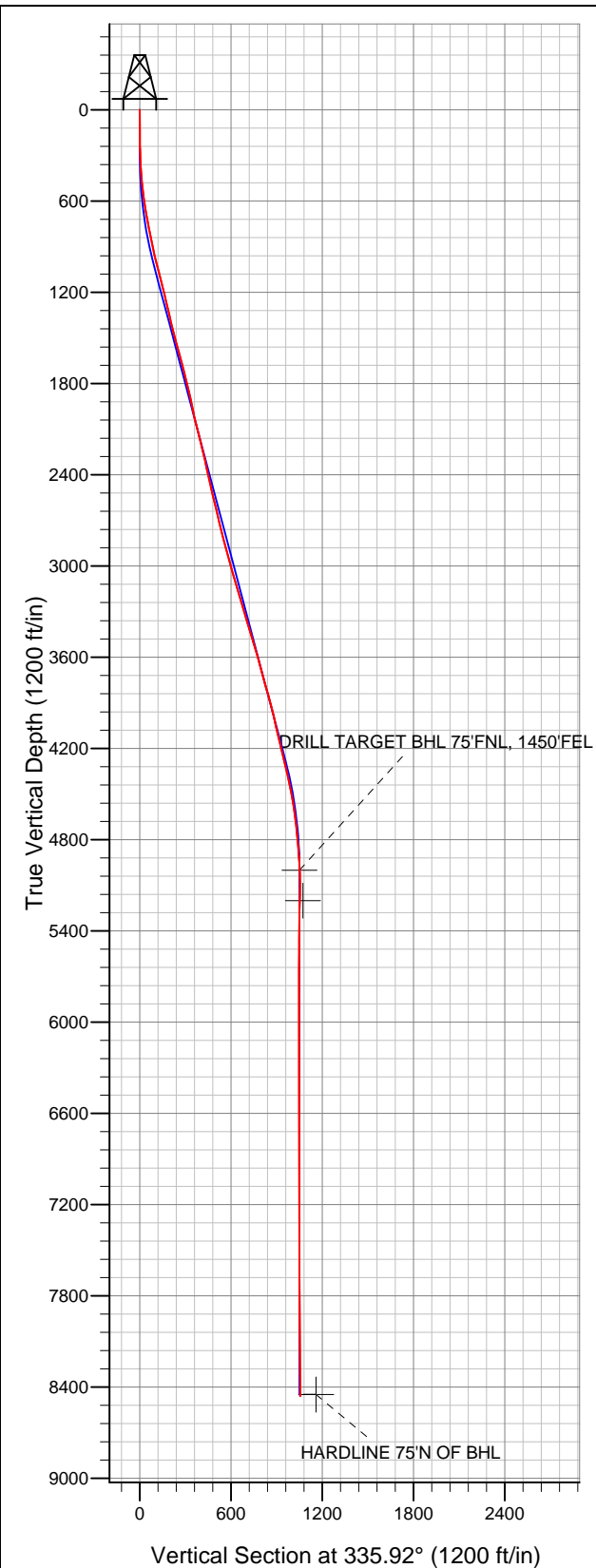
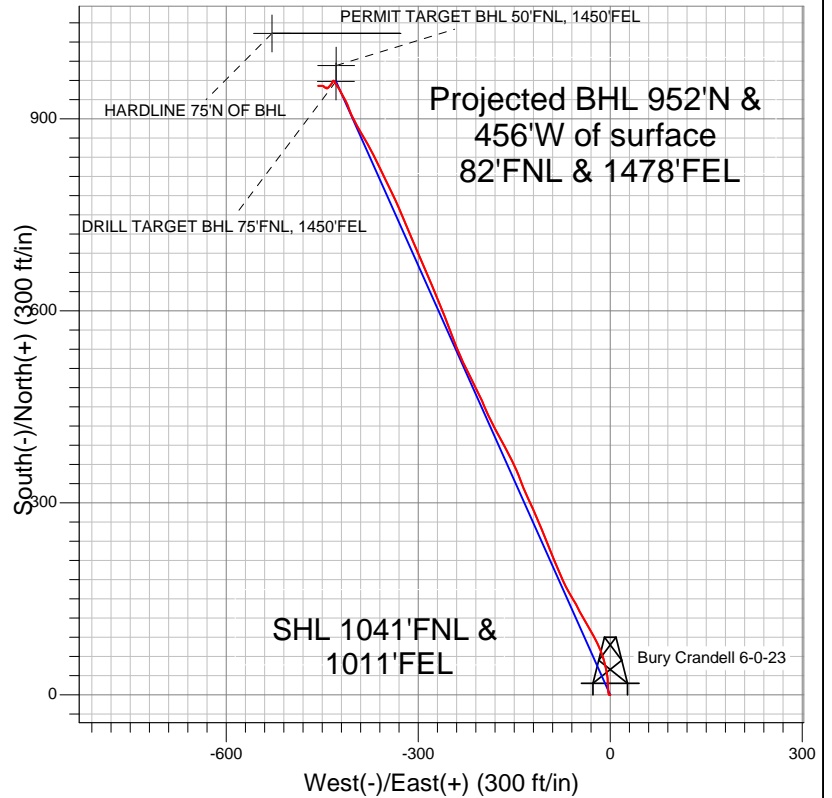


