


FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3369.0	3580.6	Wastch G
5441.0	5782.1	Williams Fork
8941.0	9282.1	Rollins

	<p>Azimuths to True North Magnetic North: 10.29°</p> <p>Magnetic Field Strength: 52184.0snT Dip Angle: 65.76° Date: 6/14/2012 Model: IGRF2010</p>
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Plan #1 WF04C-30 I25 596 125XXX; SC KB=22' @ 5846.0ft (Original Well Elev) North American Datum 1983 Well WF04C-30 I25 596, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
TD	No Target (Freehand)	18.73	Slot		0.0	0.0
						From TVD
						0.0
Name		TVD	+N/-S	+E/-W	Latitude	Longitude
WF04C-30 I25 596 TGT		5441.0	1712.0	599.3	39.5895073	-108.1073258
WF04C-30 I25 596 PBHL		8941.0	1702.0	582.3	39.5894800	-108.1073863

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF04C-30 I25 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Site:	I25 596	North Reference:	True
Well:	WF04C-30 I25 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	North Piceance		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	I25 596			
Site Position:		Northing:	1,648,435.29 ft	Latitude: 39.5847371
From:	Lat/Long	Easting:	2,264,601.34 ft	Longitude: -108.1096087
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	WF04C-30 I25 596			
Well Position	+N/-S	0.0 ft	Northing:	1,648,459.59 ft
	+E/-W	0.0 ft	Easting:	2,264,646.14 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	5,824.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	6/14/2012	10.29	65.76	52,184

