



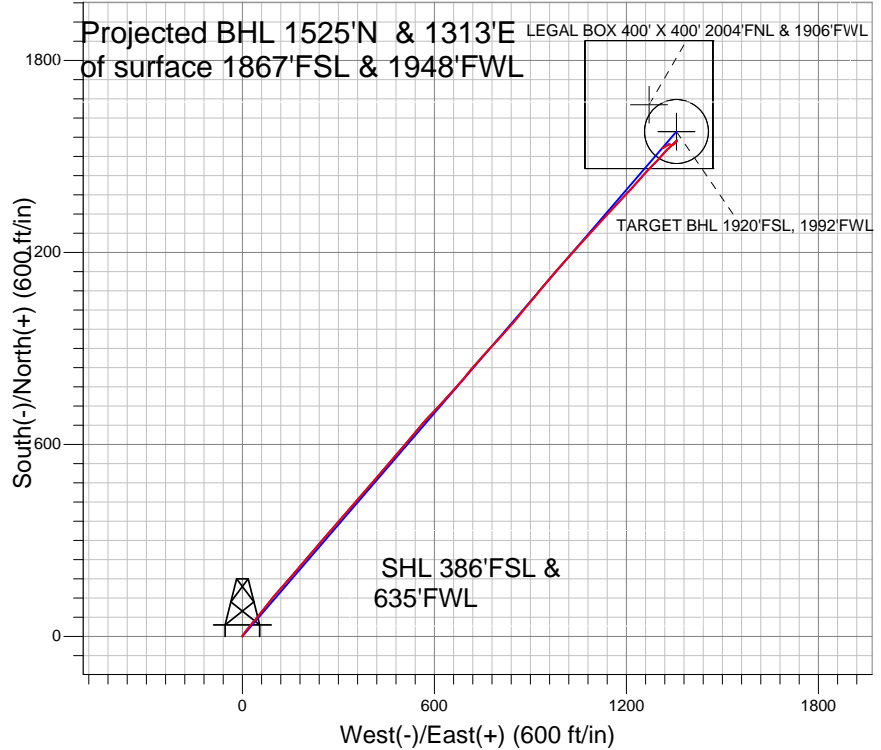
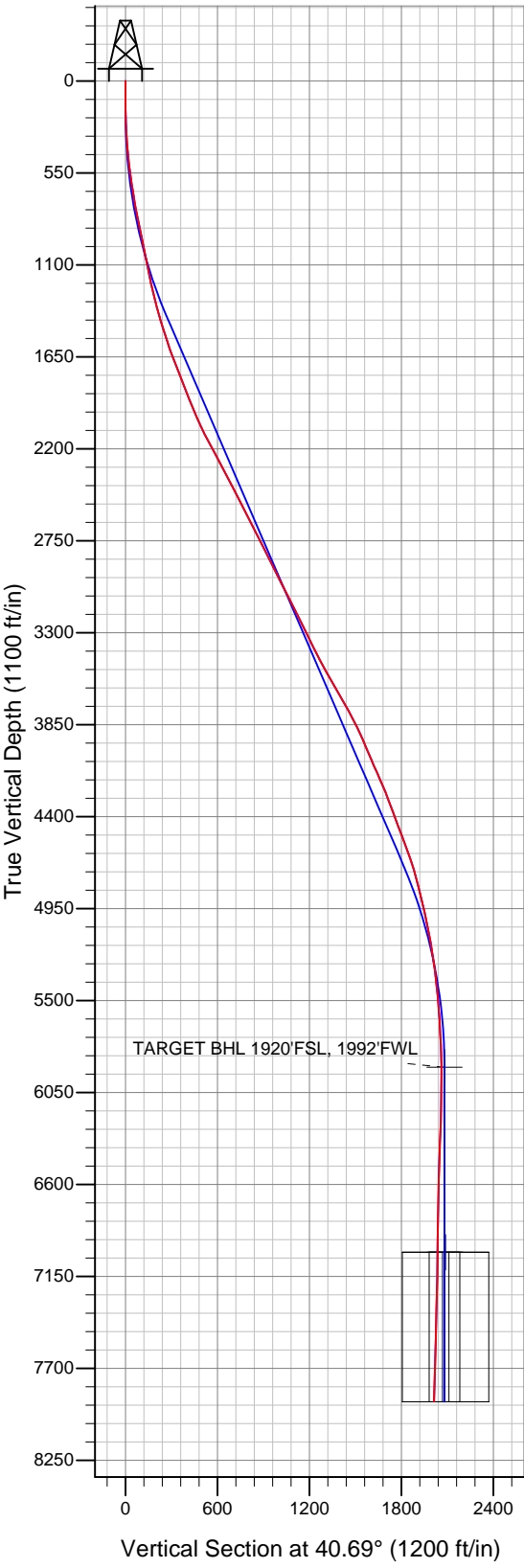
Well Name: **Zisch 23-6-M368**

