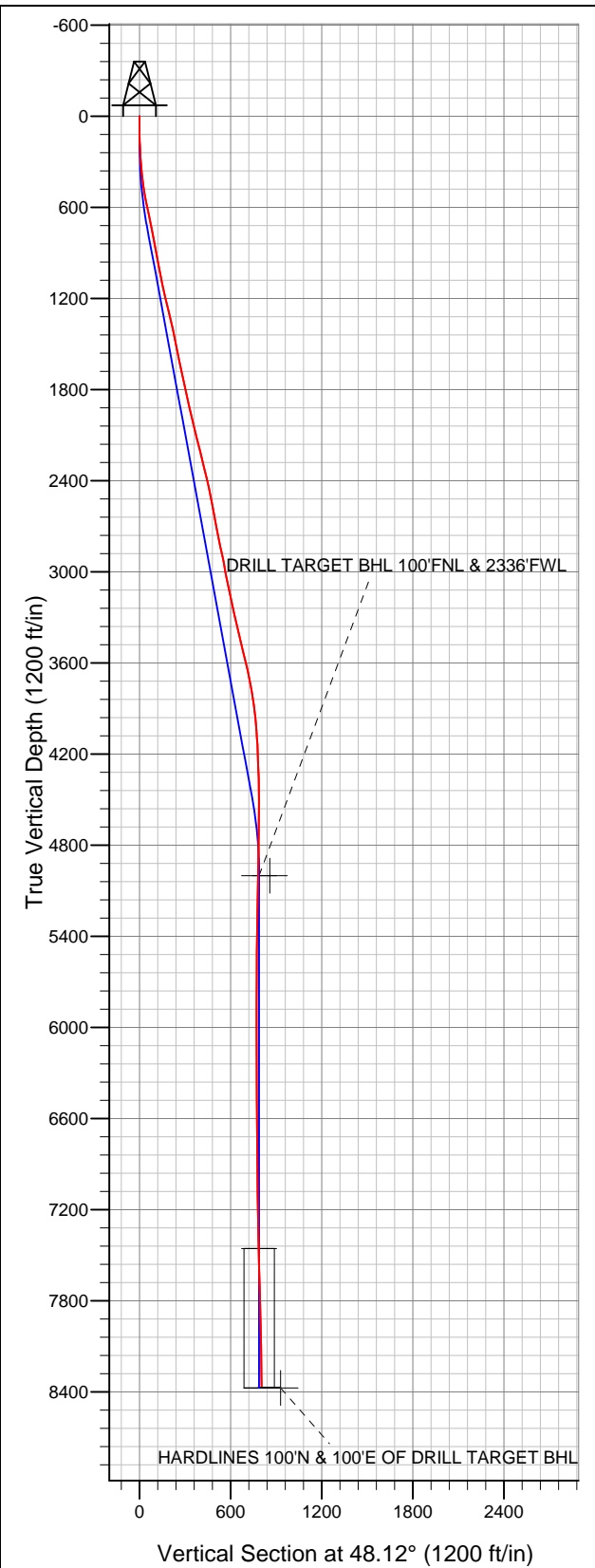


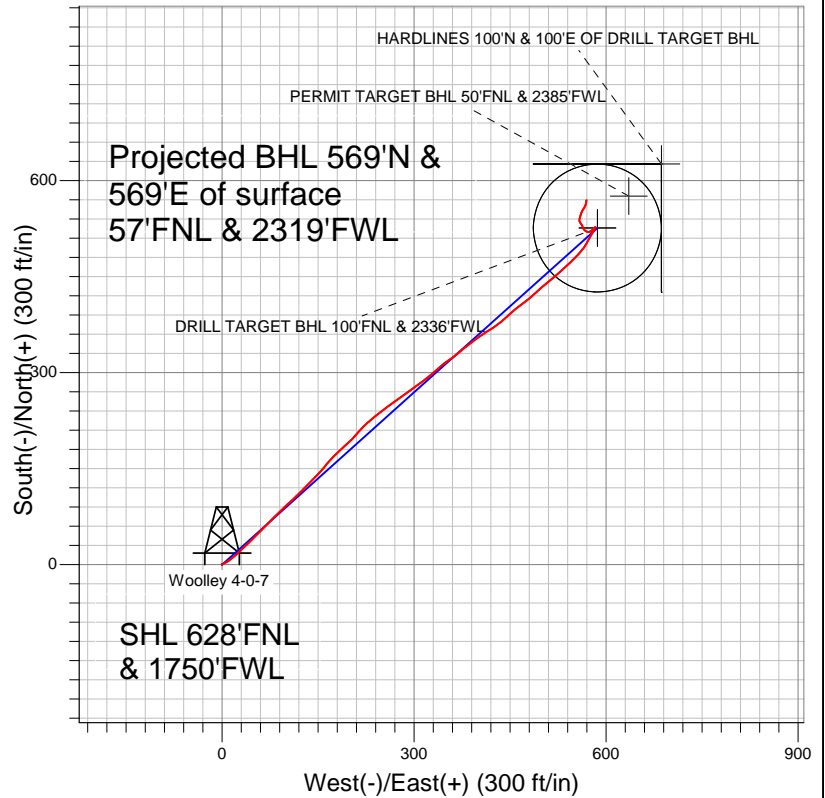
Well Name: Woolley 4-0-7

Surface Location: Woolley 4-0-7 Pad Sec.7-T1N-R68W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 5059.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1269133.04	3126160.69	40.071280	-105.049200	
		Original Well Elev	WELL @ 5072.0ft (Original Well Elev)			



EnCana Oil & Gas Weld County CO



LEGEND

- Survey #1
- ◇ Woolley 4-0-7, Wellbore #1, Plan #1 (2-22-12) V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
8443'MD & 8362'TVD @ 804'VS
1.10 deg Inc 11.90 deg AZ

Project: SEC.7-T1N-R68W
Site: Woolley 4-0-7 Pad Sec.7-T1N-R68W
Well: Woolley 4-0-7
Plan: Wellbore #1



EnCana Oil & Gas Weld County CO

SEC.7-T1N-R68W

Woolley 4-0-7 Pad Sec.7-T1N-R68W

Woolley 4-0-7

Wellbore #1

Survey: Survey #1

Standard Survey Report

07 March, 2012

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Woolley 4-0-7
Project:	SEC.7-T1N-R68W	TVD Reference:	WELL @ 5072.0ft (Original Well Elev)
Site:	Woolley 4-0-7 Pad Sec.7-T1N-R68W	MD Reference:	WELL @ 5072.0ft (Original Well Elev)
Well:	Woolley 4-0-7	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.7-T1N-R68W, Weld County, CO		
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		Woolley 4-0-7 Pad Sec.7-T1N-R68W			
Site Position:		Northing:	1,269,133.05ft	Latitude:	40.071280
From:	Lat/Long	Easting:	3,126,160.69ft	Longitude:	-105.049200
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.29 °

Well	Woolley 4-0-7					
Well Position	+N/-S	0.0 ft	Northing:	1,269,133.04 ft	Latitude:	40.071280
	+E/-W	0.0 ft	Easting:	3,126,160.69 ft	Longitude:	-105.049200
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,059.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/22/2012	8.89	66.71	52,853

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 (°)	
	5,000.0	0.0	0.0	48.12	

