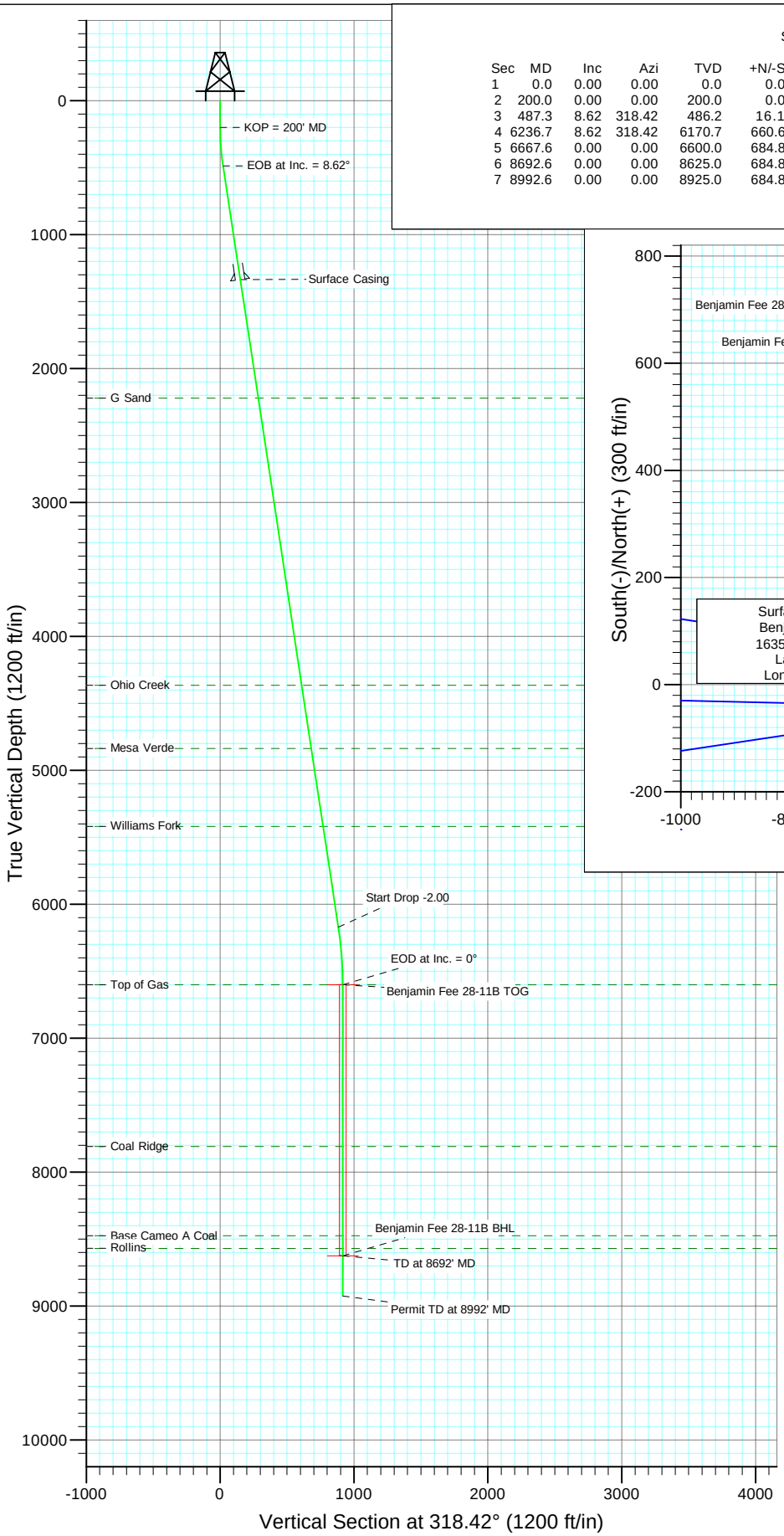
ENCANA

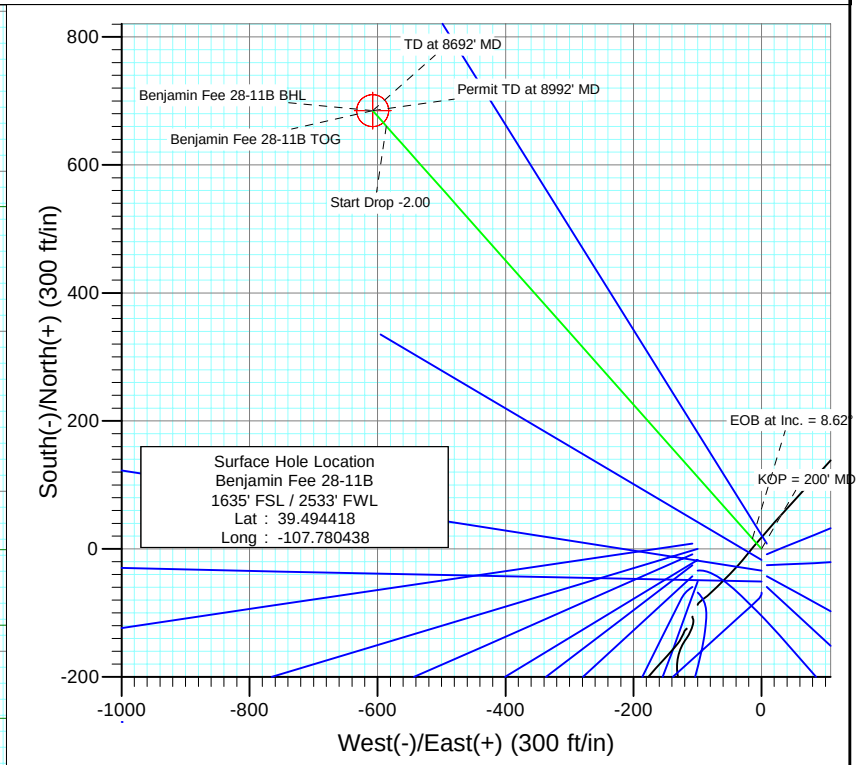
Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Fee 28-11B
Wellbore: DD
Design: Plan #2

CATHEDRAL

SECTION DETAILS

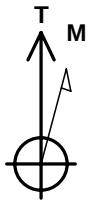
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	487.3	8.62	318.42	486.2	16.1	-14.3	3.00	318.42	21.6	
4	6236.7	8.62	318.42	6170.7	660.6	-586.1	0.00	0.00	883.1	
5	6667.6	0.00	0.00	6600.0	684.8	-607.6	2.00	180.00	915.5	Benjamin Fee 28-11B TOG
6	8692.6	0.00	0.00	8625.0	684.8	-607.6	0.00	0.00	915.5	Benjamin Fee 28-11B BHL
7	8992.6	0.00	0.00	8925.0	684.8	-607.6	0.00	0.00	915.5	





FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2221.0	2241.9	G Sand
4365.0	4410.4	Ohio Creek
4837.0	4887.8	Mesa Verde
5419.0	5476.4	Williams Fork
6600.0	6667.6	Top of Gas
7809.0	7876.6	Coal Ridge
8475.0	8542.6	Base Cameo A Coal
8570.0	8637.6	Rollins



Azimuths to True North
Magnetic North: 10.30°

Magnetic Field
Strength: 52364.7snT
Dip Angle: 65.81°
Date: 11/24/2010
Model: IGRF200510

Plan #2
Benjamin Fee 28-11B
(2330 FSL - 1950 FWL) Job 10xxx: KR

WELL @ 5965.0ft (Original Well Elev)
North American Datum 1983
Well Benjamin Fee 28-11B, True North

Target	Azimuth	Origin Type	N/S	E/W
Benjamin Fee 28-11B BHL	318.42	Slot	0.0	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
		684.8	-607.6	39.496298	-107.782591
Benjamin Fee 28-11B BHL	8625.0	684.8	-607.6	39.496298	-107.782591

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
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 28-11B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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 28-11B

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,613,050.72 ft	**Latitude:**	39.494418
	+E/-W	0.0 ft	**Easting:**	2,356,517.15 ft	**Longitude:**	-107.780438
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	11/24/2010	10.30	65.81	52,365

