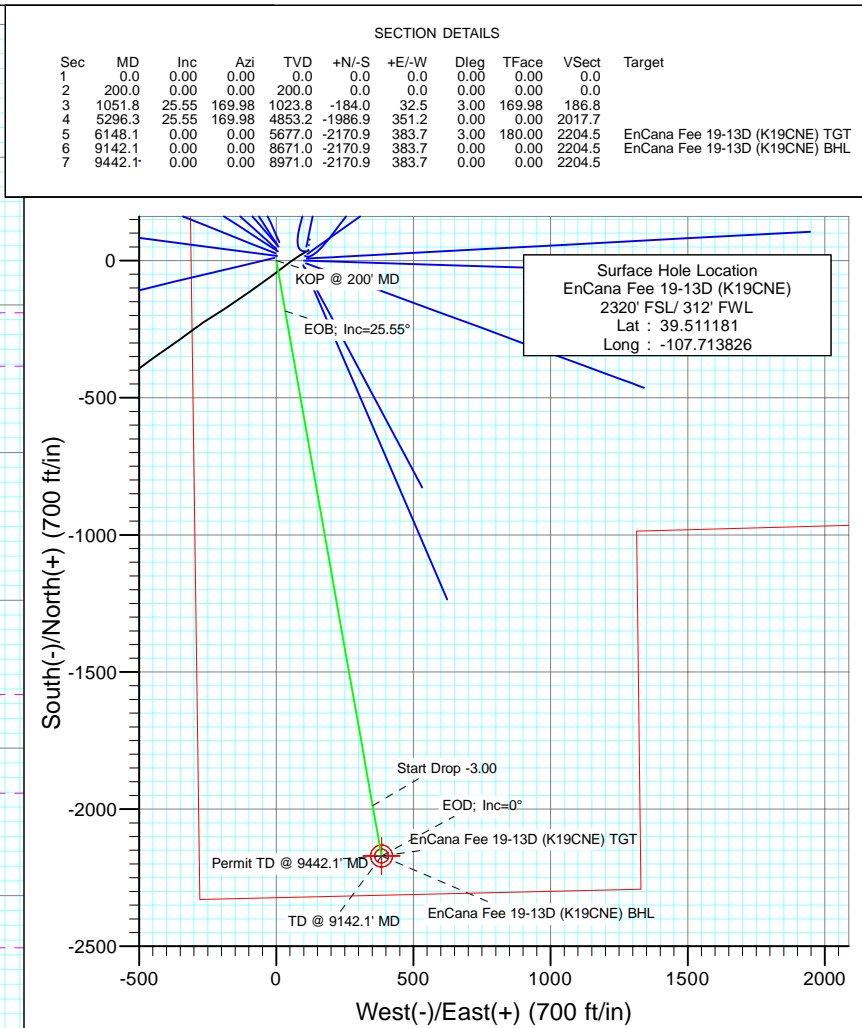
