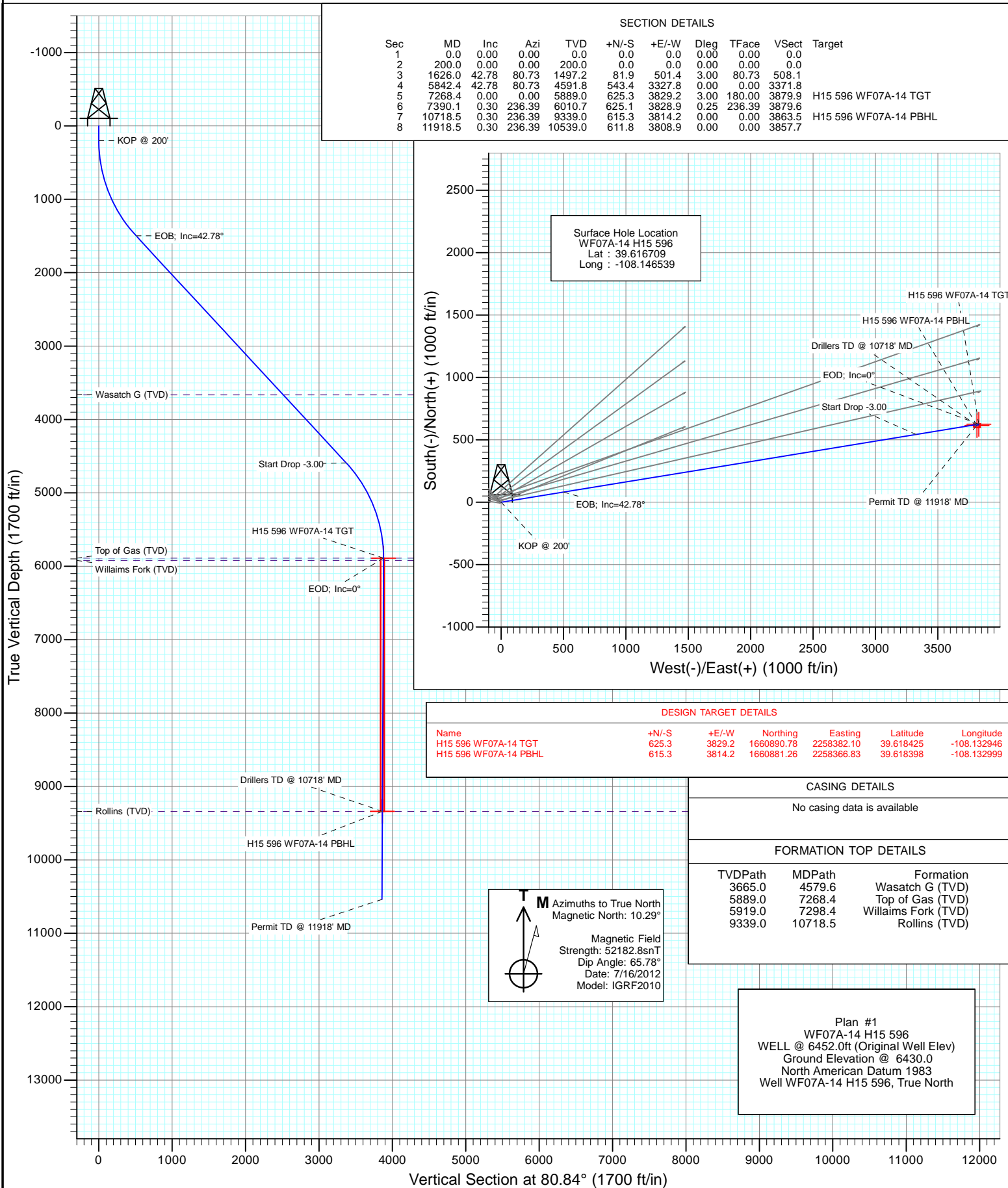




Project: North Piceance
Site: H15 596 (S15-T5S-R96W)
Well: WF07A-14 H15 596
Wellbore: DD
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF07A-14 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:	WF07A-14 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:	39.616731
From:	Lat/Long	Easting:	2,254,530.40 ft	Longitude:	-108.146561
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.67 °

Well	WF07A-14 H15 596					
Well Position	+N/-S	0.0 ft	Northing:	1,660,377.28 ft	Latitude:	39.616709
	+E/-W	0.0 ft	Easting:	2,254,536.31 ft	Longitude:	-108.146539
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	80.84

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	
1,626.0	42.78	80.73	1,497.2	81.9	501.4	3.00	3.00	0.00	80.73	
5,842.4	42.78	80.73	4,591.8	543.4	3,327.8	0.00	0.00	0.00	0.00	
7,268.4	0.00	0.00	5,889.0	625.3	3,829.2	3.00	-3.00	0.00	180.00	H15 596 WF07A-14 T
7,390.1	0.30	236.39	6,010.7	625.1	3,828.9	0.25	0.25	-101.60	236.39	
10,718.5	0.30	236.39	9,339.0	615.3	3,814.2	0.00	0.00	0.00	0.00	H15 596 WF07A-14 F
11,918.5	0.30	236.39	10,539.0	611.8	3,808.9	0.00	0.00	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF07A-14 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:	WF07A-14 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	80.73	300.0	0.4	2.6	2.6	3.00	3.00	
400.0	6.00	80.73	399.6	1.7	10.3	10.5	3.00	3.00	
500.0	9.00	80.73	498.8	3.8	23.2	23.5	3.00	3.00	
600.0	12.00	80.73	597.1	6.7	41.2	41.7	3.00	3.00	
700.0	15.00	80.73	694.3	10.5	64.2	65.1	3.00	3.00	
800.0	18.00	80.73	790.2	15.1	92.3	93.5	3.00	3.00	
900.0	21.00	80.73	884.4	20.4	125.2	126.9	3.00	3.00	
1,000.0	24.00	80.73	976.8	26.6	163.0	165.1	3.00	3.00	
1,100.0	27.00	80.73	1,067.1	33.5	205.4	208.2	3.00	3.00	
1,200.0	30.00	80.73	1,154.9	41.2	252.5	255.9	3.00	3.00	
1,300.0	33.00	80.73	1,240.2	49.7	304.1	308.1	3.00	3.00	
1,400.0	36.00	80.73	1,322.6	58.8	360.0	364.8	3.00	3.00	
1,500.0	39.00	80.73	1,401.9	68.6	420.1	425.6	3.00	3.00	
1,600.0	42.00	80.73	1,477.9	79.1	484.1	490.6	3.00	3.00	
