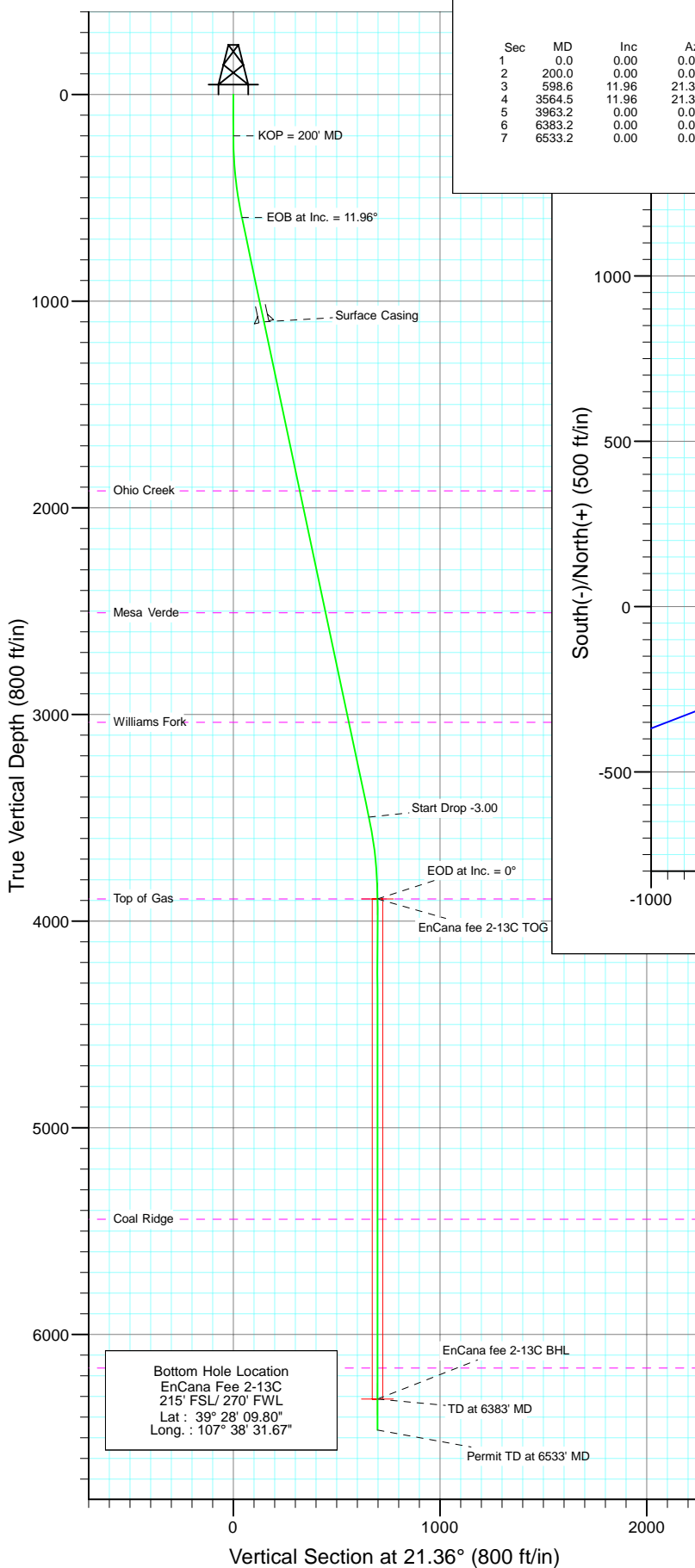
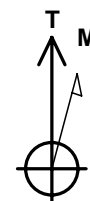
