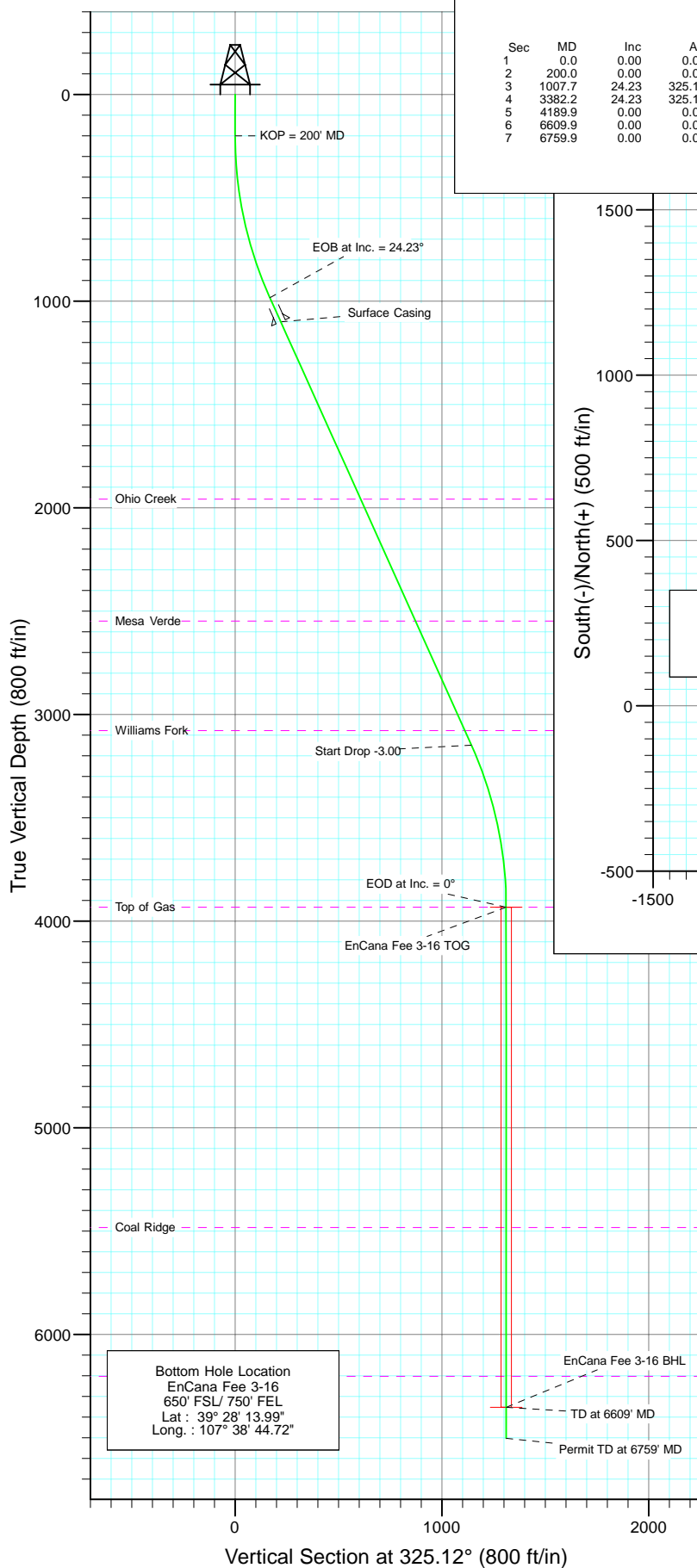
