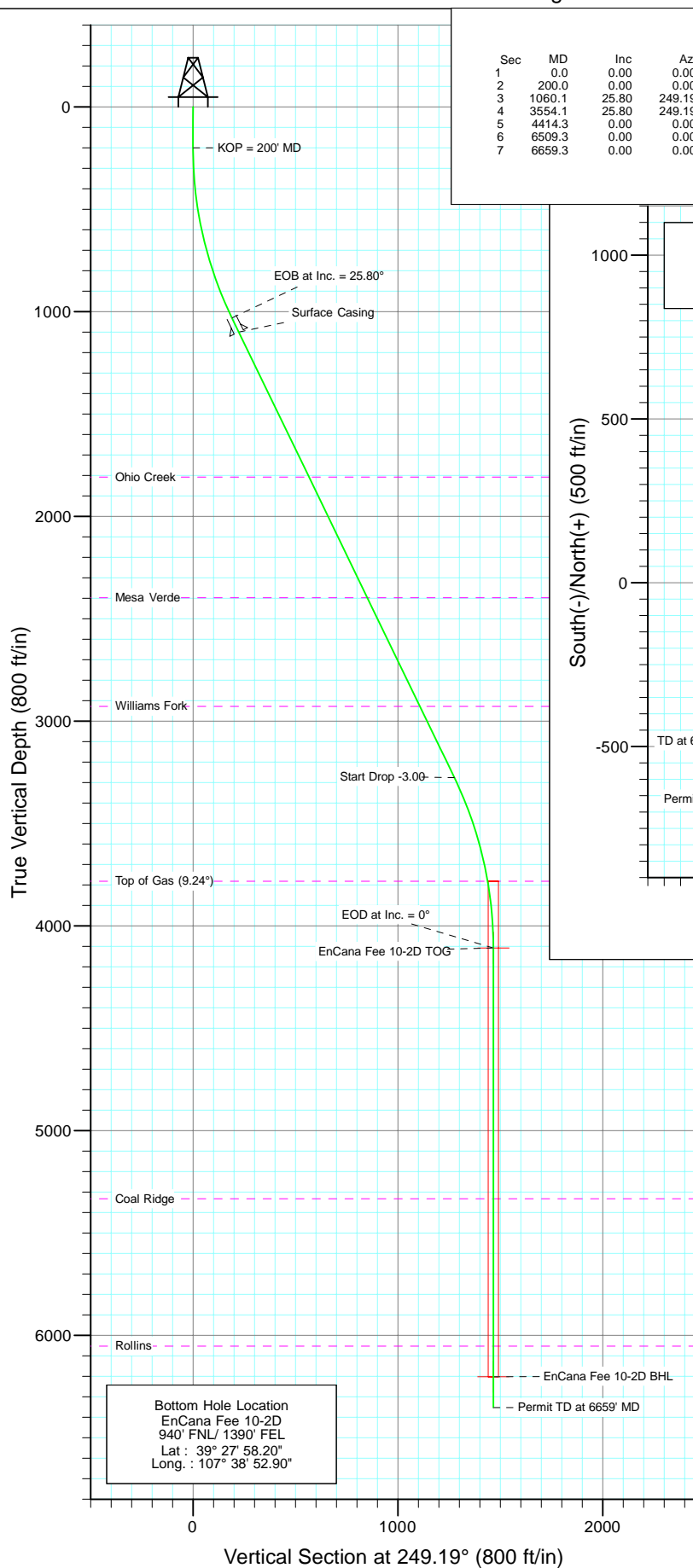
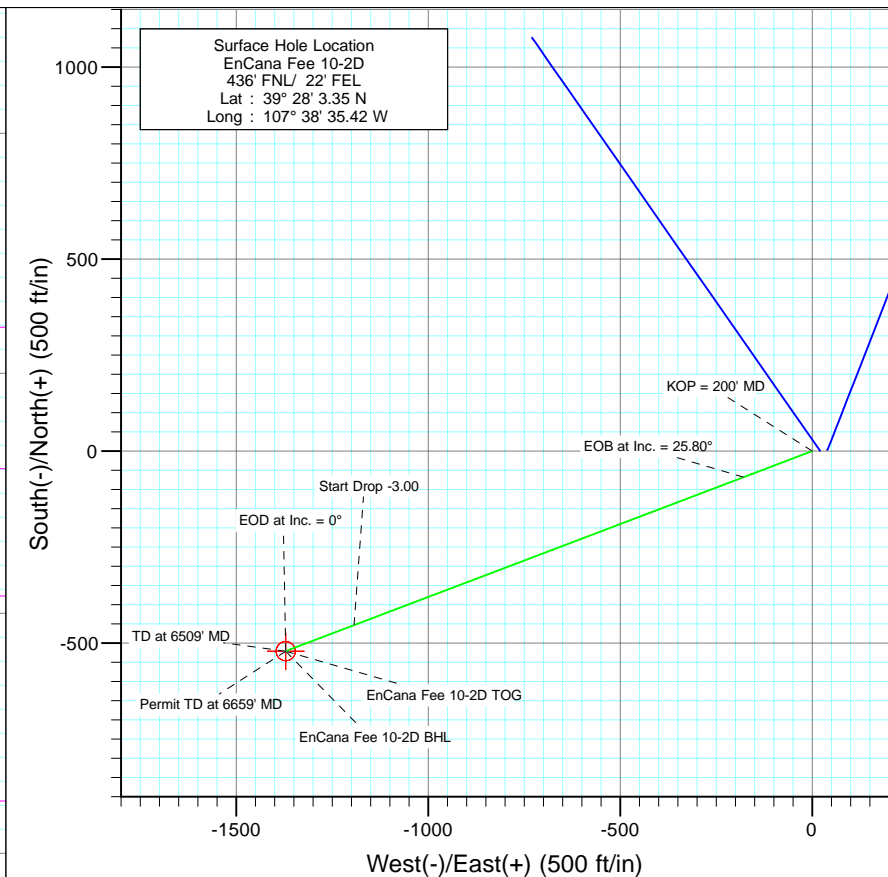