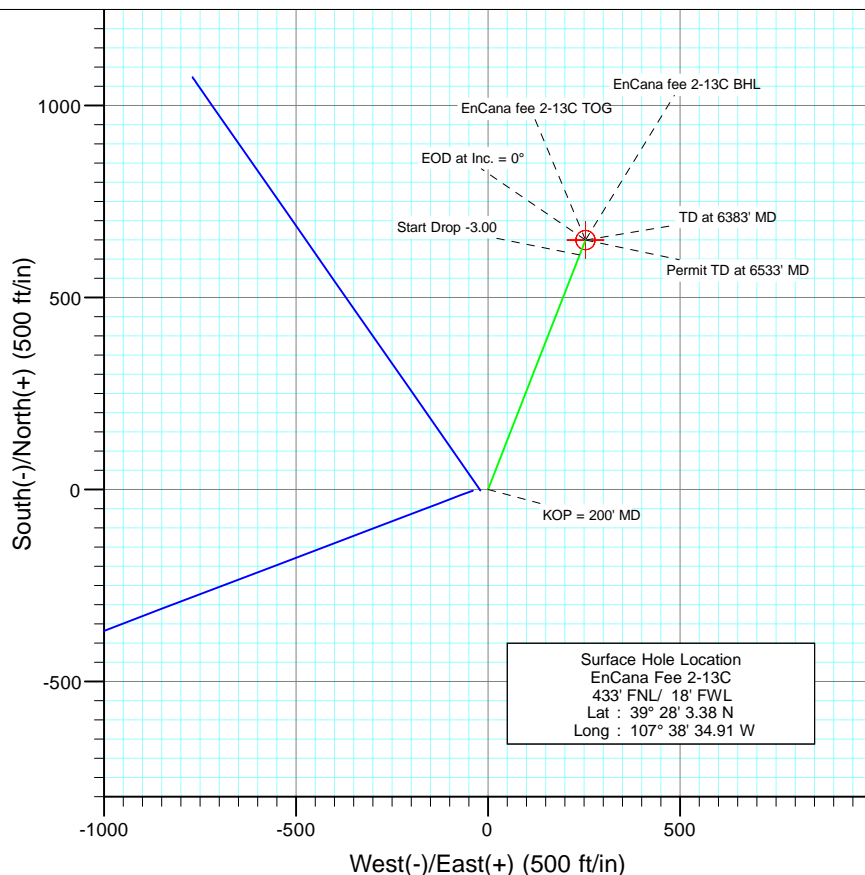