Well Name: Bury Crandell 6-0-23

Surface Location: Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5112.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1258350.82 3149840.85 40.041320 -104.964820
 Original Well ElevWELL @ 5125.0ft (Original Well Elev)



EnCana Oil & Gas Broomfield County, CO



LEGEND

- Survey #1
- Bury Crandell 6-0-23, Wellbore #1, Plan #1 (12-29-11) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
 8585'MD & 8459'TVD @ 1055'VS
 1.40 deg Inc 270.60 deg AZ

Project: SEC.23-T1N-R68W
 Site: Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W
 Well: Bury Crandell 6-0-23
 Plan: Wellbore #1



EnCana Oil & Gas Broomfield County, CO

SEC.23-T1N-R68W

Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W

Bury Crandell 6-0-23

Wellbore #1

Survey: Survey #1

Standard Survey Report

09 January, 2012

Company:	EnCana Oil & Gas Broomfield County, CO	Local Co-ordinate Reference:	Well Bury Crandell 6-0-23
Project:	SEC.23-T1N-R68W	TVD Reference:	WELL @ 5125.0ft (Original Well Elev)
Site:	Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W	MD Reference:	WELL @ 5125.0ft (Original Well Elev)
Well:	Bury Crandell 6-0-23	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.23-T1N-R68W, Broomfield County, Colorado		
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		Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W			
Site Position:		Northing:	1,258,365.55 ft	Latitude:	40.041360
From:	Lat/Long	Easting:	3,149,865.96 ft	Longitude:	-104.964730
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.35 °

Well	Bury Crandell 6-0-23					
Well Position	+N/-S	0.0 ft	Northing:	1,258,350.82 ft	Latitude:	40.041320
	+E/-W	0.0 ft	Easting:	3,149,840.85 ft	Longitude:	-104.964820
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,112.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/29/2011	8.87	66.71	52,861

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	335.92	

Survey Program		Date	1/8/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
139.0	8,585.0	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
	139.0	1.00	273.60	139.0	0.1	-1.2	0.6	0.72	0.72	0.00
	230.0	0.80	342.50	230.0	0.7	-2.2	1.6	1.13	-0.22	75.71
	321.0	2.00	348.80	321.0	2.9	-2.7	3.7	1.33	1.32	6.92
	412.0	4.40	356.00	411.8	7.9	-3.2	8.6	2.67	2.64	7.91
	503.0	6.30	359.60	502.4	16.4	-3.5	16.4	2.12	2.09	3.96
	594.0	8.40	352.70	592.7	28.0	-4.4	27.4	2.50	2.31	-7.58
	685.0	10.20	347.80	682.5	42.5	-7.0	41.6	2.16	1.98	-5.38
	777.0	11.40	342.20	772.8	59.1	-11.5	58.6	1.73	1.30	-6.09
	871.0	12.00	336.00	864.9	76.9	-18.3	77.6	1.48	0.64	-6.60
	964.0	12.80	329.50	955.7	94.6	-27.4	97.5	1.73	0.86	-6.99
	1,057.0	14.60	331.10	1,046.1	113.7	-38.3	119.5	1.98	1.94	1.72
	1,081.0	14.70	331.10	1,069.3	119.0	-41.3	125.5	0.42	0.42	0.00

