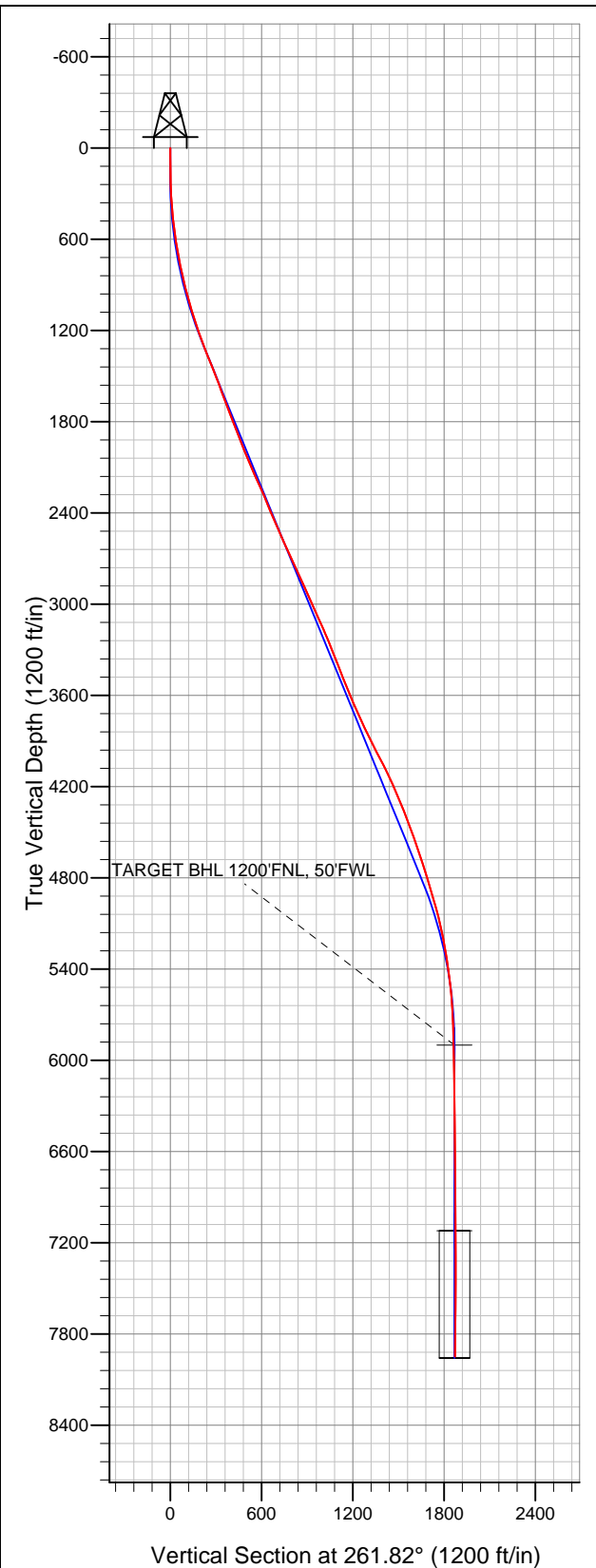


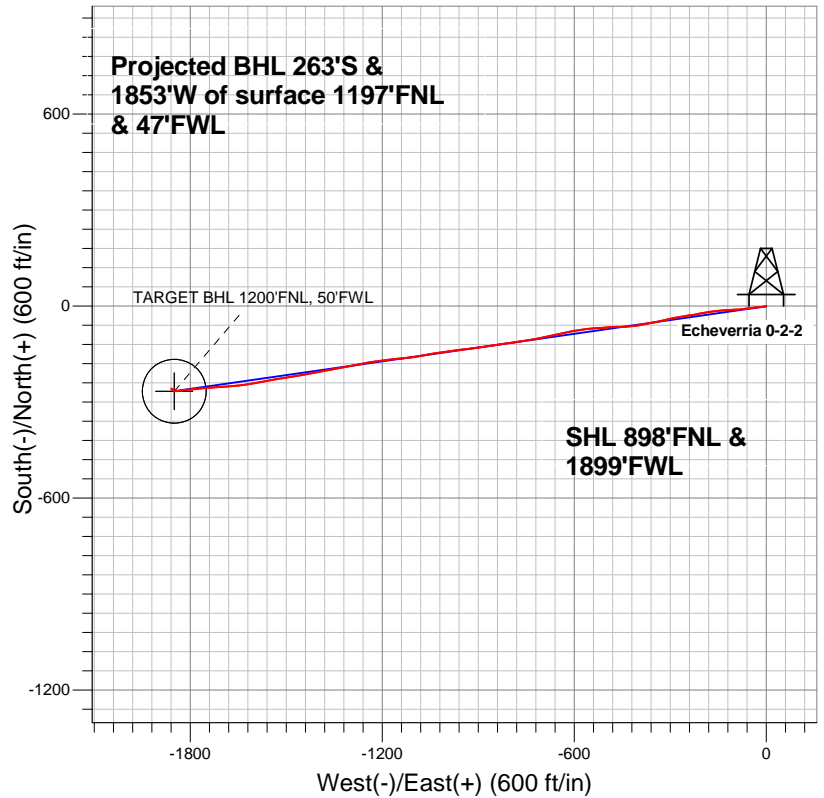
**Well Name: Echeverria 0-2-2**

Surface Location: Echeverria 4-2-2 Pad Sec.2-T2N-R67W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4855.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1306133.01	3178794.34	40.171960	-104.860180	
Original Well Elev		WELL @ 4868.0ft (Original Well Elev)				



**EnCana Oil & Gas Weld County CO**



**LEGEND**

- Wellbore #1
- ✕ Echeverria 0-2-2, Wellbore #1, Plan #1 (8-21-12) V0
- Survey #1

**Final Survey Plot**

Projected Final Survey -  
8292'MD & 7947'TVD @ 1872'VS  
1.10 deg Inc 138.60 deg AZ

Project: SEC.2-T2N-R67W  
Site: Echeverria 4-2-2 Pad Sec.2-T2N-R67W  
Well: Echeverria 0-2-2  
Plan: Wellbore #1



# **EnCana Oil & Gas Weld County CO**

**SEC.2-T2N-R67W**

**Echeverria 4-2-2 Pad Sec.2-T2N-R67W**

**Echeverria 0-2-2**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**11 September, 2012**

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Echeverria 0-2-2
<b>Project:</b>	SEC.2-T2N-R67W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Echeverria 4-2-2 Pad Sec.2-T2N-R67W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Echeverria 0-2-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.2-T2N-R67W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Echeverria 4-2-2 Pad Sec.2-T2N-R67W			
Site Position:		Northing:		1,306,143.95ft	