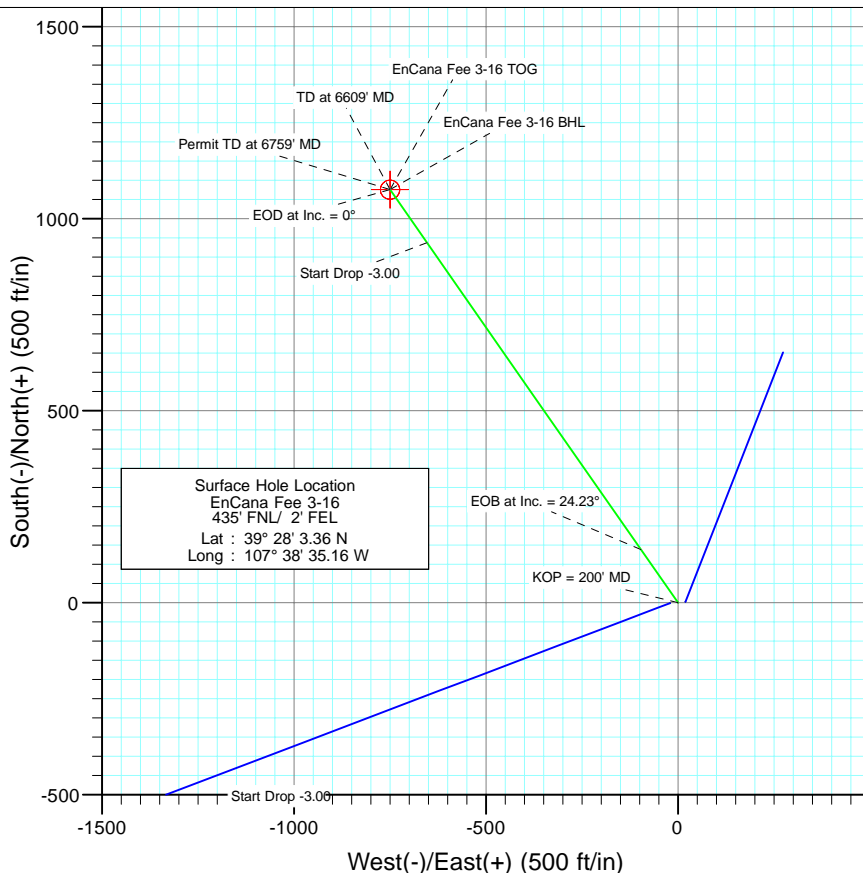




