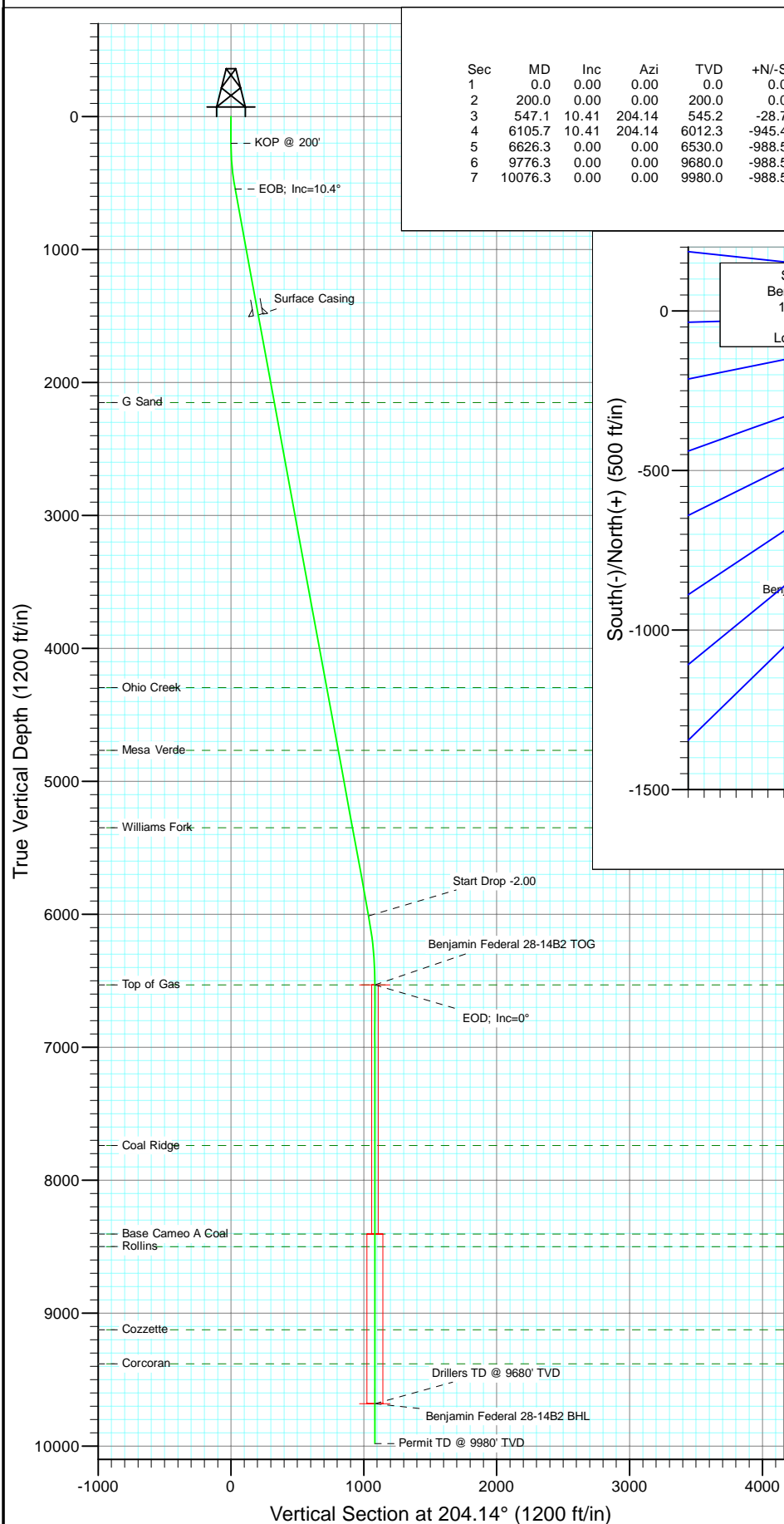


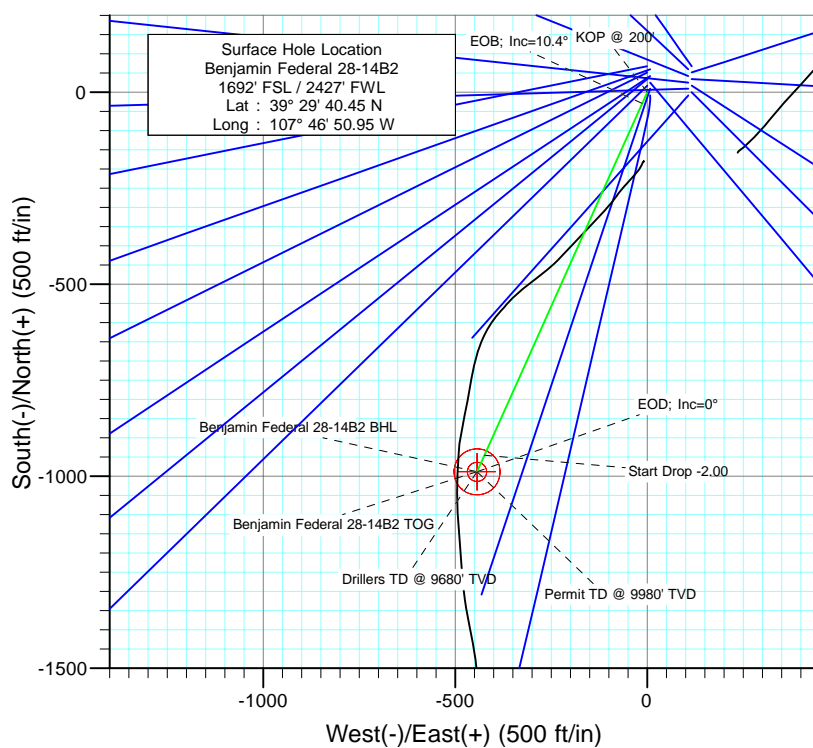


Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 28-14B2  
Wellbore: DD  
Design: Plan #1



#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	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	547.1	10.41	204.14	545.2	-28.7	-12.9	3.00	204.14	31.4	
4	6105.7	10.41	204.14	6012.3	-945.4	-423.6	0.00	0.00	1036.0	
5	6626.3	0.00	0.00	6530.0	-988.5	-442.9	2.00	180.00	1083.2	Benjamin Federal 28-14B2 TOG
6	9776.3	0.00	0.00	9680.0	-988.5	-442.9	0.00	0.00	1083.2	Benjamin Federal 28-14B2 BHL
7	10076.3	0.00	0.00	9980.0	-988.5	-442.9	0.00	0.00	1083.2	



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2151.0	2179.8	G Sand
4295.0	4359.7	Ohio Creek
4767.0	4839.6	Mesa Verde
5349.0	5431.3	Williams Fork
6530.0	6626.3	Top of Gas
7739.0	7835.3	Coal Ridge
8405.0	8501.3	Base Cameo A Coal
8500.0	8596.3	Rollins
9125.0	9221.3	Cozzette
9380.0	9476.3	Corcoran



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 Federal 28-14B2  
BHL = (710 FSL - 1950 FWL) Job #10xxx: KR

WELL @ 5965.0ft (Original Well Elev)  
North American Datum 1983  
Well Benjamin Federal 28-14B2, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	Benjamin Federal 28-14B2 BHL	204.14	Slot		0.0	0.0		0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude			
Benjamin Federal 28-14B2 BHL	9680.0	-988.5	-442.9	39° 29' 30.68 N	107° 46' 56.60 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 28-14B2
<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 28-14B2	<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 28-14B2					
Well Position	+N/-S	0.0 ft	Northing:	1,613,108.57 ft	Latitude:	39.494569
	+E/-W	0.0 ft	Easting:	2,356,410.93 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	204.14