Project: Mamm Creek  
 Site: NWNW S10-T7S-R92W (A10E Pad)  
 Well: EnCana Fee 10-2D  
 Wellbore: DD  
 Design: Plan #2



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	1060.1	25.80	249.19	1031.4	-67.7	-178.0	3.00	249.19	190.4	
4	3554.1	25.80	249.19	3276.6	-453.4	-1192.8	0.00	0.00	1276.1	
5	4414.3	0.00	0.00	4108.0	-521.0	-1370.8	3.00	180.00	1466.5	EnCana Fee 10-2D TOG
6	6509.3	0.00	0.00	6203.0	-521.0	-1370.8	0.00	0.00	1466.5	EnCana Fee 10-2D BHL
7	6659.3	0.00	0.00	6353.0	-521.0	-1370.8	0.00	0.00	1466.5	



Azimuths to True North  
 Magnetic North: 10.36°

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

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1808.0	1922.8	Ohio Creek
2398.0	2578.2	Mesa Verde
2928.0	3166.9	Williams Fork
3783.0	4087.7	Top of Gas (9.24°)
5333.0	5639.3	Coal Ridge
6053.0	6359.3	Rollins

#### DESIGN DETAILS: Plan #2

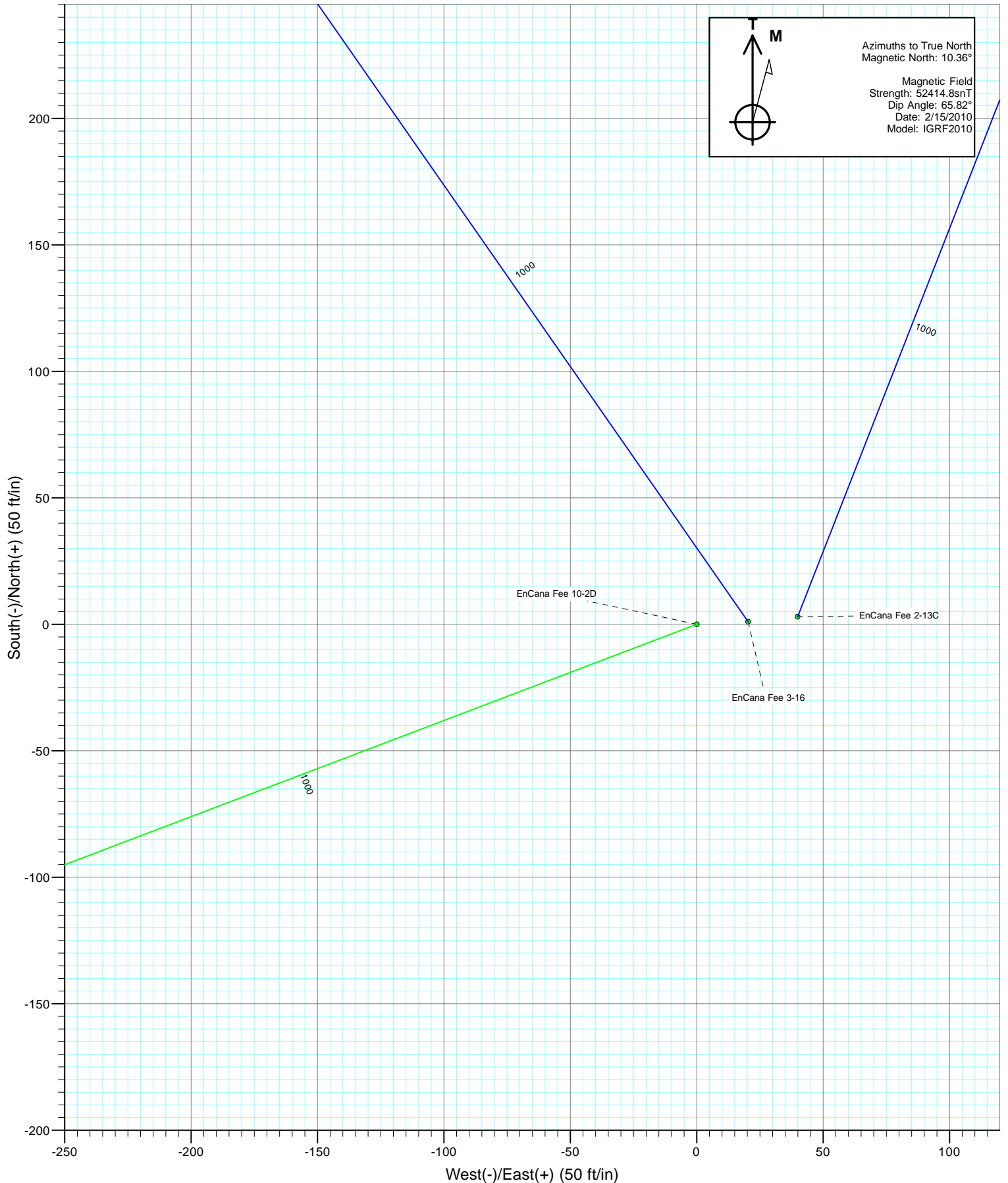
Job #10xxx: KR

KBE @ 6068.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
EnCana Fee 10-2D BHL	249.19	Slot	0.0	0.0	0.0

