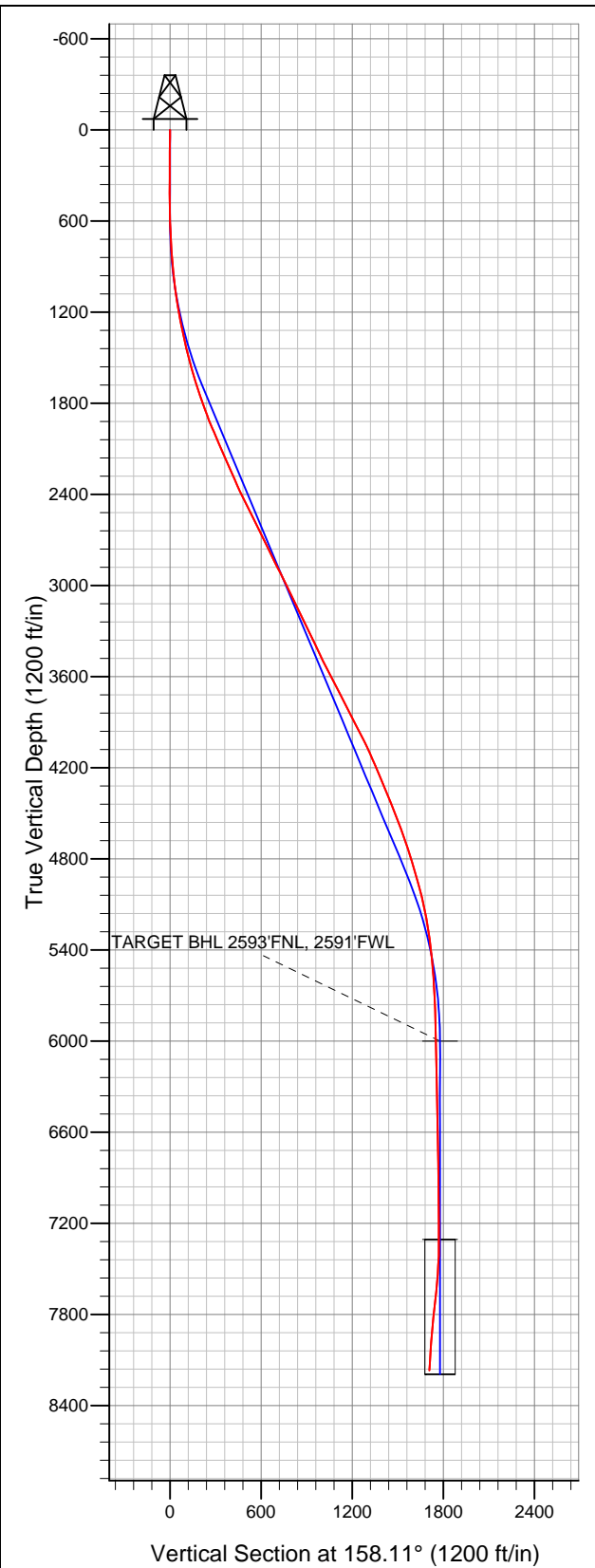


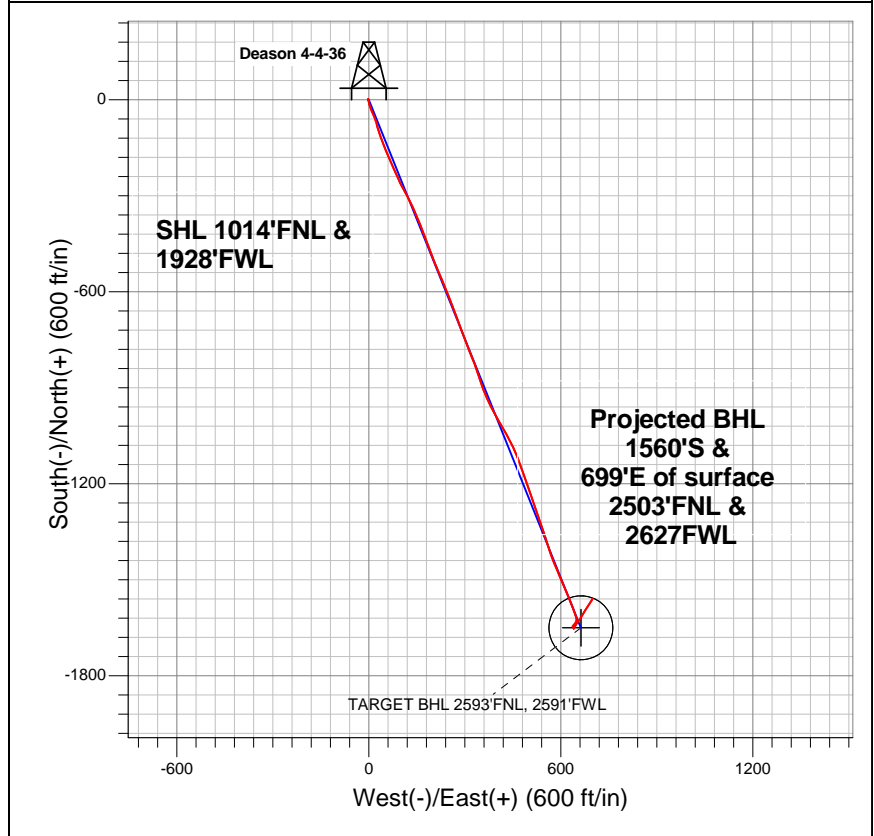
# Well Name: Deason 4-4-36

Surface Location: Deason 2-36 Pad Sec.36-T2N-R69W  
 North American Datum 1983 US State Plane 1983Colorado Northern Zone  
 Ground Elevation: 5016.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1279598.67	3121002.12	40.100080	-105.067450	
Original Well Elev			WELL @ 5029.0ft (Original Well Elev)			



## EnCana Oil & Gas Boulder County, CO



### LEGEND

- Wellbore #1
- Deason 4-4-36, Wellbore #1, Plan #1 (8-21-12) R V0
- Survey #1

## Final Survey Plot

Projected Final Survey -  
 8520'MD & 8168'TVD @ 1708'VS  
 6.20 deg Inc 32.40 deg AZ

Project: SEC.36-T2N-R69W  
 Site: Deason 2-36 Pad Sec.36-T2N-R69W  
 Well: Deason 4-4-36  
 Plan: Wellbore #1



# **EnCana Oil & Gas Boulder County, CO**

**SEC.36-T2N-R69W**

**Deason 2-36 Pad Sec.36-T2N-R69W**

**Deason 4-4-36**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**28 August, 2012**

<b>Company:</b>	EnCana Oil & Gas Boulder County, CO	<b>Local Co-ordinate Reference:</b>	Well Deason 4-4-36
<b>Project:</b>	SEC.36-T2N-R69W	<b>TVD Reference:</b>	WELL @ 5029.0ft (Original Well Elev)
<b>Site:</b>	Deason 2-36 Pad Sec.36-T2N-R69W	<b>MD Reference:</b>	WELL @ 5029.0ft (Original Well Elev)
<b>Well:</b>	Deason 4-4-36	<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.36-T2N-R69W, Boulder 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		Deason 2-36 Pad Sec.36-T2N-R69W			
Site Position:		Northing:		1,279,620.53ft	
From:	Lat/Long	Easting:		Longitude:	
		3,121,002.02ft		-105.067450	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
0.0 ft		"		0.28 °	

Well	Deason 4-4-36					
Well Position	+N/-S	0.0 ft	Northing:	1,279,598.67 ft	Latitude:	40.100080
	+E/-W	0.0 ft	Easting:	3,121,002.12 ft	Longitude:	-105.067450
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,016.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/21/2012	8.84	66.72	52,814