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	
547.1	10.41	204.14	545.2	-28.7	-12.9	3.00	3.00	0.00	204.14	
6,105.7	10.41	204.14	6,012.3	-945.4	-423.6	0.00	0.00	0.00	0.00	
6,626.3	0.00	0.00	6,530.0	-988.5	-442.9	2.00	-2.00	0.00	180.00	Benjamin Federal 28-
9,776.3	0.00	0.00	9,680.0	-988.5	-442.9	0.00	0.00	0.00	0.00	Benjamin Federal 28-
10,076.3	0.00	0.00	9,980.0	-988.5	-442.9	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 28-14B2
<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 28-14B2	<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	204.14	300.0	-2.4	-1.1	2.6	3.00	3.00	
400.0	6.00	204.14	399.6	-9.5	-4.3	10.5	3.00	3.00	
500.0	9.00	204.14	498.8	-21.5	-9.6	23.5	3.00	3.00	
547.1	10.41	204.14	545.2	-28.7	-12.9	31.4	3.00	3.00	EOB; Inc=10.4°
600.0	10.41	204.14	597.2	-37.4	-16.8	41.0	0.00	0.00	
700.0	10.41	204.14	695.6	-53.9	-24.2	59.1	0.00	0.00	
800.0	10.41	204.14	793.9	-70.4	-31.6	77.2	0.00	0.00	
900.0	10.41	204.14	892.3	-86.9	-38.9	95.2	0.00	0.00	
1,000.0	10.41	204.14	990.6	-103.4	-46.3	113.3	0.00	0.00	
1,100.0	10.41	204.14	1,089.0	-119.9	-53.7	131.4	0.00	0.00	
1,200.0	10.41	204.14	1,187.3	-136.4	-61.1	149.4	0.00	0.00	
1,300.0	10.41	204.14	1,285.7	-152.9	-68.5	167.5	0.00	0.00	
1,400.0	10.41	204.14	1,384.0	-169.4	-75.9	185.6	0.00	0.00	
1,500.0	10.41	204.14	1,482.4	-185.9	-83.3	203.7	0.00	0.00	
1,511.0	10.41	204.14	1,493.2	-187.7	-84.1	205.7	0.00	0.00	Surface Casing
1,600.0	10.41	204.14	1,580.8	-202.4	-90.7	221.7	0.00	0.00	
1,700.0	10.41	204.14	1,679.1	-218.8	-98.1	239.8	0.00	0.00	
1,800.0	10.41	204.14	1,777.5	-235.3	-105.4	257.9	0.00	0.00	
1,900.0	10.41	204.14	1,875.8	-251.8	-112.8	276.0	0.00	0.00	
2,000.0	10.41	204.14	1,974.2	-268.3	-120.2	294.0	0.00	0.00	
2,100.0	10.41	204.14	2,072.5	-284.8	-127.6	312.1	0.00	0.00	
2,179.8	10.41	204.14	2,151.0	-298.0	-133.5	326.5	0.00	0.00	G Sand
2,200.0	10.41	204.14	2,170.9	-301.3	-135.0	330.2	0.00	0.00	
2,300.0	10.41	204.14	2,269.2	-317.8	-142.4	348.2	0.00	0.00	
2,400.0	10.41	204.14	2,367.6	-334.3	-149.8	366.3	0.00	0.00	
2,500.0	10.41	204.14	2,465.9	-350.8	-157.2	384.4	0.00	0.00	
2,600.0	10.41	204.14	2,564.3	-367.3	-164.6	402.5	0.00	0.00	
2,700.0	10.41	204.14	2,662.6	-383.8	-172.0	420.5	0.00	0.00	
2,800.0	10.41	204.14	2,761.0	-400.3	-179.3	438.6	0.00	0.00	
2,900.0	10.41	204.14	2,859.3	-416.8	-186.7	456.7	0.00	0.00	
3,000.0	10.41	204.14	2,957.7	-433.2	-194.1	474.7	0.00	0.00	
3,100.0	10.41	204.14	3,056.1	-449.7	-201.5	492.8	0.00	0.00	
3,200.0	10.41	204.14	3,154.4	-466.2	-208.9	510.9	0.00	0.00	
3,300.0	10.41	204.14	3,252.8	-482.7	-216.3	529.0	0.00	0.00	
3,400.0	10.41	204.14	3,351.1	-499.2	-223.7	547.0	0.00	0.00	
3,500.0	10.41	204.14	3,449.5	-515.7	-231.1	565.1	0.00	0.00	
3,600.0	10.41	204.14	3,547.8	-532.2	-238.5	583.2	0.00	0.00	
3,700.0	10.41	204.14	3,646.2	-548.7	-245.9	601.3	0.00	0.00	
3,800.0	10.41	204.14	3,744.5	-565.2	-253.2	619.3	0.00	0.00	
3,900.0	10.41	204.14	3,842.9	-581.7	-260.6	637.4	0.00	0.00	
4,000.0	10.41	204.14	3,941.2	-598.2	-268.0	655.5	0.00	0.00	
4,100.0	10.41	204.14	4,039.6	-614.7	-275.4	673.5	0.00	0.00	
4,200.0	10.41	204.14	4,137.9	-631.2	-282.8	691.6	0.00	0.00	
4,300.0	10.41	204.14	4,236.3	-647.6	-290.2	709.7	0.00	0.00	