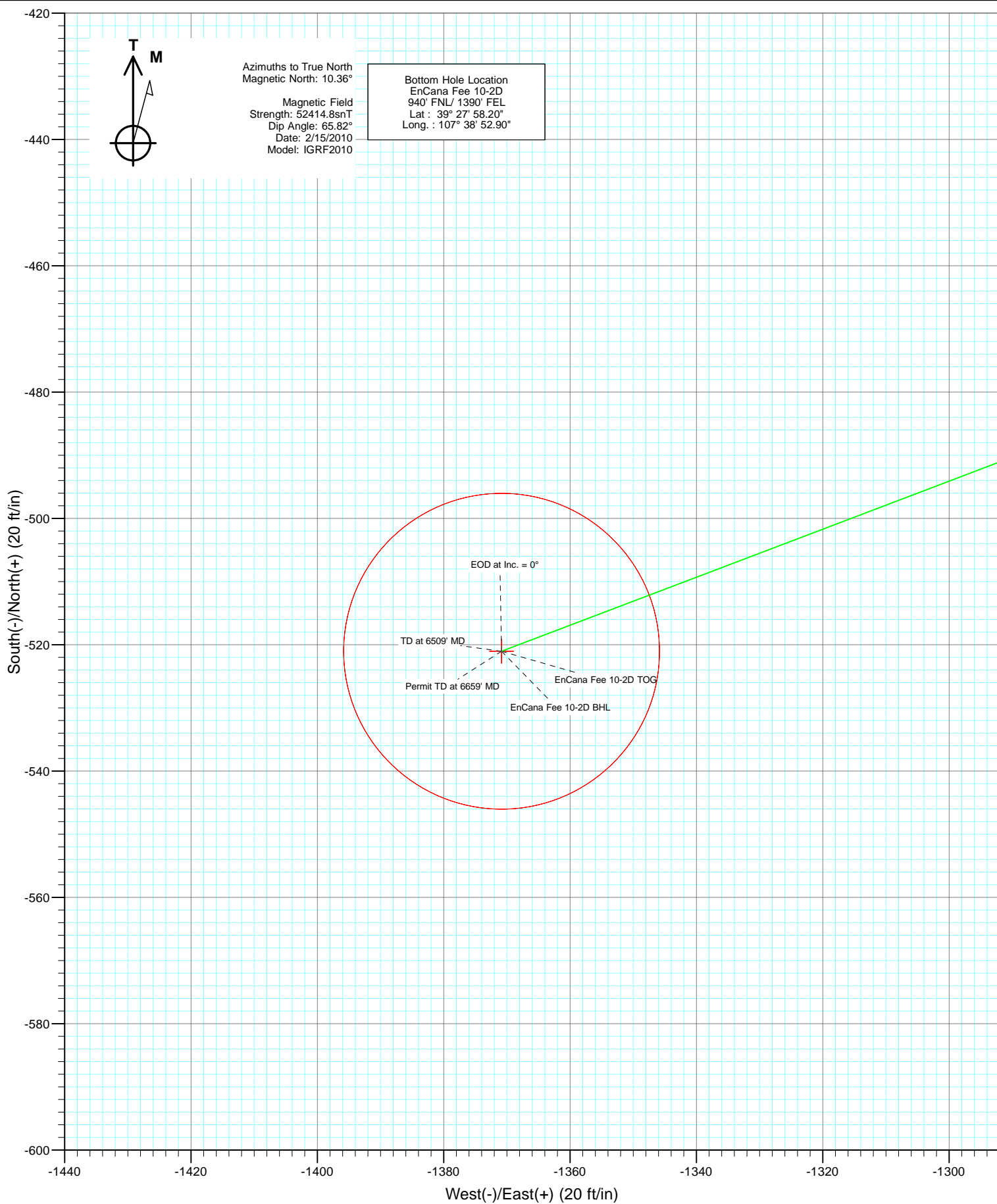


Project: Mamm Creek  
Site: NWNW S10-T7S-R92W (A10E Pad)  
Well: EnCana Fee 10-2D  
Wellbore: DD  
Design: Plan #2





Project: Mamm Creek  
Site: NWNW S10-T7S-R92W (A10E Pad)  
Well: EnCana Fee 10-2D  
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 10-2D
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 10-2D	<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 10-2D					
Well Position	+N/-S	0.0 ft	Northing:	1,602,341.23 ft	Latitude:	39° 28' 3.35 N
	+E/-W	0.0 ft	Easting:	2,395,012.64 ft	Longitude:	107° 38' 35.42 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)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	249.19