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	18.73

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,049.6	22.49	19.29	1,030.5	137.1	48.0	3.00	3.00	0.00	19.29	
5,032.5	22.49	19.29	4,710.5	1,574.9	551.3	0.00	0.00	0.00	0.00	
5,782.1	0.00	0.00	5,441.0	1,712.0	599.3	3.00	-3.00	0.00	180.00	WF04C-30 I25 596 TC
5,913.8	0.33	239.68	5,572.8	1,711.8	599.0	0.25	0.25	-91.30	239.68	
9,282.1	0.33	239.68	8,941.0	1,702.0	582.3	0.00	0.00	0.00	0.00	WF04C-30 I25 596 PI
9,382.1	0.33	239.68	9,041.0	1,701.7	581.8	0.00	0.00	0.00	0.00	
10,582.1	0.33	239.68	10,241.0	1,698.3	575.8	0.00	0.00	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF04C-30 I25 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Site:	I25 596	North Reference:	True
Well:	WF04C-30 I25 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300' MD
400.0	3.00	19.29	400.0	2.5	0.9	2.6	3.00	3.00	
500.0	6.00	19.29	499.6	9.9	3.5	10.5	3.00	3.00	
600.0	9.00	19.29	598.8	22.2	7.8	23.5	3.00	3.00	
700.0	12.00	19.29	697.1	39.4	13.8	41.7	3.00	3.00	
800.0	15.00	19.29	794.3	61.4	21.5	65.1	3.00	3.00	
900.0	18.00	19.29	890.2	88.2	30.9	93.5	3.00	3.00	
1,000.0	21.00	19.29	984.4	119.7	41.9	126.8	3.00	3.00	
1,049.6	22.49	19.29	1,030.5	137.1	48.0	145.2	3.00	3.00	EOB; Inc=22.49°
1,100.0	22.49	19.29	1,077.1	155.3	54.4	164.5	0.00	0.00	
1,200.0	22.49	19.29	1,169.5	191.4	67.0	202.7	0.00	0.00	
1,300.0	22.49	19.29	1,261.9	227.5	79.6	241.0	0.00	0.00	
1,400.0	22.49	19.29	1,354.3	263.6	92.3	279.2	0.00	0.00	
1,500.0	22.49	19.29	1,446.7	299.7	104.9	317.5	0.00	0.00	
1,600.0	22.49	19.29	1,539.0	335.8	117.5	355.7	0.00	0.00	
1,700.0	22.49	19.29	1,631.4	371.9	130.2	394.0	0.00	0.00	
1,800.0	22.49	19.29	1,723.8	408.0	142.8	432.2	0.00	0.00	
1,900.0	22.49	19.29	1,816.2	444.1	155.5	470.5	0.00	0.00	
2,000.0	22.49	19.29	1,908.6	480.2	168.1	508.7	0.00	0.00	
2,100.0	22.49	19.29	2,001.0	516.3	180.7	547.0	0.00	0.00	
2,200.0	22.49	19.29	2,093.4	552.4	193.4	585.2	0.00	0.00	
2,300.0	22.49	19.29	2,185.8	588.5	206.0	623.5	0.00	0.00	
2,400.0	22.49	19.29	2,278.2	624.6	218.6	661.7	0.00	0.00	
2,500.0	22.49	19.29	2,370.6	660.7	231.3	700.0	0.00	0.00	
2,600.0	22.49	19.29	2,463.0	696.8	243.9	738.2	0.00	0.00	
2,700.0	22.49	19.29	2,555.4	732.9	256.6	776.5	0.00	0.00	
2,800.0	22.49	19.29	2,647.8	769.0	269.2	814.7	0.00	0.00	
2,900.0	22.49	19.29	2,740.2	805.1	281.8	852.9	0.00	0.00	
3,000.0	22.49	19.29	2,832.6	841.2	294.5	891.2	0.00	0.00	
3,100.0	22.49	19.29	2,925.0	877.3	307.1	929.4	0.00	0.00	
3,200.0	22.49	19.29	3,017.4	913.4	319.7	967.7	0.00	0.00	
3,300.0	22.49	19.29	3,109.8	949.5	332.4	1,005.9	0.00	0.00	
3,400.0	22.49	19.29	3,202.2	985.6	345.0	1,044.2	0.00	0.00	
3,500.0	22.49	19.29	3,294.6	1,021.7	357.7	1,082.4	0.00	0.00	
3,580.6	22.49	19.29	3,369.0	1,050.8	367.8	1,113.2	0.00	0.00	Wastch G
3,600.0	22.49	19.29	3,387.0	1,057.8	370.3	1,120.7	0.00	0.00	
3,700.0	22.49	19.29	3,479.4	1,093.9	382.9	1,158.9	0.00	0.00	
3,800.0	22.49	19.29	3,571.8	1,130.0	395.6	1,197.2	0.00	0.00	
3,900.0	22.49	19.29	3,664.2	1,166.1	408.2	1,235.4	0.00	0.00	
4,000.0	22.49	19.29	3,756.5	1,202.2	420.8	1,273.7	0.00	0.00	
4,100.0	22.49	19.29	3,848.9	1,238.3	433.5	1,311.9	0.00	0.00	
4,200.0	22.49	19.29	3,941.3	1,274.4	446.1	1,350.2	0.00	0.00	
4,300.0	22.49	19.29	4,033.7	1,310.5	458.8	1,388.4	0.00	0.00	
4,400.0	22.49	19.29	4,126.1	1,346.6	471.4	1,426.7	0.00	0.00	
4,500.0	22.49	19.29	4,218.5	1,382.7	484.0	1,464.9	0.00	0.00	
4,600.0	22.49	19.29	4,310.9	1,418.8	496.7	1,503.2	0.00	0.00	
4,700.0	22.49	19.29	4,403.3	1,454.9	509.3	1,541.4	0.00	0.00	
4,800.0	22.49	19.29	4,495.7	1,491.0	521.9	1,579.6	0.00	0.00	
