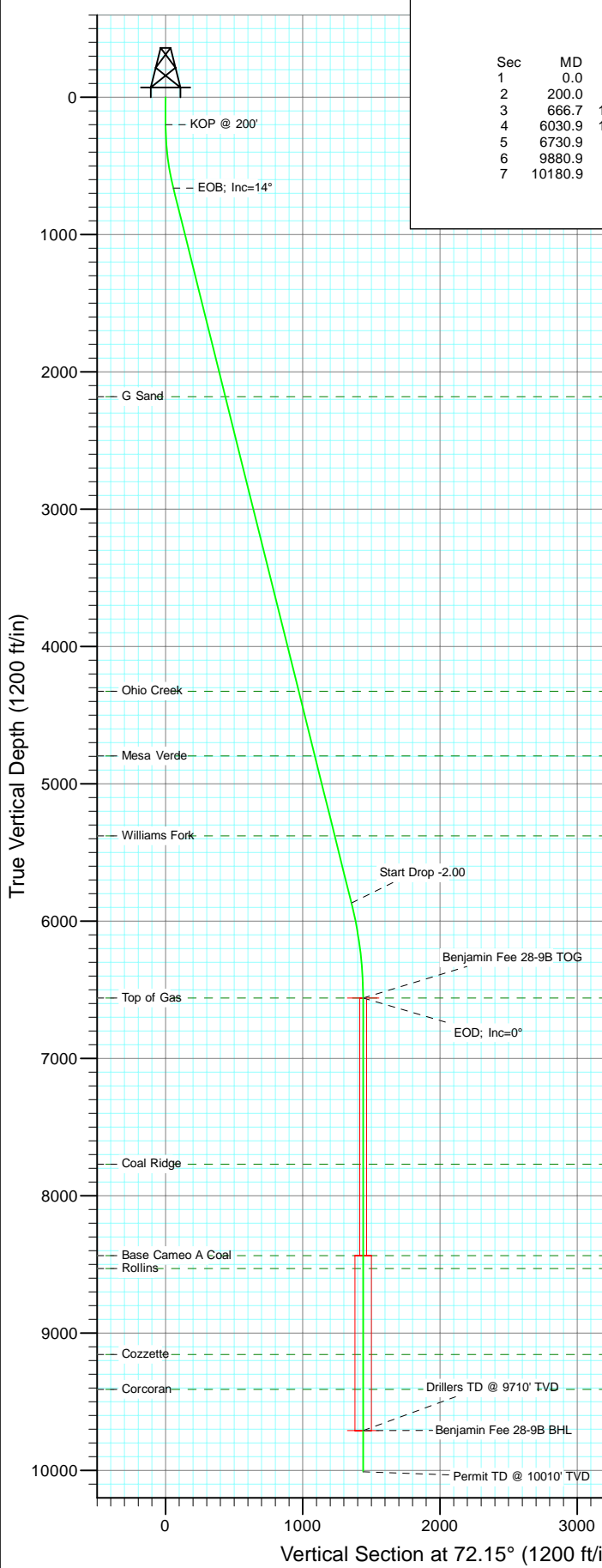
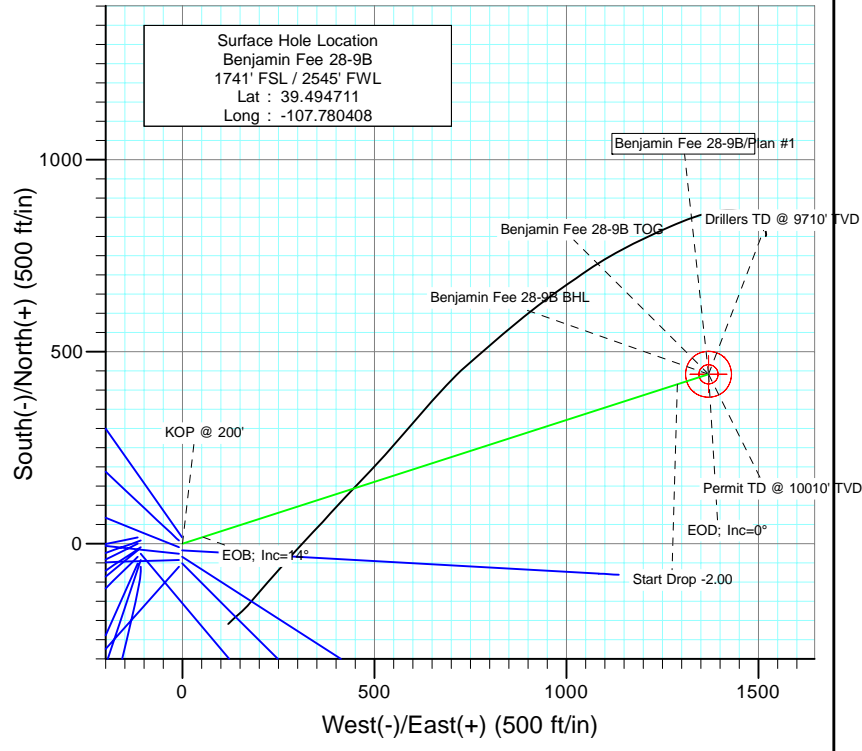