Surface Location: Zisch 23-6-M368 Pad Sec.6-T3N-R68W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 5163.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1333601.22	3124825.27	40.248270	-105.052810	

Original Well Elev WELL @ 5176.0ft (Original Well Elev)

## EnCana Oil & Gas Weld County CO



LEGEND

- ▲ Zisch 23-6-M368, Wellbore #1, Plan #1 (4-19-13) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
 8342'MD & 7899'TVD @  
 2012' VS 1.90 deg Inc  
 236.40 deg AZ

Project: SEC.6-T3N-R68W  
 Site: Zisch 23-6-M368 Pad Sec.6-T3N-R68W  
 Well: Zisch 23-6-M368  
 Plan: Wellbore #1



## **Directional**

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

**SEC.6-T3N-R68W**

**Zisch 23-6-M368 Pad Sec.6-T3N-R68W**

**Zisch 23-6-M368**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**13 May, 2013**

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Zisch 23-6-M368
<b>Project:</b>	SEC.6-T3N-R68W	<b>TVD Reference:</b>	WELL @ 5176.0ft (Original Well Elev)
<b>Site:</b>	Zisch 23-6-M368 Pad Sec.6-T3N-R68W	<b>MD Reference:</b>	WELL @ 5176.0ft (Original Well Elev)
<b>Well:</b>	Zisch 23-6-M368	<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.6-T3N-R68W, 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

<b>Site</b>	Zisch 23-6-M368 Pad Sec.6-T3N-R68W				
<b>Site Position:</b>		<b>Northing:</b>	1,333,601.23ft	<b>Latitude:</b>	40.248270
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,124,825.27ft	<b>Longitude:</b>	-105.052810
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.29 °

<b>Well</b>	Zisch 23-6-M368					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,333,601.22 ft	<b>Latitude:</b>	40.248270
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,124,825.27 ft	<b>Longitude:</b>	-105.052810
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	5,163.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/19/2013	8.76	66.82	52,824

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	40.69	

<b>Survey Program</b>	<b>Date</b>	5/13/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
75.0	8,342.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
75.0	0.40	282.30	75.0	0.1	-0.3	-0.1	0.53	0.53	0.00	
135.0	0.30	313.00	135.0	0.2	-0.6	-0.2	0.35	-0.17	51.17	
195.0	1.40	42.20	195.0	0.9	-0.2	0.5	2.38	1.83	148.67	
256.0	2.60	44.30	256.0	2.4	1.3	2.6	1.97	1.97	3.44	
316.0	3.20	37.80	315.9	4.7	3.2	5.7	1.14	1.00	-10.83	
376.0	4.60	34.80	375.7	8.0	5.6	9.7	2.36	2.33	-5.00	
437.0	6.10	30.40	436.5	12.8	8.7	15.4	2.55	2.46	-7.21	
497.0	6.90	35.30	496.1	18.5	12.4	22.1	1.62	1.33	8.17	
557.0	8.20	39.00	555.6	24.8	17.2	30.0	2.31	2.17	6.17	
618.0	9.30	40.80	615.9	31.9	23.1	39.2	1.86	1.80	2.95	
679.0	10.30	41.10	676.0	39.7	29.9	49.6	1.64	1.64	0.49	
740.0	11.10	40.60	735.9	48.3	37.3	60.9	1.32	1.31	-0.82	

