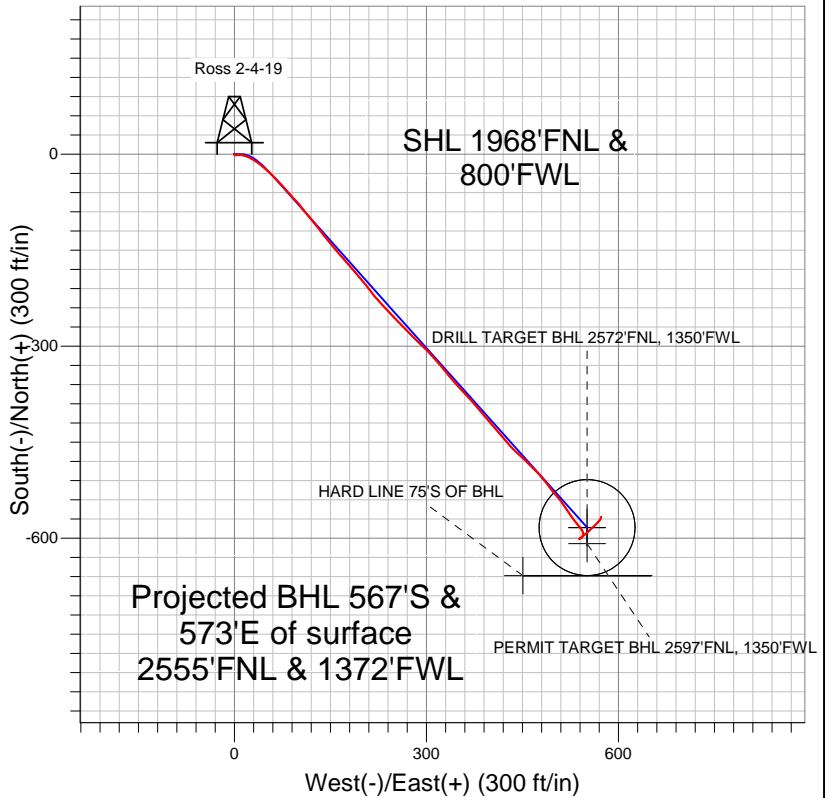


Well Name: Ross 2-4-19

Surface Location: Ross 11-19 Pad Sec.19-T2N-R68W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4988.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1288955.73	3125131.51	40.125710	-105.052520	
		Original Well Elev	WELL @ 5001.0ft (Original Well Elev)			