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	158.11	

Survey Program		Date	8/28/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
48.0	8,520.0	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
48.0	0.30	270.10	48.0	0.0	-0.1	0.0	0.63	0.63	0.00
139.0	0.50	298.50	139.0	0.2	-0.7	-0.4	0.30	0.22	31.21
230.0	0.40	271.60	230.0	0.4	-1.4	-0.9	0.25	-0.11	-29.56
322.0	0.40	301.40	322.0	0.6	-2.0	-1.3	0.22	0.00	32.39
413.0	0.20	315.20	413.0	0.8	-2.4	-1.7	0.23	-0.22	15.16
505.0	0.20	197.30	505.0	0.8	-2.5	-1.7	0.37	0.00	-128.15
597.0	2.10	157.90	597.0	-0.9	-1.9	0.1	2.12	2.07	-42.83
688.0	3.40	163.40	687.9	-5.0	-0.5	4.5	1.46	1.43	6.04
750.0	3.60	169.30	749.7	-8.7	0.4	8.2	0.66	0.32	9.52
828.0	3.40	165.50	827.6	-13.4	1.4	12.9	0.39	-0.26	-4.87
913.0	4.90	164.80	912.4	-19.3	3.0	19.0	1.77	1.76	-0.82
999.0	7.40	155.60	997.9	-27.9	6.2	28.2	3.12	2.91	-10.70

