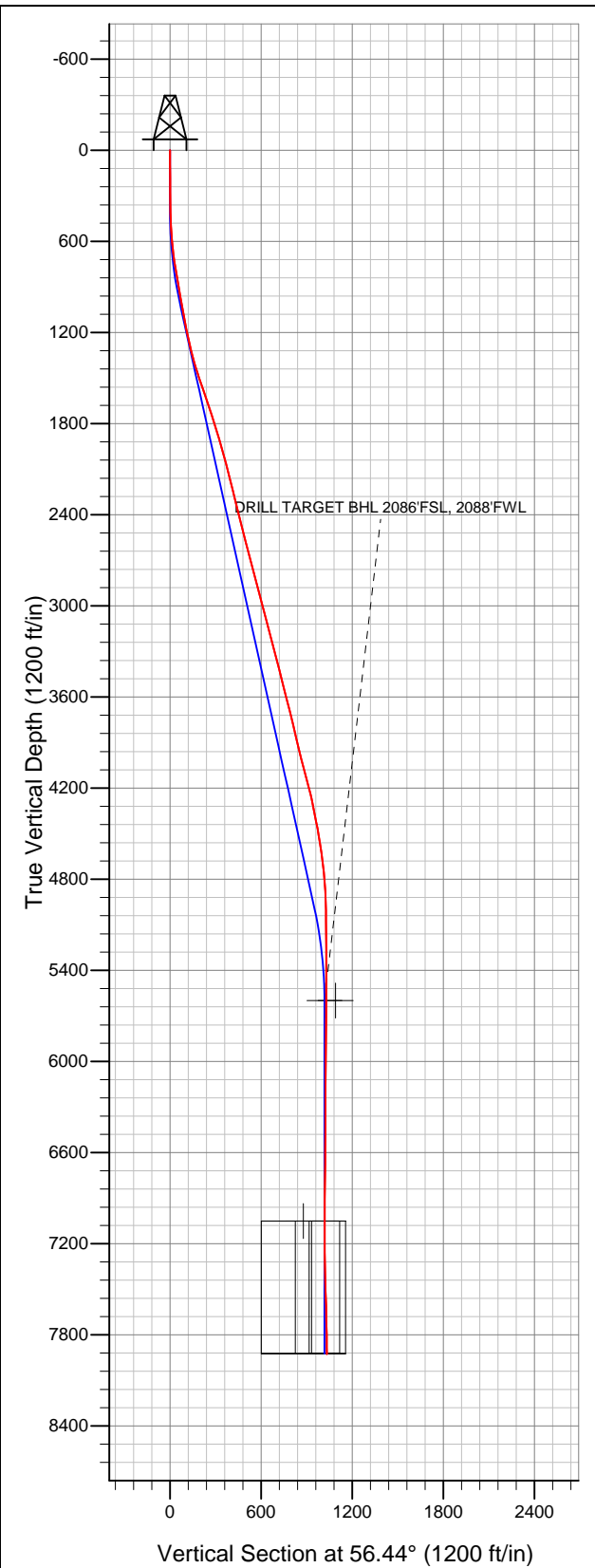


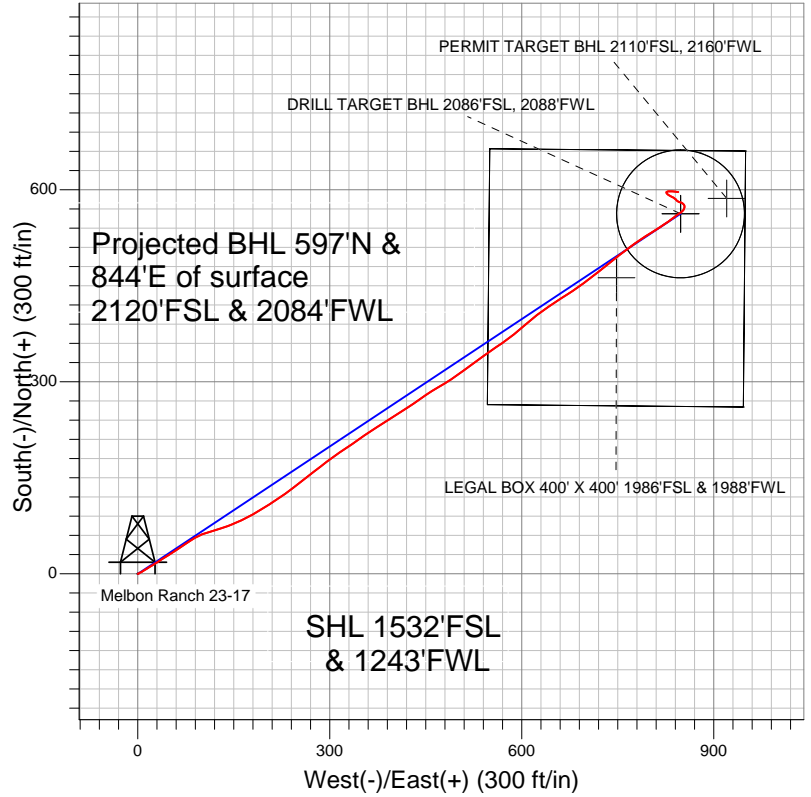
**Well Name: Melbon Ranch 23-17**

Surface Location: Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4940.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1293273.26	3225650.84	40.135610	-104.692930	
Original Well Elev			WELL @ 4952.0ft (Original Well Elev)			



**EnCana Oil & Gas Weld County CO**



- LEGEND
- Wellbore #1
  - Melbon Ranch 23-17, Wellbore #1, Plan #1 (4-16-12) R V0
  - Survey #1

**Final Survey Plot**

Projected Final Survey -  
8054'MD & 7928'TVD @ 1033'VS  
1.00 deg Inc 93.90 deg AZ

Project: SEC.17-T2N-R65W  
Site: Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W  
Well: Melbon Ranch 23-17  
Plan: Wellbore #1



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

**SEC.17-T2N-R65W**

**Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W**

**Melbon Ranch 23-17**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**25 April, 2012**

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Melbon Ranch 23-17
<b>Project:</b>	SEC.17-T2N-R65W	<b>TVD Reference:</b>	WELL @ 4952.0ft (Original Well Elev)
<b>Site:</b>	Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W	<b>MD Reference:</b>	WELL @ 4952.0ft (Original Well Elev)
<b>Well:</b>	Melbon Ranch 23-17	<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.17-T2N-R65W, 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	Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W				