1,626.0	42.78	80.73	1,497.2	81.9	501.4	508.1	3.00	3.00	EOB; Inc=42.78°
1,700.0	42.78	80.73	1,551.5	90.0	551.0	558.3	0.00	0.00	
1,800.0	42.78	80.73	1,624.9	100.9	618.1	626.3	0.00	0.00	
1,900.0	42.78	80.73	1,698.3	111.9	685.1	694.2	0.00	0.00	
2,000.0	42.78	80.73	1,771.7	122.8	752.1	762.1	0.00	0.00	
2,100.0	42.78	80.73	1,845.0	133.8	819.2	830.0	0.00	0.00	
2,200.0	42.78	80.73	1,918.4	144.7	886.2	897.9	0.00	0.00	
2,300.0	42.78	80.73	1,991.8	155.7	953.2	965.9	0.00	0.00	
2,400.0	42.78	80.73	2,065.2	166.6	1,020.3	1,033.8	0.00	0.00	
2,500.0	42.78	80.73	2,138.6	177.6	1,087.3	1,101.7	0.00	0.00	
2,600.0	42.78	80.73	2,212.0	188.5	1,154.3	1,169.6	0.00	0.00	
2,700.0	42.78	80.73	2,285.4	199.4	1,221.4	1,237.5	0.00	0.00	
2,800.0	42.78	80.73	2,358.8	210.4	1,288.4	1,305.5	0.00	0.00	
2,900.0	42.78	80.73	2,432.2	221.3	1,355.4	1,373.4	0.00	0.00	
3,000.0	42.78	80.73	2,505.6	232.3	1,422.4	1,441.3	0.00	0.00	
3,100.0	42.78	80.73	2,579.0	243.2	1,489.5	1,509.2	0.00	0.00	
3,200.0	42.78	80.73	2,652.4	254.2	1,556.5	1,577.1	0.00	0.00	
3,300.0	42.78	80.73	2,725.8	265.1	1,623.5	1,645.0	0.00	0.00	
3,400.0	42.78	80.73	2,799.2	276.1	1,690.6	1,713.0	0.00	0.00	
3,500.0	42.78	80.73	2,872.6	287.0	1,757.6	1,780.9	0.00	0.00	
3,600.0	42.78	80.73	2,946.0	298.0	1,824.6	1,848.8	0.00	0.00	
3,700.0	42.78	80.73	3,019.4	308.9	1,891.7	1,916.7	0.00	0.00	
3,800.0	42.78	80.73	3,092.8	319.9	1,958.7	1,984.6	0.00	0.00	
3,900.0	42.78	80.73	3,166.2	330.8	2,025.7	2,052.6	0.00	0.00	
4,000.0	42.78	80.73	3,239.6	341.7	2,092.8	2,120.5	0.00	0.00	
4,100.0	42.78	80.73	3,313.0	352.7	2,159.8	2,188.4	0.00	0.00	
4,200.0	42.78	80.73	3,386.4	363.6	2,226.8	2,256.3	0.00	0.00	
4,300.0	42.78	80.73	3,459.8	374.6	2,293.9	2,324.2	0.00	0.00	
4,400.0	42.78	80.73	3,533.2	385.5	2,360.9	2,392.2	0.00	0.00	
4,500.0	42.78	80.73	3,606.6	396.5	2,427.9	2,460.1	0.00	0.00	
4,579.6	42.78	80.73	3,665.0	405.2	2,481.3	2,514.1	0.00	0.00	Wasatch G (TVD)
4,600.0	42.78	80.73	3,680.0	407.4	2,494.9	2,528.0	0.00	0.00	
4,700.0	42.78	80.73	3,753.4	418.4	2,562.0	2,595.9	0.00	0.00	
4,800.0	42.78	80.73	3,826.7	429.3	2,629.0	2,663.8	0.00	0.00	