<b>Company:</b>	EnCana Oil & Gas Boulder County, CO	<b>Local Co-ordinate Reference:</b>	Well Deason 4-4-36
<b>Project:</b>	SEC.36-T2N-R69W	<b>TVD Reference:</b>	WELL @ 5029.0ft (Original Well Elev)
<b>Site:</b>	Deason 2-36 Pad Sec.36-T2N-R69W	<b>MD Reference:</b>	WELL @ 5029.0ft (Original Well Elev)
<b>Well:</b>	Deason 4-4-36	<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)	
1,085.0	8.00	158.40	1,083.1	-38.5	10.7	39.7	0.82	0.70	3.26	
1,170.0	9.90	158.10	1,167.1	-50.8	15.6	52.9	2.24	2.24	-0.35	
1,256.0	10.80	159.30	1,251.7	-65.2	21.2	68.4	1.08	1.05	1.40	
1,341.0	11.60	165.10	1,335.0	-80.9	26.2	84.8	1.62	0.94	6.82	
1,427.0	12.80	162.10	1,419.1	-98.3	31.4	102.9	1.58	1.40	-3.49	
1,513.0	14.80	162.00	1,502.6	-117.8	37.7	123.4	2.33	2.33	-0.12	
1,598.0	16.30	158.30	1,584.5	-139.2	45.5	146.2	2.11	1.76	-4.35	
1,684.0	18.00	157.20	1,666.7	-162.7	55.1	171.5	2.01	1.98	-1.28	
1,769.0	18.70	157.70	1,747.4	-187.4	65.3	198.3	0.84	0.82	0.59	
1,855.0	19.20	153.90	1,828.7	-212.9	76.8	226.2	1.55	0.58	-4.42	
1,941.0	21.90	157.20	1,909.2	-240.4	89.2	256.3	3.42	3.14	3.84	
2,026.0	23.20	152.60	1,987.7	-269.8	103.1	288.8	2.58	1.53	-5.41	
2,112.0	24.00	151.20	2,066.5	-300.2	119.3	323.0	1.14	0.93	-1.63	
2,197.0	23.00	156.20	2,144.5	-330.6	134.3	356.8	2.62	-1.18	5.88	
2,283.0	23.90	155.50	2,223.4	-361.8	148.3	391.0	1.10	1.05	-0.81	
2,369.0	24.00	158.40	2,302.0	-393.9	162.0	425.9	1.37	0.12	3.37	
2,454.0	25.10	158.80	2,379.3	-426.8	174.9	461.2	1.31	1.29	0.47	
2,540.0	26.40	160.40	2,456.8	-461.8	187.9	498.6	1.71	1.51	1.86	
2,625.0	26.70	159.10	2,532.8	-497.4	201.1	536.5	0.77	0.35	-1.53	
2,711.0	26.00	156.00	2,609.9	-532.7	215.6	574.7	1.79	-0.81	-3.60	
2,797.0	26.30	157.60	2,687.1	-567.5	230.5	612.6	0.89	0.35	1.86	
2,882.0	26.00	160.00	2,763.4	-602.5	244.1	650.0	1.29	-0.35	2.82	
2,968.0	25.90	157.20	2,840.7	-637.5	257.8	687.7	1.43	-0.12	-3.26	
3,053.0	27.20	157.60	2,916.7	-672.6	272.4	725.6	1.54	1.53	0.47	
3,139.0	26.60	162.00	2,993.4	-709.1	285.9	764.5	2.42	-0.70	5.12	
3,225.0	25.90	159.80	3,070.6	-745.0	298.3	802.5	1.39	-0.81	-2.56	
3,310.0	25.80	157.90	3,147.1	-779.6	311.7	839.5	0.98	-0.12	-2.24	
3,396.0	26.10	157.40	3,224.4	-814.4	326.0	877.2	0.43	0.35	-0.58	
3,481.0	25.80	162.70	3,300.8	-849.3	338.7	914.3	2.75	-0.35	6.24	
3,567.0	25.50	160.70	3,378.4	-884.6	350.3	951.5	1.07	-0.35	-2.33	
3,653.0	25.50	156.00	3,456.0	-919.0	364.0	988.5	2.35	0.00	-5.47	
3,738.0	27.20	155.80	3,532.2	-953.5	379.4	1,026.2	2.00	2.00	-0.24	
3,824.0	27.30	149.80	3,608.6	-988.4	397.4	1,065.3	3.20	0.12	-6.98	
3,909.0	27.50	150.20	3,684.1	-1,022.3	416.9	1,104.0	0.32	0.24	0.47	
3,995.0	27.20	151.20	3,760.5	-1,056.8	436.3	1,143.2	0.64	-0.35	1.16	
4,081.0	26.90	156.50	3,837.1	-1,091.8	453.5	1,182.2	2.82	-0.35	6.16	
4,166.0	27.30	159.00	3,912.7	-1,127.7	468.2	1,220.9	1.42	0.47	2.94	
4,252.0	27.70	160.20	3,989.0	-1,164.9	482.0	1,260.6	0.79	0.47	1.40	
4,337.0	25.10	161.60	4,065.2	-1,200.6	494.4	1,298.3	3.15	-3.06	1.65	
4,423.0	23.90	161.30	4,143.4	-1,234.4	505.7	1,333.9	1.40	-1.40	-0.35	
4,509.0	22.80	159.30	4,222.4	-1,266.5	517.2	1,368.0	1.58	-1.28	-2.33	
4,594.0	22.80	160.50	4,300.7	-1,297.4	528.5	1,400.9	0.55	0.00	1.41	
4,680.0	21.80	163.20	4,380.3	-1,328.4	538.7	1,433.5	1.66	-1.16	3.14	
4,765.0	22.60	162.10	4,459.0	-1,359.1	548.3	1,465.5	1.06	0.94	-1.29	
4,851.0	20.90	162.30	4,538.9	-1,389.4	558.0	1,497.3	1.98	-1.98	0.23	
4,937.0	20.20	159.10	4,619.4	-1,417.9	568.0	1,527.4	1.54	-0.81	-3.72	
5,022.0	18.20	159.70	4,699.7	-1,444.1	577.8	1,555.4	2.36	-2.35	0.71	
5,108.0	17.80	155.80	4,781.5	-1,468.6	587.9	1,581.9	1.48	-0.47	-4.53	
5,193.0	16.60	158.10	4,862.7	-1,491.8	597.7	1,607.1	1.62	-1.41	2.71	
5,279.0	15.70	156.30	4,945.3	-1,513.8	607.0	1,631.0	1.20	-1.05	-2.09	
5,365.0	14.20	157.00	5,028.4	-1,534.2	615.8	1,653.1	1.76	-1.74	0.81	
5,450.0	12.20	157.60	5,111.1	-1,552.1	623.3	1,672.6	2.36	-2.35	0.71	
5,536.0	10.20	158.10	5,195.5	-1,567.5	629.6	1,689.3	2.33	-2.33	0.58	
5,621.0	8.40	157.40	5,279.3	-1,580.3	634.8	1,703.0	2.12	-2.12	-0.82	