Project: Mamm Creek  
 Site: K28NW Pad  
 Well: Benjamin Fee 28-9B  
 Wellbore: DD  
 Design: Plan #1



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	666.7	14.00	72.15	662.0	17.4	54.0	3.00	72.15	56.7	
4	6030.9	14.00	72.15	5867.0	415.1	1289.2	0.00	0.00	1354.4	
5	6730.9	0.00	0.00	6560.0	441.2	1370.2	2.00	180.00	1439.5	Benjamin Fee 28-9B TOG
6	9880.9	0.00	0.00	9710.0	441.2	1370.2	0.00	0.00	1439.5	Benjamin Fee 28-9B BHL
7	10180.9	0.00	0.00	10010.0	441.2	1370.2	0.00	0.00	1439.5	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2181.0	2232.1	G Sand
4325.0	4441.8	Ohio Creek
4797.0	4928.2	Mesa Verde
5379.0	5528.0	Williams Fork
6560.0	6730.9	Top of Gas
7769.0	7939.9	Coal Ridge
8435.0	8605.9	Base Cameo A Coal
8530.0	8700.9	Rollins
9155.0	9325.9	Cozzette
9410.0	9580.9	Corcoran



Azimuths to True North  
 Magnetic North: 10.36°  
 Magnetic Field  
 Strength: 52406.1snT  
 Dip Angle: 65.82°  
 Date: 6/23/2010  
 Model: IGRF200510

Plan #1 Benjamin Fee 28-9B (2170 FSL - 1290 FEL) Job #10xxx: KR						
WELL @ 5965.0ft (Original Well Elev) North American Datum 1983 Well Benjamin Fee 28-9B, True North						
Type Target	Target	Azimuth	Origin	Type N/S	E/W	From TVD
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Benjamin Fee 28-9B BHL	9710.0	441.2	1370.2	39.495922	-107.775533	

# Cathedral Energy Services

## Planning Report

<b>Database:</b> EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b> Well Benjamin Fee 28-9B
<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 Fee 28-9B	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> DD	
<b>Design:</b> Plan #1	

<b>Project</b> Mamm Creek		
<b>Map System:</b> US State Plane 1983	<b>System Datum:</b> Mean Sea Level	
<b>Geo Datum:</b> North American Datum 1983		
<b>Map Zone:</b> Colorado Central Zone		

<b>Site</b> K28NW Pad				
<b>Site Position:</b>	<b>Northing:</b>	1,613,160.16 ft	<b>Latitude:</b>	39.494711
<b>From:</b> Lat/Long	<b>Easting:</b>	2,356,412.22 ft	<b>Longitude:</b>	-107.780819
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	-1.44 °

<b>Well</b> Benjamin Fee 28-9B				
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,613,157.24 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,356,528.20 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Latitude:</b>	39.494711
			<b>Longitude:</b>	-107.780408
			<b>Ground Level:</b>	5,943.0 ft

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

<b>Design</b> Plan #1				
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	72.15