Project: Mamm Creek
Site: NWNW S10-T7S-R92W (A10E Pad)
Well: EnCana Fee 2-13C
Wellbore: DD
Design: Plan #2



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	598.6	11.96	21.36	595.8	38.6	15.1	3.00	21.36	41.5	
4	3564.5	11.96	21.36	3497.2	611.0	239.0	0.00	0.00	656.0	
5	3963.2	0.00	0.00	3893.0	649.6	254.1	3.00	180.00	697.5	EnCana fee 2-13C TOG
6	6383.2	0.00	0.00	6313.0	649.6	254.1	0.00	0.00	697.5	EnCana fee 2-13C BHL
7	6533.2	0.00	0.00	6463.0	649.6	254.1	0.00	0.00	697.5	



Azimuths to True North
Magnetic North: 10.36°

Magnetic Field
Strength: 52414.9snT
Dip Angle: 65.82°
Date: 2/15/2010
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1918.0	1950.2	Ohio Creek
2508.0	2553.3	Mesa Verde
3038.0	3095.1	Williams Fork
3893.0	3963.2	Top of Gas
5443.0	5513.2	Coal Ridge
6163.0	6233.2	Rollins

DESIGN DETAILS: Plan #2

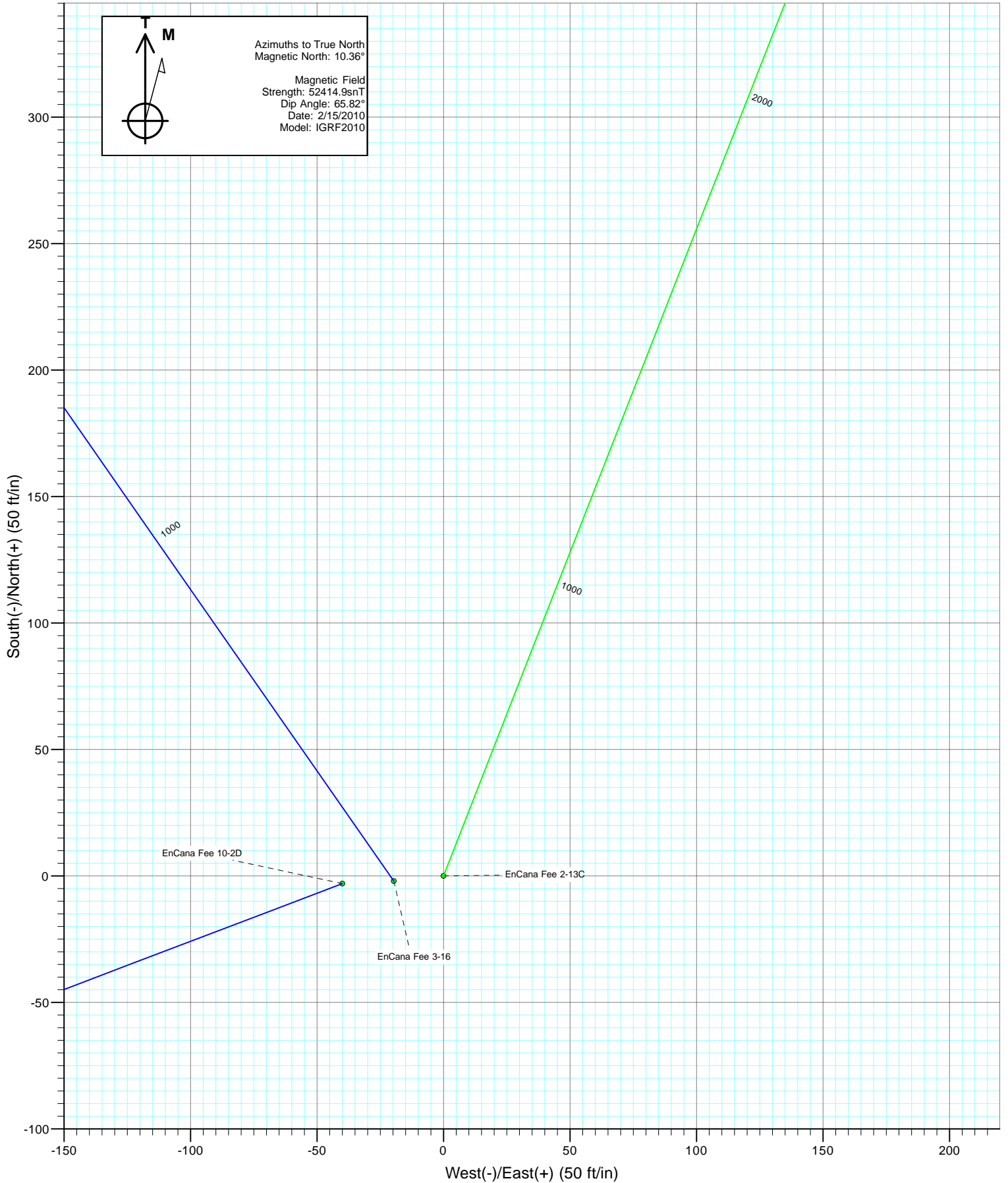
Job #10xxx: KR

KBE @ 6068.0ft (Nabors M15)

Target	Azimuth	Origin	N/S	E/W	From TVD
EnCana fee 2-13C BHL	21.36	Slot	0.0	0.0	0.0