4,900.0	22.49	19.29	4,588.1	1,527.1	534.6	1,617.9	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Site:	I25 596	North Reference:	True
Well:	WF04C-30 I25 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
5,000.0	22.49	19.29	4,680.5	1,563.2	547.2	1,656.1	0.00	0.00	
5,032.5	22.49	19.29	4,710.5	1,574.9	551.3	1,668.6	0.00	0.00	Start 3° Drop @5032.5' MD
5,100.0	20.46	19.29	4,773.3	1,598.3	559.5	1,693.3	3.00	-3.00	
5,200.0	17.46	19.29	4,867.9	1,628.9	570.2	1,725.8	3.00	-3.00	
5,300.0	14.46	19.29	4,964.0	1,654.9	579.3	1,753.3	3.00	-3.00	
5,400.0	11.46	19.29	5,061.5	1,676.1	586.7	1,775.7	3.00	-3.00	
5,500.0	8.46	19.29	5,160.0	1,692.4	592.4	1,793.0	3.00	-3.00	
5,600.0	5.46	19.29	5,259.2	1,703.8	596.4	1,805.1	3.00	-3.00	
5,700.0	2.46	19.29	5,359.0	1,710.3	598.7	1,812.0	3.00	-3.00	
5,782.1	0.00	0.00	5,441.0	1,712.0	599.3	1,813.8	3.00	-3.00	EOD @ 5782.1' MD - Williams Fork
5,800.0	0.04	239.68	5,458.9	1,712.0	599.3	1,813.8	0.25	0.25	
5,900.0	0.29	239.68	5,558.9	1,711.8	599.0	1,813.5	0.25	0.25	
5,913.8	0.33	239.68	5,572.8	1,711.8	599.0	1,813.5	0.25	0.25	
6,000.0	0.33	239.68	5,658.9	1,711.6	598.5	1,813.1	0.00	0.00	
6,100.0	0.33	239.68	5,758.9	1,711.3	598.0	1,812.7	0.00	0.00	
6,200.0	0.33	239.68	5,858.9	1,711.0	597.6	1,812.2	0.00	0.00	
6,300.0	0.33	239.68	5,958.9	1,710.7	597.1	1,811.8	0.00	0.00	
6,400.0	0.33	239.68	6,058.9	1,710.4	596.6	1,811.4	0.00	0.00	
6,500.0	0.33	239.68	6,158.9	1,710.1	596.1	1,810.9	0.00	0.00	
6,600.0	0.33	239.68	6,258.9	1,709.8	595.6	1,810.5	0.00	0.00	
6,700.0	0.33	239.68	6,358.9	1,709.5	595.1	1,810.1	0.00	0.00	
6,800.0	0.33	239.68	6,458.9	1,709.2	594.6	1,809.6	0.00	0.00	
6,900.0	0.33	239.68	6,558.9	1,708.9	594.1	1,809.2	0.00	0.00	
7,000.0	0.33	239.68	6,658.9	1,708.7	593.6	1,808.8	0.00	0.00	
7,100.0	0.33	239.68	6,758.9	1,708.4	593.1	1,808.3	0.00	0.00	
7,200.0	0.33	239.68	6,858.9	1,708.1	592.6	1,807.9	0.00	0.00	
7,300.0	0.33	239.68	6,958.9	1,707.8	592.1	1,807.5	0.00	0.00	
7,400.0	0.33	239.68	7,058.9	1,707.5	591.6	1,807.0	0.00	0.00	
7,500.0	0.33	239.68	7,158.9	1,707.2	591.1	1,806.6	0.00	0.00	
7,600.0	0.33	239.68	7,258.9	1,706.9	590.6	1,806.2	0.00	0.00	
7,700.0	0.33	239.68	7,358.9	1,706.6	590.1	1,805.7	0.00	0.00	
7,800.0	0.33	239.68	7,458.9	1,706.3	589.6	1,805.3	0.00	0.00	
7,900.0	0.33	239.68	7,558.9	1,706.0	589.1	1,804.9	0.00	0.00	
8,000.0	0.33	239.68	7,658.9	1,705.8	588.6	1,804.4	0.00	0.00	
8,100.0	0.33	239.68	7,758.9	1,705.5	588.1	1,804.0	0.00	0.00	
8,200.0	0.33	239.68	7,858.9	1,705.2	587.6	1,803.6	0.00	0.00	
8,300.0	0.33	239.68	7,958.9	1,704.9	587.1	1,803.1	0.00	0.00	
8,400.0	0.33	239.68	8,058.9	1,704.6	586.6	1,802.7	0.00	0.00	
8,500.0	0.33	239.68	8,158.9	1,704.3	586.1	1,802.3	0.00	0.00	
8,600.0	0.33	239.68	8,258.9	1,704.0	585.6	1,801.8	0.00	0.00	
8,700.0	0.33	239.68	8,358.9	1,703.7	585.1	1,801.4	0.00	0.00	
8,800.0	0.33	239.68	8,458.9	1,703.4	584.6	1,801.0	0.00	0.00	
8,900.0	0.33	239.68	8,558.9	1,703.1	584.1	1,800.5	0.00	0.00	
9,000.0	0.33	239.68	8,658.9	1,702.9	583.7	1,800.1	0.00	0.00	
9,100.0	0.33	239.68	8,758.9	1,702.6	583.2	1,799.7	0.00	0.00	
9,200.0	0.33	239.68	8,858.9	1,702.3	582.7	1,799.2	0.00	0.00	
9,282.1	0.33	239.68	8,941.0	1,702.0	582.3	1,798.9	0.00	0.00	Rollins
9,300.0	0.33	239.68	8,958.9	1,702.0	582.2	1,798.8	0.00	0.00	
9,382.1	0.33	239.68	9,041.0	1,701.7	581.8	1,798.4	0.00	0.00	TD @ 9382.1' MD
9,400.0	0.33	239.68	9,058.9	1,701.7	581.7	1,798.4	0.00	0.00	
9,500.0	0.33	239.68	9,158.9	1,701.4	581.2	1,797.9	0.00	0.00	
9,600.0	0.33	239.68	9,258.9	1,701.1	580.7	1,797.5	0.00	0.00	

