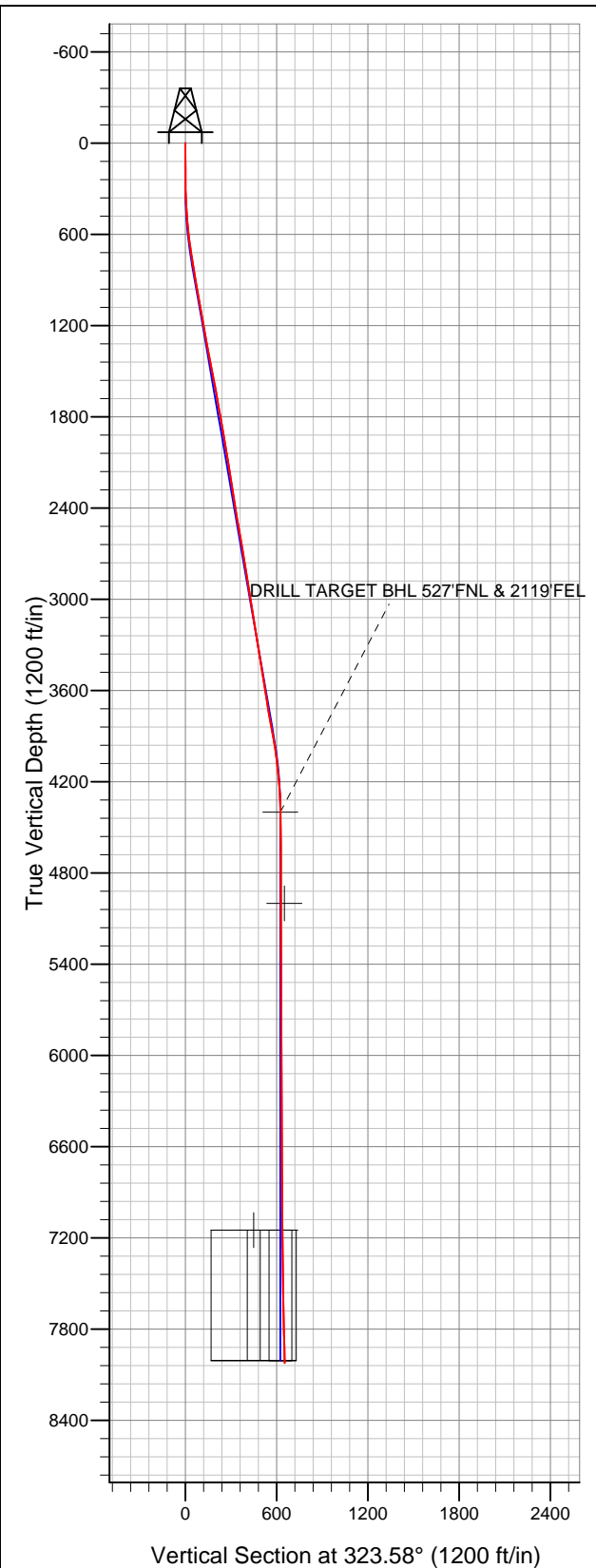


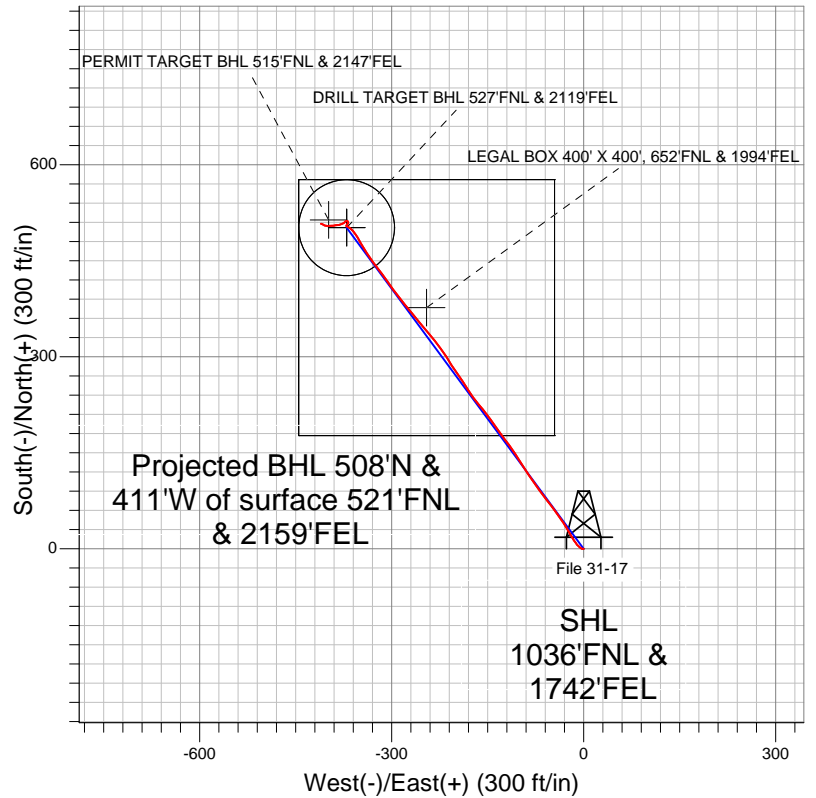
Well Name: File 31-17

Surface Location: File 31-17 Pad Sec.17-T2N-R68W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4883.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1295306.48	3133118.90	40.143029	-105.023835	
		Original Well Elev	WELL @ 4896.0ft (Original Well Elev)			



EnCana Oil & Gas Weld County CO



- LEGEND**
- Survey #1
 - ✕ File 31-17, Wellbore #1, Plan #1 (3-30-12) R V0
 - Wellbore #1

Final Survey Plot

Projected Final Survey -
8074'MD & 8023'TVD @ 652'VS
1.30 deg Inc 290.50 deg AZ

Project: SEC.17-T2N-R68W
Site: File 31-17 Pad Sec.17-T2N-R68W
Well: File 31-17
Plan: Wellbore #1



EnCana Oil & Gas Weld County CO

SEC.17-T2N-R68W

File 31-17 Pad Sec.17-T2N-R68W

File 31-17

Wellbore #1

Survey: Survey #1

Standard Survey Report

09 April, 2012

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well File 31-17
Project:	SEC.17-T2N-R68W	TVD Reference:	WELL @ 4896.0ft (Original Well Elev)
Site:	File 31-17 Pad Sec.17-T2N-R68W	MD Reference:	WELL @ 4896.0ft (Original Well Elev)
Well:	File 31-17	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.17-T2N-R68W, 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	File 31-17 Pad Sec.17-T2N-R68W				
Site Position:		Northing:	1,295,292.25 ft	Latitude:	40.142990
From:	Lat/Long	Easting:	3,133,131.57 ft	Longitude:	-105.023790
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.31 °

Well	File 31-17				
Well Position	+N-S	0.0 ft	Northing:	1,295,306.48 ft	Latitude: 40.143029
	+E-W	0.0 ft	Easting:	3,133,118.90 ft	Longitude: -105.023835
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 4,883.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/30/2012	8.87	66.77	52,884

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 (°)	
	4,400.0	0.0	0.0	323.58	

