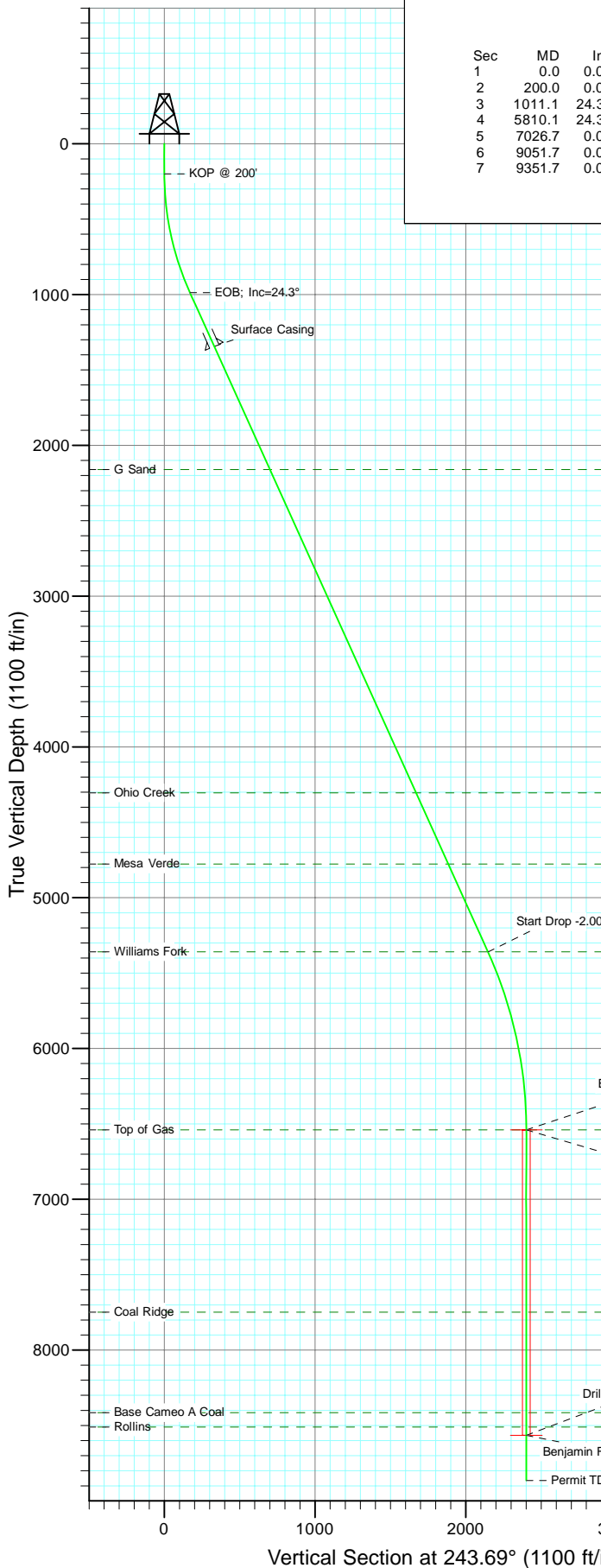


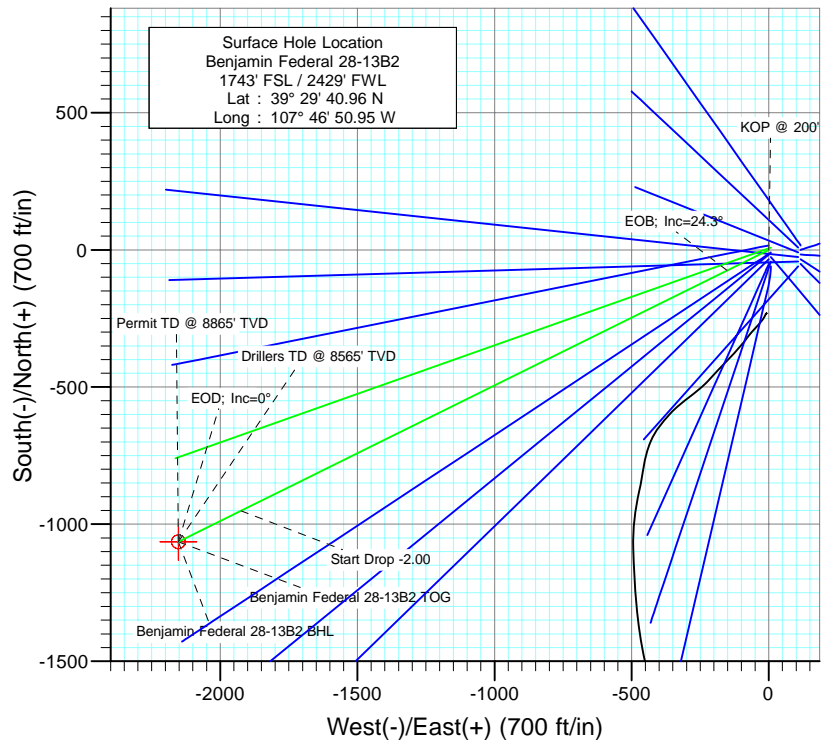


Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 28-13B2  
Wellbore: DD  
Design: Plan #1



#### 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	1011.1	24.33	243.69	986.9	-75.2	-152.1	3.00	243.69	169.6	
4	5810.1	24.33	243.69	5359.6	-951.5	-1924.6	0.00	0.00	2147.0	
5	7026.7	0.00	0.00	6540.0	-1064.3	-2152.7	2.00	180.00	2401.4	Benjamin Federal 28-13B2 TOG
6	9051.7	0.00	0.00	8565.0	-1064.3	-2152.7	0.00	0.00	2401.4	Benjamin Federal 28-13B2 BHL
7	9351.7	0.00	0.00	8865.0	-1064.3	-2152.7	0.00	0.00	2401.4	



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2161.0	2299.6	G Sand
4305.0	4652.6	Ohio Creek
4777.0	5170.6	Mesa Verde
5359.0	5809.4	Williams Fork
6540.0	7026.7	Top of Gas
7749.0	8235.7	Coal Ridge
8415.0	8901.7	Base Cameo A Coal
8510.0	8996.7	Rollins



Azimuths to True North  
Magnetic North: 10.36°

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

Plan #1  
Benjamin Federal 28-13B2  
BHL = (715 FSL - 240 FWL) Job #

WELL @ 5965.0ft (Original Well Elev)  
North American Datum 1983  
Well Benjamin Federal 28-13B2, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	Benjamin Federal 28-13B2	243.69	Slot		0.0	0.0		0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude			
Benjamin Federal 28-13B2 BHL	8565.0	-1064.3	-2152.7	39° 29' 30.44 N	107° 47' 18.41 W			

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Benjamin Federal 28-13B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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 Federal 28-13B2					
Well Position	+N/-S	0.0 ft	Northing:	1,613,160.15 ft	Latitude:	39.494711
	+E/-W	0.0 ft	Easting:	2,356,412.22 ft	Longitude:	-107.780819
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 (nT)
	IGRF200510	6/23/2010	10.36	65.82	52,406