4,900.0	42.78	80.73	3,900.1	440.3	2,696.0	2,731.7	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF07A-14 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:	WF07A-14 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	42.78	80.73	3,973.5	451.2	2,763.1	2,799.7	0.00	0.00	
5,100.0	42.78	80.73	4,046.9	462.1	2,830.1	2,867.6	0.00	0.00	
5,200.0	42.78	80.73	4,120.3	473.1	2,897.1	2,935.5	0.00	0.00	
5,300.0	42.78	80.73	4,193.7	484.0	2,964.2	3,003.4	0.00	0.00	
5,400.0	42.78	80.73	4,267.1	495.0	3,031.2	3,071.3	0.00	0.00	
5,500.0	42.78	80.73	4,340.5	505.9	3,098.2	3,139.3	0.00	0.00	
5,600.0	42.78	80.73	4,413.9	516.9	3,165.3	3,207.2	0.00	0.00	
5,700.0	42.78	80.73	4,487.3	527.8	3,232.3	3,275.1	0.00	0.00	
5,800.0	42.78	80.73	4,560.7	538.8	3,299.3	3,343.0	0.00	0.00	
5,842.4	42.78	80.73	4,591.8	543.4	3,327.8	3,371.8	0.00	0.00	Start Drop -3.00
5,900.0	41.05	80.73	4,634.7	549.6	3,365.7	3,410.3	3.00	-3.00	
6,000.0	38.05	80.73	4,711.8	559.9	3,428.6	3,474.0	3.00	-3.00	
6,100.0	35.05	80.73	4,792.1	569.5	3,487.3	3,533.5	3.00	-3.00	
6,200.0	32.05	80.73	4,875.4	578.4	3,541.9	3,588.8	3.00	-3.00	
6,300.0	29.05	80.73	4,961.5	586.6	3,592.0	3,639.6	3.00	-3.00	
6,400.0	26.05	80.73	5,050.2	594.0	3,637.7	3,685.9	3.00	-3.00	
6,500.0	23.05	80.73	5,141.1	600.7	3,678.7	3,727.4	3.00	-3.00	
6,600.0	20.05	80.73	5,234.1	606.6	3,714.9	3,764.1	3.00	-3.00	
6,700.0	17.05	80.73	5,328.9	611.8	3,746.3	3,795.9	3.00	-3.00	
6,800.0	14.05	80.73	5,425.3	616.1	3,772.8	3,822.8	3.00	-3.00	
6,900.0	11.05	80.73	5,522.9	619.6	3,794.2	3,844.5	3.00	-3.00	
7,000.0	8.05	80.73	5,621.5	622.3	3,810.6	3,861.1	3.00	-3.00	
7,100.0	5.05	80.73	5,720.8	624.1	3,821.9	3,872.5	3.00	-3.00	
7,200.0	2.05	80.73	5,820.6	625.1	3,828.0	3,878.7	3.00	-3.00	
7,268.4	0.00	0.00	5,889.0	625.3	3,829.2	3,879.9	3.00	-3.00	EOD; Inc=0° - Top of Gas (TVD) - H15 596 WFL
7,298.4	0.07	236.39	5,919.0	625.3	3,829.2	3,879.9	0.25	0.25	Williams Fork (TVD)
7,300.0	0.08	236.39	5,920.6	625.3	3,829.2	3,879.9	0.25	0.25	
7,390.1	0.30	236.39	6,010.7	625.1	3,828.9	3,879.6	0.25	0.25	
