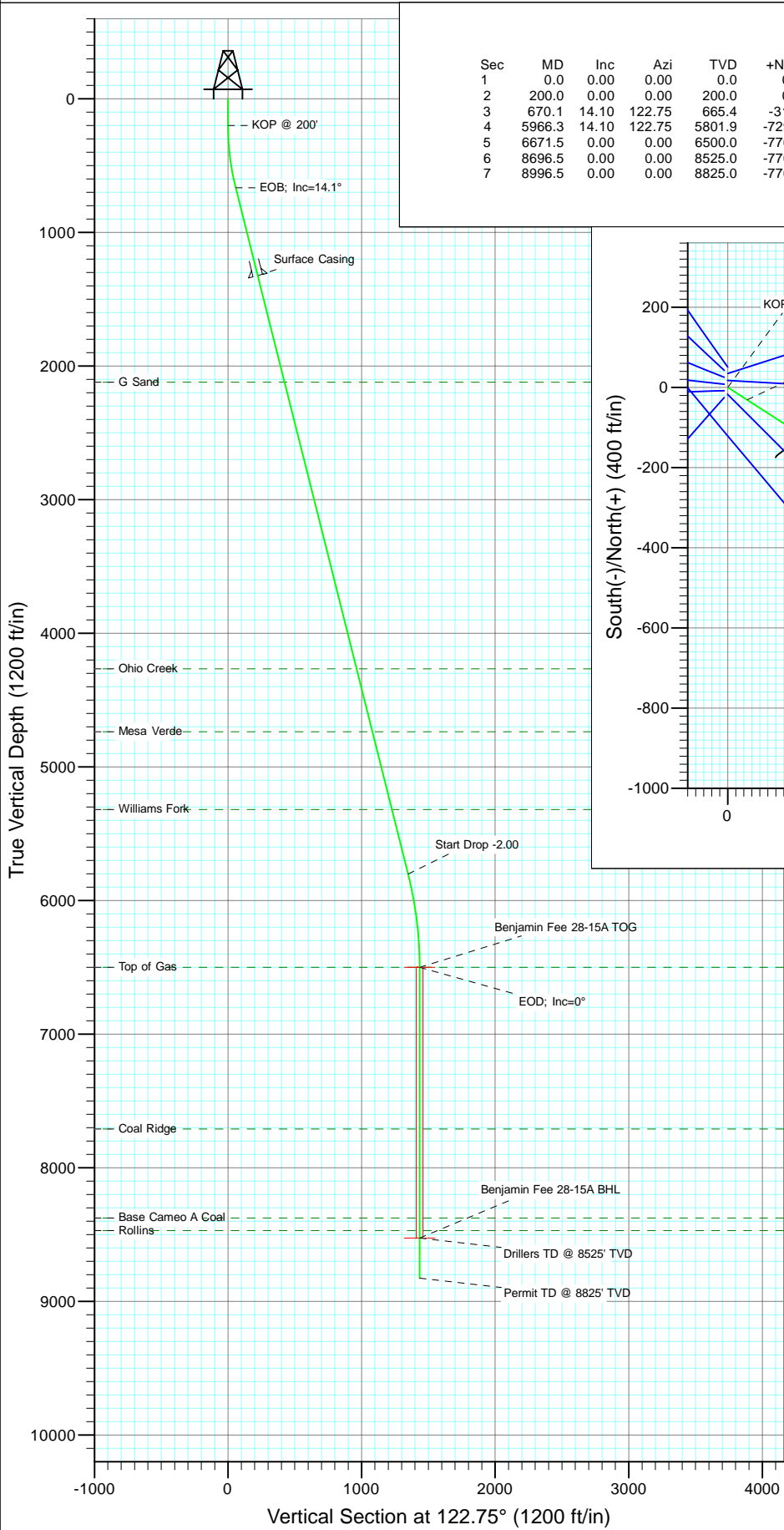
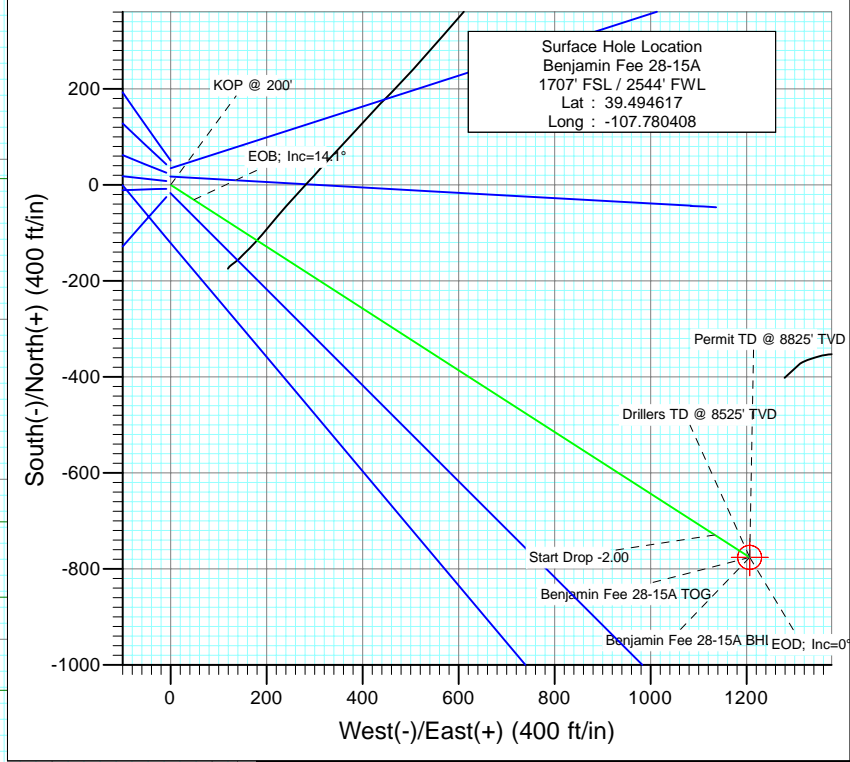