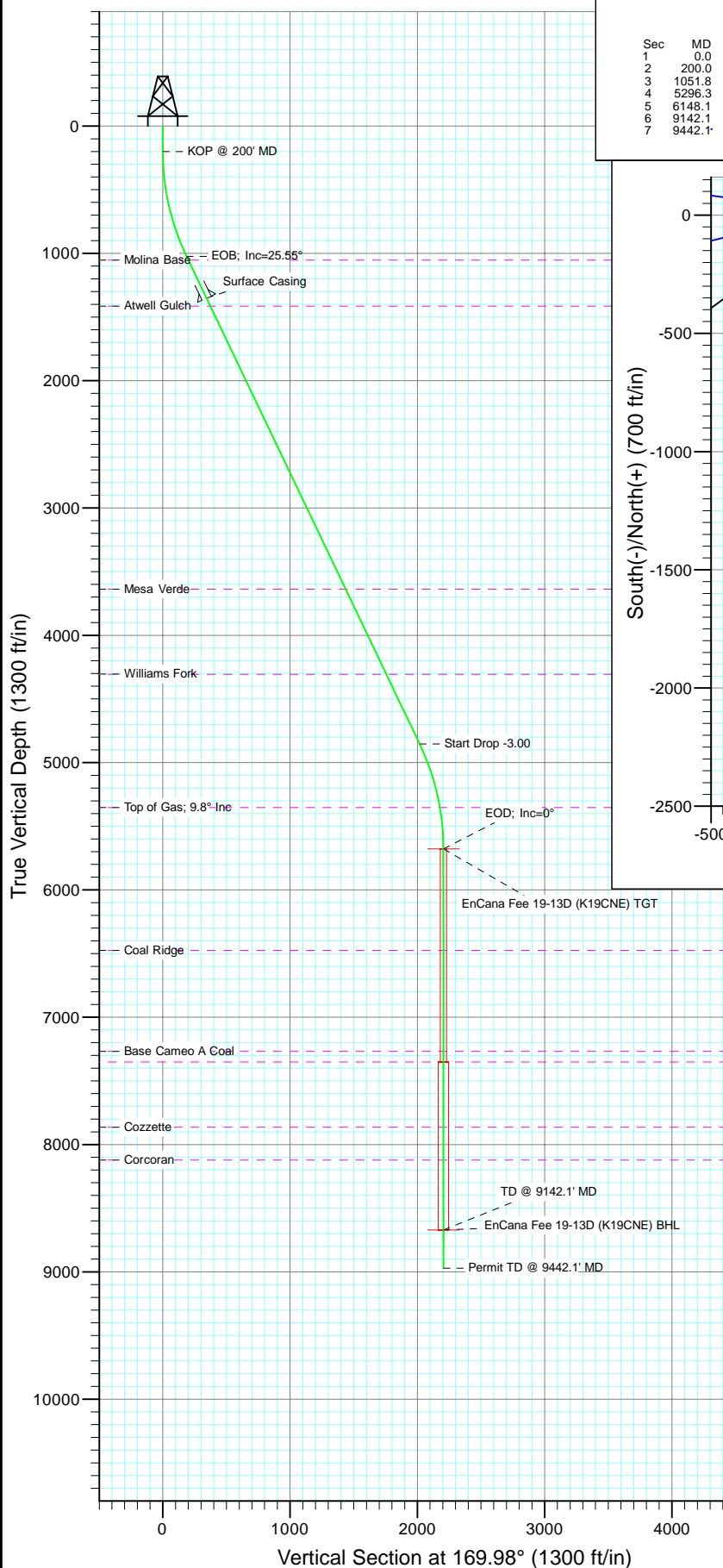