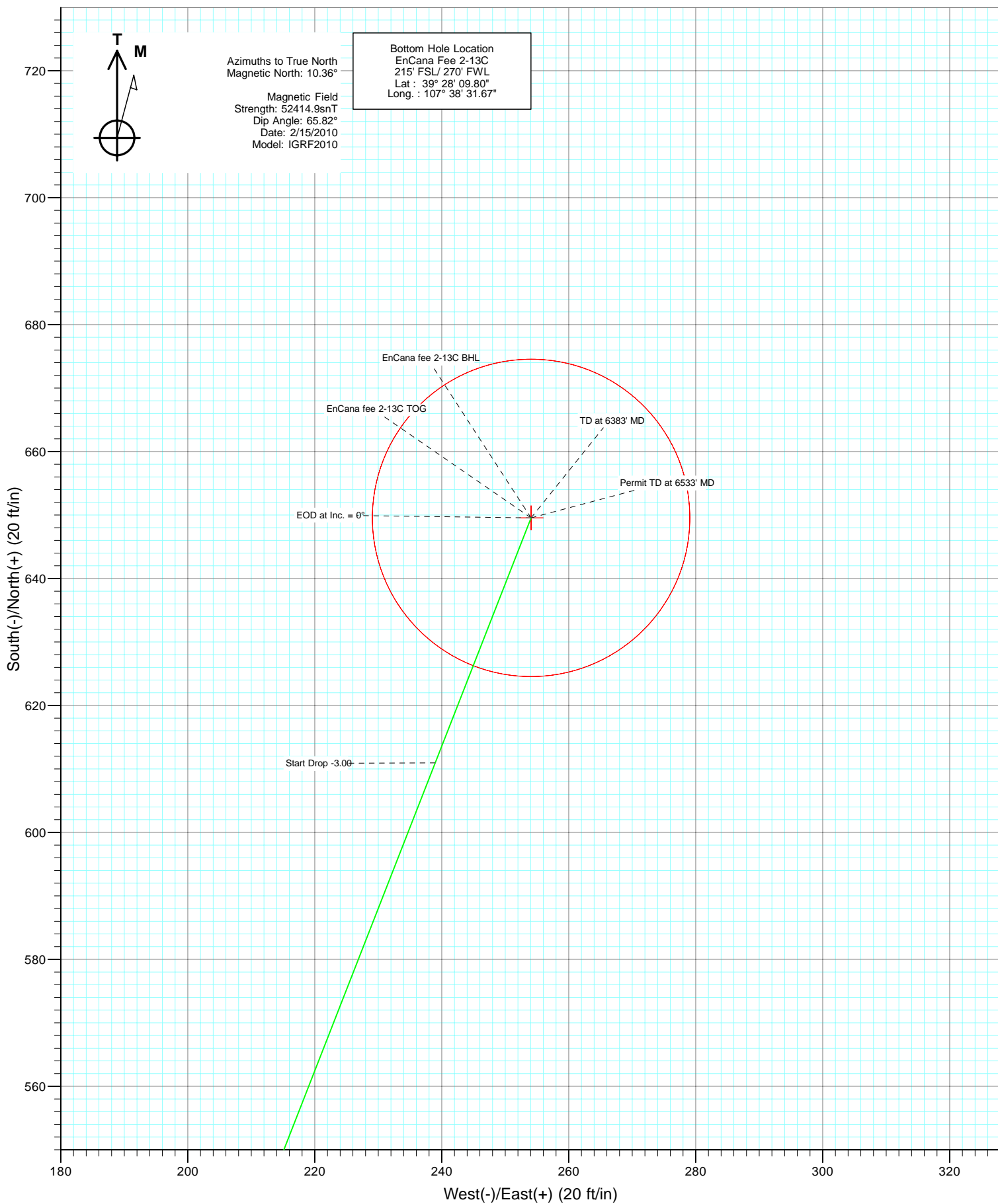


Project: Mamm Creek
Site: NWNW S10-T7S-R92W (A10E Pad)
Well: EnCana Fee 2-13C
Wellbore: DD
Design: Plan #2





Project: Mamm Creek
Site: NWNW S10-T7S-R92W (A10E Pad)
Well: EnCana Fee 2-13C
Wellbore: DD
Design: Plan #2



Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 2-13C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6068.0ft (Nabors M15)
Project:	Mamm Creek	MD Reference:	KBE @ 6068.0ft (Nabors M15)
Site:	NWNW S10-T7S-R92W (A10E Pad)	North Reference:	True
Well:	EnCana Fee 2-13C	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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 2-13C					
Well Position	+N/-S	0.0 ft	Northing:	1,602,343.32 ft	Latitude:	39° 28' 3.38 N
	+E/-W	0.0 ft	Easting:	2,395,052.70 ft	Longitude:	107° 38' 34.91 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	21.36