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	
1,060.1	25.80	249.19	1,031.4	-67.7	-178.0	3.00	3.00	0.00	249.19	
3,554.1	25.80	249.19	3,276.6	-453.4	-1,192.8	0.00	0.00	0.00	0.00	
4,414.3	0.00	0.00	4,108.0	-521.0	-1,370.8	3.00	-3.00	0.00	180.00	EnCana Fee 10-2D T
6,509.3	0.00	0.00	6,203.0	-521.0	-1,370.8	0.00	0.00	0.00	0.00	EnCana Fee 10-2D B
6,659.3	0.00	0.00	6,353.0	-521.0	-1,370.8	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 10-2D
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 10-2D	<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	249.19	300.0	-0.9	-2.4	2.6	3.00	3.00	
400.0	6.00	249.19	399.6	-3.7	-9.8	10.5	3.00	3.00	
500.0	9.00	249.19	498.8	-8.4	-22.0	23.5	3.00	3.00	
600.0	12.00	249.19	597.1	-14.8	-39.0	41.7	3.00	3.00	
700.0	15.00	249.19	694.3	-23.1	-60.8	65.1	3.00	3.00	
800.0	18.00	249.19	790.2	-33.2	-87.4	93.5	3.00	3.00	
900.0	21.00	249.19	884.4	-45.1	-118.6	126.9	3.00	3.00	
1,000.0	24.00	249.19	976.8	-58.7	-154.3	165.1	3.00	3.00	
1,060.1	25.80	249.19	1,031.4	-67.7	-178.0	190.4	3.00	3.00	EOB at Inc. = 25.80°
1,100.0	25.80	249.19	1,067.2	-73.8	-194.2	207.8	0.00	0.00	
1,136.4	25.80	249.19	1,100.0	-79.5	-209.0	223.6	0.00	0.00	Surface Casing
1,200.0	25.80	249.19	1,157.3	-89.3	-234.9	251.3	0.00	0.00	
1,300.0	25.80	249.19	1,247.3	-104.8	-275.6	294.8	0.00	0.00	
1,400.0	25.80	249.19	1,337.3	-120.2	-316.3	338.4	0.00	0.00	
1,500.0	25.80	249.19	1,427.4	-135.7	-357.0	381.9	0.00	0.00	
1,600.0	25.80	249.19	1,517.4	-151.1	-397.7	425.4	0.00	0.00	
1,700.0	25.80	249.19	1,607.4	-166.6	-438.4	469.0	0.00	0.00	
1,800.0	25.80	249.19	1,697.4	-182.1	-479.1	512.5	0.00	0.00	
1,900.0	25.80	249.19	1,787.5	-197.5	-519.8	556.0	0.00	0.00	
1,922.8	25.80	249.19	1,808.0	-201.1	-529.0	566.0	0.00	0.00	Ohio Creek
2,000.0	25.80	249.19	1,877.5	-213.0	-560.4	599.6	0.00	0.00	
2,100.0	25.80	249.19	1,967.5	-228.5	-601.1	643.1	0.00	0.00	
2,200.0	25.80	249.19	2,057.6	-243.9	-641.8	686.6	0.00	0.00	
2,300.0	25.80	249.19	2,147.6	-259.4	-682.5	730.1	0.00	0.00	
2,400.0	25.80	249.19	2,237.6	-274.9	-723.2	773.7	0.00	0.00	
2,500.0	25.80	249.19	2,327.6	-290.3	-763.9	817.2	0.00	0.00	
2,578.2	25.80	249.19	2,398.0	-302.4	-795.7	851.2	0.00	0.00	Mesa Verde
2,600.0	25.80	249.19	2,417.7	-305.8	-804.6	860.7	0.00	0.00	
2,700.0	25.80	249.19	2,507.7	-321.3	-845.3	904.3	0.00	0.00	
2,800.0	25.80	249.19	2,597.7	-336.7	-886.0	947.8	0.00	0.00	
2,900.0	25.80	249.19	2,687.8	-352.2	-926.7	991.3	0.00	0.00	
3,000.0	25.80	249.19	2,777.8	-367.7	-967.3	1,034.9	0.00	0.00	
3,100.0	25.80	249.19	2,867.8	-383.1	-1,008.0	1,078.4	0.00	0.00	
3,166.9	25.80	249.19	2,928.0	-393.5	-1,035.2	1,107.5	0.00	0.00	Williams Fork
3,200.0	25.80	249.19	2,957.8	-398.6	-1,048.7	1,121.9	0.00	0.00	
3,300.0	25.80	249.19	3,047.9	-414.1	-1,089.4	1,165.4	0.00	0.00	
3,400.0	25.80	249.19	3,137.9	-429.5	-1,130.1	1,209.0	0.00	0.00	
3,500.0	25.80	249.19	3,227.9	-445.0	-1,170.8	1,252.5	0.00	0.00	
3,554.1	25.80	249.19	3,276.6	-453.4	-1,192.8	1,276.1	0.00	0.00	Start Drop -3.00