Design Plan #2

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	318.42

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	
487.3	8.62	318.42	486.2	16.1	-14.3	3.00	3.00	0.00	318.42	
6,236.7	8.62	318.42	6,170.7	660.6	-586.1	0.00	0.00	0.00	0.00	
6,667.6	0.00	0.00	6,600.0	684.8	-607.6	2.00	-2.00	0.00	180.00	Benjamin Fee 28-11B
8,692.6	0.00	0.00	8,625.0	684.8	-607.6	0.00	0.00	0.00	0.00	Benjamin Fee 28-11B
8,992.6	0.00	0.00	8,925.0	684.8	-607.6	0.00	0.00	0.00	0.00	

Database:	EDM 5000.1 US Multi Users DB	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
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 28-11B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	318.42	300.0	2.0	-1.7	2.6	3.00	3.00	
400.0	6.00	318.42	399.6	7.8	-6.9	10.5	3.00	3.00	
487.3	8.62	318.42	486.2	16.1	-14.3	21.6	3.00	3.00	EOB at Inc. = 8.62°
500.0	8.62	318.42	498.8	17.6	-15.6	23.5	0.00	0.00	
600.0	8.62	318.42	597.6	28.8	-25.5	38.5	0.00	0.00	
700.0	8.62	318.42	696.5	40.0	-35.5	53.4	0.00	0.00	
800.0	8.62	318.42	795.4	51.2	-45.4	68.4	0.00	0.00	
900.0	8.62	318.42	894.3	62.4	-55.4	83.4	0.00	0.00	
1,000.0	8.62	318.42	993.1	73.6	-65.3	98.4	0.00	0.00	
1,100.0	8.62	318.42	1,092.0	84.8	-75.2	113.4	0.00	0.00	
1,200.0	8.62	318.42	1,190.9	96.0	-85.2	128.4	0.00	0.00	
1,300.0	8.62	318.42	1,289.7	107.2	-95.1	143.4	0.00	0.00	
1,347.0	8.62	318.42	1,336.2	112.5	-99.8	150.4	0.00	0.00	Surface Casing
1,400.0	8.62	318.42	1,388.6	118.4	-105.1	158.3	0.00	0.00	
1,500.0	8.62	318.42	1,487.5	129.6	-115.0	173.3	0.00	0.00	
1,600.0	8.62	318.42	1,586.4	140.9	-125.0	188.3	0.00	0.00	
1,700.0	8.62	318.42	1,685.2	152.1	-134.9	203.3	0.00	0.00	
1,800.0	8.62	318.42	1,784.1	163.3	-144.9	218.3	0.00	0.00	
1,900.0	8.62	318.42	1,883.0	174.5	-154.8	233.3	0.00	0.00	
2,000.0	8.62	318.42	1,981.8	185.7	-164.8	248.2	0.00	0.00	
2,100.0	8.62	318.42	2,080.7	196.9	-174.7	263.2	0.00	0.00	
2,200.0	8.62	318.42	2,179.6	208.1	-184.6	278.2	0.00	0.00	
2,241.9	8.62	318.42	2,221.0	212.8	-188.8	284.5	0.00	0.00	G Sand
2,300.0	8.62	318.42	2,278.4	219.3	-194.6	293.2	0.00	0.00	
2,400.0	8.62	318.42	2,377.3	230.5	-204.5	308.2	0.00	0.00	
2,500.0	8.62	318.42	2,476.2	241.7	-214.5	323.2	0.00	0.00	
2,600.0	8.62	318.42	2,575.1	252.9	-224.4	338.2	0.00	0.00	
2,700.0	8.62	318.42	2,673.9	264.2	-234.4	353.1	0.00	0.00	
2,800.0	8.62	318.42	2,772.8	275.4	-244.3	368.1	0.00	0.00	
2,900.0	8.62	318.42	2,871.7	286.6	-254.3	383.1	0.00	0.00	
3,000.0	8.62	318.42	2,970.5	297.8	-264.2	398.1	0.00	0.00	
3,100.0	8.62	318.42	3,069.4	309.0	-274.2	413.1	0.00	0.00	
3,200.0	8.62	318.42	3,168.3	320.2	-284.1	428.1	0.00	0.00	
3,300.0	8.62	318.42	3,267.2	331.4	-294.0	443.1	0.00	0.00	
3,400.0	8.62	318.42	3,366.0	342.6	-304.0	458.0	0.00	0.00	
3,500.0	8.62	318.42	3,464.9	353.8	-313.9	473.0	0.00	0.00	
3,600.0	8.62	318.42	3,563.8	365.0	-323.9	488.0	0.00	0.00	
3,700.0	8.62	318.42	3,662.6	376.2	-333.8	503.0	0.00	0.00	
3,800.0	8.62	318.42	3,761.5	387.5	-343.8	518.0	0.00	0.00	
3,900.0	8.62	318.42	3,860.4	398.7	-353.7	533.0	0.00	0.00	
4,000.0	8.62	318.42	3,959.3	409.9	-363.7	547.9	0.00	0.00	
4,100.0	8.62	318.42	4,058.1	421.1	-373.6	562.9	0.00	0.00	
4,200.0	8.62	318.42	4,157.0	432.3	-383.6	577.9	0.00	0.00	
4,300.0	8.62	318.42	4,255.9	443.5	-393.5	592.9	0.00	0.00	
4,400.0	8.62	318.42	4,354.7	454.7	-403.4	607.9	0.00	0.00	
4,410.4	8.62	318.42	4,365.0	455.9	-404.5	609.4	0.00	0.00	Ohio Creek
4,500.0	8.62	318.42	4,453.6	465.9	-413.4	622.9	0.00	0.00	
4,600.0	8.62	318.42	4,552.5	477.1	-423.3	637.9	0.00	0.00	
4,700.0	8.62	318.42	4,651.4	488.3	-433.3	652.8	0.00	0.00	

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Project:	Mamm Creek	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	**North Reference:**	True
Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	8.62	318.42	4,750.2	499.5	-443.2	667.8	0.00	0.00	
4,887.8	8.62	318.42	4,837.0	509.4	-452.0	681.0	0.00	0.00	Mesa Verde
4,900.0	8.62	318.42	4,849.1	510.8	-453.2	682.8	0.00	0.00	
5,000.0	8.62	318.42	4,948.0	522.0	-463.1	697.8	0.00	0.00	
5,100.0	8.62	318.42	5,046.8	533.2	-473.1	712.8	0.00	0.00	
5,200.0	8.62	318.42	5,145.7	544.4	-483.0	727.8	0.00	0.00	
5,300.0	8.62	318.42	5,244.6	555.6	-492.9	742.8	0.00	0.00	
5,400.0	8.62	318.42	5,343.4	566.8	-502.9	757.7	0.00	0.00	
5,476.4	8.62	318.42	5,419.0	575.4	-510.5	769.2	0.00	0.00	Williams Fork
5,500.0	8.62	318.42	5,442.3	578.0	-512.8	772.7	0.00	0.00	
5,600.0	8.62	318.42	5,541.2	589.2	-522.8	787.7	0.00	0.00	
5,700.0	8.62	318.42	5,640.1	600.4	-532.7	802.7	0.00	0.00	
5,800.0	8.62	318.42	5,738.9	611.6	-542.7	817.7	0.00	0.00	
5,900.0	8.62	318.42	5,837.8	622.8	-552.6	832.7	0.00	0.00	
6,000.0	8.62	318.42	5,936.7	634.1	-562.6	847.7	0.00	0.00	
6,100.0	8.62	318.42	6,035.5	645.3	-572.5	862.6	0.00	0.00	
6,200.0	8.62	318.42	6,134.4	656.5	-582.5	877.6	0.00	0.00	
6,236.7	8.62	318.42	6,170.7	660.6	-586.1	883.1	0.00	0.00	Start Drop -2.00
6,300.0	7.35	318.42	6,233.4	667.2	-591.9	891.9	2.00	-2.00	
6,400.0	5.35	318.42	6,332.8	675.4	-599.3	903.0	2.00	-2.00	
6,500.0	3.35	318.42	6,432.5	681.1	-604.3	910.6	2.00	-2.00	
6,600.0	1.35	318.42	6,532.4	684.2	-607.0	914.7	2.00	-2.00	
6,667.6	0.00	0.00	6,600.0	684.8	-607.6	915.5	2.00	-2.00	EOD at Inc. = 0° - Top of Gas - Benjamin Fee 2
6,700.0	0.00	0.00	6,632.4	684.8	-607.6	915.5	0.00	0.00	
6,800.0	0.00	0.00	6,732.4	684.8	-607.6	915.5	0.00	0.00	
6,900.0	0.00	0.00	6,832.4	684.8	-607.6	915.5	0.00	0.00	
7,000.0	0.00	0.00	6,932.4	684.8	-607.6	915.5	0.00	0.00	
7,100.0	0.00	0.00	7,032.4	684.8	-607.6	915.5	0.00	0.00	
7,200.0	0.00	0.00	7,132.4	684.8	-607.6	915.5	0.00	0.00	
7,300.0	0.00	0.00	7,232.4	684.8	-607.6	915.5	0.00	0.00	
7,400.0	0.00	0.00	7,332.4	684.8	-607.6	915.5	0.00	0.00	
7,500.0	0.00	0.00	7,432.4	684.8	-607.6	915.5	0.00	0.00	
7,600.0	0.00	0.00	7,532.4	684.8	-607.6	915.5	0.00	0.00	
7,700.0	0.00	0.00	7,632.4	684.8	-607.6	915.5	0.00	0.00	
7,800.0	0.00	0.00	7,732.4	684.8	-607.6	915.5	0.00	0.00	
7,876.6	0.00	0.00	7,809.0	684.8	-607.6	915.5	0.00	0.00	Coal Ridge
7,900.0	0.00	0.00	7,832.4	684.8	-607.6	915.5	0.00	0.00	
8,000.0	0.00	0.00	7,932.4	684.8	-607.6	915.5	0.00	0.00	
8,100.0	0.00	0.00	8,032.4	684.8	-607.6	915.5	0.00	0.00	
8,200.0	0.00	0.00	8,132.4	684.8	-607.6	915.5	0.00	0.00	
8,300.0	0.00	0.00	8,232.4	684.8	-607.6	915.5	0.00	0.00	
8,400.0	0.00	0.00	8,332.4	684.8	-607.6	915.5	0.00	0.00	
8,500.0	0.00	0.00	8,432.4	684.8	-607.6	915.5	0.00	0.00	
8,542.6	0.00	0.00	8,475.0	684.8	-607.6	915.5	0.00	0.00	Base Cameo A Coal
8,600.0	0.00	0.00	8,532.4	684.8	-607.6	915.5	0.00	0.00	
8,637.6	0.00	0.00	8,570.0	684.8	-607.6	915.5	0.00	0.00	Rollins
8,692.6	0.00	0.00	8,625.0	684.8	-607.6	915.5	0.00	0.00	TD at 8692' MD - Benjamin Fee 28-11B BHL
8,700.0	0.00	0.00	8,632.4	684.8	-607.6	915.5	0.00	0.00	
8,800.0	0.00	0.00	8,732.4	684.8	-607.6	915.5	0.00	0.00	
8,900.0	0.00	0.00	8,832.4	684.8	-607.6	915.5	0.00	0.00	
8,992.6	0.00	0.00	8,925.0	684.8	-607.6	915.5	0.00	0.00	Permit TD at 8992' MD