Project: Mamm Creek
 Site: K28NW Pad
 Well: Benjamin Fee 28-15A
 Wellbore: DD
 Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct	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	670.1	14.10	122.75	665.4	-31.1	48.4	3.00	122.75	57.6	
4	5966.3	14.10	122.75	5801.9	-729.3	1133.8	0.00	0.00	1348.1	
5	6671.5	0.00	0.00	6500.0	-776.0	1206.5	2.00	180.00	1434.5	Benjamin Fee 28-15A TOG
6	8696.5	0.00	0.00	8525.0	-776.0	1206.5	0.00	0.00	1434.5	Benjamin Fee 28-15A BHL
7	8996.5	0.00	0.00	8825.0	-776.0	1206.5	0.00	0.00	1434.5	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2121.0	2171.0	G Sand
4265.0	4381.6	Ohio Creek
4737.0	4868.3	Mesa Verde
5319.0	5468.4	Williams Fork
6500.0	6671.5	Top of Gas
7709.0	7880.5	Coal Ridge
8375.0	8546.5	Base Cameo A Coal
8470.0	8641.5	Rollins

Azimuths to True North
Magnetic North: 10.36°

Magnetic Field
Strength: 52406.0snT
Dip Angle: 65.82°
Date: 6/23/2010
Model: IGRF200510

Plan #1 Benjamin Fee 28-15A (920 FSL - 1470 FEL) Job #10xxx: KR						
WELL @ 5965.0ft (Original Well Elev) North American Datum 1983 Well Benjamin Fee 28-15A, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	Benjamin Fee 28-15A BHL	122.75	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Benjamin Fee 28-15A BHL	8525.0	-776.0	1206.5	39.492486	-107.776133	

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Benjamin Fee 28-15A
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: WELL @ 5965.0ft (Original Well Elev)
Project: Mamm Creek	MD Reference: WELL @ 5965.0ft (Original Well Elev)
Site: K28NW Pad	North Reference: True
Well: Benjamin Fee 28-15A	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 K28NW Pad					
Site Position:		Northing:	1,613,160.16 ft	Latitude:	39.494711
From:	Lat/Long	Easting:	2,356,412.22 ft	Longitude:	-107.780819
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.44 °