Survey Program		Date	4/9/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
80.0	8,074.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey	Wellbore Data									
	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)
Main Wellbore	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	80.0	0.30	275.40	80.0	0.0	-0.2	0.1	0.38	0.38	0.00
	170.0	0.40	267.50	170.0	0.0	-0.8	0.5	0.12	0.11	-8.78
	262.0	0.80	256.20	262.0	-0.1	-1.7	0.9	0.45	0.43	-12.28
	353.0	2.20	302.80	353.0	0.7	-3.8	2.8	1.92	1.54	51.21
	444.0	3.50	310.70	443.8	3.4	-7.4	7.1	1.49	1.43	8.68
	536.0	5.40	323.40	535.6	8.7	-12.1	14.2	2.31	2.07	13.80
	628.0	6.80	328.60	627.0	16.8	-17.5	23.9	1.63	1.52	5.65
	720.0	9.10	330.80	718.2	27.8	-23.9	36.6	2.52	2.50	2.39
	813.0	9.20	326.20	810.0	40.4	-31.6	51.3	0.79	0.11	-4.95
	906.0	9.80	324.00	901.7	53.0	-40.4	66.6	0.75	0.65	-2.37
	968.0	9.80	323.20	962.8	61.5	-46.7	77.2	0.22	0.00	-1.29
1,010.0	9.80	324.50	1,004.2	67.3	-50.9	84.3	0.53	0.00	3.10	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well File 31-17
Project:	SEC.17-T2N-R68W	TVD Reference:	WELL @ 4896.0ft (Original Well Elev)
Site:	File 31-17 Pad Sec.17-T2N-R68W	MD Reference:	WELL @ 4896.0ft (Original Well Elev)
Well:	File 31-17	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)
1,090.0	9.70	322.00	1,083.0	78.1	-59.0	97.9	0.54	-0.13	-3.13
1,184.0	10.10	323.50	1,175.6	91.0	-68.8	114.1	0.51	0.43	1.60
1,276.0	10.50	326.20	1,266.1	104.5	-78.2	130.5	0.68	0.43	2.93
1,369.0	10.60	326.00	1,357.6	118.6	-87.7	147.5	0.11	0.11	-0.22
1,462.0	11.30	327.40	1,448.9	133.4	-97.4	165.1	0.81	0.75	1.51
1,555.0	10.50	328.00	1,540.2	148.2	-106.8	182.7	0.87	-0.86	0.65
1,648.0	10.60	323.40	1,631.6	162.3	-116.4	199.7	0.91	0.11	-4.95
1,741.0	9.90	322.00	1,723.1	175.4	-126.4	216.2	0.80	-0.75	-1.51
1,834.0	10.10	326.00	1,814.7	188.5	-135.9	232.4	0.78	0.22	4.30
1,927.0	9.60	323.90	1,906.4	201.5	-145.0	248.3	0.66	-0.54	-2.26
2,020.0	9.90	321.00	1,998.0	214.0	-154.6	264.0	0.62	0.32	-3.12
2,112.0	8.70	321.00	2,088.8	225.6	-164.0	278.9	1.30	-1.30	0.00
2,205.0	9.10	324.00	2,180.7	237.0	-172.7	293.2	0.66	0.43	3.23
2,298.0	8.60	326.70	2,272.6	248.7	-180.9	307.5	0.70	-0.54	2.90
2,391.0	9.50	327.60	2,364.4	261.0	-188.8	322.1	0.98	0.97	0.97
2,485.0	9.60	324.00	2,457.1	273.9	-197.6	337.7	0.64	0.11	-3.83
2,578.0	10.00	327.90	2,548.8	287.0	-206.4	353.5	0.83	0.43	4.19