<b>Plan Sections</b>										
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	
666.7	14.00	72.15	662.0	17.4	54.0	3.00	3.00	0.00	72.15	
6,030.9	14.00	72.15	5,867.0	415.1	1,289.2	0.00	0.00	0.00	0.00	
6,730.9	0.00	0.00	6,560.0	441.2	1,370.2	2.00	-2.00	0.00	180.00	Benjamin Fee 28-9B I
9,880.9	0.00	0.00	9,710.0	441.2	1,370.2	0.00	0.00	0.00	0.00	Benjamin Fee 28-9B I
10,180.9	0.00	0.00	10,010.0	441.2	1,370.2	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 Fee 28-9B
<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 Fee 28-9B	<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	72.15	300.0	0.8	2.5	2.6	3.00	3.00	
400.0	6.00	72.15	399.6	3.2	10.0	10.5	3.00	3.00	
500.0	9.00	72.15	498.8	7.2	22.4	23.5	3.00	3.00	
600.0	12.00	72.15	597.1	12.8	39.7	41.7	3.00	3.00	
666.7	14.00	72.15	662.0	17.4	54.0	56.7	3.00	3.00	EOB; Inc=14°
700.0	14.00	72.15	694.4	19.9	61.7	64.8	0.00	0.00	
800.0	14.00	72.15	791.4	27.3	84.7	89.0	0.00	0.00	
900.0	14.00	72.15	888.4	34.7	107.7	113.2	0.00	0.00	
1,000.0	14.00	72.15	985.5	42.1	130.8	137.4	0.00	0.00	
1,100.0	14.00	72.15	1,082.5	49.5	153.8	161.6	0.00	0.00	
1,200.0	14.00	72.15	1,179.5	56.9	176.8	185.8	0.00	0.00	
1,300.0	14.00	72.15	1,276.6	64.3	199.8	209.9	0.00	0.00	
1,400.0	14.00	72.15	1,373.6	71.8	222.9	234.1	0.00	0.00	
1,500.0	14.00	72.15	1,470.6	79.2	245.9	258.3	0.00	0.00	
1,527.0	14.00	72.15	1,496.8	81.2	252.1	264.9	0.00	0.00	Surface Casing
1,600.0	14.00	72.15	1,567.6	86.6	268.9	282.5	0.00	0.00	
1,700.0	14.00	72.15	1,664.7	94.0	292.0	306.7	0.00	0.00	
1,800.0	14.00	72.15	1,761.7	101.4	315.0	330.9	0.00	0.00	
1,900.0	14.00	72.15	1,858.7	108.8	338.0	355.1	0.00	0.00	
2,000.0	14.00	72.15	1,955.8	116.2	361.0	379.3	0.00	0.00	
2,100.0	14.00	72.15	2,052.8	123.7	384.1	403.5	0.00	0.00	
2,200.0	14.00	72.15	2,149.8	131.1	407.1	427.7	0.00	0.00	
2,232.1	14.00	72.15	2,181.0	133.5	414.5	435.4	0.00	0.00	G Sand
2,300.0	14.00	72.15	2,246.9	138.5	430.1	451.9	0.00	0.00	
2,400.0	14.00	72.15	2,343.9	145.9	453.1	476.1	0.00	0.00	
2,500.0	14.00	72.15	2,440.9	153.3	476.2	500.2	0.00	0.00	
2,600.0	14.00	72.15	2,537.9	160.7	499.2	524.4	0.00	0.00	
2,700.0	14.00	72.15	2,635.0	168.1	522.2	548.6	0.00	0.00	
2,800.0	14.00	72.15	2,732.0	175.6	545.3	572.8	0.00	0.00	
2,900.0	14.00	72.15	2,829.0	183.0	568.3	597.0	0.00	0.00	
3,000.0	14.00	72.15	2,926.1	190.4	591.3	621.2	0.00	0.00	
3,100.0	14.00	72.15	3,023.1	197.8	614.3	645.4	0.00	0.00	
3,200.0	14.00	72.15	3,120.1	205.2	637.4	669.6	0.00	0.00	
3,300.0	14.00	72.15	3,217.2	212.6	660.4	693.8	0.00	0.00	
3,400.0	14.00	72.15	3,314.2	220.0	683.4	718.0	0.00	0.00	
3,500.0	14.00	72.15	3,411.2	227.5	706.4	742.2	0.00	0.00	
3,600.0	14.00	72.15	3,508.2	234.9	729.5	766.3	0.00	0.00	
3,700.0	14.00	72.15	3,605.3	242.3	752.5	790.5	0.00	0.00	
3,800.0	14.00	72.15	3,702.3	249.7	775.5	814.7	0.00	0.00	
3,900.0	14.00	72.15	3,799.3	257.1	798.6	838.9	0.00	0.00	
4,000.0	14.00	72.15	3,896.4	264.5	821.6	863.1	0.00	0.00	
4,100.0	14.00	72.15	3,993.4	271.9	844.6	887.3	0.00	0.00	
4,200.0	14.00	72.15	4,090.4	279.4	867.6	911.5	0.00	0.00	
4,300.0	14.00	72.15	4,187.5	286.8	890.7	935.7	0.00	0.00	
4,400.0	14.00	72.15	4,284.5	294.2	913.7	959.9	0.00	0.00	
4,441.8	14.00	72.15	4,325.0	297.3	923.3	970.0	0.00	0.00	Ohio Creek
4,500.0	14.00	72.15	4,381.5	301.6	936.7	984.1	0.00	0.00	
4,600.0	14.00	72.15	4,478.5	309.0	959.7	1,008.3	0.00	0.00	
4,700.0	14.00	72.15	4,575.6	316.4	982.8	1,032.5	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 Fee 28-9B
<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 Fee 28-9B	<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	14.00	72.15	4,672.6	323.8	1,005.8	1,056.6	0.00	0.00	
4,900.0	14.00	72.15	4,769.6	331.3	1,028.8	1,080.8	0.00	0.00	
4,928.2	14.00	72.15	4,797.0	333.3	1,035.3	1,087.7	0.00	0.00	Mesa Verde
5,000.0	14.00	72.15	4,866.7	338.7	1,051.9	1,105.0	0.00	0.00	
5,100.0	14.00	72.15	4,963.7	346.1	1,074.9	1,129.2	0.00	0.00	
5,200.0	14.00	72.15	5,060.7	353.5	1,097.9	1,153.4	0.00	0.00	
5,300.0	14.00	72.15	5,157.7	360.9	1,120.9	1,177.6	0.00	0.00	
5,400.0	14.00	72.15	5,254.8	368.3	1,144.0	1,201.8	0.00	0.00	
5,500.0	14.00	72.15	5,351.8	375.7	1,167.0	1,226.0	0.00	0.00	
