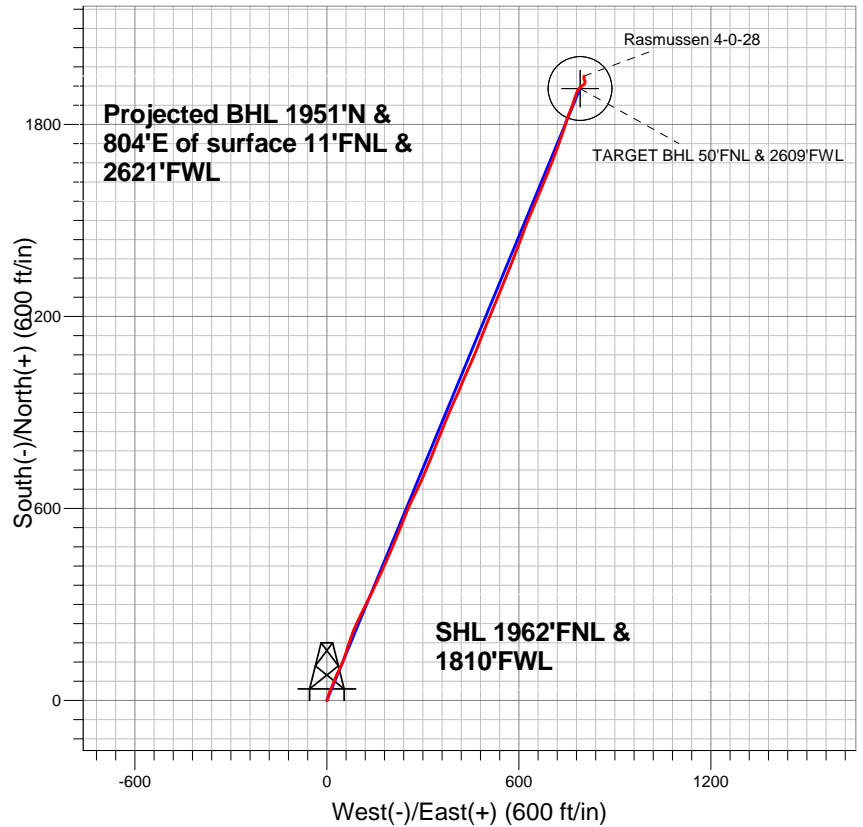
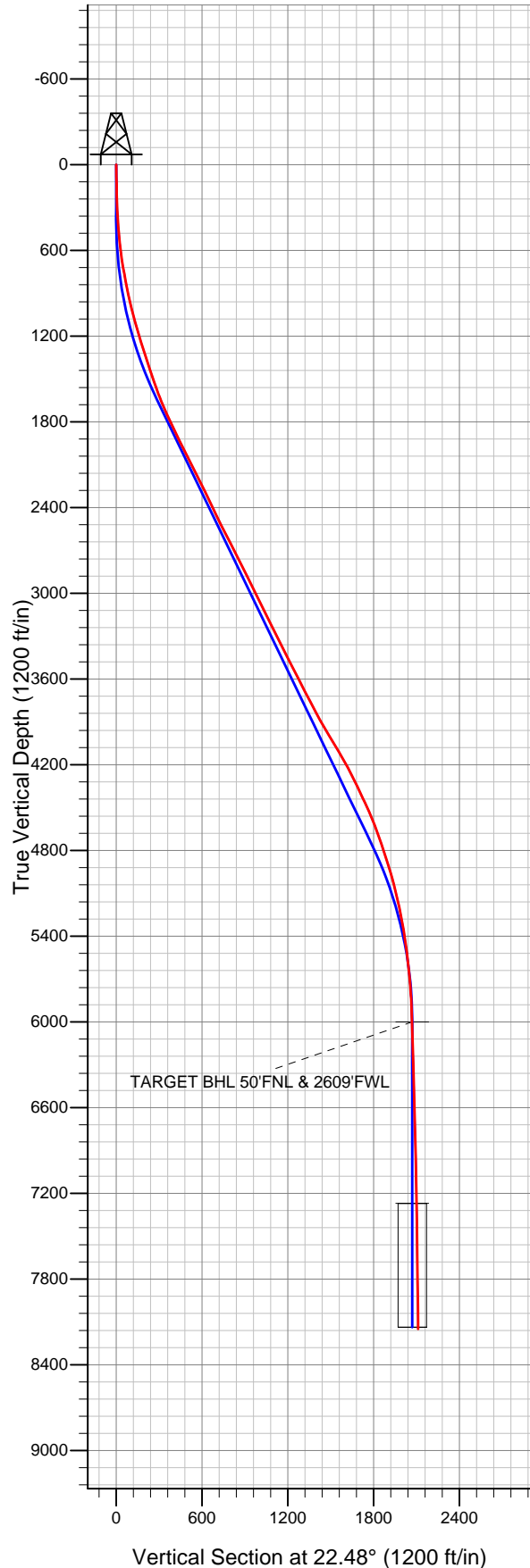