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Zisch 23-6-M368
<b>Project:</b>	SEC.6-T3N-R68W	<b>TVD Reference:</b>	WELL @ 5176.0ft (Original Well Elev)
<b>Site:</b>	Zisch 23-6-M368 Pad Sec.6-T3N-R68W	<b>MD Reference:</b>	WELL @ 5176.0ft (Original Well Elev)
<b>Well:</b>	Zisch 23-6-M368	<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)
801.0	12.30	39.00	795.6	57.8	45.2	73.3	2.04	1.97	-2.62
831.0	12.60	39.20	824.9	62.8	49.3	79.8	1.01	1.00	0.67
911.0	12.90	37.20	903.0	76.7	60.2	97.4	0.67	0.38	-2.50
997.0	12.50	36.90	986.8	91.8	71.6	116.3	0.47	-0.47	-0.35
1,083.0	11.30	39.90	1,071.0	105.7	82.6	134.0	1.57	-1.40	3.49
1,168.0	13.00	38.60	1,154.1	119.5	93.9	151.9	2.03	2.00	-1.53
1,254.0	14.00	42.20	1,237.7	134.8	106.9	171.9	1.52	1.16	4.19
1,340.0	16.50	40.60	1,320.7	151.8	121.9	194.6	2.95	2.91	-1.86
1,426.0	17.80	41.30	1,402.9	170.9	138.5	219.9	1.53	1.51	0.81
1,511.0	18.50	42.70	1,483.6	190.6	156.2	246.4	0.97	0.82	1.65
1,597.0	19.20	40.80	1,565.0	211.3	174.7	274.2	1.08	0.81	-2.21
1,683.0	22.20	38.30	1,645.5	234.8	194.0	304.5	3.64	3.49	-2.91
1,768.0	23.70	39.90	1,723.7	260.5	214.9	337.7	1.91	1.76	1.88
1,854.0	23.90	42.30	1,802.4	286.7	237.8	372.4	1.15	0.23	2.79
1,940.0	21.80	40.40	1,881.7	311.7	259.8	405.8	2.59	-2.44	-2.21
2,026.0	25.10	40.20	1,960.5	337.8	282.0	440.0	3.84	3.84	-0.23
2,111.0	26.20	41.30	2,037.2	365.7	306.0	476.8	1.41	1.29	1.29
2,197.0	28.40	41.60	2,113.6	395.2	332.1	516.2	2.56	2.56	0.35
2,283.0	30.20	42.00	2,188.6	426.6	360.2	558.3	2.11	2.09	0.47
2,369.0	31.00	40.60	2,262.6	459.5	389.0	602.1	1.25	0.93	-1.63
2,454.0	30.70	40.00	2,335.6	492.7	417.2	645.6	0.51	-0.35	-0.71
2,540.0	28.90	40.40	2,410.2	525.4	444.8	688.4	2.11	-2.09	0.47
2,626.0	28.70	41.30	2,485.6	556.7	471.9	729.8	0.56	-0.23	1.05
2,712.0	29.50	40.60	2,560.7	588.3	499.3	771.6	1.01	0.93	-0.81
2,797.0	29.10	38.10	2,634.8	620.5	525.7	813.2	1.51	-0.47	-2.94
2,883.0	29.50	40.60	2,709.8	653.0	552.4	855.3	1.50	0.47	2.91
2,969.0	28.20	43.70	2,785.2	683.8	580.2	896.7	2.30	-1.51	3.60
3,054.0	28.20	43.40	2,860.1	712.9	607.9	936.9	0.17	0.00	-0.35
3,140.0	28.60	42.30	2,935.7	742.9	635.7	977.7	0.77	0.47	-1.28
3,226.0	29.60	42.20	3,010.9	773.8	663.8	1,019.5	1.16	1.16	-0.12
3,312.0	29.10	40.90	3,085.8	805.4	691.8	1,061.7	0.94	-0.58	-1.51
3,397.0	28.70	37.60	3,160.3	837.2	717.8	1,102.7	1.93	-0.47	-3.88
3,483.0	28.40	43.70	3,235.8	868.3	744.5	1,143.8	3.41	-0.35	7.09
3,569.0	28.30	43.60	3,311.5	897.9	772.7	1,184.6	0.13	-0.12	-0.12
3,655.0	28.20	40.90	3,387.3	928.0	800.0	1,225.3	1.49	-0.12	-3.14
3,740.0	29.70	40.60	3,461.6	959.2	826.9	1,266.4	1.77	1.76	-0.35
3,826.0	31.20	40.60	3,535.8	992.3	855.3	1,310.0	1.74	1.74	0.00
3,912.0	32.10	39.50	3,609.0	1,026.8	884.3	1,355.1	1.24	1.05	-1.28
3,998.0	32.60	40.20	3,681.6	1,062.1	913.8	1,401.1	0.73	0.58	0.81
4,083.0	31.60	39.50	3,753.6	1,096.8	942.7	1,446.3	1.26	-1.18	-0.82
4,169.0	28.80	40.60	3,828.0	1,129.9	970.5	1,489.5	3.32	-3.26	1.28
4,255.0	26.30	41.30	3,904.2	1,160.0	996.6	1,529.3	2.93	-2.91	0.81
4,340.0	25.40	42.50	3,980.7	1,187.6	1,021.3	1,566.3	1.22	-1.06	1.41
4,426.0	24.90	41.50	4,058.5	1,214.7	1,045.8	1,602.9	0.76	-0.58	-1.16
4,512.0	26.10	42.90	4,136.2	1,242.1	1,070.7	1,639.9	1.56	1.40	1.63
4,598.0	24.70	42.70	4,213.9	1,269.2	1,095.7	1,676.8	1.63	-1.63	-0.23
4,683.0	22.60	41.80	4,291.7	1,294.4	1,118.7	1,710.8	2.51	-2.47	-1.06
4,769.0	22.40	42.20	4,371.2	1,318.9	1,140.7	1,743.7	0.29	-0.23	0.47
4,855.0	22.20	43.00	4,450.7	1,342.9	1,162.8	1,776.4	0.42	-0.23	0.93
4,941.0	22.10	43.60	4,530.4	1,366.5	1,185.0	1,808.7	0.29	-0.12	0.70
5,026.0	21.70	42.70	4,609.2	1,389.6	1,206.7	1,840.4	0.61	-0.47	-1.06
5,112.0	19.20	42.50	4,689.8	1,411.7	1,227.0	1,870.4	2.91	-2.91	-0.23
5,198.0	16.40	40.80	4,771.7	1,431.4	1,244.5	1,896.7	3.31	-3.26	-1.98
5,283.0	15.30	41.80	4,853.5	1,448.8	1,259.9	1,919.9	1.33	-1.29	1.18