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	
598.6	11.96	21.36	595.8	38.6	15.1	3.00	3.00	0.00	21.36	
3,564.5	11.96	21.36	3,497.2	611.0	239.0	0.00	0.00	0.00	0.00	
3,963.2	0.00	0.00	3,893.0	649.6	254.1	3.00	-3.00	0.00	180.00	EnCana fee 2-13C TC
6,383.2	0.00	0.00	6,313.0	649.6	254.1	0.00	0.00	0.00	0.00	EnCana fee 2-13C Bf
6,533.2	0.00	0.00	6,463.0	649.6	254.1	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 2-13C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6068.0ft (Nabors M15)
Project:	Mamm Creek	MD Reference:	KBE @ 6068.0ft (Nabors M15)
Site:	NWNW S10-T7S-R92W (A10E Pad)	North Reference:	True
Well:	EnCana Fee 2-13C	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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	21.36	300.0	2.4	1.0	2.6	3.00	3.00	
400.0	6.00	21.36	399.6	9.7	3.8	10.5	3.00	3.00	
500.0	9.00	21.36	498.8	21.9	8.6	23.5	3.00	3.00	
598.6	11.96	21.36	595.8	38.6	15.1	41.5	3.00	3.00	EOB at Inc. = 11.96°
600.0	11.96	21.36	597.1	38.9	15.2	41.7	0.00	0.00	
700.0	11.96	21.36	694.9	58.2	22.8	62.5	0.00	0.00	
800.0	11.96	21.36	792.7	77.5	30.3	83.2	0.00	0.00	
900.0	11.96	21.36	890.6	96.8	37.8	103.9	0.00	0.00	
1,000.0	11.96	21.36	988.4	116.1	45.4	124.6	0.00	0.00	
1,100.0	11.96	21.36	1,086.2	135.4	52.9	145.3	0.00	0.00	
1,114.1	11.96	21.36	1,100.0	138.1	54.0	148.3	0.00	0.00	Surface Casing
1,200.0	11.96	21.36	1,184.1	154.7	60.5	166.1	0.00	0.00	
1,300.0	11.96	21.36	1,281.9	174.0	68.0	186.8	0.00	0.00	
1,400.0	11.96	21.36	1,379.7	193.3	75.6	207.5	0.00	0.00	
1,500.0	11.96	21.36	1,477.5	212.6	83.1	228.2	0.00	0.00	
1,600.0	11.96	21.36	1,575.4	231.8	90.7	249.0	0.00	0.00	
1,700.0	11.96	21.36	1,673.2	251.1	98.2	269.7	0.00	0.00	
1,800.0	11.96	21.36	1,771.0	270.4	105.8	290.4	0.00	0.00	
1,900.0	11.96	21.36	1,868.9	289.7	113.3	311.1	0.00	0.00	
1,950.2	11.96	21.36	1,918.0	299.4	117.1	321.5	0.00	0.00	Ohio Creek
2,000.0	11.96	21.36	1,966.7	309.0	120.9	331.8	0.00	0.00	
2,100.0	11.96	21.36	2,064.5	328.3	128.4	352.6	0.00	0.00	
2,200.0	11.96	21.36	2,162.4	347.6	136.0	373.3	0.00	0.00	
2,300.0	11.96	21.36	2,260.2	366.9	143.5	394.0	0.00	0.00	
2,400.0	11.96	21.36	2,358.0	386.2	151.1	414.7	0.00	0.00	
2,500.0	11.96	21.36	2,455.8	405.5	158.6	435.5	0.00	0.00	
2,553.3	11.96	21.36	2,508.0	415.8	162.6	446.5	0.00	0.00	Mesa Verde
2,600.0	11.96	21.36	2,553.7	424.8	166.2	456.2	0.00	0.00	
2,700.0	11.96	21.36	2,651.5	444.1	173.7	476.9	0.00	0.00	
2,800.0	11.96	21.36	2,749.3	463.4	181.3	497.6	0.00	0.00	
2,900.0	11.96	21.36	2,847.2	482.7	188.8	518.3	0.00	0.00	
3,000.0	11.96	21.36	2,945.0	502.0	196.4	539.1	0.00	0.00	
3,095.1	11.96	21.36	3,038.0	520.4	203.5	558.8	0.00	0.00	Williams Fork
3,100.0	11.96	21.36	3,042.8	521.3	203.9	559.8	0.00	0.00	
3,200.0	11.96	21.36	3,140.6	540.6	211.5	580.5	0.00	0.00	
3,300.0	11.96	21.36	3,238.5	559.9	219.0	601.2	0.00	0.00	
3,400.0	11.96	21.36	3,336.3	579.2	226.6	621.9	0.00	0.00	
3,500.0	11.96	21.36	3,434.1	598.5	234.1	642.7	0.00	0.00	
3,564.5	11.96	21.36	3,497.2	611.0	239.0	656.0	0.00	0.00	Start Drop -3.00
3,600.0	10.89	21.36	3,532.0	617.5	241.5	663.1	3.00	-3.00	
3,700.0	7.89	21.36	3,630.7	632.7	247.5	679.4	3.00	-3.00	
3,800.0	4.89	21.36	3,730.0	643.1	251.5	690.5	3.00	-3.00	
3,900.0	1.89	21.36	3,829.9	648.6	253.7	696.4	3.00	-3.00	
3,963.2	0.00	0.00	3,893.0	649.6	254.1	697.5	3.00	-3.00	EOD at Inc. = 0° - Top of Gas - EnCana fee 2-1
