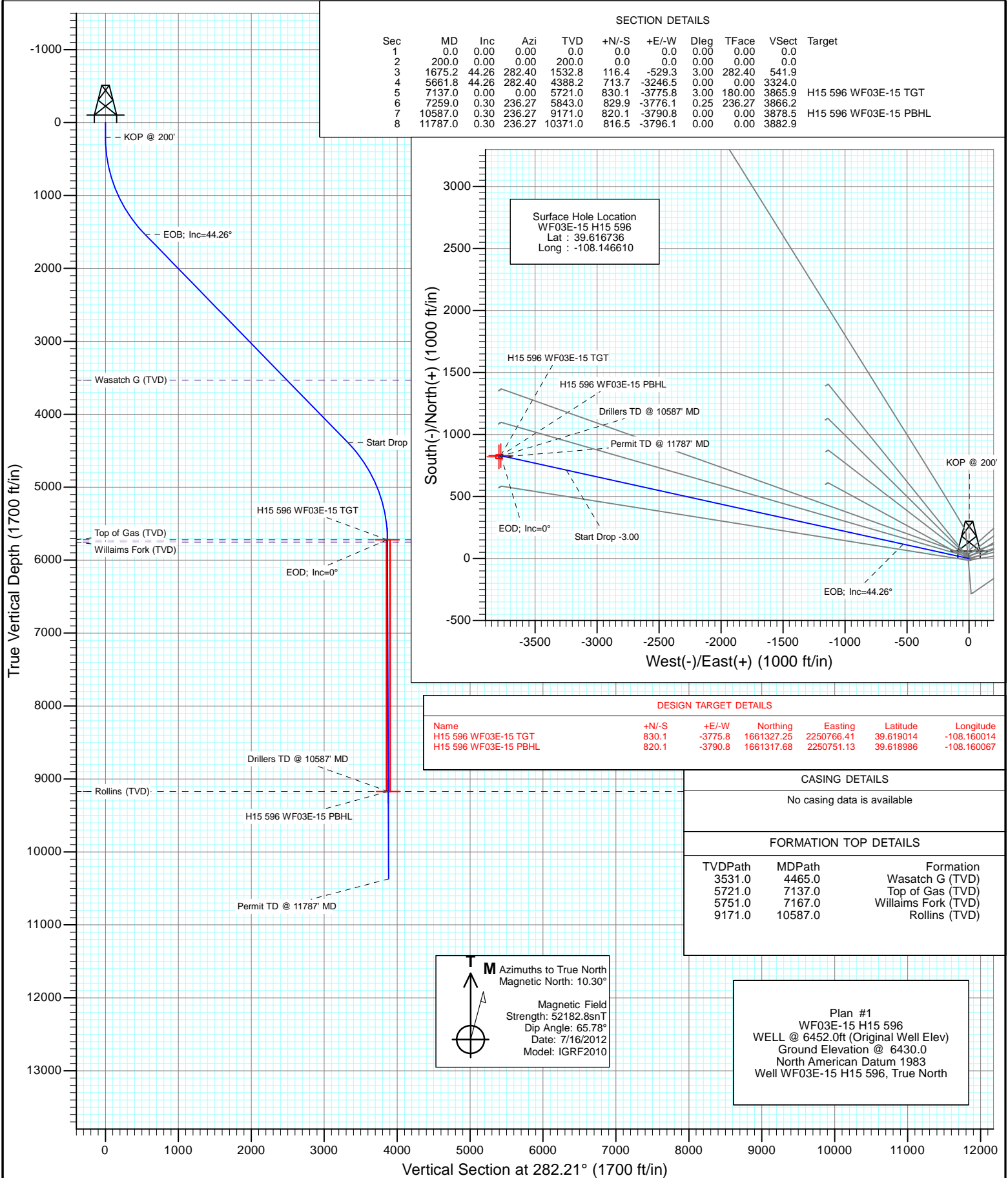




Project: North Piceance
Site: H15 596 (S15-T5S-R96W)
Well: WF03E-15 H15 596
Wellbore: DD
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF03E-15 H15 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6452.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6452.0ft (Original Well Elev)
Site:	H15 596 (S15-T5S-R96W)	North Reference:	True
Well:	WF03E-15 H15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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	H15 596 (S15-T5S-R96W)			
Site Position:		Northing:	1,660,385.37 ft	Latitude: 39° 37' 0.23 N
From:	Lat/Long	Easting:	2,254,530.40 ft	Longitude: 108° 8' 47.62 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.67 °

Well	WF03E-15 H15 596			
Well Position	+N/-S	0.0 ft	Northing:	1,660,387.52 ft
	+E/-W	0.0 ft	Easting:	2,254,516.43 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	6,430.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/16/2012	10.30	65.78	52,183

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	282.21

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,675.2	44.26	282.40	1,532.8	116.4	-529.3	3.00	3.00	0.00	282.40	
5,661.8	44.26	282.40	4,388.2	713.7	-3,246.5	0.00	0.00	0.00	0.00	
7,137.0	0.00	0.00	5,721.0	830.1	-3,775.8	3.00	-3.00	0.00	180.00	H15 596 WF03E-15 T
7,259.0	0.30	236.27	5,843.0	829.9	-3,776.1	0.25	0.25	-101.43	236.27	
10,587.0	0.30	236.27	9,171.0	820.1	-3,790.8	0.00	0.00	0.00	0.00	H15 596 WF03E-15 F
11,787.0	0.30	236.27	10,371.0	816.5	-3,796.1	0.00	0.00	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF03E-15 H15 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6452.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6452.0ft (Original Well Elev)
Site:	H15 596 (S15-T5S-R96W)	North Reference:	True
Well:	WF03E-15 H15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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	KOP @ 200'
300.0	3.00	282.40	300.0	0.6	-2.6	2.6	3.00	3.00	
400.0	6.00	282.40	399.6	2.2	-10.2	10.5	3.00	3.00	
500.0	9.00	282.40	498.8	5.0	-23.0	23.5	3.00	3.00	
600.0	12.00	282.40	597.1	9.0	-40.8	41.7	3.00	3.00	
700.0	15.00	282.40	694.3	14.0	-63.6	65.1	3.00	3.00	
800.0	18.00	282.40	790.2	20.1	-91.3	93.5	3.00	3.00	
900.0	21.00	282.40	884.4	27.2	-123.9	126.9	3.00	3.00	