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Zisch 23-6-M368
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<b>Site:</b>	Zisch 23-6-M368 Pad Sec.6-T3N-R68W	<b>MD Reference:</b>	WELL @ 5176.0ft (Original Well Elev)
<b>Well:</b>	Zisch 23-6-M368	<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)	
5,369.0	14.00	44.60	4,936.7	1,464.7	1,274.7	1,941.7	1.72	-1.51	3.26	
5,455.0	12.80	44.60	5,020.3	1,478.9	1,288.7	1,961.5	1.40	-1.40	0.00	
5,541.0	11.50	42.20	5,104.4	1,492.0	1,301.2	1,979.6	1.62	-1.51	-2.79	
5,626.0	10.70	40.60	5,187.8	1,504.3	1,312.0	1,996.0	1.01	-0.94	-1.88	
5,712.0	9.80	43.60	5,272.4	1,515.6	1,322.2	2,011.3	1.22	-1.05	3.49	
5,798.0	6.30	48.30	5,357.6	1,524.1	1,330.8	2,023.3	4.14	-4.07	5.47	
5,884.0	5.90	46.70	5,443.1	1,530.2	1,337.5	2,032.3	0.51	-0.47	-1.86	
5,969.0	5.40	47.40	5,527.7	1,536.0	1,343.7	2,040.7	0.59	-0.59	0.82	
6,055.0	4.30	49.20	5,613.4	1,540.8	1,349.1	2,047.9	1.29	-1.28	2.09	
6,141.0	3.20	47.10	5,699.2	1,544.5	1,353.3	2,053.4	1.29	-1.28	-2.44	
6,227.0	2.10	44.40	5,785.1	1,547.3	1,356.1	2,057.4	1.29	-1.28	-3.14	
6,312.0	1.40	44.80	5,870.0	1,549.1	1,358.0	2,060.0	0.82	-0.82	0.47	
6,342.1	0.77	42.08	5,900.2	1,549.6	1,358.4	2,060.6	2.08	-2.07	-9.02	
<b>TARGET BHL 1920'FSL, 1992'FWL</b>										
6,398.0	0.40	240.00	5,956.0	1,549.7	1,358.4	2,060.8	2.08	-0.67	-290.16	
6,569.0	1.00	223.20	6,127.0	1,548.4	1,356.9	2,058.7	0.37	0.35	-9.82	
6,784.0	2.10	222.70	6,341.9	1,544.1	1,353.0	2,052.9	0.51	0.51	-0.23	
6,912.0	2.70	220.20	6,469.8	1,540.1	1,349.4	2,047.5	0.48	0.47	-1.95	
7,084.0	1.90	247.80	6,641.7	1,535.9	1,344.2	2,040.9	0.78	-0.47	16.05	
7,255.0	1.20	283.20	6,812.6	1,535.2	1,339.8	2,037.6	0.68	-0.41	20.70	
7,427.0	1.60	299.90	6,984.6	1,536.8	1,336.0	2,036.3	0.33	0.23	9.71	
7,447.9	1.52	293.70	7,005.5	1,537.1	1,335.5	2,036.2	0.89	-0.38	-29.65	
<b>TARGET CIRCLE 1920'FSL &amp; 1992'FWL</b>										
7,449.9	1.51	293.08	7,007.5	1,537.1	1,335.4	2,036.2	0.89	-0.33	-31.28	
<b>LEGAL BOX 400' X 400' 2004'FNL &amp; 1906'FWL</b>										
7,598.0	1.60	242.90	7,155.5	1,536.9	1,331.8	2,033.7	0.89	0.06	-33.88	
7,770.0	1.70	231.30	7,327.5	1,534.3	1,327.6	2,028.9	0.20	0.06	-6.74	
7,941.0	1.60	245.20	7,498.4	1,531.7	1,323.5	2,024.3	0.24	-0.06	8.13	
8,113.0	1.80	233.40	7,670.3	1,529.1	1,319.1	2,019.4	0.23	0.12	-6.86	
8,298.0	1.90	236.40	7,855.2	1,525.6	1,314.3	2,013.6	0.08	0.05	1.62	
8,342.0	1.90	236.40	7,899.2	1,524.8	1,313.0	2,012.2	0.00	0.00	0.00	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_