4,359.7	10.41	204.14	4,295.0	-657.5	-294.6	720.5	0.00	0.00	Ohio Creek
4,400.0	10.41	204.14	4,334.7	-664.1	-297.6	727.8	0.00	0.00	
4,500.0	10.41	204.14	4,433.0	-680.6	-305.0	745.8	0.00	0.00	
4,600.0	10.41	204.14	4,531.4	-697.1	-312.4	763.9	0.00	0.00	
4,700.0	10.41	204.14	4,629.7	-713.6	-319.8	782.0	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 28-14B2
<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 28-14B2	<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	10.41	204.14	4,728.1	-730.1	-327.1	800.1	0.00	0.00	
4,839.6	10.41	204.14	4,767.0	-736.6	-330.1	807.2	0.00	0.00	Mesa Verde
4,900.0	10.41	204.14	4,826.4	-746.6	-334.5	818.1	0.00	0.00	
5,000.0	10.41	204.14	4,924.8	-763.1	-341.9	836.2	0.00	0.00	
5,100.0	10.41	204.14	5,023.1	-779.6	-349.3	854.3	0.00	0.00	
5,200.0	10.41	204.14	5,121.5	-796.1	-356.7	872.3	0.00	0.00	
5,300.0	10.41	204.14	5,219.8	-812.6	-364.1	890.4	0.00	0.00	
5,400.0	10.41	204.14	5,318.2	-829.1	-371.5	908.5	0.00	0.00	
5,431.3	10.41	204.14	5,349.0	-834.2	-373.8	914.1	0.00	0.00	Williams Fork
5,500.0	10.41	204.14	5,416.5	-845.6	-378.9	926.6	0.00	0.00	
5,600.0	10.41	204.14	5,514.9	-862.0	-386.3	944.6	0.00	0.00	
5,700.0	10.41	204.14	5,613.2	-878.5	-393.7	962.7	0.00	0.00	
5,800.0	10.41	204.14	5,711.6	-895.0	-401.0	980.8	0.00	0.00	
5,900.0	10.41	204.14	5,810.0	-911.5	-408.4	998.8	0.00	0.00	
6,000.0	10.41	204.14	5,908.3	-928.0	-415.8	1,016.9	0.00	0.00	
6,100.0	10.41	204.14	6,006.7	-944.5	-423.2	1,035.0	0.00	0.00	
6,105.7	10.41	204.14	6,012.3	-945.4	-423.6	1,036.0	0.00	0.00	Start Drop -2.00
6,200.0	8.53	204.14	6,105.3	-959.6	-430.0	1,051.5	2.00	-2.00	
6,300.0	6.53	204.14	6,204.4	-971.6	-435.3	1,064.6	2.00	-2.00	
6,400.0	4.53	204.14	6,303.9	-980.3	-439.3	1,074.3	2.00	-2.00	
6,500.0	2.53	204.14	6,403.7	-986.0	-441.8	1,080.4	2.00	-2.00	
6,600.0	0.53	204.14	6,503.7	-988.4	-442.9	1,083.1	2.00	-2.00	
6,626.3	0.00	0.00	6,530.0	-988.5	-442.9	1,083.2	2.00	-2.00	EOD; Inc=0° - Top of Gas - Benjamin Federal 2
6,700.0	0.00	0.00	6,603.7	-988.5	-442.9	1,083.2	0.00	0.00	
6,800.0	0.00	0.00	6,703.7	-988.5	-442.9	1,083.2	0.00	0.00	
6,900.0	0.00	0.00	6,803.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,000.0	0.00	0.00	6,903.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,100.0	0.00	0.00	7,003.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,200.0	0.00	0.00	7,103.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,300.0	0.00	0.00	7,203.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,400.0	0.00	0.00	7,303.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,500.0	0.00	0.00	7,403.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,600.0	0.00	0.00	7,503.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,700.0	0.00	0.00	7,603.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,800.0	0.00	0.00	7,703.7	-988.5	-442.9	1,083.2	0.00	0.00	
7,835.3	0.00	0.00	7,739.0	-988.5	-442.9	1,083.2	0.00	0.00	Coal Ridge