5,528.0	14.00	72.15	5,379.0	377.8	1,173.4	1,232.8	0.00	0.00	Williams Fork
5,600.0	14.00	72.15	5,448.8	383.2	1,190.0	1,250.2	0.00	0.00	
5,700.0	14.00	72.15	5,545.9	390.6	1,213.0	1,274.4	0.00	0.00	
5,800.0	14.00	72.15	5,642.9	398.0	1,236.1	1,298.6	0.00	0.00	
5,900.0	14.00	72.15	5,739.9	405.4	1,259.1	1,322.8	0.00	0.00	
6,000.0	14.00	72.15	5,837.0	412.8	1,282.1	1,346.9	0.00	0.00	
6,030.9	14.00	72.15	5,867.0	415.1	1,289.2	1,354.4	0.00	0.00	Start Drop -2.00
6,100.0	12.62	72.15	5,934.2	420.0	1,304.4	1,370.3	2.00	-2.00	
6,200.0	10.62	72.15	6,032.1	426.1	1,323.6	1,390.5	2.00	-2.00	
6,300.0	8.62	72.15	6,130.7	431.3	1,339.5	1,407.2	2.00	-2.00	
6,400.0	6.62	72.15	6,229.8	435.3	1,352.1	1,420.4	2.00	-2.00	
6,500.0	4.62	72.15	6,329.3	438.3	1,361.4	1,430.2	2.00	-2.00	
6,600.0	2.62	72.15	6,429.1	440.3	1,367.4	1,436.5	2.00	-2.00	
6,700.0	0.62	72.15	6,529.1	441.1	1,370.1	1,439.4	2.00	-2.00	
6,730.9	0.00	0.00	6,560.0	441.2	1,370.2	1,439.5	2.00	-2.00	EOD; Inc=0° - Top of Gas - Benjamin Fee 28-9B
6,800.0	0.00	0.00	6,629.1	441.2	1,370.2	1,439.5	0.00	0.00	
6,900.0	0.00	0.00	6,729.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,000.0	0.00	0.00	6,829.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,100.0	0.00	0.00	6,929.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,200.0	0.00	0.00	7,029.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,300.0	0.00	0.00	7,129.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,400.0	0.00	0.00	7,229.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,500.0	0.00	0.00	7,329.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,600.0	0.00	0.00	7,429.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,700.0	0.00	0.00	7,529.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,800.0	0.00	0.00	7,629.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,900.0	0.00	0.00	7,729.1	441.2	1,370.2	1,439.5	0.00	0.00	
7,939.9	0.00	0.00	7,769.0	441.2	1,370.2	1,439.5	0.00	0.00	Coal Ridge
8,000.0	0.00	0.00	7,829.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,100.0	0.00	0.00	7,929.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,200.0	0.00	0.00	8,029.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,300.0	0.00	0.00	8,129.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,400.0	0.00	0.00	8,229.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,500.0	0.00	0.00	8,329.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,600.0	0.00	0.00	8,429.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,605.9	0.00	0.00	8,435.0	441.2	1,370.2	1,439.5	0.00	0.00	Base Cameo A Coal
8,700.0	0.00	0.00	8,529.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,700.9	0.00	0.00	8,530.0	441.2	1,370.2	1,439.5	0.00	0.00	Rollins
8,800.0	0.00	0.00	8,629.1	441.2	1,370.2	1,439.5	0.00	0.00	
8,900.0	0.00	0.00	8,729.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,000.0	0.00	0.00	8,829.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,100.0	0.00	0.00	8,929.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,200.0	0.00	0.00	9,029.1	441.2	1,370.2	1,439.5	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 Fee 28-9B
<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 Fee 28-9B	<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
9,300.0	0.00	0.00	9,129.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,325.9	0.00	0.00	9,155.0	441.2	1,370.2	1,439.5	0.00	0.00	Cozzette
9,400.0	0.00	0.00	9,229.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,500.0	0.00	0.00	9,329.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,580.9	0.00	0.00	9,410.0	441.2	1,370.2	1,439.5	0.00	0.00	Corcoran
9,600.0	0.00	0.00	9,429.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,700.0	0.00	0.00	9,529.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,800.0	0.00	0.00	9,629.1	441.2	1,370.2	1,439.5	0.00	0.00	
9,880.9	0.00	0.00	9,710.0	441.2	1,370.2	1,439.5	0.00	0.00	Drillers TD @ 9710' TVD - Benjamin Fee 28-9B
9,900.0	0.00	0.00	9,729.1	441.2	1,370.2	1,439.5	0.00	0.00	
10,000.0	0.00	0.00	9,829.1	441.2	1,370.2	1,439.5	0.00	0.00	
10,100.0	0.00	0.00	9,929.1	441.2	1,370.2	1,439.5	0.00	0.00	
10,180.9	0.00	0.00	10,010.0	441.2	1,370.2	1,439.5	0.00	0.00	Permit TD @ 10010' TVD