EnCana Oil & Gas Weld County CO



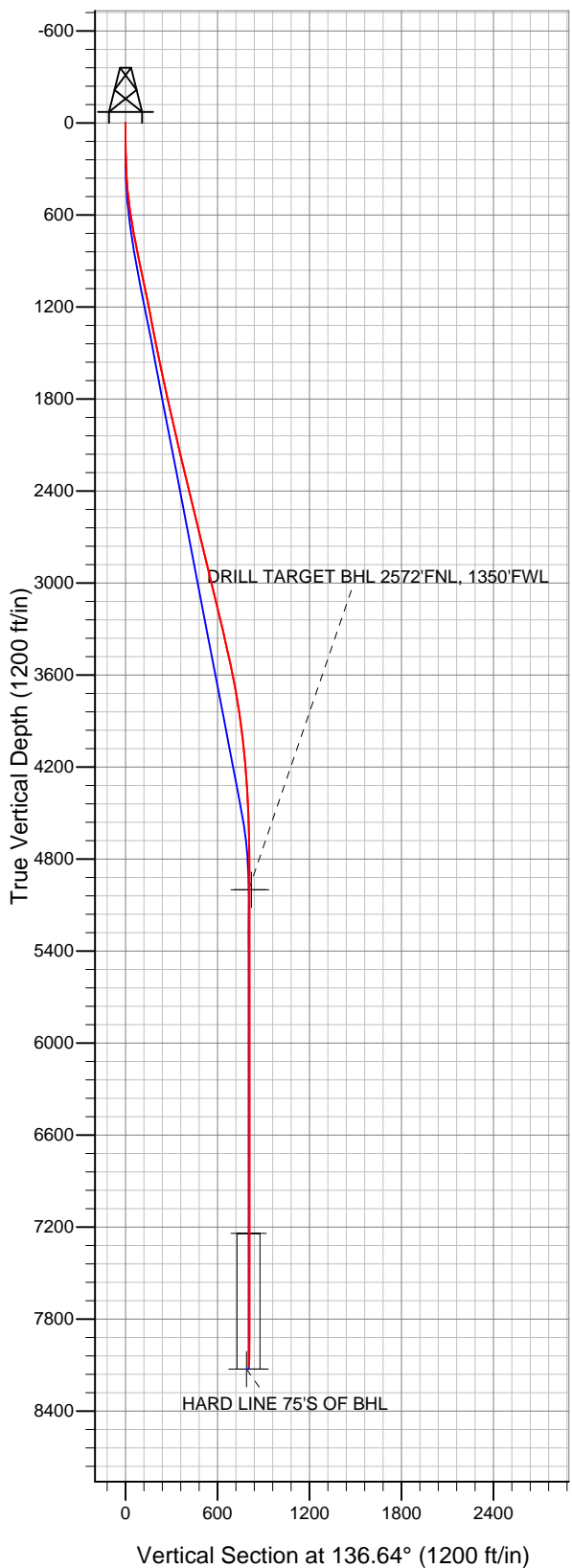
LEGEND

- Survey #1
- Ross 2-4-19, Wellbore #1, Plan #1 (1-16-12) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
8190'MD & 8106'TVD @ 806'VS
1.10 deg Inc 11.00 deg AZ

Project: SEC.19-T2N-R68W
Site: Ross 11-19 Pad Sec.19-T2N-R68W
Well: Ross 2-4-19
Plan: Wellbore #1





EnCana Oil & Gas Weld County CO

SEC.19-T2N-R68W

Ross 11-19 Pad Sec.19-T2N-R68W

Ross 2-4-19

Wellbore #1

Survey: Survey #1

Standard Survey Report

20 January, 2012

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Ross 2-4-19
Project:	SEC.19-T2N-R68W	TVD Reference:	WELL @ 5001.0ft (Original Well Elev)
Site:	Ross 11-19 Pad Sec.19-T2N-R68W	MD Reference:	WELL @ 5001.0ft (Original Well Elev)
Well:	Ross 2-4-19	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.19-T2N-R68W, Weld 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	Ross 11-19 Pad Sec.19-T2N-R68W		
Site Position:		Northing:	1,288,988.53ft
From:	Lat/Long	Easting:	3,125,131.35ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.125800
		Longitude:	-105.052520
		Grid Convergence:	0.29 °

Well	Ross 2-4-19		
Well Position	+N/-S	0.0 ft	Northing: 1,288,955.73 ft
	+E/-W	0.0 ft	Easting: 3,125,131.51 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.125710
		Longitude:	-105.052520
		Ground Level:	4,988.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/6/2012	8.92	66.76	52,895