7,400.0	0.30	236.39	6,020.6	625.1	3,828.9	3,879.6	0.00	0.00	
7,500.0	0.30	236.39	6,120.6	624.8	3,828.4	3,879.1	0.00	0.00	
7,600.0	0.30	236.39	6,220.6	624.5	3,828.0	3,878.6	0.00	0.00	
7,700.0	0.30	236.39	6,320.6	624.2	3,827.6	3,878.1	0.00	0.00	
7,800.0	0.30	236.39	6,420.6	623.9	3,827.1	3,877.6	0.00	0.00	
7,900.0	0.30	236.39	6,520.6	623.6	3,826.7	3,877.2	0.00	0.00	
8,000.0	0.30	236.39	6,620.6	623.3	3,826.2	3,876.7	0.00	0.00	
8,100.0	0.30	236.39	6,720.6	623.0	3,825.8	3,876.2	0.00	0.00	
8,200.0	0.30	236.39	6,820.6	622.7	3,825.4	3,875.7	0.00	0.00	
8,300.0	0.30	236.39	6,920.6	622.4	3,824.9	3,875.2	0.00	0.00	
8,400.0	0.30	236.39	7,020.6	622.2	3,824.5	3,874.7	0.00	0.00	
8,500.0	0.30	236.39	7,120.6	621.9	3,824.0	3,874.3	0.00	0.00	
8,600.0	0.30	236.39	7,220.6	621.6	3,823.6	3,873.8	0.00	0.00	
8,700.0	0.30	236.39	7,320.6	621.3	3,823.1	3,873.3	0.00	0.00	
8,800.0	0.30	236.39	7,420.6	621.0	3,822.7	3,872.8	0.00	0.00	
8,900.0	0.30	236.39	7,520.6	620.7	3,822.3	3,872.3	0.00	0.00	
9,000.0	0.30	236.39	7,620.6	620.4	3,821.8	3,871.8	0.00	0.00	
9,100.0	0.30	236.39	7,720.5	620.1	3,821.4	3,871.4	0.00	0.00	
9,200.0	0.30	236.39	7,820.5	619.8	3,820.9	3,870.9	0.00	0.00	
9,300.0	0.30	236.39	7,920.5	619.5	3,820.5	3,870.4	0.00	0.00	
9,400.0	0.30	236.39	8,020.5	619.2	3,820.0	3,869.9	0.00	0.00	
9,500.0	0.30	236.39	8,120.5	618.9	3,819.6	3,869.4	0.00	0.00	
9,600.0	0.30	236.39	8,220.5	618.6	3,819.2	3,868.9	0.00	0.00	
9,700.0	0.30	236.39	8,320.5	618.3	3,818.7	3,868.5	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:	WF07A-14 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	236.39	8,420.5	618.0	3,818.3	3,868.0	0.00	0.00	
9,900.0	0.30	236.39	8,520.5	617.7	3,817.8	3,867.5	0.00	0.00	
10,000.0	0.30	236.39	8,620.5	617.5	3,817.4	3,867.0	0.00	0.00	
10,100.0	0.30	236.39	8,720.5	617.2	3,817.0	3,866.5	0.00	0.00	
10,200.0	0.30	236.39	8,820.5	616.9	3,816.5	3,866.0	0.00	0.00	
10,300.0	0.30	236.39	8,920.5	616.6	3,816.1	3,865.6	0.00	0.00	
10,400.0	0.30	236.39	9,020.5	616.3	3,815.6	3,865.1	0.00	0.00	
10,500.0	0.30	236.39	9,120.5	616.0	3,815.2	3,864.6	0.00	0.00	