Well Benjamin Fee 28-15A						
Well Position	+N/-S	0.0 ft	Northing:	1,613,122.85 ft	Latitude:	39.494617
	+E/-W	0.0 ft	Easting:	2,356,527.34 ft	Longitude:	-107.780408
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,943.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	6/23/2010	(°)	(°)	(nT)
			10.36	65.82	52,406

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	122.75	

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	
670.1	14.10	122.75	665.4	-31.1	48.4	3.00	3.00	0.00	122.75	
5,966.3	14.10	122.75	5,801.9	-729.3	1,133.8	0.00	0.00	0.00	0.00	
6,671.5	0.00	0.00	6,500.0	-776.0	1,206.5	2.00	-2.00	0.00	180.00	Benjamin Fee 28-15A
8,696.5	0.00	0.00	8,525.0	-776.0	1,206.5	0.00	0.00	0.00	0.00	Benjamin Fee 28-15A
8,996.5	0.00	0.00	8,825.0	-776.0	1,206.5	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 Benjamin Fee 28-15A
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	North Reference:	True
Well:	Benjamin Fee 28-15A	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	122.75	300.0	-1.4	2.2	2.6	3.00	3.00	
400.0	6.00	122.75	399.6	-5.7	8.8	10.5	3.00	3.00	
500.0	9.00	122.75	498.8	-12.7	19.8	23.5	3.00	3.00	
600.0	12.00	122.75	597.1	-22.6	35.1	41.7	3.00	3.00	
670.1	14.10	122.75	665.4	-31.1	48.4	57.6	3.00	3.00	EOB; Inc=14.1°
700.0	14.10	122.75	694.4	-35.1	54.5	64.9	0.00	0.00	
800.0	14.10	122.75	791.4	-48.3	75.0	89.2	0.00	0.00	
900.0	14.10	122.75	888.3	-61.4	95.5	113.6	0.00	0.00	
1,000.0	14.10	122.75	985.3	-74.6	116.0	138.0	0.00	0.00	
1,100.0	14.10	122.75	1,082.3	-87.8	136.5	162.3	0.00	0.00	
1,200.0	14.10	122.75	1,179.3	-101.0	157.0	186.7	0.00	0.00	
1,300.0	14.10	122.75	1,276.3	-114.2	177.5	211.1	0.00	0.00	
1,350.0	14.10	122.75	1,324.8	-120.8	187.8	223.2	0.00	0.00	Surface Casing
1,400.0	14.10	122.75	1,373.3	-127.4	198.0	235.4	0.00	0.00	
1,500.0	14.10	122.75	1,470.3	-140.5	218.5	259.8	0.00	0.00	
1,600.0	14.10	122.75	1,567.2	-153.7	239.0	284.2	0.00	0.00	
1,700.0	14.10	122.75	1,664.2	-166.9	259.5	308.5	0.00	0.00	
1,800.0	14.10	122.75	1,761.2	-180.1	280.0	332.9	0.00	0.00	
1,900.0	14.10	122.75	1,858.2	-193.3	300.5	357.3	0.00	0.00	
2,000.0	14.10	122.75	1,955.2	-206.4	321.0	381.6	0.00	0.00	
2,100.0	14.10	122.75	2,052.2	-219.6	341.5	406.0	0.00	0.00	
2,171.0	14.10	122.75	2,121.0	-229.0	356.0	423.3	0.00	0.00	G Sand
2,200.0	14.10	122.75	2,149.2	-232.8	362.0	430.4	0.00	0.00	
2,300.0	14.10	122.75	2,246.1	-246.0	382.5	454.7	0.00	0.00	
2,400.0	14.10	122.75	2,343.1	-259.2	402.9	479.1	0.00	0.00	
2,500.0	14.10	122.75	2,440.1	-272.4	423.4	503.5	0.00	0.00	
2,600.0	14.10	122.75	2,537.1	-285.5	443.9	527.8	0.00	0.00	
2,700.0	14.10	122.75	2,634.1	-298.7	464.4	552.2	0.00	0.00	
2,800.0	14.10	122.75	2,731.1	-311.9	484.9	576.6	0.00	0.00	
2,900.0	14.10	122.75	2,828.1	-325.1	505.4	600.9	0.00	0.00	
3,000.0	14.10	122.75	2,925.0	-338.3	525.9	625.3	0.00	0.00	
3,100.0	14.10	122.75	3,022.0	-351.4	546.4	649.7	0.00	0.00	
3,200.0	14.10	122.75	3,119.0	-364.6	566.9	674.0	0.00	0.00	
3,300.0	14.10	122.75	3,216.0	-377.8	587.4	698.4	0.00	0.00	
3,400.0	14.10	122.75	3,313.0	-391.0	607.9	722.8	0.00	0.00	
3,500.0	14.10	122.75	3,410.0	-404.2	628.4	747.1	0.00	0.00	
3,600.0	14.10	122.75	3,506.9	-417.4	648.9	771.5	0.00	0.00	
3,700.0	14.10	122.75	3,603.9	-430.5	669.4	795.9	0.00	0.00	
3,800.0	14.10	122.75	3,700.9	-443.7	689.9	820.3	0.00	0.00	
3,900.0	14.10	122.75	3,797.9	-456.9	710.4	844.6	0.00	0.00	
4,000.0	14.10	122.75	3,894.9	-470.1	730.9	869.0	0.00	0.00	
4,100.0	14.10	122.75	3,991.9	-483.3	751.4	893.4	0.00	0.00	
4,200.0	14.10	122.75	4,088.9	-496.4	771.8	917.7	0.00	0.00	
4,300.0	14.10	122.75	4,185.8	-509.6	792.3	942.1	0.00	0.00	
4,381.6	14.10	122.75	4,265.0	-520.4	809.1	962.0	0.00	0.00	Ohio Creek
4,400.0	14.10	122.75	4,282.8	-522.8	812.8	966.5	0.00	0.00	
4,500.0	14.10	122.75	4,379.8	-536.0	833.3	990.8	0.00	0.00	
4,600.0	14.10	122.75	4,476.8	-549.2	853.8	1,015.2	0.00	0.00	