Survey Program	Date	3/7/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
71.0	8,443.0	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	
71.0	0.10	57.40	71.0	0.0	0.1	0.1	0.14	0.14	0.00	
163.0	1.40	63.90	163.0	0.6	1.1	1.2	1.41	1.41	7.07	
254.0	3.40	61.30	253.9	2.4	4.5	4.9	2.20	2.20	-2.86	
345.0	5.30	57.10	344.6	5.9	10.4	11.7	2.12	2.09	-4.62	
437.0	7.50	49.00	436.1	12.2	18.5	21.9	2.58	2.39	-8.80	
529.0	9.80	45.50	527.0	21.6	28.6	35.7	2.56	2.50	-3.80	
621.0	11.70	46.20	617.4	33.6	40.9	52.9	2.07	2.07	0.76	
712.0	12.60	45.80	706.4	46.9	54.7	72.0	0.99	0.99	-0.44	
786.0	11.90	43.90	778.7	58.0	65.8	87.7	1.09	-0.95	-2.57	
858.0	10.40	43.70	849.3	68.0	75.4	101.6	2.08	-2.08	-0.28	
945.0	9.80	46.00	935.0	78.9	86.2	116.8	0.83	-0.69	2.64	
1,033.0	10.50	46.70	1,021.6	89.6	97.4	132.3	0.81	0.80	0.80	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Woolley 4-0-7
Project:	SEC.7-T1N-R68W	TVD Reference:	WELL @ 5072.0ft (Original Well Elev)
Site:	Woolley 4-0-7 Pad Sec.7-T1N-R68W	MD Reference:	WELL @ 5072.0ft (Original Well Elev)
Well:	Woolley 4-0-7	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)	
1,120.0	12.60	47.60	1,106.8	101.4	110.2	149.7	2.42	2.41	1.03	
1,207.0	13.10	44.60	1,191.6	114.8	124.1	169.0	0.96	0.57	-3.45	
1,295.0	13.60	44.90	1,277.3	129.2	138.4	189.3	0.57	0.57	0.34	
1,382.0	13.20	42.30	1,361.9	143.8	152.3	209.4	0.83	-0.46	-2.99	
1,469.0	12.10	40.00	1,446.8	158.2	164.9	228.3	1.39	-1.26	-2.64	
1,556.0	11.40	43.70	1,532.0	171.4	176.7	245.9	1.18	-0.80	4.25	
1,644.0	11.50	51.60	1,618.2	183.1	189.5	263.4	1.78	0.11	8.98	
1,731.0	12.10	43.30	1,703.4	195.1	202.6	281.1	2.07	0.69	-9.54	
1,818.0	11.90	40.40	1,788.5	208.6	214.7	299.1	0.73	-0.23	-3.33	
1,906.0	12.80	47.70	1,874.4	222.1	227.8	317.8	2.05	1.02	8.30	
1,993.0	13.80	53.50	1,959.1	234.7	243.2	337.8	1.92	1.15	6.67	
2,080.0	13.40	53.40	2,043.7	246.9	259.7	358.2	0.46	-0.46	-0.11	
2,168.0	14.20	54.60	2,129.1	259.2	276.6	379.0	0.97	0.91	1.36	
2,255.0	14.20	53.50	2,213.5	271.8	293.9	400.3	0.31	0.00	-1.26	
2,342.0	13.90	52.80	2,297.9	284.4	310.8	421.3	0.40	-0.34	-0.80	
2,429.0	13.10	51.30	2,382.5	296.9	326.8	441.6	1.00	-0.92	-1.72	
2,517.0	12.40	48.10	2,468.3	309.5	341.7	461.0	1.13	-0.80	-3.64	
2,604.0	9.90	57.90	2,553.7	319.7	354.9	477.7	3.60	-2.87	11.26	
2,691.0	10.40	50.00	2,639.3	328.7	367.3	492.9	1.70	0.57	-9.08	
2,779.0	12.10	49.00	2,725.6	339.9	380.3	510.1	1.94	1.93	-1.14	
2,866.0	12.00	56.20	2,810.7	350.9	394.7	528.1	1.73	-0.11	8.28	
2,953.0	11.30	56.40	2,895.9	360.6	409.4	545.5	0.81	-0.80	0.23	
3,041.0	9.80	56.40	2,982.4	369.5	422.8	561.5	1.70	-1.70	0.00	
3,128.0	12.10	51.10	3,067.8	379.4	436.0	577.9	2.88	2.64	-6.09	
3,215.0	13.00	46.70	3,152.7	391.8	450.3	596.8	1.51	1.03	-5.06	
3,302.0	12.40	54.10	3,237.6	404.0	465.0	615.9	1.99	-0.69	8.51	
3,390.0	12.00	50.40	3,323.6	415.4	479.7	634.4	1.00	-0.45	-4.20	
3,477.0	12.80	46.70	3,408.6	427.7	493.6	653.1	1.30	0.92	-4.25	
3,564.0	15.20	51.10	3,493.0	441.5	509.5	674.1	3.02	2.76	5.06	