Project: Mamm Creek
Site: SW S19-T6S-R29W (K19CNE Pad)
Well: EnCana Fee 19-13D (K19CNE)
Wellbore: DD
Design: Plan #1



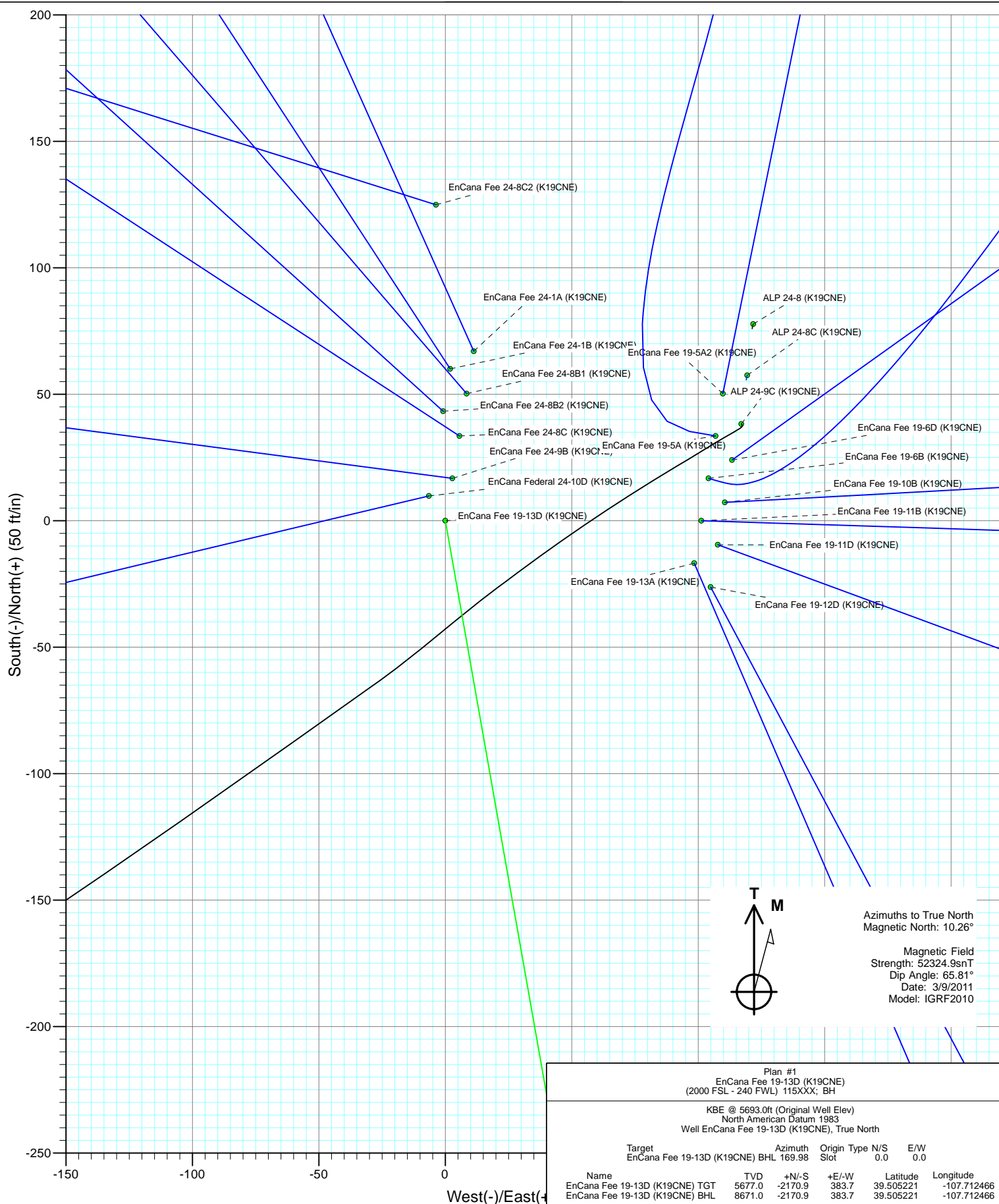
FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
1053.0	1084.1	Molina Base	
1414.0	1484.3	Atwell Gulch	
3638.0	3949.4	Mesa Verde	
4306.0	4689.8	Williams Fork	
5352.0	5821.5	Top of Gas; 9.8° Inc	
6476.0	6947.1	Coal Ridge	
7269.0	7740.1	Base Cameo A Coal	
7352.0	7823.1	Rollins	
7864.0	8335.1	Cozzette	
8121.0	8592.1	Corcoran	