EnCana Oil & Gas Weld County CO



LEGEND

-  Rasmussen 4-0-28, Wellbore #1, Plan #1 (3-04-13)R V0
-  Wellbore #1
-  Survey #1

Final Survey Plot

Projected Final Survey -
8578'MD & 8148'TVD @ 2110'VS
0.43 deg Inc 285.93 deg AZ

Project: SEC.28-T2N-R68W
 Site: Rasmussen 4-4-28 Pad Sec.28-T2N-R68W
 Well: Rasmussen 4-0-28
 Plan: Wellbore #1



Directional

EnCana Oil & Gas Weld County CO

SEC.28-T2N-R68W

Rasmussen 4-4-28 Pad Sec.28-T2N-R68W

Rasmussen 4-0-28

Wellbore #1

Survey: Survey #1

Standard Survey Report

11 March, 2013

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Rasmussen 4-0-28
Project:	SEC.28-T2N-R68W	TVD Reference:	WELL @ 4948.0ft (Original Well Elev)
Site:	Rasmussen 4-4-28 Pad Sec.28-T2N-R68W	MD Reference:	WELL @ 4948.0ft (Original Well Elev)
Well:	Rasmussen 4-0-28	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.28-T2N-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	Rasmussen 4-4-28 Pad Sec.28-T2N-R68W				
Site Position:		Northing:	1,283,840.25ft	Latitude:	40.111500
From:	Lat/Long	Easting:	3,136,683.73ft	Longitude:	-105.011310
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.32 °

Well	Rasmussen 4-0-28					
Well Position	+N/-S	0.0 ft	Northing:	1,283,840.34 ft	Latitude:	40.111500
	+E/-W	0.0 ft	Easting:	3,136,703.30 ft	Longitude:	-105.011240
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,935.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/19/2013	8.74	66.72	52,775