1,000.0	24.00	282.40	976.8	35.5	-161.3	165.1	3.00	3.00	
1,100.0	27.00	282.40	1,067.1	44.7	-203.3	208.2	3.00	3.00	
1,200.0	30.00	282.40	1,154.9	54.9	-249.9	255.9	3.00	3.00	
1,300.0	33.00	282.40	1,240.2	66.2	-300.9	308.1	3.00	3.00	
1,400.0	36.00	282.40	1,322.6	78.3	-356.2	364.7	3.00	3.00	
1,500.0	39.00	282.40	1,401.9	91.4	-415.7	425.6	3.00	3.00	
1,600.0	42.00	282.40	1,477.9	105.3	-479.1	490.6	3.00	3.00	
1,675.2	44.26	282.40	1,532.8	116.4	-529.3	541.9	3.00	3.00	EOB; Inc=44.26°
1,700.0	44.26	282.40	1,550.6	120.1	-546.2	559.3	0.00	0.00	
1,800.0	44.26	282.40	1,622.2	135.1	-614.4	629.1	0.00	0.00	
1,900.0	44.26	282.40	1,693.8	150.1	-682.5	698.8	0.00	0.00	
2,000.0	44.26	282.40	1,765.5	165.0	-750.7	768.6	0.00	0.00	
2,100.0	44.26	282.40	1,837.1	180.0	-818.9	838.4	0.00	0.00	
2,200.0	44.26	282.40	1,908.7	195.0	-887.0	908.2	0.00	0.00	
2,300.0	44.26	282.40	1,980.3	210.0	-955.2	978.0	0.00	0.00	
2,400.0	44.26	282.40	2,052.0	225.0	-1,023.3	1,047.8	0.00	0.00	
2,500.0	44.26	282.40	2,123.6	240.0	-1,091.5	1,117.5	0.00	0.00	
2,600.0	44.26	282.40	2,195.2	254.9	-1,159.6	1,187.3	0.00	0.00	
2,700.0	44.26	282.40	2,266.8	269.9	-1,227.8	1,257.1	0.00	0.00	
2,800.0	44.26	282.40	2,338.5	284.9	-1,296.0	1,326.9	0.00	0.00	
2,900.0	44.26	282.40	2,410.1	299.9	-1,364.1	1,396.7	0.00	0.00	
3,000.0	44.26	282.40	2,481.7	314.9	-1,432.3	1,466.5	0.00	0.00	
3,100.0	44.26	282.40	2,553.3	329.9	-1,500.4	1,536.3	0.00	0.00	
3,200.0	44.26	282.40	2,624.9	344.9	-1,568.6	1,606.0	0.00	0.00	
3,300.0	44.26	282.40	2,696.6	359.8	-1,636.7	1,675.8	0.00	0.00	
3,400.0	44.26	282.40	2,768.2	374.8	-1,704.9	1,745.6	0.00	0.00	
3,500.0	44.26	282.40	2,839.8	389.8	-1,773.1	1,815.4	0.00	0.00	
3,600.0	44.26	282.40	2,911.4	404.8	-1,841.2	1,885.2	0.00	0.00	
3,700.0	44.26	282.40	2,983.1	419.8	-1,909.4	1,955.0	0.00	0.00	
3,800.0	44.26	282.40	3,054.7	434.8	-1,977.5	2,024.7	0.00	0.00	
3,900.0	44.26	282.40	3,126.3	449.7	-2,045.7	2,094.5	0.00	0.00	
4,000.0	44.26	282.40	3,197.9	464.7	-2,113.9	2,164.3	0.00	0.00	
4,100.0	44.26	282.40	3,269.6	479.7	-2,182.0	2,234.1	0.00	0.00	
4,200.0	44.26	282.40	3,341.2	494.7	-2,250.2	2,303.9	0.00	0.00	
4,300.0	44.26	282.40	3,412.8	509.7	-2,318.3	2,373.7	0.00	0.00	
4,400.0	44.26	282.40	3,484.4	524.7	-2,386.5	2,443.5	0.00	0.00	
4,465.0	44.26	282.40	3,531.0	534.4	-2,430.8	2,488.8	0.00	0.00	Wasatch G (TVD)