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Benjamin Fee 28-9B BH - hit/miss target - Shape - Circle (radius 60.0)	0.00	0.00	9,710.0	441.2	1,370.2	1,613,563.89	2,357,909.09	39.495922	-107.775553	
Benjamin Fee 28-9B TO - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,560.0	441.2	1,370.2	1,613,563.89	2,357,909.09	39.495922	-107.775553	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,527.0	1,496.8	Surface Casing				

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,232.1	2,181.0	G Sand				
4,441.8	4,325.0	Ohio Creek				
4,928.2	4,797.0	Mesa Verde				
5,528.0	5,379.0	Williams Fork				
6,730.9	6,560.0	Top of Gas				
7,939.9	7,769.0	Coal Ridge				
8,605.9	8,435.0	Base Cameo A Coal				
8,700.9	8,530.0	Rollins				
9,325.9	9,155.0	Cozzette				
9,580.9	9,410.0	Corcoran				

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<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 Fee 28-9B	<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'
666.7	662.0	17.4	54.0	EOB; Inc=14°
6,030.9	5,867.0	415.1	1,289.2	Start Drop -2.00
6,730.9	6,560.0	441.2	1,370.2	EOD; Inc=0°
9,880.9	9,710.0	441.2	1,370.2	Drillers TD @ 9710' TVD
10,180.9	10,010.0	441.2	1,370.2	Permit TD @ 10010' TVD

# **EnCana Oil & Gas (USA) Inc**

**Mamm Creek**

**K28NW Pad**

**Benjamin Fee 28-9B**

**DD**

**Plan #1**

## **Anticollision Report**

**25 June, 2010**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1		
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	Systematic Ellipse
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 100.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	6/25/2010		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	10,180.9	Plan #1 (DD)	MWD	Geolink MWD

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
<b>K28NW Pad</b>						
Benjamin Federal 28-12B2 - DD - Plan #1	200.0	200.0	27.7	27.1	44.555	CC, ES
Benjamin Federal 28-12B2 - DD - Plan #1	400.0	397.3	40.5	39.1	29.859	SF
Benjamin Federal 28-12C1 - DD - Plan #1	200.0	200.0	43.4	42.7	69.793	CC, ES
Benjamin Federal 28-12C1 - DD - Plan #1	400.0	396.9	54.3	52.9	39.561	SF
Benjamin Federal 28-12C2 - DD - Plan #1						Out of range
Benjamin Federal 28-13B1 - DD - Plan #1						Out of range
Benjamin Federal 28-13B2 - DD - Plan #1						Out of range
Benjamin Federal 28-13C1 - DD - Plan #1						Out of range
Benjamin Federal 28-13C2 - DD - Plan #1						Out of range
Benjamin Federal 28-14B1 - DD - Plan #1	200.0	200.0	60.3	59.7	97.072	CC, ES
Benjamin Federal 28-14B1 - DD - Plan #1	600.0	597.1	87.1	85.0	40.429	SF
Benjamin Federal 28-14B2 - DD - Plan #1						Out of range
Benjamin Federal 28-14C - DD - Plan #1						Out of range
Benjamin Federal 28-16C - DD - Plan #1	200.0	200.0	51.4	50.8	82.723	CC, ES
Benjamin Federal 28-16C - DD - Plan #1	600.0	588.1	93.5	91.0	37.344	SF
Benjamin Federal 33-3B - DD - Plan #1						Out of range
Benjamin Federal 33-4B - DD - Plan #1						Out of range
Benjamin Fee 28-10D2 - DD - Plan #1	200.0	200.0	17.2	16.6	27.684	CC, ES
Benjamin Fee 28-10D2 - DD - Plan #1	700.0	698.9	40.5	37.0	11.792	SF
Benjamin Fee 28-11A - DD - Plan #1	200.0	200.0	12.5	11.9	20.184	CC, ES
Benjamin Fee 28-11A - DD - Plan #1	300.0	299.5	16.2	15.2	16.633	SF
Benjamin Fee 28-11B - DD - Plan #1	200.0	200.0	11.8	11.2	19.034	CC, ES
Benjamin Fee 28-11B - DD - Plan #1	300.0	299.2	15.9	14.9	16.275	SF
Benjamin Fee 28-15A - DD - Plan #1	200.0	200.0	34.4	33.8	55.365	CC, ES
Benjamin Fee 28-15A - DD - Plan #1	700.0	689.7	89.0	85.7	26.610	SF
Benjamin Fee 28-6C - DD - Plan #1	200.0	200.0	16.2	15.6	26.054	CC, ES
Benjamin Fee 28-6C - DD - Plan #1	300.0	299.1	18.0	17.0	18.347	SF
Benjamin Fee 33-1B - DD - Plan #1						Out of range
GMR 28-7D Existing - DD - Schlumberger Surveys	1,800.0	1,806.5	80.5	69.2	7.161	SF
GMR 28-7D Existing - DD - Schlumberger Surveys	1,882.4	1,887.7	79.0	68.5	7.560	CC, ES
<b>SWSW S27-T6S-R93W (M27NW Pad)</b>						
GMR 28-10D (M27NW) Existing - DD - DD						Out of range