Design	Plan #1			
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	243.69

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	
1,011.1	24.33	243.69	986.9	-75.2	-152.1	3.00	3.00	0.00	243.69	
5,810.1	24.33	243.69	5,359.6	-951.5	-1,924.6	0.00	0.00	0.00	0.00	
7,026.7	0.00	0.00	6,540.0	-1,064.3	-2,152.7	2.00	-2.00	0.00	180.00	Benjamin Federal 28-
9,051.7	0.00	0.00	8,565.0	-1,064.3	-2,152.7	0.00	0.00	0.00	0.00	Benjamin Federal 28-
9,351.7	0.00	0.00	8,865.0	-1,064.3	-2,152.7	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Benjamin Federal 28-13B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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	243.69	300.0	-1.2	-2.3	2.6	3.00	3.00	
400.0	6.00	243.69	399.6	-4.6	-9.4	10.5	3.00	3.00	
500.0	9.00	243.69	498.8	-10.4	-21.1	23.5	3.00	3.00	
600.0	12.00	243.69	597.1	-18.5	-37.4	41.7	3.00	3.00	
700.0	15.00	243.69	694.3	-28.8	-58.3	65.1	3.00	3.00	
800.0	18.00	243.69	790.2	-41.4	-83.8	93.5	3.00	3.00	
900.0	21.00	243.69	884.4	-56.2	-113.7	126.9	3.00	3.00	
1,000.0	24.00	243.69	976.8	-73.2	-148.0	165.1	3.00	3.00	
1,011.1	24.33	243.69	986.9	-75.2	-152.1	169.6	3.00	3.00	EOB; Inc=24.3°
1,100.0	24.33	243.69	1,067.9	-91.4	-184.9	206.3	0.00	0.00	
1,200.0	24.33	243.69	1,159.1	-109.7	-221.9	247.5	0.00	0.00	
1,300.0	24.33	243.69	1,250.2	-127.9	-258.8	288.7	0.00	0.00	
1,400.0	24.33	243.69	1,341.3	-146.2	-295.7	329.9	0.00	0.00	
1,402.0	24.33	243.69	1,343.1	-146.6	-296.5	330.7	0.00	0.00	Surface Casing
1,500.0	24.33	243.69	1,432.4	-164.5	-332.7	371.1	0.00	0.00	
1,600.0	24.33	243.69	1,523.5	-182.7	-369.6	412.3	0.00	0.00	
1,700.0	24.33	243.69	1,614.6	-201.0	-406.5	453.5	0.00	0.00	
1,800.0	24.33	243.69	1,705.8	-219.2	-443.5	494.7	0.00	0.00	
1,900.0	24.33	243.69	1,796.9	-237.5	-480.4	535.9	0.00	0.00	
2,000.0	24.33	243.69	1,888.0	-255.8	-517.3	577.1	0.00	0.00	
2,100.0	24.33	243.69	1,979.1	-274.0	-554.3	618.3	0.00	0.00	
2,200.0	24.33	243.69	2,070.2	-292.3	-591.2	659.5	0.00	0.00	
2,299.6	24.33	243.69	2,161.0	-310.5	-628.0	700.6	0.00	0.00	G Sand
2,300.0	24.33	243.69	2,161.3	-310.6	-628.1	700.7	0.00	0.00	
2,400.0	24.33	243.69	2,252.5	-328.8	-665.1	741.9	0.00	0.00	
2,500.0	24.33	243.69	2,343.6	-347.1	-702.0	783.1	0.00	0.00	
2,600.0	24.33	243.69	2,434.7	-365.3	-738.9	824.3	0.00	0.00	
2,700.0	24.33	243.69	2,525.8	-383.6	-775.9	865.5	0.00	0.00	
2,800.0	24.33	243.69	2,616.9	-401.9	-812.8	906.7	0.00	0.00	
2,900.0	24.33	243.69	2,708.1	-420.1	-849.7	947.9	0.00	0.00	
3,000.0	24.33	243.69	2,799.2	-438.4	-886.7	989.1	0.00	0.00	
3,100.0	24.33	243.69	2,890.3	-456.6	-923.6	1,030.3	0.00	0.00	
3,200.0	24.33	243.69	2,981.4	-474.9	-960.6	1,071.5	0.00	0.00	
3,300.0	24.33	243.69	3,072.5	-493.2	-997.5	1,112.7	0.00	0.00	