3,600.0	24.43	249.19	3,318.2	-460.3	-1,211.0	1,295.5	3.00	-3.00	
3,700.0	21.43	249.19	3,410.3	-474.1	-1,247.4	1,334.5	3.00	-3.00	
3,800.0	18.43	249.19	3,504.3	-486.2	-1,279.3	1,368.6	3.00	-3.00	
3,900.0	15.43	249.19	3,599.9	-496.6	-1,306.5	1,397.7	3.00	-3.00	
4,000.0	12.43	249.19	3,697.0	-505.1	-1,329.0	1,421.7	3.00	-3.00	
4,087.7	9.80	249.19	3,783.0	-511.1	-1,344.8	1,438.6	3.00	-3.00	Top of Gas (9.24°)
4,100.0	9.43	249.19	3,795.2	-511.9	-1,346.7	1,440.7	3.00	-3.00	
4,200.0	6.43	249.19	3,894.2	-516.8	-1,359.6	1,454.5	3.00	-3.00	
4,300.0	3.43	249.19	3,993.8	-519.8	-1,367.6	1,463.1	3.00	-3.00	
4,400.0	0.43	249.19	4,093.7	-521.0	-1,370.8	1,466.4	3.00	-3.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EnCana Fee 10-2D
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 10-2D	<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
4,414.3	0.00	0.00	4,108.0	-521.0	-1,370.8	1,466.5	3.00	-3.00	EOD at Inc. = 0° - EnCana Fee 10-2D TOG
4,500.0	0.00	0.00	4,193.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
4,600.0	0.00	0.00	4,293.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
4,700.0	0.00	0.00	4,393.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
4,800.0	0.00	0.00	4,493.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
4,900.0	0.00	0.00	4,593.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,000.0	0.00	0.00	4,693.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,100.0	0.00	0.00	4,793.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,200.0	0.00	0.00	4,893.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,300.0	0.00	0.00	4,993.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,400.0	0.00	0.00	5,093.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,500.0	0.00	0.00	5,193.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,600.0	0.00	0.00	5,293.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,639.3	0.00	0.00	5,333.0	-521.0	-1,370.8	1,466.5	0.00	0.00	Coal Ridge
5,700.0	0.00	0.00	5,393.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,800.0	0.00	0.00	5,493.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
5,900.0	0.00	0.00	5,593.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,000.0	0.00	0.00	5,693.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,100.0	0.00	0.00	5,793.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,200.0	0.00	0.00	5,893.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,300.0	0.00	0.00	5,993.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,359.3	0.00	0.00	6,053.0	-521.0	-1,370.8	1,466.5	0.00	0.00	Rollins
6,400.0	0.00	0.00	6,093.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,500.0	0.00	0.00	6,193.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,509.3	0.00	0.00	6,203.0	-521.0	-1,370.8	1,466.5	0.00	0.00	TD at 6509' MD - EnCana Fee 10-2D BHL
6,600.0	0.00	0.00	6,293.7	-521.0	-1,370.8	1,466.5	0.00	0.00	
6,659.3	0.00	0.00	6,353.0	-521.0	-1,370.8	1,466.5	0.00	0.00	Permit TD at 6659' MD