Project: Mamm Creek  
Site: NWNW S10-T7S-R92W (A10E Pad)  
Well: EnCana Fee 3-16  
Wellbore: DD  
Design: Plan #2



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1007.7	24.23	325.12	993.8	139.0	-96.2	3.00	325.12	168.2	
4	3382.2	24.23	325.12	3149.2	937.5	-653.5	0.00	0.00	1142.8	
5	4189.9	0.00	0.00	3933.0	1075.5	-749.7	3.00	180.00	1311.0	EnCana Fee 3-16 TOG
6	6609.9	0.00	0.00	6353.0	1075.5	-749.7	0.00	0.00	1311.0	EnCana Fee 3-16 BHL
7	6759.9	0.00	0.00	6503.0	1075.5	-749.7	0.00	0.00	1311.0	



Azimuths to True North  
Magnetic North: 10.36°

Magnetic Field  
Strength: 52414.8nT  
Dip Angle: 65.82°  
Date: 2/15/2010  
Model: IGRF2010

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1958.0	2076.0	Ohio Creek
2548.0	2723.0	Mesa Verde
3078.0	3304.2	Williams Fork
3933.0	4189.9	Top of Gas
5483.0	5739.9	Coal Ridge
6203.0	6459.9	Rollins

#### DESIGN DETAILS: Plan #2

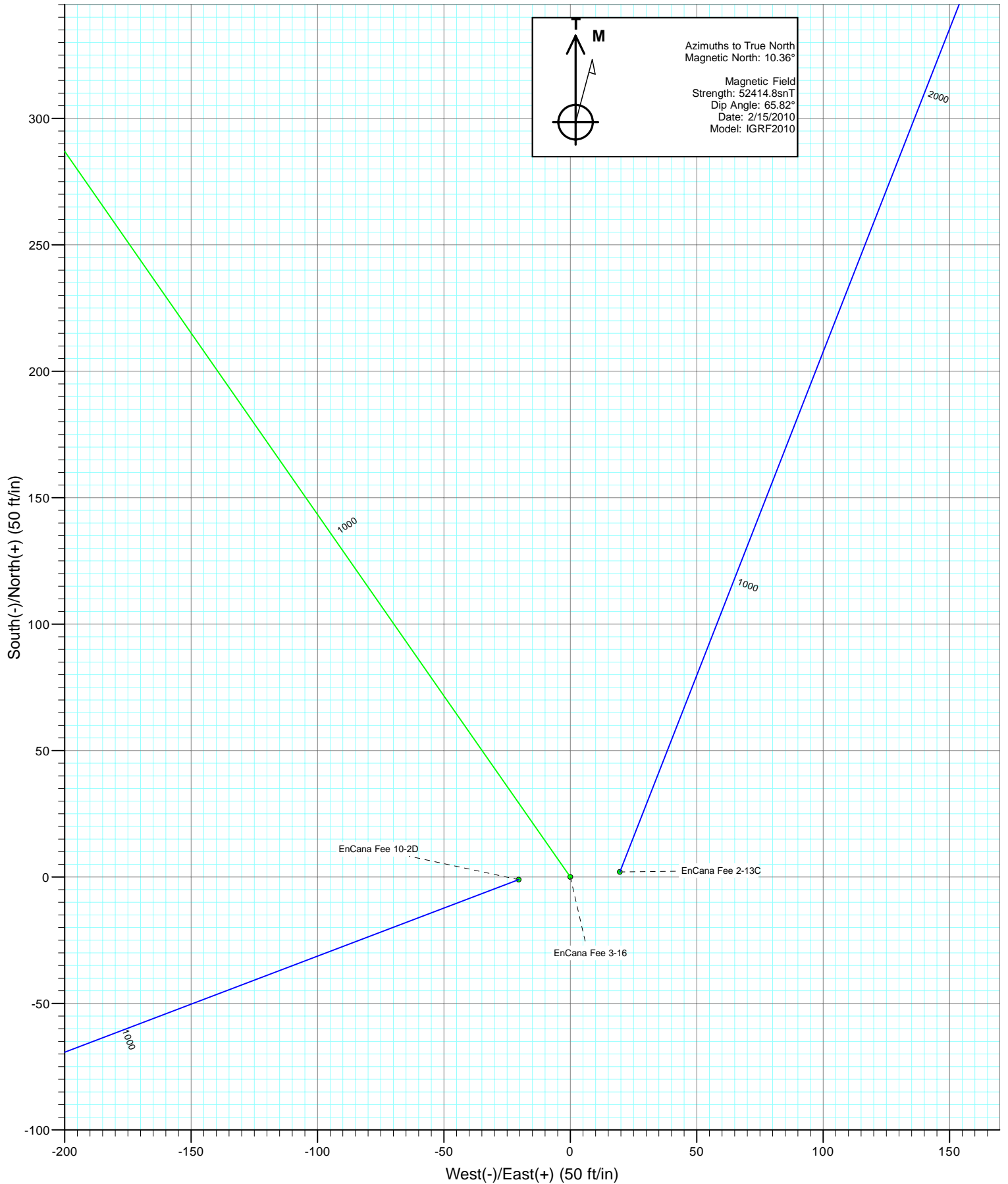
Job #10xxx: KR

KBE @ 6068.0ft (Nabors M15)

Target	Azimuth	Origin	N/S	E/W	From TVD
EnCana Fee 3-16 BHL	325.12	Slot	0.0	0.0	0.0