7,900.0	0.00	0.00	7,803.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,000.0	0.00	0.00	7,903.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,100.0	0.00	0.00	8,003.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,200.0	0.00	0.00	8,103.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,300.0	0.00	0.00	8,203.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,400.0	0.00	0.00	8,303.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,500.0	0.00	0.00	8,403.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,501.3	0.00	0.00	8,405.0	-988.5	-442.9	1,083.2	0.00	0.00	Base Cameo A Coal
8,596.3	0.00	0.00	8,500.0	-988.5	-442.9	1,083.2	0.00	0.00	Rollins
8,600.0	0.00	0.00	8,503.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,700.0	0.00	0.00	8,603.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,800.0	0.00	0.00	8,703.7	-988.5	-442.9	1,083.2	0.00	0.00	
8,900.0	0.00	0.00	8,803.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,000.0	0.00	0.00	8,903.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,100.0	0.00	0.00	9,003.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,200.0	0.00	0.00	9,103.7	-988.5	-442.9	1,083.2	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 28-14B2
<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 28-14B2	<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
9,221.3	0.00	0.00	9,125.0	-988.5	-442.9	1,083.2	0.00	0.00	Cozzette
9,300.0	0.00	0.00	9,203.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,400.0	0.00	0.00	9,303.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,476.3	0.00	0.00	9,380.0	-988.5	-442.9	1,083.2	0.00	0.00	Corcoran
9,500.0	0.00	0.00	9,403.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,600.0	0.00	0.00	9,503.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,700.0	0.00	0.00	9,603.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,776.3	0.00	0.00	9,680.0	-988.5	-442.9	1,083.2	0.00	0.00	Drillers TD @ 9680' TVD - Benjamin Federal 28
9,800.0	0.00	0.00	9,703.7	-988.5	-442.9	1,083.2	0.00	0.00	
9,900.0	0.00	0.00	9,803.7	-988.5	-442.9	1,083.2	0.00	0.00	
10,000.0	0.00	0.00	9,903.7	-988.5	-442.9	1,083.2	0.00	0.00	
10,076.3	0.00	0.00	9,980.0	-988.5	-442.9	1,083.2	0.00	0.00	Permit TD @ 9980' 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 28-14 - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,530.0	-988.5	-442.9	1,612,131.50	2,355,943.33	39.491856	-107.782389
Benjamin Federal 28-14 - plan hits target center - Circle (radius 60.0)	0.00	0.00	9,680.0	-988.5	-442.9	1,612,131.50	2,355,943.33	39.491856	-107.782389

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,511.0	1,493.2	Surface Casing	5.500	6.000

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,179.8	2,151.0	G Sand			
4,359.7	4,295.0	Ohio Creek			
4,839.6	4,767.0	Mesa Verde			
5,431.3	5,349.0	Williams Fork			
6,626.3	6,530.0	Top of Gas			
7,835.3	7,739.0	Coal Ridge			
8,501.3	8,405.0	Base Cameo A Coal			
8,596.3	8,500.0	Rollins			
9,221.3	9,125.0	Cozzette			
9,476.3	9,380.0	Corcoran			

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-14B2
<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 28-14B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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'
547.1	545.2	-28.7	-12.9	EOB; Inc=10.4°
6,105.7	6,012.3	-945.4	-423.6	Start Drop -2.00
6,626.3	6,530.0	-988.5	-442.9	EOD; Inc=0°
9,776.3	9,680.0	-988.5	-442.9	Drillers TD @ 9680' TVD
10,076.3	9,980.0	-988.5	-442.9	Permit TD @ 9980' TVD