Company:	EnCana Oil & Gas Broomfield County, CO	Local Co-ordinate Reference:	Well Bury Crandell 6-0-23
Project:	SEC.23-T1N-R68W	TVD Reference:	WELL @ 5125.0ft (Original Well Elev)
Site:	Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W	MD Reference:	WELL @ 5125.0ft (Original Well Elev)
Well:	Bury Crandell 6-0-23	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)	
1,184.0	14.30	331.30	1,169.0	141.6	-53.7	151.2	0.39	-0.39	0.19	
1,277.0	13.10	329.50	1,259.4	160.8	-64.5	173.1	1.37	-1.29	-1.94	
1,371.0	12.90	335.10	1,350.9	179.5	-74.4	194.2	1.36	-0.21	5.96	
1,464.0	14.10	338.60	1,441.4	199.4	-82.9	215.9	1.56	1.29	3.76	
1,558.0	15.30	337.90	1,532.3	221.6	-91.7	239.7	1.29	1.28	-0.74	
1,651.0	15.80	337.10	1,621.9	244.6	-101.3	264.7	0.58	0.54	-0.86	
1,745.0	14.00	337.40	1,712.7	266.9	-110.6	288.8	1.92	-1.91	0.32	
1,838.0	13.50	336.20	1,803.1	287.2	-119.3	310.9	0.62	-0.54	-1.29	
1,932.0	12.00	335.00	1,894.7	306.1	-127.9	331.7	1.62	-1.60	-1.28	
2,025.0	12.10	337.90	1,985.7	323.9	-135.6	351.1	0.66	0.11	3.12	
2,119.0	14.40	338.10	2,077.2	343.9	-143.7	372.6	2.45	2.45	0.21	
2,213.0	13.90	334.40	2,168.3	364.9	-152.9	395.6	1.10	-0.53	-3.94	
2,306.0	13.40	331.80	2,258.7	384.5	-162.9	417.5	0.85	-0.54	-2.80	
2,400.0	12.00	329.90	2,350.4	402.6	-172.9	438.1	1.55	-1.49	-2.02	
2,493.0	12.80	333.50	2,441.2	420.1	-182.3	458.0	1.20	0.86	3.87	
2,586.0	13.40	336.90	2,531.8	439.3	-191.2	479.0	1.05	0.65	3.66	
2,680.0	13.80	335.00	2,623.2	459.4	-200.2	501.1	0.64	0.43	-2.02	
2,773.0	13.50	333.40	2,713.6	479.2	-209.7	523.1	0.52	-0.32	-1.72	
2,867.0	14.20	333.00	2,804.8	499.3	-219.9	545.6	0.75	0.74	-0.43	
2,960.0	14.80	334.80	2,894.9	520.2	-230.1	568.8	0.81	0.65	1.94	
3,054.0	16.20	338.50	2,985.4	543.3	-240.0	593.9	1.82	1.49	3.94	
3,147.0	16.20	339.50	3,074.8	567.5	-249.3	619.8	0.30	0.00	1.08	
3,241.0	16.20	338.10	3,165.0	591.9	-258.8	646.0	0.42	0.00	-1.49	
3,335.0	16.40	337.20	3,255.2	616.3	-268.8	672.4	0.34	0.21	-0.96	