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	22.48	

Survey Program	Date	3/11/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
82.0	8,578.0	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	
82.0	1.00	55.50	82.0	0.4	0.6	0.6	1.22	1.22	0.00	
142.0	1.10	32.30	142.0	1.2	1.3	1.6	0.72	0.17	-38.67	
202.0	1.10	36.00	202.0	2.1	2.0	2.7	0.12	0.00	6.17	
262.0	1.90	25.30	262.0	3.5	2.7	4.3	1.41	1.33	-17.83	
322.0	2.80	14.70	321.9	5.8	3.5	6.7	1.66	1.50	-17.67	
383.0	4.00	2.90	382.8	9.4	4.0	10.2	2.27	1.97	-19.34	
443.0	4.80	12.80	442.6	13.9	4.7	14.7	1.83	1.33	16.50	
504.0	5.20	14.50	503.4	19.1	5.9	19.9	0.70	0.66	2.79	
564.0	6.20	22.60	563.1	24.7	7.9	25.8	2.14	1.67	13.50	
625.0	7.70	23.20	623.6	31.5	10.7	33.2	2.46	2.46	0.98	
687.0	8.90	22.30	685.0	39.8	14.2	42.2	1.95	1.94	-1.45	
748.0	10.10	22.60	745.2	49.1	18.0	52.2	1.97	1.97	0.49	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Rasmussen 4-0-28
Project:	SEC.28-T2N-R68W	TVD Reference:	WELL @ 4948.0ft (Original Well Elev)
Site:	Rasmussen 4-4-28 Pad Sec.28-T2N-R68W	MD Reference:	WELL @ 4948.0ft (Original Well Elev)
Well:	Rasmussen 4-0-28	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)
767.0	10.60	21.70	763.8	52.2	19.3	55.7	2.77	2.63	-4.74
868.0	11.50	23.50	863.0	70.1	26.8	75.0	0.95	0.89	1.78
954.0	12.40	23.90	947.1	86.4	33.9	92.8	1.05	1.05	0.47
1,040.0	14.20	25.80	1,030.8	104.3	42.3	112.6	2.15	2.09	2.21
1,125.0	15.90	22.10	1,112.9	124.5	51.2	134.6	2.30	2.00	-4.35
1,211.0	16.90	17.20	1,195.4	147.4	59.3	158.9	1.98	1.16	-5.70
1,297.0	17.90	17.50	1,277.4	171.9	67.0	184.5	1.17	1.16	0.35
1,383.0	17.70	20.30	1,359.3	196.8	75.5	210.7	1.02	-0.23	3.26
1,468.0	18.40	22.50	1,440.1	221.3	85.1	237.0	1.15	0.82	2.59
1,554.0	19.10	25.80	1,521.6	246.5	96.4	264.7	1.48	0.81	3.84
1,640.0	20.70	25.30	1,602.4	272.9	109.1	293.9	1.87	1.86	-0.58
1,725.0	23.00	26.10	1,681.3	301.4	122.8	325.5	2.73	2.71	0.94
1,811.0	24.60	26.00	1,760.0	332.6	138.0	360.1	1.86	1.86	-0.12
1,897.0	25.90	25.60	1,837.8	365.6	154.0	396.7	1.52	1.51	-0.47
1,983.0	25.80	25.40	1,915.2	399.5	170.1	434.2	0.15	-0.12	-0.23
2,068.0	26.40	22.80	1,991.5	433.6	185.4	471.5	1.52	0.71	-3.06
2,154.0	26.90	23.20	2,068.4	469.1	200.5	510.1	0.62	0.58	0.47
2,240.0	26.70	22.80	2,145.2	504.8	215.6	548.9	0.31	-0.23	-0.47
2,326.0	26.60	21.40	2,222.0	540.5	230.1	587.5	0.74	-0.12	-1.63
2,411.0	25.90	21.70	2,298.3	575.5	243.9	625.0	0.84	-0.82	0.35
2,497.0	25.20	24.60	2,375.8	609.6	258.5	662.1	1.67	-0.81	3.37
2,583.0	25.70	26.70	2,453.5	642.9	274.5	699.0	1.20	0.58	2.44
2,669.0	26.60	24.70	2,530.7	677.1	290.9	736.9	1.46	1.05	-2.33
2,754.0	27.30	23.30	2,606.5	712.3	306.6	775.4	1.11	0.82	-1.65
2,840.0	27.30	21.70	2,682.9	748.7	321.7	814.8	0.85	0.00	-1.86
2,926.0	27.20	21.20	2,759.3	785.3	336.1	854.2	0.29	-0.12	-0.58
3,011.0	26.50	21.20	2,835.2	821.1	350.0	892.6	0.82	-0.82	0.00
3,097.0	26.50	22.80	2,912.2	856.7	364.3	930.9	0.83	0.00	1.86
3,183.0	26.60	23.30	2,989.1	892.1	379.4	969.4	0.28	0.12	0.58
3,269.0	26.50	24.00	3,066.0	927.3	394.8	1,007.8	0.38	-0.12	0.81
3,354.0	25.60	23.30	3,142.4	961.5	409.8	1,045.1	1.12	-1.06	-0.82
3,440.0	25.40	23.90	3,220.0	995.4	424.6	1,082.1	0.38	-0.23	0.70
3,526.0	26.80	23.30	3,297.2	1,030.1	439.7	1,120.0	1.66	1.63	-0.70
3,612.0	27.10	23.50	3,373.9	1,065.9	455.2	1,158.9	0.36	0.35	0.23
3,697.0	27.30	22.10	3,449.5	1,101.7	470.3	1,197.8	0.79	0.24	-1.65
3,783.0	27.20	20.90	3,525.9	1,138.3	484.7	1,237.1	0.65	-0.12	-1.40
3,869.0	26.90	21.60	3,602.5	1,174.8	498.9	1,276.2	0.51	-0.35	0.81
3,955.0	26.80	22.30	3,679.3	1,210.8	513.4	1,315.1	0.39	-0.12	0.81
4,040.0	28.10	23.00	3,754.7	1,246.9	528.5	1,354.3	1.58	1.53	0.82
4,126.0	28.10	22.60	3,830.6	1,284.3	544.2	1,394.8	0.22	0.00	-0.47
4,212.0	29.10	21.90	3,906.1	1,322.4	559.8	1,435.9	1.23	1.16	-0.81
4,297.0	30.20	21.70	3,979.9	1,361.4	575.4	1,478.0	1.30	1.29	-0.24
4,383.0	32.00	20.70	4,053.6	1,402.8	591.4	1,522.4	2.18	2.09	-1.16
4,469.0	30.50	20.70	4,127.1	1,444.6	607.2	1,567.0	1.74	-1.74	0.00
4,555.0	28.90	21.90	4,201.8	1,484.3	622.7	1,609.6	1.98	-1.86	1.40
4,640.0	26.50	22.30	4,277.0	1,520.9	637.5	1,649.1	2.83	-2.82	0.47
4,726.0	25.50	22.60	4,354.3	1,555.7	651.9	1,686.8	1.17	-1.16	0.35
4,812.0	25.10	22.60	4,432.1	1,589.7	666.1	1,723.5	0.47	-0.47	0.00
4,898.0	24.10	22.30	4,510.3	1,622.7	679.7	1,759.3	1.17	-1.16	-0.35
4,983.0	22.70	22.30	4,588.3	1,654.0	692.5	1,793.1	1.65	-1.65	0.00
5,069.0	19.80	21.40	4,668.4	1,682.9	704.2	1,824.3	3.39	-3.37	-1.05
5,155.0	18.80	20.70	4,749.6	1,709.4	714.4	1,852.7	1.19	-1.16	-0.81
5,241.0	17.60	19.30	4,831.3	1,734.7	723.6	1,879.5	1.49	-1.40	-1.63
5,326.0	17.00	19.10	4,912.5	1,758.5	731.9	1,904.7	0.71	-0.71	-0.24