3,652.0	13.90	48.60	3,578.2	455.7	526.4	696.2	1.64	-1.48	-2.84	
3,739.0	11.50	46.00	3,663.1	468.7	540.5	715.3	2.84	-2.76	-2.99	
3,826.0	10.50	45.80	3,748.5	480.2	552.4	731.9	1.15	-1.15	-0.23	
3,914.0	8.70	36.80	3,835.2	491.2	562.2	746.4	2.66	-2.05	-10.23	
4,001.0	6.80	31.60	3,921.4	500.8	568.8	757.8	2.33	-2.18	-5.98	
4,088.0	5.40	28.10	4,007.9	508.8	573.4	766.6	1.66	-1.61	-4.02	
4,175.0	3.70	28.60	4,094.7	514.9	576.7	773.1	1.95	-1.95	0.57	
4,263.0	2.70	35.10	4,182.5	519.1	579.3	777.8	1.21	-1.14	7.39	
4,350.0	2.30	26.50	4,269.4	522.3	581.2	781.4	0.63	-0.46	-9.89	
4,437.0	2.00	10.10	4,356.4	525.4	582.3	784.2	0.78	-0.34	-18.85	
4,525.0	0.60	93.30	4,444.4	526.9	583.0	785.8	2.29	-1.59	94.55	
4,699.0	0.20	226.50	4,618.4	526.6	583.7	786.1	0.43	-0.23	76.55	
4,874.0	1.10	242.90	4,793.3	525.6	582.0	784.2	0.52	0.51	9.37	
5,048.0	1.10	219.80	4,967.3	523.6	579.4	780.9	0.25	0.00	-13.28	
5,079.3	1.08	221.97	4,998.6	523.1	579.0	780.3	0.15	-0.07	6.94	
PERMIT TARGET BHL 50'FNL & 2385'FWL										
5,080.6	1.08	222.06	4,999.9	523.1	579.0	780.3	0.15	-0.07	7.08	
DRILL TARGET BHL 100'FNL & 2336'FWL										
5,223.0	1.00	233.00	5,142.3	521.4	577.1	777.7	0.15	-0.05	7.68	
5,398.0	0.90	246.20	5,317.3	519.9	574.6	774.9	0.14	-0.06	7.54	
5,572.0	0.60	270.80	5,491.2	519.4	572.5	772.9	0.25	-0.17	14.14	
5,747.0	0.90	289.30	5,666.2	519.8	570.3	771.6	0.22	0.17	10.57	
5,921.0	0.90	303.00	5,840.2	521.0	567.8	770.6	0.12	0.00	7.87	
6,096.0	0.90	317.00	6,015.2	522.8	565.7	770.2	0.13	0.00	8.00	
6,271.0	1.20	341.60	6,190.2	525.5	564.2	770.9	0.31	0.17	14.06	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Woolley 4-0-7
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Site:	Woolley 4-0-7 Pad Sec.7-T1N-R68W	MD Reference:	WELL @ 5072.0ft (Original Well Elev)
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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)	
6,445.0	1.00	336.00	6,364.1	528.6	563.0	772.1	0.13	-0.11	-3.22	
6,620.0	1.00	320.60	6,539.1	531.2	561.4	772.6	0.15	0.00	-8.80	
6,794.0	1.10	336.90	6,713.1	533.9	559.8	773.2	0.18	0.06	9.37	
6,969.0	0.70	321.80	6,888.1	536.3	558.5	773.8	0.26	-0.23	-8.63	
7,144.0	1.60	13.50	7,063.0	539.5	558.4	775.9	0.74	0.51	29.54	
7,318.0	1.60	18.60	7,236.9	544.2	559.8	780.0	0.08	0.00	2.93	
7,493.0	1.30	15.00	7,411.9	548.4	561.0	783.8	0.18	-0.17	-2.06	
7,536.8	1.36	19.73	7,455.7	549.4	561.4	784.7	0.29	0.15	10.79	
TARGET CIRCLE 100'FNL & 2336'FWL										
7,667.0	1.60	31.20	7,585.8	552.4	562.8	787.8	0.29	0.18	8.81	
7,842.0	1.60	28.90	7,760.8	556.6	565.3	792.4	0.04	0.00	-1.31	
8,017.0	1.40	31.70	7,935.7	560.6	567.6	796.8	0.12	-0.11	1.60	
8,191.0	1.10	359.60	8,109.7	564.1	568.7	800.0	0.43	-0.17	-18.45	
8,393.0	1.10	11.90	8,311.6	567.9	569.1	802.8	0.12	0.00	6.09	
8,443.0	1.10	11.90	8,361.6	568.8	569.3	803.6	0.00	0.00	0.00	
HARDLINES 100'N & 100'E OF DRILL TARGET BHL										

Checked By: _____	Approved By: _____	Date: _____
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