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Project:	Mamm Creek	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	**North Reference:**	True
Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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 Fee 28-11B T(- plan hits target center - Point	0.00	0.00	6,600.0	684.8	-607.6	1,613,750.54	2,355,926.96	39.496298	-107.782591
Benjamin Fee 28-11B Bl - plan hits target center - Circle (radius 25.0)	0.00	0.00	8,625.0	684.8	-607.6	1,613,750.54	2,355,926.96	39.496298	-107.782591

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,347.0	1,336.2	Surface Casing		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,241.9	2,221.0	G Sand			
4,410.4	4,365.0	Ohio Creek			
4,887.8	4,837.0	Mesa Verde			
5,476.4	5,419.0	Williams Fork			
6,667.6	6,600.0	Top of Gas			
7,876.6	7,809.0	Coal Ridge			
8,542.6	8,475.0	Base Cameo A Coal			
8,637.6	8,570.0	Rollins			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP = 200' MD
487.3	486.2	16.1	-14.3	EOB at Inc. = 8.62°
6,236.7	6,170.7	660.6	-586.1	Start Drop -2.00
6,667.6	6,600.0	684.8	-607.6	EOD at Inc. = 0°
8,692.6	8,625.0	684.8	-607.6	TD at 8692' MD
8,992.6	8,925.0	684.8	-607.6	Permit TD at 8992' MD