From:	Lat/Long	Easting:		Longitude:	
		3,178,794.26ft		-104.860180	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
0.0 ft		"		0.41 °	

Well	Echeverria 0-2-2					
Well Position	+N/-S	0.0 ft	Northing:	1,306,133.01 ft	Latitude:	40.171960
	+E/-W	0.0 ft	Easting:	3,178,794.34 ft	Longitude:	-104.860180
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,855.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/21/2012	8.74	66.81	52,876

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 (°)
	5,900.0	0.0	0.0	261.82

Survey Program		Date	9/11/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
48.0	8,292.0	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 Survey	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	48.0	0.40	265.90	48.0	0.0	-0.2	0.2	0.83	0.83	0.00
	139.0	0.70	244.60	139.0	-0.3	-1.0	1.0	0.39	0.33	-23.41
	231.0	1.60	251.10	231.0	-0.9	-2.7	2.8	0.99	0.98	7.07
	322.0	3.40	262.70	321.9	-1.7	-6.6	6.8	2.04	1.98	12.75
	414.0	5.30	265.60	413.6	-2.4	-13.5	13.7	2.08	2.07	3.15
	506.0	6.40	266.30	505.1	-3.0	-22.9	23.1	1.20	1.20	0.76
	597.0	8.00	263.10	595.4	-4.1	-34.2	34.5	1.81	1.76	-3.52
	688.0	9.80	261.50	685.3	-6.0	-48.2	48.5	2.00	1.98	-1.76
	779.0	12.50	263.30	774.6	-8.3	-65.6	66.1	2.99	2.97	1.98
	795.0	12.50	263.40	790.2	-8.7	-69.1	69.6	0.14	0.00	0.63
	872.0	13.90	265.40	865.2	-10.4	-86.6	87.2	1.91	1.82	2.60
	958.0	14.20	266.30	948.6	-11.9	-107.4	108.0	0.43	0.35	1.05