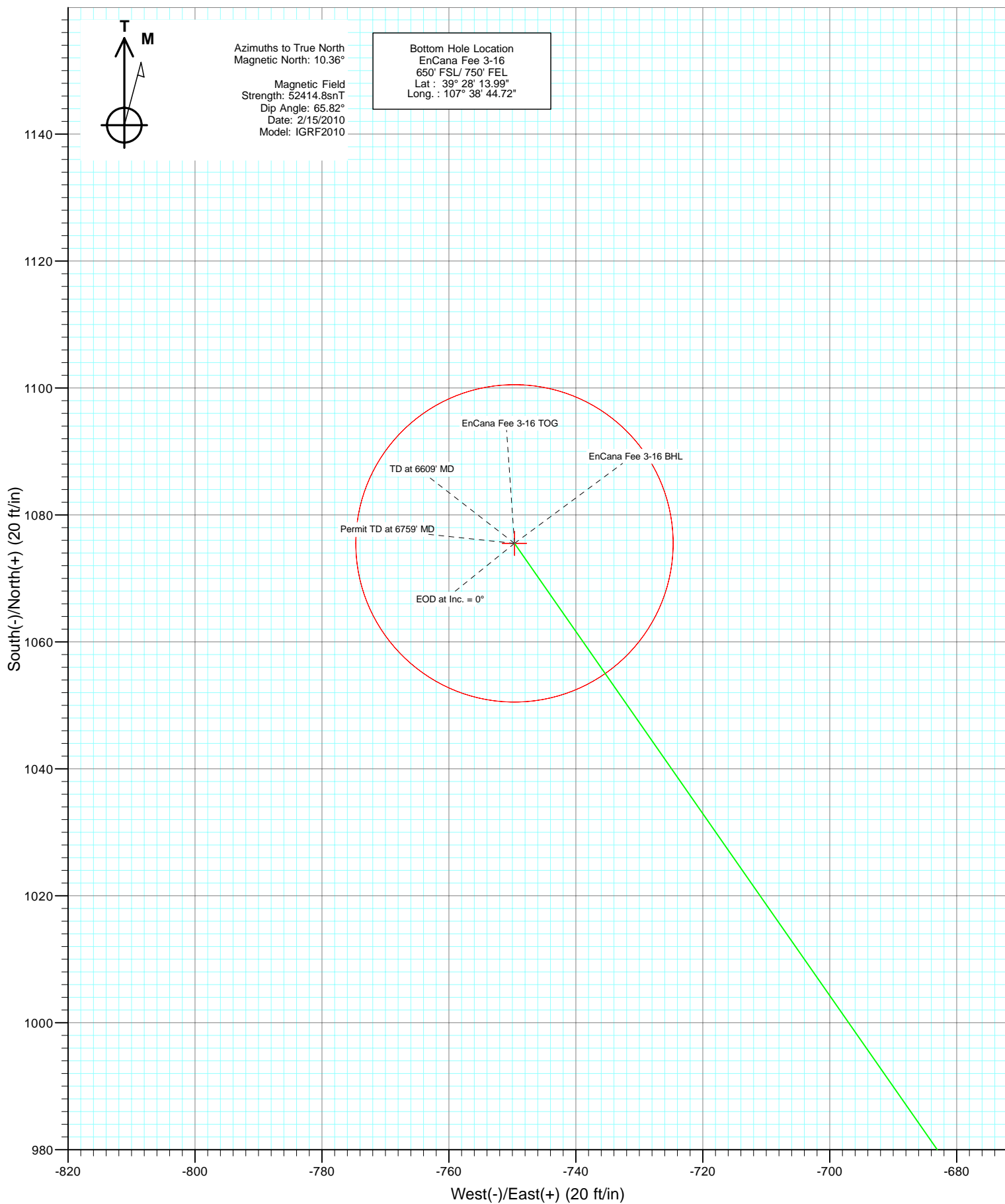


Project: Mamm Creek  
Site: NWNW S10-T7S-R92W (A10E Pad)  
Well: EnCana Fee 3-16  
Wellbore: DD  
Design: Plan #2





Project: Mamm Creek  
Site: NWNW S10-T7S-R92W (A10E Pad)  
Well: EnCana Fee 3-16  
Wellbore: DD  
Design: Plan #2



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EnCana Fee 3-16
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 3-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

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

Site		NWNW S10-T7S-R92W (A10E Pad)			
Site Position:		Northing:	1,602,351.99 ft	Latitude:	39° 28' 3.46 N
From:	Lat/Long	Easting:	2,395,032.44 ft	Longitude:	107° 38' 35.17 W
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.35 °

Well	EnCana Fee 3-16					
Well Position	+N/-S	0.0 ft	Northing:	1,602,341.76 ft	Latitude:	39° 28' 3.36 N
	+E/-W	0.0 ft	Easting:	2,395,033.05 ft	Longitude:	107° 38' 35.16 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,046.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/15/2010	10.36	65.82	52,415

Design	Plan #2			
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	325.12

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	
1,007.7	24.23	325.12	983.8	138.0	-96.2	3.00	3.00	0.00	325.12	
3,382.2	24.23	325.12	3,149.2	937.5	-653.5	0.00	0.00	0.00	0.00	
4,189.9	0.00	0.00	3,933.0	1,075.5	-749.7	3.00	-3.00	0.00	180.00	EnCana Fee 3-16 TO
6,609.9	0.00	0.00	6,353.0	1,075.5	-749.7	0.00	0.00	0.00	0.00	EnCana Fee 3-16 BH
6,759.9	0.00	0.00	6,503.0	1,075.5	-749.7	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EnCana Fee 3-16
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 3-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