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	136.64	

Survey Program	Date	1/20/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
102.0	8,190.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
102.0	0.70	191.60	102.0	-0.6	-0.1	0.4	0.69	0.69	0.00	
193.0	1.00	116.50	193.0	-1.5	0.5	1.4	1.17	0.33	-82.53	
285.0	3.60	85.00	284.9	-1.6	4.1	4.0	3.04	2.83	-34.24	
377.0	4.70	92.90	376.7	-1.6	10.7	8.5	1.34	1.20	8.59	
469.0	6.30	109.50	468.2	-3.4	19.2	15.7	2.44	1.74	18.04	
560.0	8.00	123.40	558.5	-8.6	29.2	26.3	2.65	1.87	15.27	
652.0	9.90	126.90	649.4	-16.9	40.9	40.3	2.15	2.07	3.80	
744.0	10.80	134.40	739.9	-27.6	53.4	56.7	1.76	0.98	8.15	
776.0	11.30	135.00	771.3	-32.0	57.7	62.9	1.60	1.56	1.88	
840.0	11.30	135.00	834.1	-40.8	66.6	75.4	0.00	0.00	0.00	
902.0	11.90	136.20	894.8	-49.7	75.3	87.9	1.04	0.97	1.94	
990.0	11.70	138.80	981.0	-63.0	87.5	105.9	0.65	-0.23	2.95	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Ross 2-4-19
Project:	SEC.19-T2N-R68W	TVD Reference:	WELL @ 5001.0ft (Original Well Elev)
Site:	Ross 11-19 Pad Sec.19-T2N-R68W	MD Reference:	WELL @ 5001.0ft (Original Well Elev)
Well:	Ross 2-4-19	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)	
1,077.0	11.80	139.20	1,066.1	-76.4	99.1	123.6	0.15	0.11	0.46	
1,164.0	11.50	141.80	1,151.4	-89.9	110.3	141.1	0.69	-0.34	2.99	
1,252.0	11.30	140.10	1,237.6	-103.4	121.2	158.4	0.44	-0.23	-1.93	
1,339.0	11.30	142.20	1,322.9	-116.7	131.9	175.4	0.47	0.00	2.41	
1,426.0	11.00	142.20	1,408.3	-130.0	142.2	192.2	0.34	-0.34	0.00	
1,513.0	10.70	140.40	1,493.7	-142.8	152.5	208.5	0.52	-0.34	-2.07	
1,601.0	11.40	138.80	1,580.1	-155.6	163.4	225.3	0.87	0.80	-1.82	
1,688.0	12.30	139.00	1,665.2	-169.1	175.2	243.2	1.04	1.03	0.23	
1,775.0	12.80	139.50	1,750.2	-183.4	187.5	262.1	0.59	0.57	0.57	
1,863.0	12.60	139.50	1,836.0	-198.1	200.1	281.4	0.23	-0.23	0.00	
1,950.0	13.20	143.20	1,920.8	-213.3	212.2	300.7	1.17	0.69	4.25	
2,037.0	13.10	138.30	2,005.5	-228.6	224.7	320.5	1.29	-0.11	-5.63	
2,125.0	13.30	137.20	2,091.2	-243.5	238.2	340.6	0.36	0.23	-1.25	
2,212.0	13.60	134.80	2,175.8	-258.0	252.3	360.8	0.73	0.34	-2.76	
2,299.0	13.70	137.60	2,260.4	-272.8	266.5	381.3	0.77	0.11	3.22	
2,386.0	13.40	132.80	2,345.0	-287.3	280.8	401.7	1.34	-0.34	-5.52	
2,474.0	13.40	133.90	2,430.6	-301.3	295.6	422.0	0.29	0.00	1.25	
2,561.0	13.50	139.00	2,515.2	-315.9	309.6	442.2	1.37	0.11	5.86	
2,648.0	13.60	139.50	2,599.8	-331.4	322.9	462.6	0.18	0.11	0.57	
2,736.0	13.40	141.00	2,685.3	-347.2	336.0	483.1	0.46	-0.23	1.70	
2,823.0	13.50	137.90	2,769.9	-362.5	349.2	503.3	0.84	0.11	-3.56	
2,910.0	13.60	136.00	2,854.5	-377.4	363.1	523.7	0.52	0.11	-2.18	
2,998.0	13.80	141.10	2,940.0	-393.0	376.8	544.5	1.39	0.23	5.80	
3,085.0	13.50	137.00	3,024.6	-408.5	390.3	565.0	1.16	-0.34	-4.71	
3,172.0	13.70	139.90	3,109.1	-423.9	403.8	585.4	0.82	0.23	3.33	
3,259.0	14.10	141.10	3,193.6	-440.0	417.1	606.3	0.57	0.46	1.38	
3,347.0	13.70	137.10	3,279.0	-456.0	431.0	627.4	1.18	-0.45	-4.55	
3,434.0	12.00	131.80	3,363.8	-469.5	444.7	646.7	2.38	-1.95	-6.09	
3,521.0	12.70	134.10	3,448.8	-482.2	458.3	665.3	0.98	0.80	2.64	
3,609.0	12.20	135.70	3,534.7	-495.6	471.8	684.2	0.69	-0.57	1.82	
3,696.0	12.60	142.00	3,619.7	-509.7	484.0	702.9	1.62	0.46	7.24	