4,500.0	44.26	282.40	3,556.1	539.6	-2,454.6	2,513.2	0.00	0.00	
4,600.0	44.26	282.40	3,627.7	554.6	-2,522.8	2,583.0	0.00	0.00	
4,700.0	44.26	282.40	3,699.3	569.6	-2,591.0	2,652.8	0.00	0.00	
4,800.0	44.26	282.40	3,770.9	584.6	-2,659.1	2,722.6	0.00	0.00	
4,900.0	44.26	282.40	3,842.6	599.6	-2,727.3	2,792.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF03E-15 H15 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6452.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6452.0ft (Original Well Elev)
Site:	H15 596 (S15-T5S-R96W)	North Reference:	True
Well:	WF03E-15 H15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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	44.26	282.40	3,914.2	614.6	-2,795.4	2,862.2	0.00	0.00	
5,100.0	44.26	282.40	3,985.8	629.6	-2,863.6	2,932.0	0.00	0.00	
5,200.0	44.26	282.40	4,057.4	644.5	-2,931.7	3,001.7	0.00	0.00	
5,300.0	44.26	282.40	4,129.1	659.5	-2,999.9	3,071.5	0.00	0.00	
5,400.0	44.26	282.40	4,200.7	674.5	-3,068.1	3,141.3	0.00	0.00	
5,500.0	44.26	282.40	4,272.3	689.5	-3,136.2	3,211.1	0.00	0.00	
5,600.0	44.26	282.40	4,343.9	704.5	-3,204.4	3,280.9	0.00	0.00	
5,661.8	44.26	282.40	4,388.2	713.7	-3,246.5	3,324.0	0.00	0.00	Start Drop -3.00
5,700.0	43.11	282.40	4,415.8	719.4	-3,272.3	3,350.4	3.00	-3.00	
5,800.0	40.11	282.40	4,490.6	733.7	-3,337.1	3,416.8	3.00	-3.00	
5,900.0	37.11	282.40	4,568.7	747.1	-3,398.0	3,479.2	3.00	-3.00	
6,000.0	34.11	282.40	4,650.0	759.6	-3,454.9	3,537.4	3.00	-3.00	
6,100.0	31.11	282.40	4,734.2	771.1	-3,507.5	3,591.3	3.00	-3.00	
6,200.0	28.11	282.40	4,821.2	781.7	-3,555.8	3,640.7	3.00	-3.00	
6,300.0	25.11	282.40	4,910.6	791.3	-3,599.5	3,685.5	3.00	-3.00	
6,400.0	22.11	282.40	5,002.2	799.9	-3,638.6	3,725.5	3.00	-3.00	
6,500.0	19.11	282.40	5,095.8	807.5	-3,673.0	3,760.7	3.00	-3.00	
6,600.0	16.11	282.40	5,191.1	814.0	-3,702.6	3,791.0	3.00	-3.00	
6,700.0	13.11	282.40	5,287.8	819.4	-3,727.2	3,816.2	3.00	-3.00	
6,800.0	10.11	282.40	5,385.8	823.7	-3,746.8	3,836.3	3.00	-3.00	
6,900.0	7.11	282.40	5,484.6	826.9	-3,761.5	3,851.3	3.00	-3.00	
7,000.0	4.11	282.40	5,584.1	829.0	-3,771.0	3,861.0	3.00	-3.00	
7,100.0	1.11	282.40	5,684.0	830.0	-3,775.5	3,865.6	3.00	-3.00	
7,137.0	0.00	0.00	5,721.0	830.1	-3,775.8	3,865.9	3.00	-3.00	EOD; Inc=0° - Top of Gas (TVD) - H15 596 WFC
7,167.0	0.08	236.27	5,751.0	830.1	-3,775.8	3,866.0	0.25	0.25	Williams Fork (TVD)