Planning Report

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Project:	North Piceance	MD Reference:	KB=22' @ 5846.0ft (Original Well Elev)
Site:	I25 596	North Reference:	True
Well:	WF04C-30 I25 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,700.0	0.33	239.68	9,358.9	1,700.8	580.2	1,797.0	0.00	0.00	
9,800.0	0.33	239.68	9,458.9	1,700.5	579.7	1,796.6	0.00	0.00	
9,900.0	0.33	239.68	9,558.9	1,700.2	579.2	1,796.2	0.00	0.00	
10,000.0	0.33	239.68	9,658.9	1,699.9	578.7	1,795.7	0.00	0.00	
10,100.0	0.33	239.68	9,758.9	1,699.7	578.2	1,795.3	0.00	0.00	
10,200.0	0.33	239.68	9,858.9	1,699.4	577.7	1,794.9	0.00	0.00	
10,300.0	0.33	239.68	9,958.9	1,699.1	577.2	1,794.4	0.00	0.00	
10,400.0	0.33	239.68	10,058.9	1,698.8	576.7	1,794.0	0.00	0.00	
10,500.0	0.33	239.68	10,158.9	1,698.5	576.2	1,793.6	0.00	0.00	
10,582.1	0.33	239.68	10,241.0	1,698.3	575.8	1,793.2	0.00	0.00	Permit TD @ 10582.1' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
WF04C-30 I25 596 PBH	0.00	0.00	8,941.0	1,702.0	582.3	1,650,144.20	2,265,277.03	39.5894800	-108.1073863
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									
WF04C-30 I25 596 TGT	0.00	0.00	5,441.0	1,712.0	599.3	1,650,153.67	2,265,294.36	39.5895073	-108.1073258
- plan hits target center									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,580.6	3,369.0	Wastch G			
5,782.1	5,441.0	Williams Fork			
9,282.1	8,941.0	Rollins			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300' MD
1,049.6	1,030.5	137.1	48.0	EOB; Inc=22.49°
5,032.5	4,710.5	1,574.9	551.3	Start 3° Drop @5032.5' MD
5,782.1	5,441.0	1,712.0	599.3	EOD @ 5782.1' MD
9,382.1	9,041.0	1,711.8	599.0	TD @ 9382.1' MD
10,582.1	10,241.0	1,702.0	582.3	Permit TD @ 10582.1' MD