3,400.0	24.33	243.69	3,163.6	-511.4	-1,034.4	1,153.9	0.00	0.00	
3,500.0	24.33	243.69	3,254.8	-529.7	-1,071.4	1,195.1	0.00	0.00	
3,600.0	24.33	243.69	3,345.9	-547.9	-1,108.3	1,236.3	0.00	0.00	
3,700.0	24.33	243.69	3,437.0	-566.2	-1,145.2	1,277.5	0.00	0.00	
3,800.0	24.33	243.69	3,528.1	-584.5	-1,182.2	1,318.8	0.00	0.00	
3,900.0	24.33	243.69	3,619.2	-602.7	-1,219.1	1,360.0	0.00	0.00	
4,000.0	24.33	243.69	3,710.3	-621.0	-1,256.0	1,401.2	0.00	0.00	
4,100.0	24.33	243.69	3,801.5	-639.2	-1,293.0	1,442.4	0.00	0.00	
4,200.0	24.33	243.69	3,892.6	-657.5	-1,329.9	1,483.6	0.00	0.00	
4,300.0	24.33	243.69	3,983.7	-675.8	-1,366.8	1,524.8	0.00	0.00	
4,400.0	24.33	243.69	4,074.8	-694.0	-1,403.8	1,566.0	0.00	0.00	
4,500.0	24.33	243.69	4,165.9	-712.3	-1,440.7	1,607.2	0.00	0.00	
4,600.0	24.33	243.69	4,257.0	-730.5	-1,477.6	1,648.4	0.00	0.00	
4,652.6	24.33	243.69	4,305.0	-740.2	-1,497.1	1,670.1	0.00	0.00	Ohio Creek
4,700.0	24.33	243.69	4,348.2	-748.8	-1,514.6	1,689.6	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Benjamin Federal 28-13B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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	24.33	243.69	4,439.3	-767.1	-1,551.5	1,730.8	0.00	0.00	
4,900.0	24.33	243.69	4,530.4	-785.3	-1,588.4	1,772.0	0.00	0.00	
5,000.0	24.33	243.69	4,621.5	-803.6	-1,625.4	1,813.2	0.00	0.00	
5,100.0	24.33	243.69	4,712.6	-821.8	-1,662.3	1,854.4	0.00	0.00	
5,170.6	24.33	243.69	4,777.0	-834.7	-1,688.4	1,883.5	0.00	0.00	Mesa Verde
5,200.0	24.33	243.69	4,803.8	-840.1	-1,699.3	1,895.6	0.00	0.00	
5,300.0	24.33	243.69	4,894.9	-858.4	-1,736.2	1,936.8	0.00	0.00	
5,400.0	24.33	243.69	4,986.0	-876.6	-1,773.1	1,978.0	0.00	0.00	
5,500.0	24.33	243.69	5,077.1	-894.9	-1,810.1	2,019.2	0.00	0.00	
5,600.0	24.33	243.69	5,168.2	-913.2	-1,847.0	2,060.4	0.00	0.00	
5,700.0	24.33	243.69	5,259.3	-931.4	-1,883.9	2,101.6	0.00	0.00	
5,800.0	24.33	243.69	5,350.5	-949.7	-1,920.9	2,142.8	0.00	0.00	
5,809.4	24.33	243.69	5,359.0	-951.4	-1,924.3	2,146.7	0.00	0.00	Williams Fork
5,810.1	24.33	243.69	5,359.6	-951.5	-1,924.6	2,147.0	0.00	0.00	Start Drop -2.00
5,900.0	22.53	243.69	5,442.1	-967.4	-1,956.6	2,182.7	2.00	-2.00	
6,000.0	20.53	243.69	5,535.2	-983.6	-1,989.5	2,219.4	2.00	-2.00	
6,100.0	18.53	243.69	5,629.4	-998.4	-2,019.5	2,252.8	2.00	-2.00	
6,200.0	16.53	243.69	5,724.7	-1,011.8	-2,046.5	2,283.0	2.00	-2.00	
6,300.0	14.53	243.69	5,821.1	-1,023.7	-2,070.5	2,309.7	2.00	-2.00	
6,400.0	12.53	243.69	5,918.3	-1,034.0	-2,091.5	2,333.1	2.00	-2.00	
6,500.0	10.53	243.69	6,016.3	-1,042.9	-2,109.4	2,353.1	2.00	-2.00	
6,600.0	8.53	243.69	6,114.9	-1,050.2	-2,124.3	2,369.7	2.00	-2.00	