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
K28NW Pad - Benjamin Federal 28-12B2 - DD - Plan #1															
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-161.85	-26.3	-8.6	27.7						
100.0	100.0	100.0	100.0	0.1	0.1	-161.85	-26.3	-8.6	27.7	27.4	0.27	101.676			
200.0	200.0	200.0	200.0	0.3	0.3	-161.85	-26.3	-8.6	27.7	27.1	0.62	44.555 CC, ES			
300.0	300.0	299.4	299.4	0.5	0.5	134.79	-26.0	-11.2	30.1	29.1	0.98	30.719			
400.0	399.6	397.3	397.0	0.7	0.7	152.82	-25.2	-18.8	40.5	39.1	1.36	29.859 SF			
500.0	498.8	492.3	491.1	1.0	1.0	167.10	-23.9	-30.8	62.1	60.4	1.71	36.301			
600.0	597.1	582.9	580.4	1.4	1.3	175.51	-22.2	-46.7	94.7	92.7	2.04	46.345			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-168.53	-42.5	-8.6	43.4						
100.0	100.0	100.0	100.0	0.1	0.1	-168.53	-42.5	-8.6	43.4	43.1	0.27	159.271			
200.0	200.0	200.0	200.0	0.3	0.3	-168.53	-42.5	-8.6	43.4	42.7	0.62	69.793 CC, ES			
300.0	300.0	299.2	299.2	0.5	0.5	125.28	-42.6	-11.2	45.5	44.5	0.98	46.324			
400.0	399.6	396.9	396.5	0.7	0.7	139.44	-42.8	-18.8	54.3	52.9	1.37	39.561 SF			
500.0	498.8	491.5	490.4	1.0	1.0	153.68	-43.2	-30.8	73.7	72.0	1.75	42.059			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-171.78	-59.7	-8.6	60.3						
100.0	100.0	100.0	100.0	0.1	0.1	-171.78	-59.7	-8.6	60.3	60.0	0.27	221.523			
200.0	200.0	200.0	200.0	0.3	0.3	-171.78	-59.7	-8.6	60.3	59.7	0.62	97.072 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	118.22	-59.7	-8.6	61.5	60.5	0.98	62.971			
400.0	399.6	399.6	399.6	0.7	0.7	124.16	-59.7	-8.6	65.6	64.2	1.36	48.379			
500.0	498.8	498.8	498.8	1.0	0.8	132.36	-59.7	-8.6	73.7	72.0	1.76	41.995			
600.0	597.1	597.1	597.1	1.4	1.0	140.93	-59.7	-8.6	87.1	85.0	2.16	40.429 SF			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset															
Semi Major Axis															
Distance															
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-179.79	-51.4	-0.2	51.4						
100.0	100.0	100.0	100.0	0.1	0.1	-179.79	-51.4	-0.2	51.4	51.1	0.27	188.777			
200.0	200.0	200.0	200.0	0.3	0.3	-179.79	-51.4	-0.2	51.4	50.8	0.62	82.723 CC, ES			
300.0	300.0	298.1	298.0	0.5	0.5	108.68	-53.2	1.6	54.0	53.0	0.98	55.184			
400.0	399.6	395.7	395.4	0.7	0.7	110.20	-58.5	6.9	61.9	60.5	1.39	44.576			
500.0	498.8	492.5	491.4	1.0	1.0	111.96	-67.2	15.6	75.1	73.2	1.89	39.749			
600.0	597.1	588.1	585.4	1.4	1.3	113.49	-79.2	27.6	93.5	91.0	2.50	37.344 SF			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-179.37	-17.2	-0.2	17.2						
100.0	100.0	100.0	100.0	0.1	0.1	-179.37	-17.2	-0.2	17.2	16.9	0.27	63.177			
200.0	200.0	200.0	200.0	0.3	0.3	-179.37	-17.2	-0.2	17.2	16.6	0.62	27.684 CC, ES			
300.0	300.0	300.0	299.9	0.5	0.5	108.03	-17.3	2.4	18.1	17.2	0.99	18.397			
400.0	399.6	399.8	399.5	0.7	0.7	106.95	-17.8	10.2	21.0	19.6	1.42	14.744			
500.0	498.8	499.6	498.4	1.0	1.0	105.65	-18.5	23.2	25.7	23.8	1.98	12.967			
600.0	597.1	599.3	596.5	1.4	1.3	104.98	-19.5	41.0	32.3	29.7	2.68	12.064			
700.0	694.4	698.9	694.3	1.8	1.7	109.71	-20.6	59.9	40.5	37.0	3.43	11.792 SF			
800.0	791.4	798.5	792.0	2.2	2.1	114.20	-21.6	78.8	49.3	45.1	4.17	11.799			
900.0	888.4	898.0	889.8	2.7	2.4	117.32	-22.7	97.7	58.3	53.3	4.91	11.863			
1,000.0	985.5	997.6	987.5	3.2	2.8	119.59	-23.7	116.6	67.4	61.7	5.64	11.944			
1,100.0	1,082.5	1,097.1	1,085.2	3.6	3.2	121.33	-24.8	135.5	76.6	70.2	6.37	12.027			