Azimuths to True North
Magnetic North: 10.26°

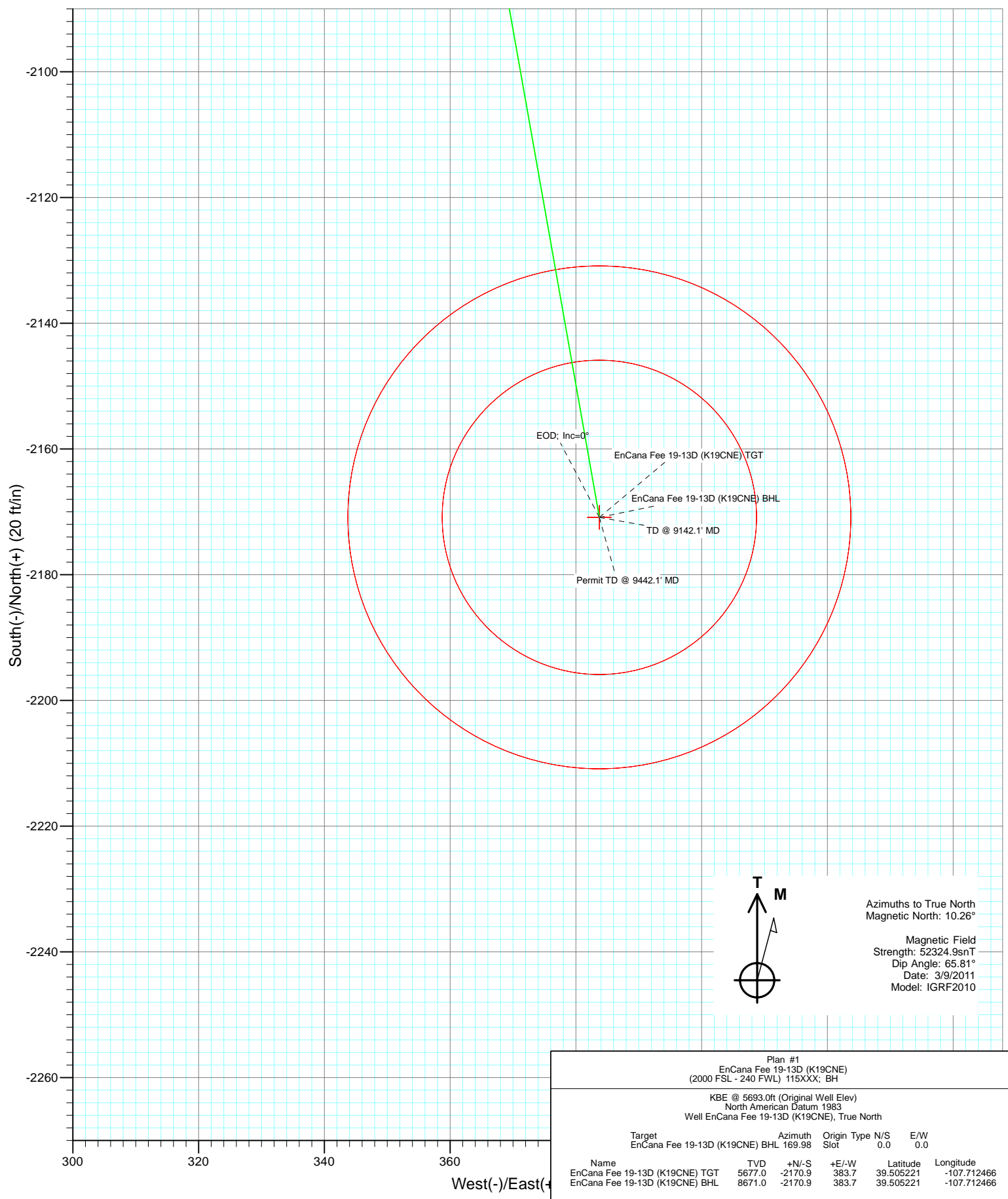
Magnetic Field
Strength: 52324.9snT
Dip Angle: 65.81°
Date: 3/9/2011
Model: IGRF2010

Plan #1 EnCana Fee 19-13D (K19CNE) (2000 FSL - 240 FWL) 115XXX; BH					
KBE @ 5693.0ft (Original Well Elev) North American Datum 1983 Well EnCana Fee 19-13D (K19CNE), True North					
Target	Azimuth	Origin	Type	N/S	E/W
EnCana Fee 19-13D (K19CNE) BHL	169.98	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
EnCana Fee 19-13D (K19CNE) TGT	5677.0	-2170.9	383.7	39.505221	-107.712466
EnCana Fee 19-13D (K19CNE) BHL	8671.0	-2170.9	383.7	39.505221	-107.712466