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Echeverria 0-2-2
<b>Project:</b>	SEC.2-T2N-R67W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Echeverria 4-2-2 Pad Sec.2-T2N-R67W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Echeverria 0-2-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
1,043.0	15.70	268.70	1,030.7	-12.8	-129.3	129.8	1.91	1.76	2.82	
1,129.0	17.70	263.60	1,113.1	-14.6	-153.9	154.4	2.88	2.33	-5.93	
1,215.0	18.90	259.80	1,194.7	-18.5	-180.6	181.4	1.97	1.40	-4.42	
1,300.0	20.50	259.80	1,274.8	-23.6	-208.8	210.0	1.88	1.88	0.00	
1,386.0	22.50	261.30	1,354.8	-28.7	-239.9	241.6	2.41	2.33	1.74	
1,471.0	21.70	260.80	1,433.5	-33.7	-271.5	273.5	0.97	-0.94	-0.59	
1,557.0	21.10	256.80	1,513.6	-39.8	-302.3	304.8	1.83	-0.70	-4.65	
1,643.0	20.00	258.00	1,594.1	-46.4	-331.7	334.9	1.37	-1.28	1.40	
1,728.0	20.80	258.30	1,673.8	-52.4	-360.7	364.5	0.95	0.94	0.35	
1,814.0	21.50	258.70	1,754.0	-58.6	-391.1	395.5	0.83	0.81	0.47	
1,899.0	20.30	265.90	1,833.4	-62.7	-421.1	425.8	3.33	-1.41	8.47	
1,985.0	22.10	269.10	1,913.6	-64.1	-452.2	456.7	2.49	2.09	3.72	
2,071.0	22.20	265.60	1,993.3	-65.6	-484.5	488.9	1.54	0.12	-4.07	
2,156.0	23.00	265.60	2,071.7	-68.1	-517.1	521.5	0.94	0.94	0.00	
2,242.0	24.60	264.70	2,150.4	-71.0	-551.7	556.2	1.91	1.86	-1.05	
2,327.0	24.00	262.40	2,227.9	-74.9	-586.4	591.1	1.32	-0.71	-2.71	
2,413.0	23.00	257.10	2,306.8	-81.0	-620.2	625.4	2.72	-1.16	-6.16	
2,499.0	23.00	258.50	2,385.9	-88.1	-653.0	658.9	0.64	0.00	1.63	
2,584.0	23.00	256.90	2,464.2	-95.2	-685.5	692.0	0.74	0.00	-1.88	
2,670.0	23.00	259.20	2,543.3	-102.1	-718.3	725.5	1.04	0.00	2.67	
2,755.0	24.20	261.20	2,621.2	-107.9	-751.9	759.6	1.70	1.41	2.35	
2,841.0	25.50	262.00	2,699.3	-113.2	-787.6	795.7	1.56	1.51	0.93	
2,927.0	25.10	262.20	2,777.0	-118.2	-824.0	832.4	0.48	-0.47	0.23	
3,012.0	24.70	261.30	2,854.1	-123.4	-859.4	868.2	0.65	-0.47	-1.06	
3,098.0	23.70	261.90	2,932.6	-128.5	-894.3	903.5	1.20	-1.16	0.70	
3,183.0	23.70	263.80	3,010.4	-132.8	-928.2	937.6	0.90	0.00	2.24	
3,269.0	24.40	262.70	3,088.9	-136.9	-963.0	972.7	0.97	0.81	-1.28	
3,355.0	24.20	261.30	3,167.3	-141.8	-998.0	1,008.1	0.71	-0.23	-1.63	
3,440.0	22.20	262.00	3,245.4	-146.7	-1,031.2	1,041.5	2.38	-2.35	0.82	
3,526.0	21.40	258.70	3,325.3	-152.0	-1,062.6	1,073.5	1.70	-0.93	-3.84	
3,611.0	21.10	261.30	3,404.5	-157.4	-1,093.0	1,104.2	1.16	-0.35	3.06	
3,697.0	22.20	262.90	3,484.4	-161.7	-1,124.4	1,136.0	1.45	1.28	1.86	
3,783.0	22.20	265.90	3,564.1	-164.9	-1,156.7	1,168.4	1.32	0.00	3.49	
3,868.0	23.00	262.40	3,642.5	-168.2	-1,189.2	1,201.0	1.84	0.94	-4.12	
3,954.0	24.20	262.00	3,721.4	-172.9	-1,223.3	1,235.5	1.41	1.40	-0.47	
4,039.0	25.10	257.80	3,798.6	-179.1	-1,258.2	1,270.9	2.32	1.06	-4.94	
4,125.0	26.10	260.10	3,876.2	-186.3	-1,294.7	1,308.0	1.64	1.16	2.67	
4,211.0	27.50	259.20	3,952.9	-193.2	-1,332.8	1,346.7	1.69	1.63	-1.05	
4,296.0	27.80	259.90	4,028.2	-200.4	-1,371.6	1,386.2	0.52	0.35	0.82	
4,382.0	25.50	259.60	4,105.1	-207.2	-1,409.6	1,424.7	2.68	-2.67	-0.35	
4,467.0	24.60	259.20	4,182.1	-213.9	-1,444.9	1,460.7	1.08	-1.06	-0.47	
4,553.0	22.90	260.30	4,260.8	-220.0	-1,479.0	1,495.3	2.04	-1.98	1.28	
4,639.0	22.10	261.50	4,340.3	-225.2	-1,511.5	1,528.2	1.07	-0.93	1.40	
4,724.0	20.20	260.30	4,419.5	-230.1	-1,541.8	1,558.8	2.29	-2.24	-1.41	
4,810.0	20.10	259.10	4,500.3	-235.4	-1,570.9	1,588.4	0.49	-0.12	-1.40	
4,895.0	19.60	260.60	4,580.2	-240.5	-1,599.3	1,617.3	0.84	-0.59	1.76	
4,981.0	17.90	261.00	4,661.6	-244.9	-1,626.6	1,644.9	1.98	-1.98	0.47	
5,067.0	18.50	264.20	4,743.3	-248.3	-1,653.3	1,671.8	1.36	0.70	3.72	
5,152.0	16.10	265.00	4,824.5	-250.7	-1,678.4	1,697.0	2.84	-2.82	0.94	
5,238.0	16.80	268.70	4,907.0	-252.0	-1,702.7	1,721.3	1.46	0.81	4.30	
5,323.0	15.60	264.70	4,988.6	-253.4	-1,726.4	1,744.9	1.93	-1.41	-4.71	
5,409.0	14.00	264.70	5,071.7	-255.4	-1,748.3	1,766.8	1.86	-1.86	0.00	
5,495.0	11.80	264.20	5,155.6	-257.3	-1,767.4	1,786.0	2.56	-2.56	-0.58	
5,580.0	10.20	262.70	5,239.0	-259.1	-1,783.5	1,802.2	1.91	-1.88	-1.76	