1,200.0	1,179.5	1,196.7	1,183.0	4.1	3.6	122.69	-25.9	154.4	85.8	78.8	7.09	12.106			
1,300.0	1,276.6	1,296.2	1,280.7	4.5	3.9	123.78	-26.9	173.3	95.1	87.3	7.81	12.178			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-136.56	-9.1	-8.6	12.5						
100.0	100.0	100.0	100.0	0.1	0.1	-136.56	-9.1	-8.6	12.5	12.3	0.27	46.060			
200.0	200.0	200.0	200.0	0.3	0.3	-136.56	-9.1	-8.6	12.5	11.9	0.62	20.184 CC, ES			
300.0	300.0	299.5	299.5	0.5	0.5	164.31	-8.1	-11.0	16.2	15.2	0.98	16.633 SF			
400.0	399.6	397.6	397.3	0.7	0.7	-179.03	-5.3	-18.1	29.4	28.1	1.33	22.094			
500.0	498.8	495.1	494.3	1.0	0.9	-171.90	-1.6	-27.5	50.9	49.2	1.68	30.221			
600.0	597.1	591.5	590.1	1.4	1.2	-169.65	2.2	-36.8	77.6	75.5	2.03	38.137			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-46.81	8.1	-8.6	11.8						
100.0	100.0	100.0	100.0	0.1	0.1	-46.81	8.1	-8.6	11.8	11.6	0.27	43.437			
200.0	200.0	200.0	200.0	0.3	0.3	-46.81	8.1	-8.6	11.8	11.2	0.62	19.034	CC, ES		
300.0	300.0	299.2	299.1	0.5	0.5	-127.12	9.9	-10.5	15.9	14.9	0.97	16.275	SF		
400.0	399.6	397.2	396.8	0.7	0.7	-137.10	15.1	-16.0	28.7	27.4	1.34	21.371			
500.0	498.8	493.6	492.5	1.0	1.0	-142.30	23.3	-24.8	50.3	48.5	1.74	28.957			
600.0	597.1	589.9	587.8	1.4	1.2	-146.05	32.2	-34.4	77.2	75.0	2.15	35.820			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset															
Semi Major Axis															
Distance															
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-34.4	0.0	34.4						
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-34.4	0.0	34.4	34.1	0.27	126.346			
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-34.4	0.0	34.4	33.8	0.62	55.365 CC, ES			
300.0	300.0	299.0	298.9	0.5	0.5	108.27	-35.8	2.2	36.6	35.6	0.98	37.265			
400.0	399.6	397.7	397.3	0.7	0.7	109.25	-39.9	8.6	43.2	41.8	1.40	30.793			
500.0	498.8	495.8	494.6	1.0	1.0	110.31	-46.8	19.2	54.2	52.3	1.93	28.131			
600.0	597.1	593.1	590.3	1.4	1.3	111.14	-56.2	33.9	69.6	67.0	2.58	26.947			
700.0	694.4	689.7	684.4	1.8	1.8	111.75	-68.1	52.4	89.0	85.7	3.35	26.610 SF			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	16.2	0.0	16.2						
100.0	100.0	100.0	100.0	0.1	0.1	0.00	16.2	0.0	16.2	15.9	0.27	59.457			
200.0	200.0	200.0	200.0	0.3	0.3	0.00	16.2	0.0	16.2	15.6	0.62	26.054 CC, ES			
300.0	300.0	299.1	299.1	0.5	0.5	-84.81	18.3	-1.5	18.0	17.0	0.98	18.347 SF			
400.0	399.6	397.2	396.9	0.7	0.7	-108.07	24.5	-5.9	26.7	25.3	1.36	19.555			
500.0	498.8	493.3	492.2	1.0	1.0	-122.95	34.6	-12.9	45.2	43.4	1.78	25.320			
600.0	597.1	587.9	585.3	1.4	1.3	-130.53	47.9	-22.3	72.2	70.0	2.25	32.095			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 140-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
1,600.0	1,567.6	1,608.5	1,561.5	5.9	6.8	51.57	35.7	345.5	92.1	80.5	11.65	7.907			
1,700.0	1,664.7	1,707.3	1,654.0	6.4	7.5	40.66	60.9	369.5	85.1	73.3	11.73	7.252			
1,800.0	1,761.7	1,806.5	1,747.1	6.9	8.1	28.67	85.9	392.5	80.5	69.2	11.24	7.161 SF			
1,882.4	1,841.7	1,887.7	1,823.5	7.2	8.6	18.20	106.4	410.8	79.0	68.5	10.45	7.560 CC, ES			
1,900.0	1,858.7	1,904.6	1,839.5	7.3	8.7	15.97	110.7	414.7	79.1	68.8	10.26	7.709			
2,000.0	1,955.8	2,001.0	1,929.6	7.8	9.3	3.62	135.5	438.0	83.5	74.3	9.25	9.032			
2,100.0	2,052.8	2,099.8	2,021.8	8.3	10.0	-7.26	161.1	462.6	92.4	83.6	8.71	10.597			