3,430.0	16.60	338.30	3,346.3	641.3	-279.1	699.4	0.39	0.21	1.16	
3,523.0	17.10	336.20	3,435.3	666.2	-289.5	726.3	0.85	0.54	-2.26	
3,617.0	17.10	336.50	3,525.2	691.5	-300.6	753.9	0.09	0.00	0.32	
3,710.0	14.90	336.40	3,614.6	715.0	-310.8	779.6	2.37	-2.37	-0.11	
3,803.0	15.30	337.90	3,704.4	737.3	-320.2	803.8	0.60	0.43	1.61	
3,898.0	16.20	336.50	3,795.8	761.1	-330.2	829.6	1.03	0.95	-1.47	
3,992.0	14.40	334.10	3,886.5	783.6	-340.6	854.4	2.03	-1.91	-2.55	
4,087.0	14.30	333.90	3,978.5	804.8	-350.9	877.9	0.12	-0.11	-0.21	
4,181.0	12.80	334.10	4,069.9	824.6	-360.5	899.9	1.60	-1.60	0.21	
4,275.0	12.50	333.20	4,161.6	843.0	-369.7	920.5	0.38	-0.32	-0.96	
4,368.0	13.30	330.70	4,252.3	861.3	-379.4	941.2	1.05	0.86	-2.69	
4,461.0	14.00	329.50	4,342.6	880.3	-390.4	963.0	0.81	0.75	-1.29	
4,555.0	12.40	332.80	4,434.1	899.1	-400.8	984.4	1.88	-1.70	3.51	
4,648.0	9.30	340.20	4,525.5	915.1	-407.9	1,001.9	3.65	-3.33	7.96	
4,742.0	8.30	332.50	4,618.4	928.2	-413.6	1,016.2	1.64	-1.06	-8.19	
4,835.0	6.40	330.90	4,710.6	938.7	-419.2	1,028.1	2.05	-2.04	-1.72	
4,929.0	5.30	331.80	4,804.1	947.1	-423.8	1,037.6	1.17	-1.17	0.96	
5,022.0	4.20	324.80	4,896.8	953.7	-427.8	1,045.3	1.33	-1.18	-7.53	
5,116.0	2.70	330.60	4,990.6	958.4	-430.9	1,050.8	1.64	-1.60	6.17	
5,125.3	2.44	328.01	4,999.9	958.8	-431.1	1,051.3	3.05	-2.79	-27.72	
DRILL TARGET BHL 75'FNL, 1450'FEL										
5,209.0	1.10	245.00	5,083.6	960.0	-432.8	1,053.0	3.05	-1.60	-99.22	
5,305.0	1.50	194.70	5,179.6	958.4	-433.9	1,052.0	1.21	0.42	-52.40	
5,324.8	1.47	196.94	5,199.3	957.9	-434.1	1,051.6	0.32	-0.13	11.31	
PERMIT TARGET BHL 50'FNL, 1450'FEL										
5,396.0	1.40	205.60	5,270.5	956.2	-434.7	1,050.4	0.32	-0.10	12.16	
5,490.0	1.80	219.60	5,364.5	954.0	-436.1	1,049.0	0.59	0.43	14.89	
5,584.0	1.60	218.60	5,458.4	951.9	-437.9	1,047.7	0.22	-0.21	-1.06	
5,677.0	1.00	224.90	5,551.4	950.3	-439.3	1,046.8	0.66	-0.65	6.77	
5,770.0	0.70	223.00	5,644.4	949.3	-440.2	1,046.3	0.32	-0.32	-2.04	