6,700.0	6.53	243.69	6,214.0	-1,056.0	-2,136.0	2,382.8	2.00	-2.00	
6,800.0	4.53	243.69	6,313.6	-1,060.3	-2,144.7	2,392.5	2.00	-2.00	
6,900.0	2.53	243.69	6,413.4	-1,063.1	-2,150.2	2,398.6	2.00	-2.00	
7,000.0	0.53	243.69	6,513.3	-1,064.2	-2,152.6	2,401.3	2.00	-2.00	
7,026.7	0.00	0.00	6,540.0	-1,064.3	-2,152.7	2,401.4	2.00	-2.00	EOD; Inc=0° - Top of Gas - Benjamin Federal 2
7,100.0	0.00	0.00	6,613.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,200.0	0.00	0.00	6,713.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,300.0	0.00	0.00	6,813.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,400.0	0.00	0.00	6,913.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,500.0	0.00	0.00	7,013.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,600.0	0.00	0.00	7,113.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,700.0	0.00	0.00	7,213.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,800.0	0.00	0.00	7,313.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
7,900.0	0.00	0.00	7,413.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,000.0	0.00	0.00	7,513.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,100.0	0.00	0.00	7,613.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,200.0	0.00	0.00	7,713.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,235.7	0.00	0.00	7,749.0	-1,064.3	-2,152.7	2,401.4	0.00	0.00	Coal Ridge
8,300.0	0.00	0.00	7,813.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,400.0	0.00	0.00	7,913.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,500.0	0.00	0.00	8,013.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,600.0	0.00	0.00	8,113.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,700.0	0.00	0.00	8,213.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,800.0	0.00	0.00	8,313.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,900.0	0.00	0.00	8,413.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
8,901.7	0.00	0.00	8,415.0	-1,064.3	-2,152.7	2,401.4	0.00	0.00	Base Cameo A Coal
8,996.7	0.00	0.00	8,510.0	-1,064.3	-2,152.7	2,401.4	0.00	0.00	Rollins
9,000.0	0.00	0.00	8,513.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
9,051.7	0.00	0.00	8,565.0	-1,064.3	-2,152.7	2,401.4	0.00	0.00	Drillers TD @ 8565' TVD - Benjamin Federal 28
9,100.0	0.00	0.00	8,613.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Benjamin Federal 28-13B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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
9,200.0	0.00	0.00	8,713.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
9,300.0	0.00	0.00	8,813.3	-1,064.3	-2,152.7	2,401.4	0.00	0.00	
9,351.7	0.00	0.00	8,865.0	-1,064.3	-2,152.7	2,401.4	0.00	0.00	Permit TD @ 8865' TVD