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
EnCana Fee 10-2D TOC - plan hits target center - Point	0.00	0.00	4,108.0	-521.0	-1,370.8	1,601,852.70	2,393,629.91	39° 27' 58.20 N	107° 38' 52.90 W
EnCana Fee 10-2D BHL - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,203.0	-521.0	-1,370.8	1,601,852.70	2,393,629.91	39° 27' 58.20 N	107° 38' 52.90 W

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,136.4	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 10-2D
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 6068.0ft (Original Well Elev)
<b>Site:</b>	NWNW S10-T7S-R92W (A10E Pad)	<b>North Reference:</b>	True
<b>Well:</b>	EnCana Fee 10-2D	<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 (°)
1,922.8	1,808.0	Ohio Creek			
2,578.2	2,398.0	Mesa Verde			
3,166.9	2,928.0	Williams Fork			
4,087.7	3,783.0	Top of Gas (9.24°)			
5,639.3	5,333.0	Coal Ridge			
6,359.3	6,053.0	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
1,060.1	1,031.4	-67.7	-178.0	EOB at Inc. = 25.80°
3,554.1	3,276.6	-453.4	-1,192.8	Start Drop -3.00
4,414.3	4,108.0	-521.0	-1,370.8	EOD at Inc. = 0°
6,509.3	6,203.0	-521.0	-1,370.8	TD at 6509' MD
6,659.3	6,353.0	-521.0	-1,370.8	Permit TD at 6659' MD