Site Position:		Northing:	1,293,284.19ft	Latitude:	40.135640
From:	Lat/Long	Easting:	3,225,650.74ft	Longitude:	-104.692930
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.52 °

Well	Melbon Ranch 23-17					
Well Position	+N/-S	0.0 ft	Northing:	1,293,273.26 ft	Latitude:	40.135610
	+E/-W	0.0 ft	Easting:	3,225,650.84 ft	Longitude:	-104.692930
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,940.0 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	4/16/2012	8.69	66.82	52,911

<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>	
	5,600.0	0.0	0.0	56.44	

<b>Survey Program</b>	<b>Date</b>	4/25/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
90.0	8,054.0	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	
90.0	0.50	108.00	90.0	-0.1	0.4	0.2	0.56	0.56	0.00	
181.0	0.40	45.80	181.0	0.0	1.0	0.8	0.52	-0.11	-68.35	
272.0	0.30	28.00	272.0	0.4	1.3	1.3	0.16	-0.11	-19.56	
364.0	0.90	61.20	364.0	1.0	2.1	2.3	0.73	0.65	36.09	
455.0	2.00	62.80	455.0	2.0	4.1	4.5	1.21	1.21	1.76	
547.0	4.00	57.60	546.8	4.5	8.2	9.4	2.19	2.17	-5.65	
639.0	6.20	59.50	638.5	8.7	15.2	17.5	2.40	2.39	2.07	
732.0	8.40	57.40	730.7	14.9	25.3	29.3	2.38	2.37	-2.26	
826.0	9.70	58.80	823.5	22.7	37.8	44.1	1.40	1.38	1.49	
891.0	10.20	56.70	887.5	28.7	47.3	55.3	0.95	0.77	-3.23	
985.0	9.60	57.40	980.1	37.5	60.9	71.5	0.65	-0.64	0.74	
1,079.0	10.60	54.00	1,072.7	46.8	74.5	88.0	1.24	1.06	-3.62	