EnCana Oil & Gas (USA) Inc

Mamm Creek
K28NW Pad
Benjamin Fee 28-11B
DD
Plan #2

Anticollision Report

23 November, 2010

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	0.0 to 99,999.0ft	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 828.6ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 11/23/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,992.6	Plan #2 (DD)	MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
K28NW Pad						
Benjamin 28-11 Existing - Existing - Existing	0.0	0.0	150.9			
Benjamin 28-11 Existing - Existing - Existing	100.0	99.3	151.1	150.8	556.912	ES
Benjamin 28-11 Existing - Existing - Existing	2,000.0	1,965.1	365.9	358.1	46.996	SF
Benjamin Federal 28-12B2 - DD - Plan #2	200.0	200.0	33.9	33.3	54.518	CC, ES
Benjamin Federal 28-12B2 - DD - Plan #2	800.0	794.1	84.7	80.7	20.864	SF
Benjamin Federal 28-12C1 - DD - Plan #2	200.0	200.0	51.0	50.4	82.071	CC, ES
Benjamin Federal 28-12C1 - DD - Plan #2	1,700.0	1,681.3	220.1	210.6	23.262	SF
Benjamin Federal 28-12C2 - DD - Plan #2	200.0	200.0	108.1	107.5	174.025	CC, ES
Benjamin Federal 28-12C2 - DD - Plan #2	900.0	847.2	184.3	180.7	50.317	SF
Benjamin Federal 28-13B1 - DD - Plan #2	200.0	200.0	99.9	99.3	160.784	CC, ES
Benjamin Federal 28-13B1 - DD - Plan #2	800.0	758.7	158.2	155.0	49.527	SF
Benjamin Federal 28-13B2 - DD - Plan #2	200.0	200.0	108.1	107.5	174.025	CC, ES
Benjamin Federal 28-13B2 - DD - Plan #2	800.0	755.0	170.8	167.6	53.587	SF
Benjamin Federal 28-13C1 - DD - Plan #2	200.0	200.0	101.3	100.6	162.979	CC, ES
Benjamin Federal 28-13C1 - DD - Plan #2	800.0	754.7	171.7	168.5	53.682	SF
Benjamin Federal 28-13C2 - DD - Plan #2	200.0	200.0	110.8	110.2	178.289	CC, ES
Benjamin Federal 28-13C2 - DD - Plan #2	800.0	751.0	184.1	180.9	57.899	SF
Benjamin Federal 28-14B1 - DD - Plan #2	200.0	200.0	68.1	67.5	109.623	CC, ES
Benjamin Federal 28-14B1 - DD - Plan #2	4,200.0	4,120.7	824.1	804.8	42.818	SF
Benjamin Federal 28-14B2 - DD - Plan #2	200.0	200.0	123.1	122.4	198.074	CC, ES
Benjamin Federal 28-14B2 - DD - Plan #2	3,300.0	3,184.5	811.0	796.7	56.726	SF
Benjamin Federal 28-14C - DD - Plan #2	200.0	200.0	112.1	111.5	180.385	CC, ES
Benjamin Federal 28-14C - DD - Plan #2	700.0	664.9	169.7	167.0	62.655	SF
Benjamin Federal 28-16C - DD - Plan #2	200.0	200.0	59.9	59.3	96.457	CC, ES
Benjamin Federal 28-16C - DD - Plan #2	400.0	393.2	77.4	76.1	58.278	SF
Benjamin Federal 33-3B - DD - Plan #2	200.0	200.0	120.8	120.2	194.474	CC, ES
Benjamin Federal 33-3B - DD - Plan #2	700.0	667.1	167.5	164.7	61.943	SF
Benjamin Federal 33-4B - DD - Plan #2	200.0	200.0	115.9	115.3	186.567	CC, ES
Benjamin Federal 33-4B - DD - Plan #2	800.0	747.6	197.2	194.0	62.262	SF
Benjamin Fee 28-10D2 - DD - Plan #2	200.0	200.0	26.8	26.2	43.097	CC, ES
Benjamin Fee 28-10D2 - DD - Plan #2	300.0	299.4	30.1	29.1	30.786	SF
Benjamin Fee 28-11A - DD - Plan #2	200.0	200.0	17.1	16.5	27.552	CC, ES
Benjamin Fee 28-11A - DD - Plan #2	8,992.6	8,963.4	349.9	312.6	9.373	SF
Benjamin Fee 28-15A - DD - Plan #2	200.0	200.0	43.4	42.8	69.841	CC, ES
Benjamin Fee 28-15A - DD - Plan #2	400.0	395.1	60.4	59.0	45.267	SF
Benjamin Fee 28-6C - DD - Plan #2	200.0	200.0	11.7	11.1	18.849	CC, ES
Benjamin Fee 28-6C - DD - Plan #2	600.0	599.3	18.9	16.3	7.316	SF
Benjamin Fee 28-9B - DD - Plan #2	200.0	200.0	11.7	11.1	18.849	CC, ES
Benjamin Fee 28-9B - DD - Plan #2	300.0	299.6	15.5	14.5	15.871	SF
Benjamin Fee 33-1B - DD - Plan #2	659.9	660.5	88.1	85.5	33.595	CC, ES
Benjamin Fee 33-1B - DD - Plan #2	800.0	791.0	98.6	95.4	30.165	SF
GMR 28-7D Existing - DD - Schlumberger Surveys	861.1	874.3	80.1	76.2	20.972	CC, ES
GMR 28-7D Existing - DD - Schlumberger Surveys	1,000.0	1,009.5	86.8	82.1	18.242	SF
GMU 28-14D Existing - Schlumberger Surveys - Schlumb	246.8	247.2	171.0	170.2	215.885	CC
GMU 28-14D Existing - Schlumberger Surveys - Schlumb	300.0	300.1	171.1	170.1	174.733	ES
GMU 28-14D Existing - Schlumberger Surveys - Schlumb	1,200.0	1,147.2	281.1	276.2	57.701	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin 28-11 Existing - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 100-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-134.48	-105.7	-107.6	150.9				
100.0	100.0	99.3	99.3	0.1	0.1	-134.48	-105.9	-107.8	151.1	150.8	0.27	556.912 ES	
200.0	200.0	199.1	199.1	0.3	0.3	-134.54	-106.4	-108.1	151.7	151.0	0.62	244.529	
300.0	300.0	299.1	299.1	0.5	0.5	-94.18	-107.2	-108.0	152.4	151.4	0.98	155.827	
400.0	399.6	398.8	398.8	0.7	0.7	-97.62	-108.7	-107.2	153.7	152.4	1.37	111.933	
487.3	486.2	483.5	483.4	1.0	0.8	-102.10	-110.6	-106.5	156.7	154.9	1.76	89.072	
500.0	498.8	495.8	495.7	1.0	0.8	-102.85	-110.9	-106.4	157.3	155.5	1.82	86.642	
600.0	597.6	593.1	593.0	1.3	1.0	-108.44	-113.7	-106.3	163.9	161.6	2.26	72.417	
700.0	696.5	689.8	689.6	1.6	1.2	-113.40	-117.1	-106.9	172.7	170.0	2.70	63.943	
800.0	795.4	787.7	787.4	1.9	1.4	-117.83	-121.1	-108.1	183.5	180.4	3.13	58.627	
900.0	894.3	885.2	884.8	2.2	1.6	-121.67	-125.3	-109.6	195.6	192.1	3.55	55.152	
1,000.0	993.1	983.0	982.6	2.5	1.7	-124.94	-129.8	-111.6	208.9	204.9	3.96	52.814	
1,100.0	1,092.0	1,081.3	1,080.7	2.8	1.9	-127.73	-134.4	-114.0	222.9	218.6	4.36	51.150	
1,200.0	1,190.9	1,180.0	1,179.2	3.1	2.1	-130.14	-139.0	-116.7	237.4	232.6	4.76	49.905	
1,300.0	1,289.7	1,278.1	1,277.2	3.5	2.3	-132.22	-143.5	-119.5	252.2	247.1	5.15	48.960	
1,400.0	1,388.6	1,376.4	1,375.3	3.8	2.5	-134.07	-148.2	-122.4	267.5	262.0	5.54	48.253	
1,500.0	1,487.5	1,474.2	1,473.0	4.1	2.7	-135.72	-153.0	-125.2	283.2	277.2	5.93	47.734	
1,600.0	1,586.4	1,571.9	1,570.5	4.4	2.9	-137.33	-158.0	-127.4	299.3	293.0	6.31	47.412	