4,700.0	14.10	122.75	4,573.8	-562.4	874.3	1,039.6	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benjamin Fee 28-15A
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	North Reference:	True
Well:	Benjamin Fee 28-15A	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
4,800.0	14.10	122.75	4,670.8	-575.5	894.8	1,063.9	0.00	0.00	
4,868.3	14.10	122.75	4,737.0	-584.5	908.8	1,080.6	0.00	0.00	Mesa Verde
4,900.0	14.10	122.75	4,767.8	-588.7	915.3	1,088.3	0.00	0.00	
5,000.0	14.10	122.75	4,864.7	-601.9	935.8	1,112.7	0.00	0.00	
5,100.0	14.10	122.75	4,961.7	-615.1	956.3	1,137.0	0.00	0.00	
5,200.0	14.10	122.75	5,058.7	-628.3	976.8	1,161.4	0.00	0.00	
5,300.0	14.10	122.75	5,155.7	-641.5	997.3	1,185.8	0.00	0.00	
5,400.0	14.10	122.75	5,252.7	-654.6	1,017.8	1,210.1	0.00	0.00	
5,468.4	14.10	122.75	5,319.0	-663.6	1,031.8	1,226.8	0.00	0.00	Williams Fork
5,500.0	14.10	122.75	5,349.7	-667.8	1,038.3	1,234.5	0.00	0.00	
5,600.0	14.10	122.75	5,446.7	-681.0	1,058.8	1,258.9	0.00	0.00	
5,700.0	14.10	122.75	5,543.6	-694.2	1,079.3	1,283.2	0.00	0.00	
5,800.0	14.10	122.75	5,640.6	-707.4	1,099.8	1,307.6	0.00	0.00	
5,900.0	14.10	122.75	5,737.6	-720.5	1,120.3	1,332.0	0.00	0.00	
5,966.3	14.10	122.75	5,801.9	-729.3	1,133.8	1,348.1	0.00	0.00	Start Drop -2.00
6,000.0	13.43	122.75	5,834.7	-733.6	1,140.6	1,356.1	2.00	-2.00	
6,100.0	11.43	122.75	5,932.3	-745.3	1,158.7	1,377.7	2.00	-2.00	
6,200.0	9.43	122.75	6,030.6	-755.1	1,173.9	1,395.8	2.00	-2.00	
6,300.0	7.43	122.75	6,129.6	-763.0	1,186.2	1,410.4	2.00	-2.00	
6,400.0	5.43	122.75	6,228.9	-769.0	1,195.7	1,421.6	2.00	-2.00	
6,500.0	3.43	122.75	6,328.6	-773.2	1,202.2	1,429.4	2.00	-2.00	
6,600.0	1.43	122.75	6,428.5	-775.5	1,205.7	1,433.6	2.00	-2.00	
6,671.5	0.00	0.00	6,500.0	-776.0	1,206.5	1,434.5	2.00	-2.00	EOD; Inc=0° - Top of Gas - Benjamin Fee 28-15
6,700.0	0.00	0.00	6,528.5	-776.0	1,206.5	1,434.5	0.00	0.00	
6,800.0	0.00	0.00	6,628.5	-776.0	1,206.5	1,434.5	0.00	0.00	
6,900.0	0.00	0.00	6,728.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,000.0	0.00	0.00	6,828.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,100.0	0.00	0.00	6,928.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,200.0	0.00	0.00	7,028.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,300.0	0.00	0.00	7,128.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,400.0	0.00	0.00	7,228.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,500.0	0.00	0.00	7,328.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,600.0	0.00	0.00	7,428.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,700.0	0.00	0.00	7,528.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,800.0	0.00	0.00	7,628.5	-776.0	1,206.5	1,434.5	0.00	0.00	
7,880.5	0.00	0.00	7,709.0	-776.0	1,206.5	1,434.5	0.00	0.00	Coal Ridge
7,900.0	0.00	0.00	7,728.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,000.0	0.00	0.00	7,828.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,100.0	0.00	0.00	7,928.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,200.0	0.00	0.00	8,028.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,300.0	0.00	0.00	8,128.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,400.0	0.00	0.00	8,228.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,500.0	0.00	0.00	8,328.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,546.5	0.00	0.00	8,375.0	-776.0	1,206.5	1,434.5	0.00	0.00	Base Cameo A Coal
8,600.0	0.00	0.00	8,428.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,641.5	0.00	0.00	8,470.0	-776.0	1,206.5	1,434.5	0.00	0.00	Rollins
8,696.5	0.00	0.00	8,525.0	-776.0	1,206.5	1,434.5	0.00	0.00	Drillers TD @ 8525' TVD - Benjamin Fee 28-15.
8,700.0	0.00	0.00	8,528.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,800.0	0.00	0.00	8,628.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,900.0	0.00	0.00	8,728.5	-776.0	1,206.5	1,434.5	0.00	0.00	
8,996.5	0.00	0.00	8,825.0	-776.0	1,206.5	1,434.5	0.00	0.00	Permit TD @ 8825' TVD