Company:	EnCana Oil & Gas Broomfield County, CO	Local Co-ordinate Reference:	Well Bury Crandell 6-0-23
Project:	SEC.23-T1N-R68W	TVD Reference:	WELL @ 5125.0ft (Original Well Elev)
Site:	Bury Crandell 6-0-23 Pad Sec.23-T1N-R68W	MD Reference:	WELL @ 5125.0ft (Original Well Elev)
Well:	Bury Crandell 6-0-23	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)
5,864.0	0.70	230.20	5,738.4	948.5	-441.1	1,045.9	0.09	0.00	7.66
5,958.0	0.30	241.10	5,832.4	948.0	-441.7	1,045.8	0.44	-0.43	11.60
6,051.0	0.40	250.80	5,925.4	947.8	-442.2	1,045.8	0.12	0.11	10.43
6,145.0	0.30	300.50	6,019.4	947.8	-442.8	1,046.0	0.33	-0.11	52.87
6,238.0	0.40	317.20	6,112.4	948.2	-443.2	1,046.5	0.15	0.11	17.96
6,332.0	0.40	353.40	6,206.4	948.7	-443.5	1,047.1	0.26	0.00	38.51
6,425.0	0.30	104.00	6,299.4	949.0	-443.3	1,047.3	0.62	-0.11	118.92
6,519.0	0.10	63.00	6,393.4	949.0	-442.9	1,047.1	0.25	-0.21	-43.62
6,613.0	0.20	117.30	6,487.4	948.9	-442.7	1,047.0	0.17	0.11	57.77
6,707.0	0.20	221.40	6,581.4	948.8	-442.7	1,046.8	0.34	0.00	110.74
6,800.0	0.10	234.80	6,674.4	948.6	-442.9	1,046.7	0.11	-0.11	14.41
6,894.0	0.20	272.20	6,768.4	948.5	-443.1	1,046.8	0.14	0.11	39.79
6,988.0	0.20	254.50	6,862.4	948.5	-443.4	1,046.9	0.07	0.00	-18.83
7,081.0	0.20	260.50	6,955.4	948.4	-443.7	1,046.9	0.02	0.00	6.45
7,175.0	0.20	303.30	7,049.4	948.5	-444.0	1,047.1	0.16	0.00	45.53
7,268.0	0.40	300.30	7,142.4	948.8	-444.4	1,047.5	0.22	0.22	-3.23
7,361.0	0.50	286.80	7,235.4	949.0	-445.1	1,048.1	0.16	0.11	-14.52
7,455.0	0.40	289.90	7,329.4	949.3	-445.8	1,048.6	0.11	-0.11	3.30
7,548.0	0.70	302.10	7,422.4	949.7	-446.6	1,049.3	0.34	0.32	13.12
7,642.0	0.30	306.80	7,516.4	950.1	-447.3	1,049.9	0.43	-0.43	5.00
7,736.0	0.20	359.60	7,610.4	950.4	-447.5	1,050.3	0.25	-0.11	56.17
7,830.0	0.00	321.80	7,704.4	950.6	-447.5	1,050.5	0.21	-0.21	0.00
7,923.0	0.00	328.80	7,797.4	950.6	-447.5	1,050.5	0.00	0.00	0.00
8,017.0	0.20	327.40	7,891.4	950.7	-447.6	1,050.6	0.21	0.21	0.00
8,110.0	0.30	325.30	7,984.4	951.1	-447.8	1,051.0	0.11	0.11	-2.26
8,203.0	0.70	283.60	8,077.4	951.4	-448.5	1,051.6	0.56	0.43	-44.84
8,297.0	1.00	278.00	8,171.4	951.7	-449.9	1,052.4	0.33	0.32	-5.96
8,422.0	1.00	268.70	8,296.3	951.8	-452.0	1,053.4	0.13	0.00	-7.44
8,484.0	1.70	272.20	8,358.3	951.8	-453.5	1,054.0	1.14	1.13	5.65
8,539.0	1.40	270.60	8,413.3	951.8	-455.0	1,054.7	0.55	-0.55	-2.91
8,576.5	1.40	270.60	8,450.8	951.9	-455.9	1,055.0	0.00	0.00	0.00
HARDLINE 75'N OF BHL									
8,585.0	1.40	270.60	8,459.3	951.9	-456.1	1,055.1	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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