### 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
Benjamin Federal 28-13 - plan hits target center - Point	0.00	0.00	6,540.0	-1,064.3	-2,152.7	1,612,150.23	2,354,233.49	39.491789	-107.788447
Benjamin Federal 28-13 - plan hits target center - Circle (radius 25.0)	0.00	0.00	8,565.0	-1,064.3	-2,152.7	1,612,150.23	2,354,233.49	39.491789	-107.788447

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,402.0	1,343.1	Surface Casing	5.500	6.000

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,299.6	2,161.0	G Sand			
4,652.6	4,305.0	Ohio Creek			
5,170.6	4,777.0	Mesa Verde			
5,809.4	5,359.0	Williams Fork			
7,026.7	6,540.0	Top of Gas			
8,235.7	7,749.0	Coal Ridge			
8,901.7	8,415.0	Base Cameo A Coal			
8,996.7	8,510.0	Rollins			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200'
1,011.1	986.9	-75.2	-152.1	EOB; Inc=24.3°
5,810.1	5,359.6	-951.5	-1,924.6	Start Drop -2.00
7,026.7	6,540.0	-1,064.3	-2,152.7	EOD; Inc=0°
9,051.7	8,565.0	-1,064.3	-2,152.7	Drillers TD @ 8565' TVD
9,351.7	8,865.0	-1,064.3	-2,152.7	Permit TD @ 8865' TVD