2,671.0	9.30	328.00	2,640.4	300.3	-214.7	369.1	0.75	-0.75	0.11
2,764.0	9.80	323.00	2,732.2	312.9	-223.4	384.5	1.04	0.54	-5.38
2,857.0	8.90	322.00	2,823.9	324.9	-232.6	399.6	0.98	-0.97	-1.08
2,950.0	9.40	320.00	2,915.7	336.4	-241.9	414.4	0.64	0.54	-2.15
3,043.0	9.30	319.00	3,007.5	347.9	-251.7	429.4	0.21	-0.11	-1.08
3,136.0	8.70	322.00	3,099.4	359.1	-261.0	443.9	0.82	-0.65	3.23
3,229.0	8.70	320.00	3,191.3	370.1	-269.9	458.0	0.33	0.00	-2.15
3,322.0	9.80	322.00	3,283.1	381.7	-279.3	472.9	1.23	1.18	2.15
3,415.0	9.40	321.00	3,374.8	393.8	-288.9	488.4	0.47	-0.43	-1.08
3,508.0	9.20	325.70	3,466.6	405.9	-297.9	503.4	0.84	-0.22	5.05
3,601.0	9.00	323.90	3,558.4	417.9	-306.4	518.1	0.37	-0.22	-1.94
3,694.0	8.70	322.30	3,650.3	429.3	-314.9	532.5	0.42	-0.32	-1.72
3,787.0	9.80	322.10	3,742.1	441.1	-324.1	547.4	1.18	1.18	-0.22
3,880.0	10.70	326.00	3,833.6	454.5	-333.8	563.9	1.22	0.97	4.19
3,973.0	10.10	328.60	3,925.1	468.7	-342.9	580.7	0.82	-0.65	2.80
4,066.0	7.60	331.60	4,016.9	481.0	-350.0	594.9	2.73	-2.69	3.23
4,159.0	6.50	325.10	4,109.2	490.8	-356.0	606.3	1.46	-1.18	-6.99
4,252.0	4.60	316.30	4,201.8	497.8	-361.6	615.2	2.23	-2.04	-9.46
4,345.0	3.40	305.00	4,294.6	502.1	-366.4	621.5	1.54	-1.29	-12.15
4,438.0	1.40	282.80	4,387.5	503.9	-369.8	625.0	2.33	-2.15	-23.87
4,450.5	1.24	286.38	4,400.0	504.0	-370.1	625.2	1.46	-1.30	28.64
DRILL TARGET BHL 527'FNL & 2119'FEL									
4,531.0	0.60	356.10	4,480.5	504.6	-370.9	626.3	1.46	-0.79	86.61
4,624.0	0.70	35.80	4,573.5	505.6	-370.6	626.9	0.49	0.11	42.69
4,717.0	0.50	48.80	4,666.5	506.3	-370.0	627.1	0.26	-0.22	13.98
4,810.0	0.40	20.20	4,759.5	506.9	-369.6	627.3	0.26	-0.11	-30.75
4,903.0	0.60	42.50	4,852.5	507.5	-369.1	627.6	0.30	0.22	23.98
4,996.0	0.40	40.90	4,945.5	508.1	-368.6	627.7	0.22	-0.22	-1.72
5,050.5	0.44	19.63	5,000.0	508.5	-368.4	627.9	0.29	0.08	-39.03
PERMIT TARGET BHL 515'FNL & 2147'FEL									
5,089.0	0.50	7.80	5,038.5	508.8	-368.3	628.1	0.29	0.15	-30.73
5,182.0	0.40	56.20	5,131.5	509.4	-368.0	628.4	0.41	-0.11	52.04
5,275.0	0.40	345.20	5,224.4	509.9	-367.8	628.6	0.50	0.00	-76.34
5,368.0	0.10	21.60	5,317.4	510.3	-367.9	629.0	0.35	-0.32	39.14
5,461.0	0.40	351.30	5,410.4	510.6	-367.9	629.3	0.34	0.32	-32.58
5,554.0	0.30	325.50	5,503.4	511.2	-368.1	629.8	0.20	-0.11	-27.74
5,647.0	0.30	264.50	5,596.4	511.3	-368.4	630.2	0.33	0.00	-65.59