<b>Company:</b>	EnCana Oil & Gas Boulder County, CO	<b>Local Co-ordinate Reference:</b>	Well Deason 4-4-36
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<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)
5,707.0	7.30	160.20	5,364.5	-1,591.2	639.0	1,714.7	1.35	-1.28	3.26
5,793.0	6.00	160.00	5,450.0	-1,600.6	642.4	1,724.7	1.51	-1.51	-0.23
5,878.0	4.40	161.30	5,534.6	-1,607.8	645.0	1,732.4	1.89	-1.88	1.53
5,964.0	3.30	163.00	5,620.4	-1,613.3	646.8	1,738.1	1.29	-1.28	1.98
6,049.0	2.60	164.80	5,705.3	-1,617.5	648.0	1,742.5	0.83	-0.82	2.12
6,135.0	2.30	169.50	5,791.2	-1,621.1	648.8	1,746.1	0.42	-0.35	5.47
6,221.0	1.80	175.30	5,877.2	-1,624.1	649.3	1,749.1	0.63	-0.58	6.74
6,306.0	1.80	188.00	5,962.1	-1,626.8	649.2	1,751.5	0.47	0.00	14.94
6,344.4	1.66	190.01	6,000.5	-1,627.9	649.0	1,752.5	0.40	-0.36	5.24
TARGET BHL 2593'FNL, 2591'FWL									
6,477.0	1.20	200.50	6,133.1	-1,631.1	648.2	1,755.2	0.40	-0.35	7.91
6,649.0	1.40	215.20	6,305.0	-1,634.5	646.3	1,757.7	0.23	0.12	8.55
6,820.0	3.00	221.00	6,475.9	-1,639.6	642.2	1,760.8	0.94	0.94	3.39
6,991.0	1.30	220.50	6,646.8	-1,644.5	638.0	1,763.8	0.99	-0.99	-0.29
7,162.0	0.90	151.20	6,817.7	-1,647.1	637.4	1,766.0	0.76	-0.23	-40.53
7,333.0	1.30	120.50	6,988.7	-1,649.3	639.7	1,768.9	0.41	0.23	-17.95
7,505.0	1.10	190.50	7,160.7	-1,651.9	641.1	1,771.8	0.81	-0.12	40.70
7,650.3	0.69	3.92	7,306.0	-1,652.4	640.9	1,772.2	1.23	-0.29	119.35
TARGET CIRCLE 2593'FNL & 2591'FWL									
7,676.0	1.00	5.20	7,331.7	-1,652.0	640.9	1,771.9	1.23	1.22	4.97
7,761.0	3.60	31.10	7,416.6	-1,649.0	642.4	1,769.6	3.22	3.06	30.47
7,848.0	5.90	31.90	7,503.3	-1,642.9	646.1	1,765.3	2.64	2.64	0.92
7,936.0	8.20	33.60	7,590.6	-1,633.8	652.0	1,759.1	2.62	2.61	1.93
8,023.0	10.30	36.30	7,676.5	-1,622.4	660.0	1,751.5	2.46	2.41	3.10
8,111.0	11.50	27.50	7,762.9	-1,608.2	668.8	1,741.6	2.33	1.36	-10.00
8,198.0	10.40	35.70	7,848.3	-1,594.2	677.3	1,731.8	2.19	-1.26	9.43
8,286.0	7.70	32.60	7,935.2	-1,582.8	685.2	1,724.1	3.12	-3.07	-3.52
8,374.0	6.30	31.70	8,022.6	-1,573.7	690.9	1,717.8	1.60	-1.59	-1.02
8,478.0	6.20	32.40	8,125.9	-1,564.1	696.9	1,711.1	0.12	-0.10	0.67
8,520.0	6.20	32.40	8,167.7	-1,560.3	699.3	1,708.5	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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