3,783.0	9.70	143.00	3,705.1	-523.0	494.3	719.6	3.34	-3.33	1.15	
3,871.0	8.20	137.60	3,792.0	-533.6	503.0	733.3	1.95	-1.70	-6.14	
3,958.0	8.00	144.80	3,878.1	-543.1	510.7	745.5	1.19	-0.23	8.28	
4,045.0	7.70	145.30	3,964.3	-552.8	517.5	757.2	0.35	-0.34	0.57	
4,132.0	6.60	147.40	4,050.6	-561.8	523.5	767.9	1.30	-1.26	2.41	
4,220.0	5.20	140.40	4,138.2	-569.2	528.7	776.8	1.79	-1.59	-7.95	
4,307.0	4.30	143.40	4,224.9	-574.8	533.2	784.0	1.07	-1.03	3.45	
4,394.0	3.60	139.50	4,311.7	-579.5	536.9	790.0	0.86	-0.80	-4.48	
4,482.0	3.20	139.30	4,399.5	-583.5	540.3	795.2	0.45	-0.45	-0.23	
4,569.0	2.70	151.30	4,486.4	-587.1	542.9	799.6	0.91	-0.57	13.79	
4,656.0	2.40	162.00	4,573.3	-590.6	544.4	803.2	0.65	-0.34	12.30	
4,744.0	1.30	180.50	4,661.3	-593.4	545.0	805.6	1.41	-1.25	21.02	
4,831.0	0.70	204.90	4,748.2	-594.9	544.8	806.5	0.83	-0.69	28.05	
4,962.0	0.70	216.30	4,879.2	-596.2	544.0	807.0	0.11	0.00	8.70	
5,082.6	0.52	213.35	4,999.8	-597.3	543.2	807.2	0.15	-0.15	-2.44	
DRILL TARGET BHL 2572'FNL, 1350'FWL										
5,082.8	0.52	213.35	5,000.0	-597.3	543.2	807.2	0.00	0.00	0.00	
PERMIT TARGET BHL 2597'FNL, 1350'FWL										
5,093.0	0.50	213.00	5,010.2	-597.4	543.2	807.2	0.16	-0.16	-3.49	
5,224.0	0.50	222.50	5,141.2	-598.3	542.5	807.4	0.06	0.00	7.25	
5,355.0	0.50	223.50	5,272.2	-599.1	541.7	807.5	0.01	0.00	0.76	
5,486.0	0.50	234.10	5,403.2	-599.8	540.8	807.4	0.07	0.00	8.09	
5,617.0	0.50	243.40	5,534.2	-600.4	539.9	807.2	0.06	0.00	7.10	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Ross 2-4-19
Project:	SEC.19-T2N-R68W	TVD Reference:	WELL @ 5001.0ft (Original Well Elev)
Site:	Ross 11-19 Pad Sec.19-T2N-R68W	MD Reference:	WELL @ 5001.0ft (Original Well Elev)
Well:	Ross 2-4-19	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)
5,748.0	0.40	224.40	5,665.2	-601.0	539.0	807.1	0.14	-0.08	-14.50
5,878.0	0.10	309.30	5,795.2	-601.3	538.6	807.0	0.31	-0.23	65.31
6,005.0	0.50	43.20	5,922.2	-600.8	538.9	806.8	0.41	0.31	73.94
6,140.0	0.30	84.50	6,057.2	-600.3	539.7	807.0	0.25	-0.15	30.59
6,271.0	0.20	61.00	6,188.2	-600.2	540.2	807.3	0.11	-0.08	-17.94
6,402.0	0.20	90.30	6,319.2	-600.1	540.6	807.5	0.08	0.00	22.37
6,533.0	0.40	60.80	6,450.2	-599.9	541.3	807.8	0.19	0.15	-22.52
6,664.0	0.60	52.70	6,581.2	-599.2	542.2	807.9	0.16	0.15	-6.18
6,795.0	0.90	45.80	6,712.2	-598.1	543.5	808.0	0.24	0.23	-5.27
6,926.0	1.30	41.80	6,843.1	-596.3	545.2	807.9	0.31	0.31	-3.05
7,057.0	1.40	49.00	6,974.1	-594.1	547.4	807.8	0.15	0.08	5.50
7,188.0	1.90	54.80	7,105.1	-591.8	550.4	808.2	0.40	0.38	4.43
7,319.0	3.80	46.30	7,235.9	-587.6	555.3	808.5	1.48	1.45	-6.49
7,324.1	3.77	46.24	7,241.0	-587.3	555.6	808.4	0.54	-0.54	-1.25
TARGET CIRCLE 2572'FNL, 1350'FWL									
7,450.0	3.10	44.30	7,366.7	-582.0	560.9	808.3	0.54	-0.53	-1.54
7,581.0	2.20	46.50	7,497.5	-577.7	565.2	808.1	0.69	-0.69	1.68
7,712.0	1.80	44.40	7,628.4	-574.5	568.5	808.0	0.31	-0.31	-1.60
7,843.0	1.10	43.90	7,759.4	-572.2	570.8	807.9	0.53	-0.53	-0.38
7,974.0	1.00	19.80	7,890.4	-570.2	572.1	807.3	0.34	-0.08	-18.40
8,140.0	1.10	11.00	8,056.3	-567.3	572.9	805.7	0.11	0.06	-5.30
8,190.0	1.10	11.00	8,106.3	-566.3	573.0	805.2	0.00	0.00	0.00
HARD LINE 75'S OF BHL									

Checked By: _____	Approved By: _____	Date: _____
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