### 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' MD
300.0	3.00	325.12	300.0	2.1	-1.5	2.6	3.00	3.00	
400.0	6.00	325.12	399.6	8.6	-6.0	10.5	3.00	3.00	
500.0	9.00	325.12	498.8	19.3	-13.4	23.5	3.00	3.00	
600.0	12.00	325.12	597.1	34.2	-23.9	41.7	3.00	3.00	
700.0	15.00	325.12	694.3	53.4	-37.2	65.1	3.00	3.00	
800.0	18.00	325.12	790.2	76.7	-53.5	93.5	3.00	3.00	
900.0	21.00	325.12	884.4	104.1	-72.5	126.9	3.00	3.00	
1,000.0	24.00	325.12	976.8	135.5	-94.4	165.1	3.00	3.00	
1,007.7	24.23	325.12	983.8	138.0	-96.2	168.2	3.00	3.00	EOB at Inc. = 24.23°
1,100.0	24.23	325.12	1,068.0	169.1	-117.9	206.1	0.00	0.00	
1,135.1	24.23	325.12	1,100.0	180.9	-126.1	220.5	0.00	0.00	Surface Casing
1,200.0	24.23	325.12	1,159.2	202.8	-141.3	247.2	0.00	0.00	
1,300.0	24.23	325.12	1,250.4	236.5	-164.8	288.2	0.00	0.00	
1,400.0	24.23	325.12	1,341.6	270.1	-188.3	329.3	0.00	0.00	
1,500.0	24.23	325.12	1,432.8	303.8	-211.7	370.3	0.00	0.00	
1,600.0	24.23	325.12	1,524.0	337.5	-235.2	411.3	0.00	0.00	
1,700.0	24.23	325.12	1,615.1	371.1	-258.7	452.4	0.00	0.00	
1,800.0	24.23	325.12	1,706.3	404.8	-282.1	493.4	0.00	0.00	
1,900.0	24.23	325.12	1,797.5	438.5	-305.6	534.5	0.00	0.00	
2,000.0	24.23	325.12	1,888.7	472.1	-329.1	575.5	0.00	0.00	
2,076.0	24.23	325.12	1,958.0	497.7	-346.9	606.7	0.00	0.00	Ohio Creek
2,100.0	24.23	325.12	1,979.9	505.8	-352.6	616.5	0.00	0.00	
2,200.0	24.23	325.12	2,071.1	539.5	-376.0	657.6	0.00	0.00	
2,300.0	24.23	325.12	2,162.3	573.1	-399.5	698.6	0.00	0.00	
2,400.0	24.23	325.12	2,253.5	606.8	-423.0	739.7	0.00	0.00	
2,500.0	24.23	325.12	2,344.7	640.5	-446.4	780.7	0.00	0.00	
2,600.0	24.23	325.12	2,435.9	674.1	-469.9	821.7	0.00	0.00	
2,700.0	24.23	325.12	2,527.1	707.8	-493.4	862.8	0.00	0.00	
2,723.0	24.23	325.12	2,548.0	715.5	-498.7	872.2	0.00	0.00	Mesa Verde
2,800.0	24.23	325.12	2,618.2	741.5	-516.8	903.8	0.00	0.00	
2,900.0	24.23	325.12	2,709.4	775.1	-540.3	944.9	0.00	0.00	
3,000.0	24.23	325.12	2,800.6	808.8	-563.8	985.9	0.00	0.00	
3,100.0	24.23	325.12	2,891.8	842.5	-587.2	1,026.9	0.00	0.00	
3,200.0	24.23	325.12	2,983.0	876.1	-610.7	1,068.0	0.00	0.00	
3,300.0	24.23	325.12	3,074.2	909.8	-634.2	1,109.0	0.00	0.00	
3,304.2	24.23	325.12	3,078.0	911.2	-635.1	1,110.7	0.00	0.00	Williams Fork
3,382.2	24.23	325.12	3,149.2	937.5	-653.5	1,142.8	0.00	0.00	Start Drop -3.00
3,400.0	23.70	325.12	3,165.4	943.4	-657.6	1,150.0	3.00	-3.00	
3,500.0	20.70	325.12	3,258.0	974.4	-679.2	1,187.8	3.00	-3.00	
3,600.0	17.70	325.12	3,352.4	1,001.4	-698.0	1,220.6	3.00	-3.00	
3,700.0	14.70	325.12	3,448.4	1,024.3	-713.9	1,248.5	3.00	-3.00	
3,800.0	11.70	325.12	3,545.8	1,043.0	-727.0	1,271.4	3.00	-3.00	
3,900.0	8.70	325.12	3,644.2	1,057.5	-737.1	1,289.1	3.00	-3.00	
4,000.0	5.70	325.12	3,743.4	1,067.8	-744.3	1,301.6	3.00	-3.00	
4,100.0	2.70	325.12	3,843.1	1,073.8	-748.5	1,308.9	3.00	-3.00	
4,189.9	0.00	0.00	3,933.0	1,075.5	-749.7	1,311.0	3.00	-3.00	EOD at Inc. = 0° - Top of Gas - EnCana Fee 3-
4,200.0	0.00	0.00	3,943.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,300.0	0.00	0.00	4,043.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,400.0	0.00	0.00	4,143.1	1,075.5	-749.7	1,311.0	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EnCana Fee 3-16
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 3-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