1,700.0	1,685.2	1,670.4	1,668.9	4.7	3.1	-138.88	-163.2	-129.0	315.7	309.1	6.69	47.209	
1,800.0	1,784.1	1,769.0	1,767.4	5.0	3.3	-140.35	-168.3	-130.2	332.3	325.2	7.06	47.073	
1,900.0	1,883.0	1,867.2	1,865.4	5.3	3.5	-141.74	-173.2	-131.1	349.0	341.5	7.42	47.003	
2,000.0	1,981.8	1,965.1	1,963.2	5.7	3.7	-143.03	-178.3	-131.7	365.9	358.1	7.79	46.996 SF	
2,100.0	2,080.7	2,063.4	2,061.3	6.0	3.9	-144.26	-183.3	-132.0	383.1	374.9	8.14	47.040	
2,200.0	2,179.6	2,161.5	2,159.3	6.3	4.0	-145.44	-188.3	-132.0	400.4	391.9	8.50	47.117	
2,300.0	2,278.4	2,259.9	2,257.6	6.6	4.2	-146.56	-193.3	-131.6	417.9	409.0	8.85	47.227	
2,400.0	2,377.3	2,358.1	2,355.7	6.9	4.4	-147.65	-198.1	-130.9	435.4	426.2	9.19	47.357	
2,500.0	2,476.2	2,457.1	2,454.6	7.2	4.6	-148.69	-202.9	-129.9	453.1	443.6	9.54	47.498	
2,600.0	2,575.1	2,556.1	2,553.5	7.5	4.8	-149.69	-207.3	-128.7	470.6	460.7	9.88	47.624	
2,700.0	2,673.9	2,654.0	2,651.2	7.9	5.0	-150.62	-211.6	-127.4	488.2	478.0	10.22	47.763	
2,800.0	2,772.8	2,751.5	2,748.7	8.2	5.2	-151.48	-216.0	-126.1	506.0	495.4	10.56	47.918	
2,900.0	2,871.7	2,849.0	2,846.1	8.5	5.3	-152.29	-220.5	-124.7	524.0	513.1	10.90	48.084	
3,000.0	2,970.5	2,946.2	2,943.1	8.8	5.5	-153.04	-225.2	-123.3	542.3	531.1	11.24	48.264	
3,100.0	3,069.4	3,043.5	3,040.3	9.1	5.7	-153.76	-229.9	-121.7	560.8	549.2	11.57	48.461	
3,200.0	3,168.3	3,141.0	3,137.6	9.4	5.9	-154.46	-234.7	-119.8	579.5	567.6	11.91	48.667	
3,300.0	3,267.2	3,238.4	3,234.9	9.8	6.1	-155.12	-239.6	-117.9	598.4	586.1	12.24	48.877	
3,400.0	3,366.0	3,336.2	3,332.5	10.1	6.3	-155.74	-244.5	-116.0	617.4	604.8	12.58	49.084	
3,500.0	3,464.9	3,433.6	3,429.8	10.4	6.5	-156.34	-249.4	-113.9	636.5	623.6	12.91	49.295	
3,600.0	3,563.8	3,531.0	3,527.0	10.7	6.7	-156.90	-254.4	-111.7	655.8	642.5	13.25	49.504	
3,700.0	3,662.6	3,627.9	3,623.8	11.0	6.9	-157.43	-259.5	-109.6	675.2	661.6	13.58	49.719	
3,800.0	3,761.5	3,725.3	3,721.0	11.3	7.1	-157.92	-264.7	-107.5	694.8	680.9	13.92	49.922	
3,900.0	3,860.4	3,822.8	3,818.4	11.6	7.2	-158.38	-270.1	-105.4	714.6	700.3	14.26	50.125	
4,000.0	3,959.3	3,921.0	3,916.5	12.0	7.4	-158.81	-275.4	-103.5	734.3	719.7	14.59	50.312	
4,100.0	4,058.1	4,018.5	4,013.8	12.3	7.6	-159.20	-280.9	-101.6	754.1	739.2	14.93	50.495	
4,200.0	4,157.0	4,117.7	4,112.8	12.6	7.8	-159.58	-286.4	-99.9	773.9	758.6	15.28	50.656	
4,300.0	4,255.9	4,218.7	4,213.7	12.9	8.0	-159.94	-291.7	-98.2	793.4	777.8	15.62	50.785	
4,400.0	4,354.7	4,321.2	4,316.0	13.2	8.2	-160.30	-296.6	-96.4	812.5	796.6	15.97	50.882	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-12B2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-33.9	0.0	33.9				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-33.9	0.0	33.9	33.6	0.27	124.414	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-33.9	0.0	33.9	33.3	0.62	54.518	CC, ES
300.0	300.0	300.2	300.2	0.5	0.5	-137.00	-33.5	-2.6	35.4	34.5	0.98	36.053	
400.0	399.6	400.3	399.9	0.7	0.7	-133.41	-32.3	-10.4	40.2	38.8	1.40	28.680	
487.3	486.2	487.3	486.2	1.0	1.0	-129.58	-30.5	-21.3	47.2	45.3	1.86	25.386	
500.0	498.8	500.0	498.7	1.0	1.0	-129.00	-30.2	-23.2	48.4	46.5	1.93	25.108	
600.0	597.6	599.1	596.2	1.3	1.4	-122.50	-27.5	-41.1	58.3	55.8	2.57	22.732	
700.0	696.5	697.3	691.7	1.6	1.8	-113.86	-23.9	-63.6	70.0	66.7	3.30	21.223	
800.0	795.4	794.1	784.6	1.9	2.3	-104.69	-19.7	-90.6	84.7	80.7	4.06	20.864	SF
900.0	894.3	889.0	874.1	2.2	3.0	-96.10	-14.9	-121.5	103.7	98.9	4.80	21.603	
1,000.0	993.1	981.8	960.1	2.5	3.6	-88.63	-9.5	-155.9	127.3	121.8	5.46	23.291	
1,100.0	1,092.0	1,077.2	1,047.7	2.8	4.3	-82.80	-3.7	-193.1	153.9	147.8	6.07	25.344	
1,200.0	1,190.9	1,172.5	1,135.4	3.1	5.0	-78.68	2.2	-230.4	181.6	174.9	6.65	27.301	
1,300.0	1,289.7	1,267.9	1,223.0	3.5	5.7	-75.66	8.0	-267.7	209.9	202.7	7.22	29.089	
1,400.0	1,388.6	1,363.3	1,310.6	3.8	6.5	-73.35	13.8	-304.9	238.7	230.9	7.78	30.699	
1,500.0	1,487.5	1,458.7	1,398.2	4.1	7.2	-71.54	19.7	-342.2	267.7	259.4	8.33	32.141	
1,600.0	1,586.4	1,554.1	1,485.8	4.4	7.9	-70.08	25.5	-379.5	297.0	288.1	8.88	33.435	
1,700.0	1,685.2	1,649.5	1,573.4	4.7	8.6	-68.88	31.3	-416.7	326.3	316.9	9.43	34.597	
1,800.0	1,784.1	1,744.8	1,661.0	5.0	9.3	-67.88	37.1	-454.0	355.8	345.8	9.98	35.644	
1,900.0	1,883.0	1,840.2	1,748.6	5.3	10.1	-67.03	43.0	-491.3	385.4	374.9	10.53	36.591	
2,000.0	1,981.8	1,935.6	1,836.2	5.7	10.8	-66.31	48.8	-528.5	415.0	404.0	11.08	37.450	
2,100.0	2,080.7	2,031.0	1,923.8	6.0	11.5	-65.68	54.6	-565.8	444.7	433.1	11.63	38.234	
2,200.0	2,179.6	2,126.4	2,011.4	6.3	12.2	-65.12	60.5	-603.0	474.5	462.3	12.18	38.950	
2,300.0	2,278.4	2,221.8	2,099.1	6.6	13.0	-64.64	66.3	-640.3	504.2	491.5	12.73	39.608	
2,400.0	2,377.3	2,317.1	2,186.7	6.9	13.7	-64.21	72.1	-677.6	534.0	520.8	13.28	40.213	
2,500.0	2,476.2	2,412.5	2,274.3	7.2	14.4	-63.82	78.0	-714.8	563.9	550.0	13.83	40.772	
2,600.0	2,575.1	2,507.9	2,361.9	7.5	15.1	-63.47	83.8	-752.1	593.7	579.3	14.38	41.289	
2,700.0	2,673.9	2,603.3	2,449.5	7.9	15.9	-63.16	89.6	-789.4	623.6	608.6	14.93	41.769	
2,800.0	2,772.8	2,698.7	2,537.1	8.2	16.6	-62.87	95.4	-826.6	653.5	638.0	15.48	42.216	
2,900.0	2,871.7	2,794.1	2,624.7	8.5	17.3	-62.61	101.3	-863.9	683.3	667.3	16.03	42.633	
3,000.0	2,970.5	2,889.4	2,712.3	8.8	18.0	-62.37	107.1	-901.1	713.3	696.7	16.58	43.023	
3,100.0	3,069.4	2,984.8	2,799.9	9.1	18.8	-62.15	112.9	-938.4	743.2	726.0	17.13	43.389	
3,200.0	3,168.3	3,080.2	2,887.5	9.4	19.5	-61.95	118.8	-975.7	773.1	755.4	17.68	43.732	