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Melbon Ranch 23-17
<b>Project:</b>	SEC.17-T2N-R65W	<b>TVD Reference:</b>	WELL @ 4952.0ft (Original Well Elev)
<b>Site:</b>	Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W	<b>MD Reference:</b>	WELL @ 4952.0ft (Original Well Elev)
<b>Well:</b>	Melbon Ranch 23-17	<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)
1,172.0	11.30	60.40	1,164.0	56.4	89.3	105.6	1.51	0.75	6.88
1,266.0	12.50	73.20	1,256.0	63.9	107.1	124.5	3.08	1.28	13.62
1,360.0	15.20	72.50	1,347.3	70.5	128.6	146.1	2.88	2.87	-0.74
1,453.0	17.70	66.50	1,436.4	79.8	153.2	171.8	3.25	2.69	-6.45
1,547.0	18.70	60.90	1,525.8	92.8	179.5	200.9	2.14	1.06	-5.96
1,641.0	18.70	57.20	1,614.8	108.3	205.3	231.0	1.26	0.00	-3.94
1,734.0	19.00	54.60	1,702.8	125.2	230.2	261.0	0.96	0.32	-2.80
1,828.0	17.70	51.40	1,792.0	143.0	253.8	290.5	1.75	-1.38	-3.40
1,922.0	16.30	51.90	1,881.9	160.0	275.4	317.9	1.50	-1.49	0.53
2,015.0	14.90	53.20	1,971.5	175.2	295.2	342.9	1.55	-1.51	1.40
2,109.0	15.00	56.30	2,062.3	189.2	315.0	367.1	0.86	0.11	3.30
2,203.0	14.90	55.30	2,153.1	202.8	335.1	391.3	0.29	-0.11	-1.06
2,296.0	14.30	54.70	2,243.1	216.3	354.3	414.8	0.67	-0.65	-0.65
2,390.0	13.80	57.70	2,334.3	229.0	373.2	437.6	0.94	-0.53	3.19
2,484.0	14.20	57.60	2,425.5	241.2	392.4	460.3	0.43	0.43	-0.11
2,577.0	14.60	57.60	2,515.6	253.6	411.9	483.4	0.43	0.43	0.00
2,671.0	13.60	55.80	2,606.8	266.1	431.1	506.3	1.16	-1.06	-1.91
2,765.0	14.20	55.10	2,698.0	278.9	449.7	528.9	0.66	0.64	-0.74
2,858.0	14.50	60.20	2,788.1	291.2	469.1	551.9	1.40	0.32	5.48
2,952.0	14.90	56.30	2,879.0	303.8	489.4	575.8	1.14	0.43	-4.15
3,046.0	15.60	53.30	2,969.7	318.0	509.6	600.5	1.12	0.74	-3.19
3,139.0	14.80	54.20	3,059.5	332.5	529.3	624.8	0.90	-0.86	0.97
3,233.0	15.50	55.10	3,150.2	346.7	549.3	649.4	0.79	0.74	0.96
3,326.0	14.30	55.40	3,240.1	360.3	568.9	673.3	1.29	-1.29	0.32
3,420.0	14.30	51.40	3,331.2	374.1	587.6	696.5	1.05	0.00	-4.26
3,514.0	14.90	48.60	3,422.1	389.4	605.7	720.0	0.99	0.64	-2.98
3,607.0	14.20	52.30	3,512.2	404.3	623.7	743.2	1.25	-0.75	3.98
3,701.0	14.10	56.00	3,603.3	417.7	642.3	766.2	0.97	-0.11	3.94
3,795.0	14.30	57.40	3,694.4	430.4	661.6	789.2	0.42	0.21	1.49
3,888.0	13.50	54.00	3,784.7	442.9	680.1	811.6	1.23	-0.86	-3.66
3,982.0	13.10	54.90	3,876.2	455.5	697.6	833.2	0.48	-0.43	0.96
4,076.0	13.30	53.00	3,967.7	468.2	715.0	854.6	0.51	0.21	-2.02
4,169.0	15.10	50.40	4,057.9	482.3	732.9	877.3	2.05	1.94	-2.80
4,263.0	15.20	51.90	4,148.6	497.7	752.0	901.8	0.43	0.11	1.60
4,357.0	13.50	53.20	4,239.7	511.9	770.5	925.0	1.84	-1.81	1.38
4,450.0	11.20	58.10	4,330.5	523.2	786.9	944.9	2.72	-2.47	5.27
4,544.0	11.00	57.70	4,422.7	532.8	802.2	963.0	0.23	-0.21	-0.43
4,638.0	9.80	56.70	4,515.2	542.0	816.5	980.0	1.29	-1.28	-1.06
4,731.0	8.30	54.60	4,607.0	550.2	828.5	994.6	1.65	-1.61	-2.26
4,825.0	7.20	52.60	4,700.2	557.7	838.7	1,007.2	1.20	-1.17	-2.13
4,919.0	5.00	55.80	4,793.6	563.6	846.8	1,017.2	2.37	-2.34	3.40
5,012.0	2.50	41.20	4,886.4	567.4	851.5	1,023.2	2.86	-2.69	-15.70
5,106.0	1.10	18.40	4,980.4	569.8	853.1	1,025.9	1.64	-1.49	-24.26
5,200.0	0.80	18.50	5,074.4	571.3	853.6	1,027.1	0.32	-0.32	0.11
5,293.0	1.10	16.20	5,167.4	572.8	854.1	1,028.3	0.33	0.32	-2.47
5,387.0	1.10	346.40	5,261.3	574.5	854.1	1,029.3	0.60	0.00	-31.70
5,481.0	0.90	331.20	5,355.3	576.0	853.6	1,029.7	0.35	-0.21	-16.17
5,574.0	0.90	319.30	5,448.3	577.2	852.7	1,029.7	0.20	0.00	-12.80
5,668.0	1.00	309.30	5,542.3	578.3	851.6	1,029.3	0.21	0.11	-10.64
5,724.9	0.94	313.60	5,599.2	578.9	850.9	1,029.1	0.17	-0.11	7.54
<b>PERMIT TARGET BHL 2110'FSL, 2160'FWL</b>									
5,725.5	0.94	313.60	5,599.8	578.9	850.9	1,029.1	0.00	0.00	0.00
<b>DRILL TARGET BHL 2086'FSL, 2088'FWL</b>									
5,762.0	0.90	316.70	5,636.3	579.4	850.5	1,029.0	0.17	-0.10	8.52