Project: Mamm Creek
 Site: SW S19-T6S-R29W (K19CNE Pad)
 Well: EnCana Fee 19-13D (K19CNE)
 Wellbore: DD
 Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 19-13D (K19CNE)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5693.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5693.0ft (Original Well Elev)
Site:	SW S19-T6S-R29W (K19CNE Pad)	North Reference:	True
Well:	EnCana Fee 19-13D (K19CNE)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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		SW S19-T6S-R29W (K19CNE Pad)			
Site Position:		Northing:	1,618,725.17 ft	Latitude:	39.511286
From:	Lat/Long	Easting:	2,375,576.53 ft	Longitude:	-107.713411
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.40 °

Well	EnCana Fee 19-13D (K19CNE)					
Well Position	+N/-S	0.0 ft	Northing:	1,618,689.74 ft	Latitude:	39.511181
	+E/-W	0.0 ft	Easting:	2,375,458.58 ft	Longitude:	-107.713826
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,671.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	3/9/2011	10.26	65.81	52,325

Design	Plan #1			
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	169.98

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
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	
1,051.8	25.55	169.98	1,023.8	-184.0	32.5	3.00	3.00	0.00	169.98	
5,296.3	25.55	169.98	4,853.2	-1,986.9	351.2	0.00	0.00	0.00	0.00	
6,148.1	0.00	0.00	5,677.0	-2,170.9	383.7	3.00	-3.00	0.00	180.00	EnCana Fee 19-13D (K19CNE)
9,142.1	0.00	0.00	8,671.0	-2,170.9	383.7	0.00	0.00	0.00	0.00	EnCana Fee 19-13D (K19CNE)
9,442.1	0.00	0.00	8,971.0	-2,170.9	383.7	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 19-13D (K19CNE)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5693.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5693.0ft (Original Well Elev)
Site:	SW S19-T6S-R29W (K19CNE Pad)	North Reference:	True
Well:	EnCana Fee 19-13D (K19CNE)	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' MD
300.0	3.00	169.98	300.0	-2.6	0.5	2.6	3.00	3.00	
400.0	6.00	169.98	399.6	-10.3	1.8	10.5	3.00	3.00	
500.0	9.00	169.98	498.8	-23.2	4.1	23.5	3.00	3.00	
600.0	12.00	169.98	597.1	-41.1	7.3	41.7	3.00	3.00	
700.0	15.00	169.98	694.3	-64.1	11.3	65.1	3.00	3.00	
800.0	18.00	169.98	790.2	-92.0	16.3	93.5	3.00	3.00	
900.0	21.00	169.98	884.4	-124.9	22.1	126.9	3.00	3.00	
1,000.0	24.00	169.98	976.8	-162.6	28.7	165.1	3.00	3.00	
1,051.8	25.55	169.98	1,023.8	-184.0	32.5	186.8	3.00	3.00	EOB; Inc=25.55°
1,084.1	25.55	169.98	1,053.0	-197.7	34.9	200.8	0.00	0.00	Molina Base
1,100.0	25.55	169.98	1,067.3	-204.4	36.1	207.6	0.00	0.00	
1,200.0	25.55	169.98	1,157.5	-246.9	43.6	250.8	0.00	0.00	
1,300.0	25.55	169.98	1,247.8	-289.4	51.2	293.9	0.00	0.00	
1,400.0	25.55	169.98	1,338.0	-331.9	58.7	337.0	0.00	0.00	
1,416.3	25.55	169.98	1,352.7	-338.8	59.9	344.1	0.00	0.00	Surface Casing
1,484.3	25.55	169.98	1,414.0	-367.7	65.0	373.4	0.00	0.00	Atwell Gulch
1,500.0	25.55	169.98	1,428.2	-374.4	66.2	380.2	0.00	0.00	
1,600.0	25.55	169.98	1,518.4	-416.8	73.7	423.3	0.00	0.00	
1,700.0	25.55	169.98	1,608.6	-459.3	81.2	466.4	0.00	0.00	
1,800.0	25.55	169.98	1,698.9	-501.8	88.7	509.6	0.00	0.00	
1,900.0	25.55	169.98	1,789.1	-544.3	96.2	552.7	0.00	0.00	
2,000.0	25.55	169.98	1,879.3	-586.7	103.7	595.8	0.00	0.00	
2,100.0	25.55	169.98	1,969.5	-629.2	111.2	639.0	0.00	0.00	
2,200.0	25.55	169.98	2,059.7	-671.7	118.7	682.1	0.00	0.00	
2,300.0	25.55	169.98	2,149.9	-714.2	126.2	725.2	0.00	0.00	