7,200.0	0.16	236.27	5,784.0	830.1	-3,775.9	3,866.0	0.25	0.25	
7,259.0	0.30	236.27	5,843.0	829.9	-3,776.1	3,866.2	0.25	0.25	
7,300.0	0.30	236.27	5,884.0	829.8	-3,776.3	3,866.3	0.00	0.00	
7,400.0	0.30	236.27	5,984.0	829.5	-3,776.7	3,866.7	0.00	0.00	
7,500.0	0.30	236.27	6,084.0	829.2	-3,777.1	3,867.1	0.00	0.00	
7,600.0	0.30	236.27	6,184.0	828.9	-3,777.6	3,867.4	0.00	0.00	
7,700.0	0.30	236.27	6,284.0	828.6	-3,778.0	3,867.8	0.00	0.00	
7,800.0	0.30	236.27	6,384.0	828.3	-3,778.5	3,868.2	0.00	0.00	
7,900.0	0.30	236.27	6,484.0	828.0	-3,778.9	3,868.5	0.00	0.00	
8,000.0	0.30	236.27	6,584.0	827.7	-3,779.4	3,868.9	0.00	0.00	
8,100.0	0.30	236.27	6,684.0	827.4	-3,779.8	3,869.3	0.00	0.00	
8,200.0	0.30	236.27	6,784.0	827.1	-3,780.2	3,869.7	0.00	0.00	
8,300.0	0.30	236.27	6,884.0	826.8	-3,780.7	3,870.0	0.00	0.00	
8,400.0	0.30	236.27	6,984.0	826.5	-3,781.1	3,870.4	0.00	0.00	
8,500.0	0.30	236.27	7,084.0	826.3	-3,781.6	3,870.8	0.00	0.00	
8,600.0	0.30	236.27	7,184.0	826.0	-3,782.0	3,871.1	0.00	0.00	
8,700.0	0.30	236.27	7,284.0	825.7	-3,782.4	3,871.5	0.00	0.00	
8,800.0	0.30	236.27	7,384.0	825.4	-3,782.9	3,871.9	0.00	0.00	
8,900.0	0.30	236.27	7,484.0	825.1	-3,783.3	3,872.2	0.00	0.00	
9,000.0	0.30	236.27	7,584.0	824.8	-3,783.8	3,872.6	0.00	0.00	
9,100.0	0.30	236.27	7,684.0	824.5	-3,784.2	3,873.0	0.00	0.00	
9,200.0	0.30	236.27	7,784.0	824.2	-3,784.7	3,873.4	0.00	0.00	
9,300.0	0.30	236.27	7,884.0	823.9	-3,785.1	3,873.7	0.00	0.00	
9,400.0	0.30	236.27	7,984.0	823.6	-3,785.5	3,874.1	0.00	0.00	
9,500.0	0.30	236.27	8,084.0	823.3	-3,786.0	3,874.5	0.00	0.00	
9,600.0	0.30	236.27	8,184.0	823.0	-3,786.4	3,874.8	0.00	0.00	
9,700.0	0.30	236.27	8,284.0	822.7	-3,786.9	3,875.2	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6452.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6452.0ft (Original Well Elev)
Site:	H15 596 (S15-T5S-R96W)	North Reference:	True
Well:	WF03E-15 H15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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
9,800.0	0.30	236.27	8,384.0	822.4	-3,787.3	3,875.6	0.00	0.00	
9,900.0	0.30	236.27	8,484.0	822.1	-3,787.8	3,876.0	0.00	0.00	
10,000.0	0.30	236.27	8,584.0	821.8	-3,788.2	3,876.3	0.00	0.00	
10,100.0	0.30	236.27	8,684.0	821.5	-3,788.6	3,876.7	0.00	0.00	
10,200.0	0.30	236.27	8,784.0	821.2	-3,789.1	3,877.1	0.00	0.00	