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well File 31-17
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Site:	File 31-17 Pad Sec.17-T2N-R68W	MD Reference:	WELL @ 4896.0ft (Original Well Elev)
Well:	File 31-17	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)
5,740.0	0.40	348.90	5,689.4	511.6	-368.7	630.6	0.51	0.11	90.75
5,833.0	0.30	304.40	5,782.4	512.1	-369.0	631.2	0.30	-0.11	-47.85
5,926.0	0.40	324.10	5,875.4	512.5	-369.4	631.7	0.17	0.11	21.18
6,019.0	0.30	250.80	5,968.4	512.7	-369.8	632.1	0.46	-0.11	-78.82
6,112.0	0.70	257.80	6,061.4	512.5	-370.6	632.4	0.43	0.43	7.53
6,205.0	0.90	234.40	6,154.4	511.9	-371.8	632.7	0.41	0.22	-25.16
6,298.0	0.80	216.80	6,247.4	511.0	-372.7	632.5	0.30	-0.11	-18.92
6,391.0	0.80	226.90	6,340.4	510.0	-373.6	632.2	0.15	0.00	10.86
6,484.0	1.00	239.30	6,433.4	509.2	-374.8	632.2	0.30	0.22	13.33
6,577.0	1.00	240.80	6,526.4	508.4	-376.2	632.4	0.03	0.00	1.61
6,670.0	1.10	249.90	6,619.4	507.7	-377.7	632.8	0.21	0.11	9.78
6,763.0	1.10	248.30	6,712.3	507.0	-379.4	633.2	0.03	0.00	-1.72
6,856.0	0.90	259.40	6,805.3	506.6	-380.9	633.8	0.30	-0.22	11.94
6,949.0	1.10	258.90	6,898.3	506.3	-382.5	634.5	0.22	0.22	-0.54
7,042.0	1.70	265.00	6,991.3	506.0	-384.8	635.6	0.66	0.65	6.56
7,135.0	1.90	258.00	7,084.2	505.5	-387.7	636.9	0.32	0.22	-7.53
7,195.8	1.83	265.18	7,145.0	505.2	-389.6	637.9	0.40	-0.12	11.82
LEGAL BOX 400' X 400', 652'FNL & 1994'FEL									
7,199.2	1.82	265.60	7,148.4	505.2	-389.7	637.9	0.40	-0.09	12.29
TAGRET CIRCLE 527'FNL & 2119'FEL									
7,228.0	1.80	269.20	7,177.2	505.2	-390.6	638.4	0.40	-0.08	12.48
7,321.0	1.30	260.10	7,270.2	505.0	-393.1	639.7	0.60	-0.54	-9.78
7,414.0	1.20	268.20	7,363.1	504.8	-395.1	640.8	0.22	-0.11	8.71
7,507.0	1.40	266.20	7,456.1	504.7	-397.3	641.9	0.22	0.22	-2.15
7,600.0	1.10	267.50	7,549.1	504.5	-399.3	643.1	0.32	-0.32	1.40
7,693.0	1.30	276.30	7,642.1	504.6	-401.2	644.3	0.29	0.22	9.46
7,786.0	1.60	278.40	7,735.0	504.9	-403.5	645.9	0.33	0.32	2.26
7,879.0	1.60	303.70	7,828.0	505.8	-405.9	648.0	0.75	0.00	27.20
7,972.0	1.50	296.50	7,921.0	507.1	-408.1	650.3	0.24	-0.11	-7.74
8,032.0	1.30	290.50	7,981.0	507.7	-409.4	651.6	0.41	-0.33	-10.00
8,074.0	1.30	290.50	8,022.9	508.0	-410.3	652.4	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____