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Echeverria 0-2-2
<b>Project:</b>	SEC.2-T2N-R67W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Echeverria 4-2-2 Pad Sec.2-T2N-R67W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Echeverria 0-2-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
5,666.0	9.50	266.30	5,323.7	-260.5	-1,798.1	1,816.9	1.08	-0.81	4.19	
5,751.0	7.70	264.20	5,407.8	-261.6	-1,810.8	1,829.6	2.15	-2.12	-2.47	
5,837.0	6.20	263.40	5,493.1	-262.7	-1,821.1	1,840.0	1.75	-1.74	-0.93	
5,923.0	4.70	263.10	5,578.8	-263.6	-1,829.2	1,848.1	1.74	-1.74	-0.35	
6,008.0	3.50	262.90	5,663.5	-264.4	-1,835.3	1,854.2	1.41	-1.41	-0.24	
6,094.0	2.60	259.80	5,749.4	-265.0	-1,839.8	1,858.8	1.06	-1.05	-3.60	
6,179.0	1.60	266.80	5,834.4	-265.4	-1,842.9	1,861.9	1.21	-1.18	8.24	
6,244.8	1.29	270.63	5,900.1	-265.5	-1,844.5	1,863.5	0.49	-0.47	5.82	
TARGET BHL 1200'FNL, 50'FWL										
6,265.0	1.20	272.20	5,920.3	-265.5	-1,845.0	1,864.0	0.49	-0.46	7.76	
6,436.0	0.70	290.20	6,091.3	-265.0	-1,847.7	1,866.7	0.34	-0.29	10.53	
6,607.0	1.00	308.80	6,262.3	-263.7	-1,849.9	1,868.6	0.24	0.18	10.88	
6,779.0	0.70	302.30	6,434.3	-262.2	-1,851.9	1,870.4	0.18	-0.17	-3.78	
6,950.0	0.60	300.40	6,605.3	-261.2	-1,853.6	1,871.9	0.06	-0.06	-1.11	
7,121.0	0.60	277.00	6,776.2	-260.7	-1,855.3	1,873.5	0.14	0.00	-13.68	
7,292.0	0.50	319.20	6,947.2	-260.0	-1,856.6	1,874.7	0.24	-0.06	24.68	
7,463.0	0.40	320.60	7,118.2	-259.0	-1,857.5	1,875.5	0.06	-0.06	0.82	
7,464.7	0.40	320.21	7,119.9	-259.0	-1,857.5	1,875.5	0.26	0.20	-23.46	
TARGET CIRCLE 1200'FNL & 50'FWL										
7,635.0	0.80	299.80	7,290.2	-257.9	-1,858.9	1,876.7	0.26	0.23	-11.98	
7,806.0	0.70	127.90	7,461.2	-258.0	-1,859.1	1,876.9	0.88	-0.06	-100.53	
7,981.0	0.70	134.10	7,636.2	-259.4	-1,857.5	1,875.5	0.04	0.00	3.54	
8,156.0	1.20	123.30	7,811.2	-261.1	-1,855.2	1,873.5	0.30	0.29	-6.17	
8,250.0	1.10	138.60	7,905.2	-262.3	-1,853.8	1,872.3	0.34	-0.11	16.28	
8,292.0	1.10	138.60	7,947.2	-262.9	-1,853.3	1,871.8	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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