10,300.0	0.30	236.27	8,884.0	820.9	-3,789.5	3,877.4	0.00	0.00	
10,400.0	0.30	236.27	8,984.0	820.6	-3,790.0	3,877.8	0.00	0.00	
10,500.0	0.30	236.27	9,084.0	820.3	-3,790.4	3,878.2	0.00	0.00	
10,587.0	0.30	236.27	9,171.0	820.1	-3,790.8	3,878.5	0.00	0.00	Drillers TD @ 10587' MD - Rollins (TVD) - H15
10,600.0	0.30	236.27	9,184.0	820.0	-3,790.9	3,878.5	0.00	0.00	
10,700.0	0.30	236.27	9,284.0	819.8	-3,791.3	3,878.9	0.00	0.00	
10,800.0	0.30	236.27	9,384.0	819.5	-3,791.7	3,879.3	0.00	0.00	
10,900.0	0.30	236.27	9,484.0	819.2	-3,792.2	3,879.7	0.00	0.00	
11,000.0	0.30	236.27	9,584.0	818.9	-3,792.6	3,880.0	0.00	0.00	
11,100.0	0.30	236.27	9,684.0	818.6	-3,793.1	3,880.4	0.00	0.00	
11,200.0	0.30	236.27	9,784.0	818.3	-3,793.5	3,880.8	0.00	0.00	
11,300.0	0.30	236.27	9,884.0	818.0	-3,794.0	3,881.1	0.00	0.00	
11,400.0	0.30	236.27	9,984.0	817.7	-3,794.4	3,881.5	0.00	0.00	
11,500.0	0.30	236.27	10,084.0	817.4	-3,794.8	3,881.9	0.00	0.00	
11,600.0	0.30	236.27	10,184.0	817.1	-3,795.3	3,882.2	0.00	0.00	
11,700.0	0.30	236.27	10,284.0	816.8	-3,795.7	3,882.6	0.00	0.00	
11,787.0	0.30	236.27	10,371.0	816.5	-3,796.1	3,882.9	0.00	0.00	Permit TD @ 11787' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
H15 596 WF03E-15 PB† - hit/miss target - Shape - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,171.0	820.1	-3,790.8	1,661,317.68	2,250,751.13	39° 37' 8.35 N	108° 9' 36.24 W
H15 596 WF03E-15 TG† - plan hits target center - Point	0.00	0.00	5,721.0	830.1	-3,775.8	1,661,327.25	2,250,766.41	39° 37' 8.45 N	108° 9' 36.05 W

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,465.0	3,531.0	Wasatch G (TVD)			
7,137.0	5,721.0	Top of Gas (TVD)			
7,167.0	5,751.0	Willaims Fork (TVD)			
10,587.0	9,171.0	Rollins (TVD)			

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF03E-15 H15 596
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6452.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6452.0ft (Original Well Elev)
Site:	H15 596 (S15-T5S-R96W)	North Reference:	True
Well:	WF03E-15 H15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
1,675.2	1,532.8	116.4	-529.3	EOB; Inc=44.26°
5,661.8	4,388.2	713.7	-3,246.5	Start Drop -3.00
7,137.0	5,721.0	830.1	-3,775.8	EOD; Inc=0°
10,587.0	9,171.0	829.9	-3,776.1	Drillers TD @ 10587' MD
11,787.0	10,371.0	820.1	-3,790.8	Permit TD @ 11787' MD