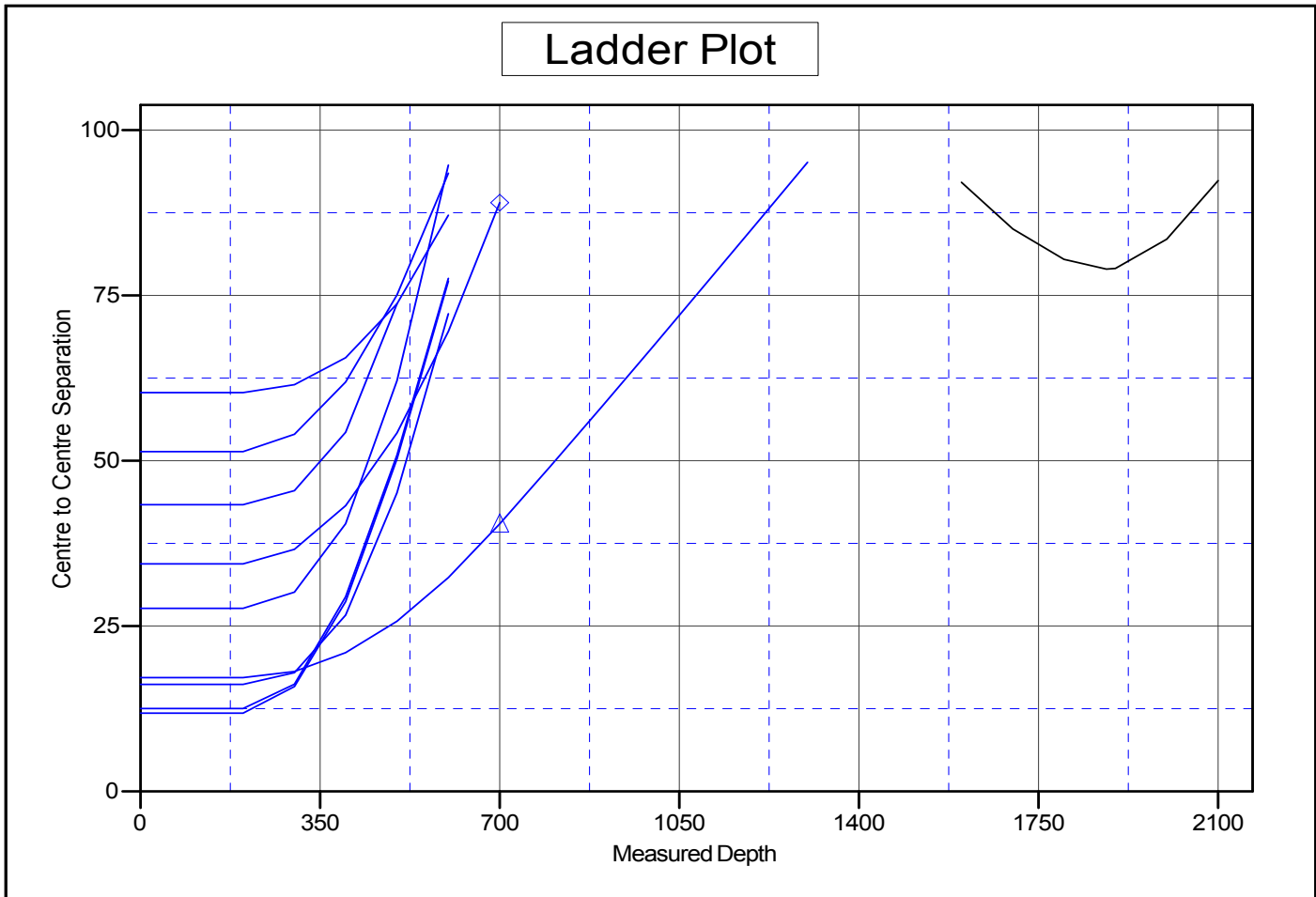
# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Fee 28-9B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Reference Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Benjamin Fee 28-9B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5965.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: Benjamin Fee 28-9B  
 Coordinate System is US State Plane 1983, Colorado Central Zone  
 Grid Convergence at Surface is: -1.44°



### LEGEND

- |                                     |  |  |
|-------------------------------------|--|--|
| min Federal 28-12B2, DD, Plan #1 V0 | ▲ Benjamin Fee 28-10D2, DD, Plan #1 V0 | ⊠ Benjamin Fee 28-6C, DD, Plan #1 V0   |
| min Federal 28-12C1, DD, Plan #1 V0 | ✖ Benjamin Fee 28-11A, DD, Plan #1 V0  | ⊕ GMR 28-7D Existing, DD, Schlumberger |
| min Federal 28-14B1, DD, Plan #1 V0 | ◆ Benjamin Fee 28-11B, DD, Plan #1 V0  |  |
| min Federal 28-16C, DD, Plan #1 V0  | ◻ Benjamin Fee 28-15A, DD, Plan #1 V0  |  |