3,300.0	3,267.2	3,175.6	2,975.1	9.8	20.2	-61.76	124.6	-1,012.9	803.0	784.8	18.23	44.055	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-12C1 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-51.0	0.0	51.0				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-51.0	0.0	51.0	50.7	0.27	187.290	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-51.0	0.0	51.0	50.4	0.62	82.071	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-140.26	-51.0	0.0	53.0	52.0	0.97	54.430	
400.0	399.6	399.6	399.6	0.7	0.7	-145.00	-51.0	0.0	59.2	57.9	1.33	44.372	
487.3	486.2	486.2	486.2	1.0	0.8	-150.18	-51.0	0.0	68.6	67.0	1.65	41.515	
500.0	498.8	498.8	498.8	1.0	0.8	-150.95	-51.0	0.0	70.3	68.6	1.70	41.368	
600.0	597.6	597.6	597.6	1.3	1.0	-155.92	-51.0	0.0	83.7	81.7	2.06	40.710	
700.0	696.5	696.5	696.5	1.6	1.2	-159.51	-51.0	0.0	97.6	95.2	2.41	40.532	
800.0	795.4	796.5	796.5	1.9	1.4	-161.95	-51.0	-0.6	111.6	108.8	2.76	40.414	
900.0	894.3	898.5	898.3	2.2	1.5	-161.96	-50.9	-5.8	123.7	120.6	3.14	39.452	
1,000.0	993.1	1,000.6	999.9	2.5	1.8	-159.84	-50.7	-16.4	133.7	130.1	3.56	37.575	
1,100.0	1,092.0	1,102.5	1,100.5	2.8	2.0	-155.97	-50.3	-32.4	142.0	137.9	4.07	34.931	
1,200.0	1,190.9	1,203.5	1,199.3	3.1	2.4	-150.61	-49.9	-53.6	149.5	144.8	4.70	31.824	
1,300.0	1,289.7	1,303.1	1,295.4	3.5	2.8	-143.99	-49.3	-79.5	157.4	152.0	5.48	28.711	
1,400.0	1,388.6	1,400.7	1,388.2	3.8	3.3	-136.48	-48.7	-109.8	167.2	160.8	6.41	26.074	
1,500.0	1,487.5	1,496.0	1,477.2	4.1	3.9	-128.51	-48.0	-143.8	180.3	172.8	7.44	24.233	
1,600.0	1,586.4	1,588.5	1,561.8	4.4	4.6	-120.59	-47.2	-181.1	197.8	189.3	8.49	23.290	
1,700.0	1,685.2	1,681.3	1,645.4	4.7	5.3	-113.18	-46.4	-221.4	220.1	210.6	9.46	23.262	SF
1,800.0	1,784.1	1,774.8	1,729.6	5.0	6.1	-107.05	-45.5	-262.0	245.6	235.2	10.33	23.766	
1,900.0	1,883.0	1,868.2	1,813.7	5.3	6.8	-102.05	-44.7	-302.7	273.3	262.2	11.12	24.575	
2,000.0	1,981.8	1,961.7	1,897.8	5.7	7.6	-97.96	-43.8	-343.3	302.7	290.9	11.85	25.547	
2,100.0	2,080.7	2,055.1	1,982.0	6.0	8.3	-94.58	-43.0	-384.0	333.3	320.8	12.53	26.595	
2,200.0	2,179.6	2,148.6	2,066.1	6.3	9.1	-91.75	-42.1	-424.7	364.8	351.6	13.19	27.668	
2,300.0	2,278.4	2,242.0	2,150.3	6.6	9.9	-89.37	-41.3	-465.3	397.0	383.2	13.82	28.735	
2,400.0	2,377.3	2,335.5	2,234.4	6.9	10.7	-87.34	-40.4	-506.0	429.8	415.4	14.43	29.779	
2,500.0	2,476.2	2,428.9	2,318.5	7.2	11.4	-85.60	-39.6	-546.6	463.0	447.9	15.04	30.790	
2,600.0	2,575.1	2,522.3	2,402.7	7.5	12.2	-84.08	-38.7	-587.3	496.5	480.8	15.63	31.761	
2,700.0	2,673.9	2,615.8	2,486.8	7.9	13.0	-82.76	-37.9	-627.9	530.2	514.0	16.22	32.691	
2,800.0	2,772.8	2,709.2	2,570.9	8.2	13.8	-81.59	-37.1	-668.6	564.3	547.4	16.80	33.578	
2,900.0	2,871.7	2,802.7	2,655.1	8.5	14.6	-80.55	-36.2	-709.3	598.4	581.1	17.38	34.424	
3,000.0	2,970.5	2,896.1	2,739.2	8.8	15.3	-79.62	-35.4	-749.9	632.8	614.8	17.96	35.229	
3,100.0	3,069.4	2,989.6	2,823.3	9.1	16.1	-78.79	-34.5	-790.6	667.3	648.7	18.54	35.995	
3,200.0	3,168.3	3,083.0	2,907.5	9.4	16.9	-78.04	-33.7	-831.2	701.9	682.7	19.11	36.725	
3,300.0	3,267.2	3,176.5	2,991.6	9.8	17.7	-77.36	-32.8	-871.9	736.5	716.9	19.68	37.419	
3,400.0	3,366.0	3,269.9	3,075.7	10.1	18.5	-76.74	-32.0	-912.5	771.3	751.1	20.26	38.080	
3,500.0	3,464.9	3,363.4	3,159.9	10.4	19.3	-76.18	-31.1	-953.2	806.2	785.3	20.83	38.710	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-12C2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-85.56	8.4	-107.8	108.1				
100.0	100.0	100.0	100.0	0.1	0.1	-85.56	8.4	-107.8	108.1	107.9	0.27	397.134	
200.0	200.0	200.0	200.0	0.3	0.3	-85.56	8.4	-107.8	108.1	107.5	0.62	174.025	CC, ES
300.0	300.0	294.7	294.7	0.5	0.5	-45.15	8.0	-110.1	108.7	107.7	0.97	112.570	
400.0	399.6	389.1	388.8	0.7	0.7	-48.56	7.0	-117.1	110.6	109.3	1.33	83.082	
487.3	486.2	471.0	470.1	1.0	0.9	-53.11	5.6	-126.8	114.1	112.4	1.69	67.552	
500.0	498.8	482.9	481.8	1.0	1.0	-53.87	5.3	-128.5	114.8	113.1	1.74	65.845	
600.0	597.6	575.9	573.5	1.3	1.3	-59.47	3.0	-144.3	123.9	121.7	2.19	56.581	
700.0	696.5	667.9	663.2	1.6	1.7	-63.98	0.0	-164.2	138.9	136.2	2.66	52.183	
800.0	795.4	758.4	750.5	1.9	2.1	-67.27	-3.5	-188.0	159.2	156.0	3.15	50.472	
900.0	894.3	847.2	834.9	2.2	2.7	-69.48	-7.5	-215.3	184.3	180.7	3.66	50.317	SF
1,000.0	993.1	933.9	916.0	2.5	3.3	-70.84	-12.0	-245.6	214.0	209.8	4.18	51.157	
1,100.0	1,092.0	1,028.7	1,003.9	2.8	3.9	-71.84	-17.2	-280.7	245.7	241.0	4.73	51.905	
1,200.0	1,190.9	1,123.4	1,091.7	3.1	4.6	-72.60	-22.3	-315.8	277.5	272.3	5.30	52.407	
1,300.0	1,289.7	1,218.2	1,179.6	3.5	5.3	-73.21	-27.5	-350.9	309.4	303.5	5.87	52.746	
1,400.0	1,388.6	1,312.9	1,267.4	3.8	5.9	-73.71	-32.7	-386.0	341.3	334.8	6.44	52.979	
1,500.0	1,487.5	1,407.7	1,355.2	4.1	6.6	-74.12	-37.9	-421.2	373.2	366.2	7.02	53.141	
1,600.0	1,586.4	1,502.4	1,443.1	4.4	7.3	-74.46	-43.1	-456.3	405.1	397.5	7.61	53.255	
1,700.0	1,685.2	1,597.2	1,530.9	4.7	7.9	-74.76	-48.3	-491.4	437.0	428.8	8.19	53.334	
1,800.0	1,784.1	1,691.9	1,618.8	5.0	8.6	-75.02	-53.4	-526.5	469.0	460.2	8.78	53.390	
1,900.0	1,883.0	1,786.6	1,706.6	5.3	9.3	-75.24	-58.6	-561.6	500.9	491.5	9.38	53.428	
2,000.0	1,981.8	1,881.4	1,794.5	5.7	10.0	-75.43	-63.8	-596.7	532.9	522.9	9.97	53.454	
2,100.0	2,080.7	1,976.1	1,882.3	6.0	10.7	-75.61	-69.0	-631.8	564.8	554.2	10.56	53.470	
2,200.0	2,179.6	2,070.9	1,970.2	6.3	11.3	-75.76	-74.2	-666.9	596.8	585.6	11.16	53.480	
2,300.0	2,278.4	2,165.6	2,058.0	6.6	12.0	-75.90	-79.4	-702.0	628.7	617.0	11.76	53.485	
2,400.0	2,377.3	2,260.4	2,145.9	6.9	12.7	-76.03	-84.6	-737.1	660.7	648.3	12.35	53.486	
2,500.0	2,476.2	2,355.1	2,233.7	7.2	13.4	-76.14	-89.7	-772.3	692.7	679.7	12.95	53.484	
2,600.0	2,575.1	2,449.9	2,321.5	7.5	14.1	-76.25	-94.9	-807.4	724.6	711.1	13.55	53.480	
2,700.0	2,673.9	2,544.6	2,409.4	7.9	14.7	-76.34	-100.1	-842.5	756.6	742.5	14.15	53.475	