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
4,500.0	0.00	0.00	4,243.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,600.0	0.00	0.00	4,343.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,700.0	0.00	0.00	4,443.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,800.0	0.00	0.00	4,543.1	1,075.5	-749.7	1,311.0	0.00	0.00	
4,900.0	0.00	0.00	4,643.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,000.0	0.00	0.00	4,743.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,100.0	0.00	0.00	4,843.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,200.0	0.00	0.00	4,943.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,300.0	0.00	0.00	5,043.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,400.0	0.00	0.00	5,143.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,500.0	0.00	0.00	5,243.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,600.0	0.00	0.00	5,343.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,700.0	0.00	0.00	5,443.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,739.9	0.00	0.00	5,483.0	1,075.5	-749.7	1,311.0	0.00	0.00	Coal Ridge
5,800.0	0.00	0.00	5,543.1	1,075.5	-749.7	1,311.0	0.00	0.00	
5,900.0	0.00	0.00	5,643.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,000.0	0.00	0.00	5,743.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,100.0	0.00	0.00	5,843.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,200.0	0.00	0.00	5,943.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,300.0	0.00	0.00	6,043.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,400.0	0.00	0.00	6,143.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,459.9	0.00	0.00	6,203.0	1,075.5	-749.7	1,311.0	0.00	0.00	Rollins
6,500.0	0.00	0.00	6,243.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,600.0	0.00	0.00	6,343.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,609.9	0.00	0.00	6,353.0	1,075.5	-749.7	1,311.0	0.00	0.00	TD at 6609' MD - EnCana Fee 3-16 BHL
6,700.0	0.00	0.00	6,443.1	1,075.5	-749.7	1,311.0	0.00	0.00	
6,759.9	0.00	0.00	6,503.0	1,075.5	-749.7	1,311.0	0.00	0.00	Permit TD at 6759' 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									
EnCana Fee 3-16 BHL	0.00	0.00	6,353.0	1,075.5	-749.7	1,603,434.68	2,394,308.96	39° 28' 13.99 N	107° 38' 44.72 W
- plan hits target center									
- Circle (radius 25.0)									
EnCana Fee 3-16 TOG	0.00	0.00	3,933.0	1,075.5	-749.7	1,603,434.68	2,394,308.96	39° 28' 13.99 N	107° 38' 44.72 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,135.1	1,100.0	Surface Casing	5.500	6.000	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EnCana Fee 3-16
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Nabors M15)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 3-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,076.0	1,958.0	Ohio Creek			
2,723.0	2,548.0	Mesa Verde			
3,304.2	3,078.0	Williams Fork			
4,189.9	3,933.0	Top of Gas			
5,739.9	5,483.0	Coal Ridge			
6,459.9	6,203.0	Rollins			

### 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' MD
1,007.7	983.8	138.0	-96.2	EOB at Inc. = 24.23°
3,382.2	3,149.2	937.5	-653.5	Start Drop -3.00
4,189.9	3,933.0	1,075.5	-749.7	EOD at Inc. = 0°
6,609.9	6,353.0	1,075.5	-749.7	TD at 6609' MD
6,759.9	6,503.0	1,075.5	-749.7	Permit TD at 6759' MD