10,600.0	0.30	236.39	9,220.5	615.7	3,814.7	3,864.1	0.00	0.00	
10,700.0	0.30	236.39	9,320.5	615.4	3,814.3	3,863.6	0.00	0.00	
10,718.5	0.30	236.39	9,339.0	615.3	3,814.2	3,863.5	0.00	0.00	Drillers TD @ 10718' MD - Rollins (TVD) - H15
10,800.0	0.30	236.39	9,420.5	615.1	3,813.9	3,863.1	0.00	0.00	
10,900.0	0.30	236.39	9,520.5	614.8	3,813.4	3,862.7	0.00	0.00	
11,000.0	0.30	236.39	9,620.5	614.5	3,813.0	3,862.2	0.00	0.00	
11,100.0	0.30	236.39	9,720.5	614.2	3,812.5	3,861.7	0.00	0.00	
11,200.0	0.30	236.39	9,820.5	613.9	3,812.1	3,861.2	0.00	0.00	
11,300.0	0.30	236.39	9,920.5	613.6	3,811.6	3,860.7	0.00	0.00	
11,400.0	0.30	236.39	10,020.5	613.3	3,811.2	3,860.2	0.00	0.00	
11,500.0	0.30	236.39	10,120.5	613.0	3,810.8	3,859.8	0.00	0.00	
11,600.0	0.30	236.39	10,220.5	612.8	3,810.3	3,859.3	0.00	0.00	
11,700.0	0.30	236.39	10,320.5	612.5	3,809.9	3,858.8	0.00	0.00	
11,800.0	0.30	236.39	10,420.5	612.2	3,809.4	3,858.3	0.00	0.00	
11,900.0	0.30	236.39	10,520.5	611.9	3,809.0	3,857.8	0.00	0.00	
11,918.5	0.30	236.39	10,539.0	611.8	3,808.9	3,857.7	0.00	0.00	Permit TD @ 11918' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
H15 596 WF07A-14 PB1 - hit/miss target - Shape - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,339.0	615.3	3,814.2	1,660,881.26	2,258,366.83	39.618398	-108.132999
H15 596 WF07A-14 TG1 - plan hits target center - Point	0.00	0.00	5,889.0	625.3	3,829.2	1,660,890.78	2,258,382.10	39.618425	-108.132946

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,579.6	3,665.0	Wasatch G (TVD)				
7,268.4	5,889.0	Top of Gas (TVD)				
7,298.4	5,919.0	Williams Fork (TVD)				
10,718.5	9,339.0	Rollins (TVD)				

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WF07A-14 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:	WF07A-14 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'
1,626.0	1,497.2	81.9	501.4	EOB; Inc=42.78°
5,842.4	4,591.8	543.4	3,327.8	Start Drop -3.00
7,268.4	5,889.0	625.3	3,829.2	EOD; Inc=0°
10,718.5	9,339.0	625.1	3,828.9	Drillers TD @ 10718' MD
11,918.5	10,539.0	615.3	3,814.2	Permit TD @ 11918' MD