2,400.0	25.55	169.98	2,240.2	-756.6	133.8	768.4	0.00	0.00	
2,500.0	25.55	169.98	2,330.4	-799.1	141.3	811.5	0.00	0.00	
2,600.0	25.55	169.98	2,420.6	-841.6	148.8	854.6	0.00	0.00	
2,700.0	25.55	169.98	2,510.8	-884.1	156.3	897.8	0.00	0.00	
2,800.0	25.55	169.98	2,601.0	-926.5	163.8	940.9	0.00	0.00	
2,900.0	25.55	169.98	2,691.3	-969.0	171.3	984.0	0.00	0.00	
3,000.0	25.55	169.98	2,781.5	-1,011.5	178.8	1,027.2	0.00	0.00	
3,100.0	25.55	169.98	2,871.7	-1,054.0	186.3	1,070.3	0.00	0.00	
3,200.0	25.55	169.98	2,961.9	-1,096.5	193.8	1,113.5	0.00	0.00	
3,300.0	25.55	169.98	3,052.1	-1,138.9	201.3	1,156.6	0.00	0.00	
3,400.0	25.55	169.98	3,142.3	-1,181.4	208.8	1,199.7	0.00	0.00	
3,500.0	25.55	169.98	3,232.6	-1,223.9	216.3	1,242.9	0.00	0.00	
3,600.0	25.55	169.98	3,322.8	-1,266.4	223.9	1,286.0	0.00	0.00	
3,700.0	25.55	169.98	3,413.0	-1,308.8	231.4	1,329.1	0.00	0.00	
3,800.0	25.55	169.98	3,503.2	-1,351.3	238.9	1,372.3	0.00	0.00	
3,900.0	25.55	169.98	3,593.4	-1,393.8	246.4	1,415.4	0.00	0.00	
3,949.4	25.55	169.98	3,638.0	-1,414.8	250.1	1,436.7	0.00	0.00	Mesa Verde
4,000.0	25.55	169.98	3,683.7	-1,436.3	253.9	1,458.5	0.00	0.00	
4,100.0	25.55	169.98	3,773.9	-1,478.7	261.4	1,501.7	0.00	0.00	
4,200.0	25.55	169.98	3,864.1	-1,521.2	268.9	1,544.8	0.00	0.00	
4,300.0	25.55	169.98	3,954.3	-1,563.7	276.4	1,587.9	0.00	0.00	
4,400.0	25.55	169.98	4,044.5	-1,606.2	283.9	1,631.1	0.00	0.00	
4,500.0	25.55	169.98	4,134.7	-1,648.7	291.4	1,674.2	0.00	0.00	
4,600.0	25.55	169.98	4,225.0	-1,691.1	298.9	1,717.3	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 19-13D (K19CNE)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5693.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5693.0ft (Original Well Elev)
Site:	SW S19-T6S-R29W (K19CNE Pad)	North Reference:	True
Well:	EnCana Fee 19-13D (K19CNE)	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
4,689.8	25.55	169.98	4,306.0	-1,729.3	305.7	1,756.1	0.00	0.00	Williams Fork
4,700.0	25.55	169.98	4,315.2	-1,733.6	306.4	1,760.5	0.00	0.00	
4,800.0	25.55	169.98	4,405.4	-1,776.1	314.0	1,803.6	0.00	0.00	
4,900.0	25.55	169.98	4,495.6	-1,818.6	321.5	1,846.8	0.00	0.00	
5,000.0	25.55	169.98	4,585.8	-1,861.0	329.0	1,889.9	0.00	0.00	
5,100.0	25.55	169.98	4,676.1	-1,903.5	336.5	1,933.0	0.00	0.00	
5,200.0	25.55	169.98	4,766.3	-1,946.0	344.0	1,976.2	0.00	0.00	
5,296.3	25.55	169.98	4,853.2	-1,986.9	351.2	2,017.7	0.00	0.00	Start Drop -3.00
5,300.0	25.44	169.98	4,856.5	-1,988.5	351.5	2,019.3	3.00	-3.00	
5,400.0	22.44	169.98	4,947.9	-2,028.4	358.6	2,059.9	3.00	-3.00	
5,500.0	19.44	169.98	5,041.3	-2,063.6	364.8	2,095.6	3.00	-3.00	
5,600.0	16.44	169.98	5,136.4	-2,094.0	370.1	2,126.4	3.00	-3.00	
5,700.0	13.44	169.98	5,233.0	-2,119.3	374.6	2,152.2	3.00	-3.00	
5,800.0	10.44	169.98	5,330.8	-2,139.7	378.2	2,172.9	3.00	-3.00	
5,821.5	9.80	169.98	5,352.0	-2,143.4	378.9	2,176.7	3.00	-3.00	Top of Gas; 9.8° Inc
5,900.0	7.44	169.98	5,429.6	-2,155.0	380.9	2,188.4	3.00	-3.00	
6,000.0	4.44	169.98	5,529.0	-2,165.2	382.7	2,198.8	3.00	-3.00	
6,100.0	1.44	169.98	5,628.9	-2,170.3	383.6	2,203.9	3.00	-3.00	
6,148.1	0.00	0.00	5,677.0	-2,170.9	383.7	2,204.5	3.00	-3.00	EOD; Inc=0° - EnCana Fee 19-13D (K19CNE)