4,000.0	0.00	0.00	3,929.8	649.6	254.1	697.5	0.00	0.00	
4,100.0	0.00	0.00	4,029.8	649.6	254.1	697.5	0.00	0.00	
4,200.0	0.00	0.00	4,129.8	649.6	254.1	697.5	0.00	0.00	
4,300.0	0.00	0.00	4,229.8	649.6	254.1	697.5	0.00	0.00	
4,400.0	0.00	0.00	4,329.8	649.6	254.1	697.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 2-13C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6068.0ft (Nabors M15)
Project:	Mamm Creek	MD Reference:	KBE @ 6068.0ft (Nabors M15)
Site:	NWNW S10-T7S-R92W (A10E Pad)	North Reference:	True
Well:	EnCana Fee 2-13C	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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	4,429.8	649.6	254.1	697.5	0.00	0.00	
4,600.0	0.00	0.00	4,529.8	649.6	254.1	697.5	0.00	0.00	
4,700.0	0.00	0.00	4,629.8	649.6	254.1	697.5	0.00	0.00	
4,800.0	0.00	0.00	4,729.8	649.6	254.1	697.5	0.00	0.00	
4,900.0	0.00	0.00	4,829.8	649.6	254.1	697.5	0.00	0.00	
5,000.0	0.00	0.00	4,929.8	649.6	254.1	697.5	0.00	0.00	
5,100.0	0.00	0.00	5,029.8	649.6	254.1	697.5	0.00	0.00	
5,200.0	0.00	0.00	5,129.8	649.6	254.1	697.5	0.00	0.00	
5,300.0	0.00	0.00	5,229.8	649.6	254.1	697.5	0.00	0.00	
5,400.0	0.00	0.00	5,329.8	649.6	254.1	697.5	0.00	0.00	
5,500.0	0.00	0.00	5,429.8	649.6	254.1	697.5	0.00	0.00	
5,513.2	0.00	0.00	5,443.0	649.6	254.1	697.5	0.00	0.00	Coal Ridge
5,600.0	0.00	0.00	5,529.8	649.6	254.1	697.5	0.00	0.00	
5,700.0	0.00	0.00	5,629.8	649.6	254.1	697.5	0.00	0.00	
5,800.0	0.00	0.00	5,729.8	649.6	254.1	697.5	0.00	0.00	
5,900.0	0.00	0.00	5,829.8	649.6	254.1	697.5	0.00	0.00	
6,000.0	0.00	0.00	5,929.8	649.6	254.1	697.5	0.00	0.00	
6,100.0	0.00	0.00	6,029.8	649.6	254.1	697.5	0.00	0.00	
6,200.0	0.00	0.00	6,129.8	649.6	254.1	697.5	0.00	0.00	
6,233.2	0.00	0.00	6,163.0	649.6	254.1	697.5	0.00	0.00	Rollins
6,300.0	0.00	0.00	6,229.8	649.6	254.1	697.5	0.00	0.00	
6,383.2	0.00	0.00	6,313.0	649.6	254.1	697.5	0.00	0.00	TD at 6383' MD - EnCana fee 2-13C BHL
6,400.0	0.00	0.00	6,329.8	649.6	254.1	697.5	0.00	0.00	
6,500.0	0.00	0.00	6,429.8	649.6	254.1	697.5	0.00	0.00	
6,533.2	0.00	0.00	6,463.0	649.6	254.1	697.5	0.00	0.00	Permit TD at 6533' 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 2-13C BHL - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,313.0	649.6	254.1	1,602,986.72	2,395,322.02	39° 28' 9.80 N	107° 38' 31.67 W
EnCana fee 2-13C TOG - plan hits target center - Point	0.00	0.00	3,893.0	649.6	254.1	1,602,986.72	2,395,322.02	39° 28' 9.80 N	107° 38' 31.67 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,114.1	1,100.0	Surface Casing	5.500	6.000	

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 2-13C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6068.0ft (Nabors M15)
Project:	Mamm Creek	MD Reference:	KBE @ 6068.0ft (Nabors M15)
Site:	NWNW S10-T7S-R92W (A10E Pad)	North Reference:	True
Well:	EnCana Fee 2-13C	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,950.2	1,918.0	Ohio Creek			
2,553.3	2,508.0	Mesa Verde			
3,095.1	3,038.0	Williams Fork			
3,963.2	3,893.0	Top of Gas			
5,513.2	5,443.0	Coal Ridge			
6,233.2	6,163.0	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
598.6	595.8	38.6	15.1	EOB at Inc. = 11.96°
3,564.5	3,497.2	611.0	239.0	Start Drop -3.00
3,963.2	3,893.0	649.6	254.1	EOD at Inc. = 0°
6,383.2	6,313.0	649.6	254.1	TD at 6383' MD
6,533.2	6,463.0	649.6	254.1	Permit TD at 6533' MD