2,800.0	2,772.8	2,639.3	2,497.2	8.2	15.4	-76.43	-105.3	-877.6	788.6	773.8	14.75	53.468	
2,900.0	2,871.7	2,734.1	2,585.1	8.5	16.1	-76.51	-110.5	-912.7	820.6	805.2	15.35	53.461	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-13B1 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-99.9	99.9				
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-99.9	99.9	99.6	0.27	366.918	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-99.9	99.9	99.3	0.62	160.784	CC, ES
300.0	300.0	295.2	295.1	0.5	0.5	-49.85	-0.7	-102.2	100.6	99.6	0.97	103.987	
400.0	399.6	389.9	389.6	0.7	0.7	-53.99	-2.7	-108.9	103.0	101.7	1.34	76.919	
487.3	486.2	471.9	471.0	1.0	0.9	-59.41	-5.6	-118.4	107.4	105.7	1.71	62.933	
500.0	498.8	483.8	482.8	1.0	1.0	-60.31	-6.1	-120.1	108.3	106.5	1.76	61.447	
600.0	597.6	576.8	574.3	1.3	1.3	-66.81	-10.7	-135.4	119.0	116.8	2.22	53.656	
700.0	696.5	668.6	663.9	1.6	1.7	-71.91	-16.5	-154.7	135.9	133.2	2.70	50.391	
800.0	795.4	758.7	750.8	1.9	2.1	-75.53	-23.4	-177.6	158.2	155.0	3.19	49.527	SF
900.0	894.3	847.0	834.7	2.2	2.7	-77.91	-31.2	-203.8	185.4	181.7	3.71	49.993	
1,000.0	993.1	933.0	915.1	2.5	3.3	-79.37	-40.0	-232.9	217.0	212.8	4.23	51.279	
1,100.0	1,092.0	1,023.6	998.7	2.8	3.9	-80.32	-50.1	-266.4	251.9	247.1	4.78	52.693	
1,200.0	1,190.9	1,117.2	1,085.0	3.1	4.6	-81.05	-60.5	-301.1	287.0	281.6	5.34	53.690	
1,300.0	1,289.7	1,210.8	1,171.3	3.5	5.3	-81.62	-70.9	-335.9	322.1	316.2	5.92	54.429	
1,400.0	1,388.6	1,304.3	1,257.5	3.8	5.9	-82.08	-81.4	-370.6	357.2	350.7	6.50	54.992	
1,500.0	1,487.5	1,397.9	1,343.8	4.1	6.6	-82.46	-91.8	-405.3	392.4	385.3	7.08	55.428	
1,600.0	1,586.4	1,491.5	1,430.1	4.4	7.3	-82.77	-102.3	-440.1	427.6	419.9	7.67	55.774	
1,700.0	1,685.2	1,585.1	1,516.4	4.7	8.0	-83.04	-112.7	-474.8	462.8	454.5	8.26	56.053	
1,800.0	1,784.1	1,678.7	1,602.6	5.0	8.7	-83.27	-123.1	-509.5	497.9	489.1	8.85	56.282	
1,900.0	1,883.0	1,772.3	1,688.9	5.3	9.4	-83.47	-133.6	-544.3	533.1	523.7	9.44	56.472	
2,000.0	1,981.8	1,865.9	1,775.2	5.7	10.1	-83.64	-144.0	-579.0	568.4	558.3	10.04	56.631	
2,100.0	2,080.7	1,959.4	1,861.4	6.0	10.8	-83.79	-154.5	-613.7	603.6	592.9	10.63	56.767	
2,200.0	2,179.6	2,053.0	1,947.7	6.3	11.5	-83.93	-164.9	-648.5	638.8	627.5	11.23	56.883	
2,300.0	2,278.4	2,146.6	2,034.0	6.6	12.2	-84.05	-175.4	-683.2	674.0	662.2	11.83	56.983	
2,400.0	2,377.3	2,240.2	2,120.3	6.9	12.9	-84.16	-185.8	-717.9	709.2	696.8	12.43	57.070	
2,500.0	2,476.2	2,333.8	2,206.5	7.2	13.5	-84.26	-196.2	-752.6	744.4	731.4	13.03	57.147	
2,600.0	2,575.1	2,427.4	2,292.8	7.5	14.2	-84.36	-206.7	-787.4	779.6	766.0	13.63	57.214	
2,700.0	2,673.9	2,520.9	2,379.1	7.9	14.9	-84.44	-217.1	-822.1	814.9	800.6	14.23	57.274	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-13B2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-94.44	-8.4	-107.8	108.1				
100.0	100.0	100.0	100.0	0.1	0.1	-94.44	-8.4	-107.8	108.1	107.9	0.27	397.134	
200.0	200.0	200.0	200.0	0.3	0.3	-94.44	-8.4	-107.8	108.1	107.5	0.62	174.025	CC, ES
300.0	300.0	294.8	294.8	0.5	0.5	-54.29	-9.3	-110.0	108.9	108.0	0.97	112.572	
400.0	399.6	389.2	388.9	0.7	0.7	-58.41	-12.2	-116.4	111.8	110.4	1.34	83.195	
487.3	486.2	470.7	469.8	1.0	0.9	-63.77	-16.1	-125.3	116.8	115.0	1.72	68.053	
500.0	498.8	482.6	481.5	1.0	0.9	-64.66	-16.8	-126.9	117.8	116.0	1.77	66.465	
600.0	597.6	574.8	572.4	1.3	1.3	-71.14	-23.2	-141.3	129.4	127.2	2.23	58.092	
700.0	696.5	665.7	661.1	1.6	1.7	-76.32	-31.2	-159.5	147.3	144.6	2.70	54.557	
800.0	795.4	755.0	747.2	1.9	2.1	-80.12	-40.7	-181.1	170.8	167.6	3.19	53.587	SF
900.0	894.3	842.2	830.1	2.2	2.6	-82.73	-51.5	-205.7	199.2	195.5	3.69	54.024	
1,000.0	993.1	927.0	909.6	2.5	3.2	-84.44	-63.5	-232.9	232.1	227.9	4.20	55.284	
1,100.0	1,092.0	1,011.6	987.4	2.8	3.8	-85.52	-76.9	-263.2	269.0	264.3	4.72	56.989	
1,200.0	1,190.9	1,103.9	1,071.9	3.1	4.5	-86.36	-91.9	-297.2	307.3	302.0	5.27	58.280	
1,300.0	1,289.7	1,196.2	1,156.4	3.5	5.2	-87.02	-106.9	-331.3	345.6	339.8	5.83	59.241	
1,400.0	1,388.6	1,288.5	1,240.8	3.8	5.9	-87.54	-121.9	-365.4	383.9	377.5	6.40	59.975	
1,500.0	1,487.5	1,380.8	1,325.3	4.1	6.6	-87.97	-137.0	-399.5	422.3	415.3	6.97	60.548	
1,600.0	1,586.4	1,473.2	1,409.8	4.4	7.3	-88.33	-152.0	-433.6	460.6	453.1	7.55	61.004	
1,700.0	1,685.2	1,565.5	1,494.2	4.7	8.0	-88.64	-167.0	-467.6	499.0	490.9	8.13	61.373	
1,800.0	1,784.1	1,657.8	1,578.7	5.0	8.7	-88.90	-182.0	-501.7	537.4	528.7	8.71	61.675	
1,900.0	1,883.0	1,750.1	1,663.2	5.3	9.5	-89.12	-197.1	-535.8	575.8	566.5	9.30	61.927	
2,000.0	1,981.8	1,842.4	1,747.6	5.7	10.2	-89.32	-212.1	-569.9	614.2	604.3	9.88	62.138	
2,100.0	2,080.7	1,934.7	1,832.1	6.0	10.9	-89.49	-227.1	-604.0	652.6	642.1	10.47	62.318	
2,200.0	2,179.6	2,027.0	1,916.6	6.3	11.6	-89.65	-242.1	-638.0	691.0	679.9	11.06	62.472	
2,300.0	2,278.4	2,119.4	2,001.0	6.6	12.3	-89.78	-257.1	-672.1	729.4	717.8	11.65	62.605	
2,400.0	2,377.3	2,211.7	2,085.5	6.9	13.0	-89.91	-272.2	-706.2	767.8	755.6	12.24	62.721	
2,500.0	2,476.2	2,304.0	2,170.0	7.2	13.7	-90.02	-287.2	-740.3	806.2	793.4	12.83	62.823	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-13C1 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-99.73	-17.1	-99.8	101.3				
100.0	100.0	100.0	100.0	0.1	0.1	-99.73	-17.1	-99.8	101.3	101.0	0.27	371.926	
200.0	200.0	200.0	200.0	0.3	0.3	-99.73	-17.1	-99.8	101.3	100.6	0.62	162.979	CC, ES
300.0	300.0	295.2	295.2	0.5	0.5	-59.80	-18.4	-101.8	102.2	101.3	0.97	105.491	
400.0	399.6	389.8	389.5	0.7	0.7	-64.49	-22.0	-107.9	105.7	104.4	1.35	78.307	
487.3	486.2	471.4	470.5	1.0	0.9	-70.46	-27.1	-116.3	111.8	110.1	1.73	64.664	
500.0	498.8	483.2	482.2	1.0	1.0	-71.44	-28.0	-117.7	113.1	111.3	1.79	63.294	