6,200.0	0.00	0.00	5,728.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,300.0	0.00	0.00	5,828.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,400.0	0.00	0.00	5,928.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,500.0	0.00	0.00	6,028.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,600.0	0.00	0.00	6,128.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,700.0	0.00	0.00	6,228.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,800.0	0.00	0.00	6,328.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,900.0	0.00	0.00	6,428.9	-2,170.9	383.7	2,204.5	0.00	0.00	
6,947.1	0.00	0.00	6,476.0	-2,170.9	383.7	2,204.5	0.00	0.00	Coal Ridge
7,000.0	0.00	0.00	6,528.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,100.0	0.00	0.00	6,628.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,200.0	0.00	0.00	6,728.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,300.0	0.00	0.00	6,828.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,400.0	0.00	0.00	6,928.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,500.0	0.00	0.00	7,028.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,600.0	0.00	0.00	7,128.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,700.0	0.00	0.00	7,228.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,740.1	0.00	0.00	7,269.0	-2,170.9	383.7	2,204.5	0.00	0.00	Base Cameo A Coal
7,800.0	0.00	0.00	7,328.9	-2,170.9	383.7	2,204.5	0.00	0.00	
7,823.1	0.00	0.00	7,352.0	-2,170.9	383.7	2,204.5	0.00	0.00	Rollins
7,900.0	0.00	0.00	7,428.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,000.0	0.00	0.00	7,528.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,100.0	0.00	0.00	7,628.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,200.0	0.00	0.00	7,728.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,300.0	0.00	0.00	7,828.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,335.1	0.00	0.00	7,864.0	-2,170.9	383.7	2,204.5	0.00	0.00	Cozzette
8,400.0	0.00	0.00	7,928.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,500.0	0.00	0.00	8,028.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,592.1	0.00	0.00	8,121.0	-2,170.9	383.7	2,204.5	0.00	0.00	Corcoran
8,600.0	0.00	0.00	8,128.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,700.0	0.00	0.00	8,228.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,800.0	0.00	0.00	8,328.9	-2,170.9	383.7	2,204.5	0.00	0.00	
8,900.0	0.00	0.00	8,428.9	-2,170.9	383.7	2,204.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 19-13D (K19CNE)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5693.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5693.0ft (Original Well Elev)
Site:	SW S19-T6S-R29W (K19CNE Pad)	North Reference:	True
Well:	EnCana Fee 19-13D (K19CNE)	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
9,000.0	0.00	0.00	8,528.9	-2,170.9	383.7	2,204.5	0.00	0.00	
9,100.0	0.00	0.00	8,628.9	-2,170.9	383.7	2,204.5	0.00	0.00	
9,142.1	0.00	0.00	8,671.0	-2,170.9	383.7	2,204.5	0.00	0.00	TD @ 9142.1' MD - EnCana Fee 19-13D (K19CNE)
9,200.0	0.00	0.00	8,728.9	-2,170.9	383.7	2,204.5	0.00	0.00	
9,300.0	0.00	0.00	8,828.9	-2,170.9	383.7	2,204.5	0.00	0.00	
9,400.0	0.00	0.00	8,928.9	-2,170.9	383.7	2,204.5	0.00	0.00	
9,442.1	0.00	0.00	8,971.0	-2,170.9	383.7	2,204.5	0.00	0.00	Permit TD @ 9442.1' 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 19-13D (K1 - plan hits target center - Circle (radius 40.0)	0.00	0.00	8,671.0	-2,170.9	383.7	1,616,510.16	2,375,789.31	39.505221	-107.712466
EnCana Fee 19-13D (K1 - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,677.0	-2,170.9	383.7	1,616,510.16	2,375,789.31	39.505221	-107.712466