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benjamin Fee 28-15A
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	North Reference:	True
Well:	Benjamin Fee 28-15A	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Benjamin Fee 28-15A BI - plan hits target center - Circle (radius 25.0)	0.00	0.00	8,525.0	-776.0	1,206.5	1,612,316.81	2,357,713.95	39.492486	-107.776133
Benjamin Fee 28-15A T - plan hits target center - Point	0.00	0.00	6,500.0	-776.0	1,206.5	1,612,316.81	2,357,713.95	39.492486	-107.776133

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(ft)	(ft)		(in)	(in)	
1,350.0	1,324.8	Surface Casing	0.000	0.000	

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
2,171.0	2,121.0	G Sand			
4,381.6	4,265.0	Ohio Creek			
4,868.3	4,737.0	Mesa Verde			
5,468.4	5,319.0	Williams Fork			
6,671.5	6,500.0	Top of Gas			
7,880.5	7,709.0	Coal Ridge			
8,546.5	8,375.0	Base Cameo A Coal			
8,641.5	8,470.0	Rollins			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
670.1	665.4	-31.1	48.4	EOB; Inc=14.1°
5,966.3	5,801.9	-729.3	1,133.8	Start Drop -2.00
6,671.5	6,500.0	-776.0	1,206.5	EOD; Inc=0°
8,696.5	8,525.0	-776.0	1,206.5	Drillers TD @ 8525' TVD
8,996.5	8,825.0	-776.0	1,206.5	Permit TD @ 8825' TVD