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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)
5,412.0	15.70	18.10	4,995.0	1,781.5	739.6	1,928.9	1.55	-1.51	-1.16
5,498.0	13.90	17.40	5,078.1	1,802.4	746.3	1,950.8	2.10	-2.09	-0.81
5,583.0	12.80	17.50	5,160.8	1,821.1	752.2	1,970.3	1.29	-1.29	0.12
5,669.0	11.40	23.00	5,244.9	1,838.0	758.4	1,988.3	2.11	-1.63	6.40
5,755.0	9.60	21.70	5,329.5	1,852.5	764.4	2,004.0	2.11	-2.09	-1.51
5,841.0	8.80	20.20	5,414.4	1,865.3	769.3	2,017.7	0.97	-0.93	-1.74
5,926.0	7.40	17.40	5,498.5	1,876.7	773.2	2,029.7	1.71	-1.65	-3.29
6,012.0	6.10	15.90	5,583.9	1,886.4	776.1	2,039.8	1.53	-1.51	-1.74
6,098.0	5.50	24.70	5,669.5	1,894.5	779.0	2,048.4	1.25	-0.70	10.23
6,184.0	4.80	19.50	5,755.1	1,901.6	782.0	2,056.1	0.98	-0.81	-6.05
6,269.0	3.40	24.70	5,839.9	1,907.3	784.2	2,062.2	1.70	-1.65	6.12
6,355.0	2.00	44.40	5,925.8	1,910.7	786.3	2,066.1	1.93	-1.63	22.91
6,429.3	1.87	44.28	6,000.1	1,912.5	788.1	2,068.5	0.18	-0.18	-0.16
TARGET BHL 50'FNL & 2609'FWL									
6,526.0	1.70	44.10	6,096.7	1,914.6	790.2	2,071.3	0.18	-0.18	-0.19
6,698.0	1.50	54.30	6,268.7	1,917.8	793.8	2,075.5	0.20	-0.12	5.93
6,869.0	1.80	52.70	6,439.6	1,920.7	797.7	2,079.8	0.18	0.18	-0.94
7,041.0	2.70	47.40	6,611.4	1,925.1	802.9	2,085.8	0.54	0.52	-3.08
7,212.0	1.30	13.10	6,782.3	1,929.7	806.3	2,091.3	1.04	-0.82	-20.06
7,384.0	1.30	12.10	6,954.3	1,933.5	807.1	2,095.2	0.01	0.00	-0.58
7,555.0	1.20	319.50	7,125.3	1,936.8	806.4	2,097.9	0.65	-0.06	-30.76
7,699.5	1.11	333.76	7,269.7	1,939.2	804.8	2,099.5	0.21	-0.06	9.87
TARGET CIRCLE 50'FNL & 2609'FWL									
7,727.0	1.10	336.70	7,297.2	1,939.6	804.5	2,099.9	0.21	-0.03	10.66
7,898.0	1.00	348.20	7,468.2	1,942.6	803.6	2,102.3	0.14	-0.06	6.73
8,070.0	1.10	0.30	7,640.2	1,945.7	803.3	2,105.0	0.14	0.06	7.03
8,241.0	0.60	19.30	7,811.2	1,948.2	803.6	2,107.4	0.33	-0.29	11.11
8,413.0	0.70	17.90	7,983.1	1,950.1	804.2	2,109.4	0.06	0.06	-0.81
8,535.0	0.50	309.90	8,105.1	1,951.1	804.0	2,110.3	0.57	-0.16	-55.74
8,578.0	0.43	285.93	8,148.1	1,951.3	803.7	2,110.3	0.48	-0.16	-55.74

Checked By: _____	Approved By: _____	Date: _____
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