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,416.3	1,352.7	Surface Casing	0.000	0.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,084.1	1,053.0	Molina Base		0.00	
1,484.3	1,414.0	Atwell Gulch		0.00	
3,949.4	3,638.0	Mesa Verde		0.00	
4,689.8	4,306.0	Williams Fork		0.00	
5,821.5	5,352.0	Top of Gas; 9.8° Inc		0.00	
6,947.1	6,476.0	Coal Ridge		0.00	
7,740.1	7,269.0	Base Cameo A Coal		0.00	
7,823.1	7,352.0	Rollins		0.00	
8,335.1	7,864.0	Cozzette		0.00	
8,592.1	8,121.0	Corcoran		0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well EnCana Fee 19-13D (K19CNE)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5693.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5693.0ft (Original Well Elev)
Site:	SW S19-T6S-R29W (K19CNE Pad)	North Reference:	True
Well:	EnCana Fee 19-13D (K19CNE)	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' MD
1,051.8	1,023.8	-184.0	32.5	EOB; Inc=25.55°
5,296.3	4,853.2	-1,986.9	351.2	Start Drop -3.00
6,148.1	5,677.0	-2,170.9	383.7	EOD; Inc=0°
9,142.1	8,671.0	-2,170.9	383.7	TD @ 9142.1' MD
9,442.1	8,971.0	-2,170.9	383.7	Permit TD @ 9442.1' MD

EnCana Oil & Gas (USA) Inc

Mamm Creek

SW S19-T6S-R29W (K19CNE Pad)

EnCana Fee 19-13D (K19CNE)

DD

Plan #1

Anticollision Report

11 March, 2011