<b>Company:</b>	EnCana Oil & Gas Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Melbon Ranch 23-17
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<b>Site:</b>	Melbon Ranch 2-4-17 Pad Sec.17-T2N-R65W	<b>MD Reference:</b>	WELL @ 4952.0ft (Original Well Elev)
<b>Well:</b>	Melbon Ranch 23-17	<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)
5,855.0	0.70	287.30	5,729.3	580.1	849.4	1,028.5	0.48	-0.22	-31.61
5,949.0	0.70	270.40	5,823.3	580.2	848.3	1,027.7	0.22	0.00	-17.98
6,043.0	0.80	288.00	5,917.3	580.4	847.1	1,026.8	0.27	0.11	18.72
6,136.0	0.90	293.30	6,010.3	580.9	845.8	1,026.0	0.14	0.11	5.70
6,230.0	1.00	298.70	6,104.2	581.6	844.4	1,025.2	0.14	0.11	5.74
6,324.0	1.10	301.50	6,198.2	582.5	842.9	1,024.4	0.12	0.11	2.98
6,417.0	1.10	318.20	6,291.2	583.6	841.6	1,023.9	0.34	0.00	17.96
6,512.0	0.90	321.10	6,386.2	584.9	840.5	1,023.7	0.22	-0.21	3.05
6,606.0	0.90	299.60	6,480.2	585.8	839.4	1,023.3	0.36	0.00	-22.87
6,700.0	0.70	319.50	6,574.2	586.6	838.4	1,022.9	0.36	-0.21	21.17
6,794.0	0.80	299.40	6,668.2	587.4	837.4	1,022.5	0.30	0.11	-21.38
6,889.0	0.90	299.30	6,763.2	588.1	836.2	1,021.9	0.11	0.11	-0.11
6,983.0	1.40	300.50	6,857.1	589.0	834.6	1,021.1	0.53	0.53	1.28
7,077.0	1.80	296.40	6,951.1	590.2	832.3	1,019.8	0.44	0.43	-4.36
7,172.0	3.10	304.20	7,046.0	592.3	828.8	1,018.1	1.41	1.37	8.21
7,176.2	3.03	304.82	7,050.2	592.5	828.6	1,018.0	1.84	-1.66	14.73
TARGET CIRCLE 2086'FSL & 2088'FWL									
7,176.8	3.02	304.90	7,050.8	592.5	828.6	1,018.0	1.84	-1.66	15.12
LEGAL BOX 400' X 400' 1986'FSL & 1988'FWL									
7,266.0	1.70	329.70	7,139.9	595.0	826.0	1,017.2	1.84	-1.48	27.79
7,360.0	1.30	57.40	7,233.9	596.8	826.2	1,018.4	2.23	-0.43	93.30
7,454.0	1.80	79.50	7,327.9	597.6	828.5	1,020.8	0.82	0.53	23.51
7,549.0	2.30	96.20	7,422.8	597.7	831.9	1,023.6	0.81	0.53	17.58
7,643.0	1.50	87.30	7,516.8	597.5	835.0	1,026.1	0.90	-0.85	-9.47
7,737.0	1.60	99.00	7,610.7	597.4	837.5	1,028.2	0.35	0.11	12.45
7,832.0	1.60	92.00	7,705.7	597.1	840.2	1,030.2	0.21	0.00	-7.37
7,926.0	0.90	107.00	7,799.7	596.9	842.2	1,031.8	0.82	-0.74	15.96
8,009.0	1.00	93.90	7,882.7	596.6	843.5	1,032.7	0.29	0.12	-15.78
8,054.0	1.00	93.90	7,927.7	596.6	844.3	1,033.4	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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