600.0	597.6	575.4	572.9	1.3	1.3	-78.43	-36.2	-131.2	126.5	124.3	2.25	56.345	
700.0	696.5	666.0	661.4	1.6	1.7	-83.86	-46.5	-148.1	146.3	143.6	2.72	53.870	
800.0	795.4	754.7	747.0	1.9	2.1	-87.72	-58.7	-168.2	171.7	168.5	3.20	53.682	SF
900.0	894.3	841.3	829.4	2.2	2.6	-90.32	-72.5	-191.0	202.0	198.3	3.69	54.700	
1,000.0	993.1	925.5	908.2	2.5	3.2	-92.00	-87.8	-216.2	236.7	232.5	4.20	56.396	
1,100.0	1,092.0	1,007.0	983.2	2.8	3.8	-93.03	-104.4	-243.4	275.5	270.8	4.71	58.515	
1,200.0	1,190.9	1,090.7	1,058.9	3.1	4.5	-93.66	-122.9	-273.8	317.7	312.5	5.23	60.707	
1,300.0	1,289.7	1,181.0	1,140.3	3.5	5.2	-94.16	-143.2	-307.2	360.6	354.8	5.78	62.355	
1,400.0	1,388.6	1,271.2	1,221.7	3.8	5.9	-94.55	-163.5	-340.6	403.5	397.2	6.34	63.663	
1,500.0	1,487.5	1,361.5	1,303.1	4.1	6.7	-94.87	-183.8	-374.0	446.5	439.6	6.90	64.717	
1,600.0	1,586.4	1,451.8	1,384.4	4.4	7.4	-95.13	-204.1	-407.4	489.4	481.9	7.46	65.581	
1,700.0	1,685.2	1,542.1	1,465.8	4.7	8.1	-95.35	-224.4	-440.8	532.4	524.3	8.03	66.301	
1,800.0	1,784.1	1,632.4	1,547.2	5.0	8.9	-95.53	-244.7	-474.2	575.3	566.7	8.60	66.908	
1,900.0	1,883.0	1,722.7	1,628.6	5.3	9.6	-95.69	-265.0	-507.6	618.3	609.1	9.17	67.426	
2,000.0	1,981.8	1,813.0	1,710.0	5.7	10.4	-95.83	-285.3	-541.0	661.2	651.5	9.74	67.872	
2,100.0	2,080.7	1,903.3	1,791.4	6.0	11.1	-95.96	-305.6	-574.4	704.2	693.9	10.32	68.260	
2,200.0	2,179.6	1,993.5	1,872.8	6.3	11.8	-96.06	-325.8	-607.8	747.2	736.3	10.89	68.600	
2,300.0	2,278.4	2,083.8	1,954.2	6.6	12.6	-96.16	-346.1	-641.2	790.2	778.7	11.47	68.901	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-13C2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-103.31	-25.5	-107.8	110.8				
100.0	100.0	100.0	100.0	0.1	0.1	-103.31	-25.5	-107.8	110.8	110.5	0.27	406.863	
200.0	200.0	200.0	200.0	0.3	0.3	-103.31	-25.5	-107.8	110.8	110.2	0.62	178.289	CC, ES
300.0	300.0	294.9	294.8	0.5	0.5	-63.31	-26.9	-109.7	111.9	110.9	0.97	115.386	
400.0	399.6	389.0	388.7	0.7	0.7	-67.80	-31.2	-115.2	115.6	114.3	1.35	85.479	
487.3	486.2	470.2	469.3	1.0	0.9	-73.52	-37.1	-123.0	122.2	120.4	1.73	70.421	
500.0	498.8	481.9	480.9	1.0	0.9	-74.46	-38.1	-124.3	123.5	121.7	1.79	68.915	
600.0	597.6	573.3	571.0	1.3	1.3	-81.27	-47.5	-136.7	137.5	135.2	2.25	61.155	
700.0	696.5	663.2	658.6	1.6	1.6	-86.70	-59.4	-152.3	157.9	155.2	2.71	58.264	
800.0	795.4	751.0	743.4	1.9	2.1	-90.70	-73.3	-170.6	184.1	180.9	3.18	57.899	SF
900.0	894.3	836.7	825.0	2.2	2.6	-93.52	-89.2	-191.4	215.2	211.5	3.66	58.875	
1,000.0	993.1	919.8	902.9	2.5	3.1	-95.43	-106.7	-214.4	250.8	246.7	4.14	60.594	
1,100.0	1,092.0	1,000.0	976.8	2.8	3.7	-96.70	-125.6	-239.1	290.5	285.9	4.63	62.767	
1,200.0	1,190.9	1,077.9	1,047.4	3.1	4.4	-97.51	-145.7	-265.5	333.9	328.8	5.13	65.136	
1,300.0	1,289.7	1,159.5	1,119.9	3.5	5.1	-98.05	-168.3	-295.2	380.5	374.9	5.64	67.493	
1,400.0	1,388.6	1,247.8	1,198.1	3.8	5.8	-98.50	-193.0	-327.6	427.5	421.4	6.17	69.275	
1,500.0	1,487.5	1,336.0	1,276.4	4.1	6.6	-98.86	-217.7	-360.0	474.6	467.9	6.71	70.723	
1,600.0	1,586.4	1,424.2	1,354.6	4.4	7.4	-99.15	-242.4	-392.4	521.6	514.4	7.25	71.913	
1,700.0	1,685.2	1,512.4	1,432.8	4.7	8.1	-99.39	-267.0	-424.8	568.7	560.9	7.80	72.906	
1,800.0	1,784.1	1,600.6	1,511.1	5.0	8.9	-99.60	-291.7	-457.3	615.8	607.4	8.35	73.744	
1,900.0	1,883.0	1,688.8	1,589.3	5.3	9.7	-99.78	-316.4	-489.7	662.8	653.9	8.90	74.458	
2,000.0	1,981.8	1,777.0	1,667.5	5.7	10.4	-99.93	-341.1	-522.1	709.9	700.5	9.46	75.075	
2,100.0	2,080.7	1,865.2	1,745.8	6.0	11.2	-100.07	-365.8	-554.5	757.0	747.0	10.01	75.612	
2,200.0	2,179.6	1,953.4	1,824.0	6.3	12.0	-100.19	-390.5	-586.9	804.1	793.5	10.57	76.084	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-14B1 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-68.1	0.0	68.1				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-68.1	0.0	68.1	67.8	0.27	250.165	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-68.1	0.0	68.1	67.5	0.62	109.623	CC, ES
300.0	300.0	295.8	295.7	0.5	0.5	-139.37	-71.7	-0.3	73.8	72.8	0.97	76.331	
400.0	399.6	393.7	393.3	0.7	0.7	-139.65	-78.2	-4.4	86.3	84.9	1.34	64.256	
487.3	486.2	478.9	478.0	1.0	0.9	-139.18	-85.1	-11.6	101.6	99.8	1.71	59.404	
500.0	498.8	491.4	490.3	1.0	0.9	-139.20	-86.1	-12.7	104.0	102.3	1.77	58.935	
600.0	597.6	589.5	587.7	1.3	1.2	-139.39	-94.3	-21.8	123.5	121.3	2.21	55.814	
700.0	696.5	687.6	685.0	1.6	1.5	-139.53	-102.4	-30.8	142.9	140.3	2.67	53.547	
800.0	795.4	785.7	782.3	1.9	1.7	-139.63	-110.6	-39.8	162.4	159.3	3.13	51.849	
900.0	894.3	883.8	879.7	2.2	2.0	-139.72	-118.8	-48.8	181.9	178.3	3.60	50.541	
1,000.0	993.1	981.9	977.0	2.5	2.3	-139.78	-126.9	-57.8	201.3	197.3	4.07	49.505	
1,100.0	1,092.0	1,079.9	1,074.3	2.8	2.5	-139.84	-135.1	-66.9	220.8	216.2	4.54	48.667	
1,200.0	1,190.9	1,178.0	1,171.7	3.1	2.8	-139.88	-143.3	-75.9	240.2	235.2	5.01	47.975	
1,300.0	1,289.7	1,276.1	1,269.0	3.5	3.1	-139.92	-151.4	-84.9	259.7	254.2	5.48	47.396	
1,400.0	1,388.6	1,374.2	1,366.3	3.8	3.3	-139.96	-159.6	-93.9	279.2	273.2	5.95	46.903	
1,500.0	1,487.5	1,472.3	1,463.6	4.1	3.6	-139.98	-167.8	-102.9	298.6	292.2	6.42	46.480	
1,600.0	1,586.4	1,570.4	1,561.0	4.4	3.9	-140.01	-175.9	-111.9	318.1	311.2	6.90	46.111	
1,700.0	1,685.2	1,668.5	1,658.3	4.7	4.2	-140.03	-184.1	-121.0	337.5	330.2	7.37	45.789	
1,800.0	1,784.1	1,766.6	1,755.6	5.0	4.4	-140.05	-192.3	-130.0	357.0	349.2	7.85	45.504	
1,900.0	1,883.0	1,864.6	1,853.0	5.3	4.7	-140.07	-200.5	-139.0	376.5	368.2	8.32	45.250	
2,000.0	1,981.8	1,962.7	1,950.3	5.7	5.0	-140.09	-208.6	-148.0	395.9	387.1	8.79	45.022	
2,100.0	2,080.7	2,060.8	2,047.6	6.0	5.3	-140.10	-216.8	-157.0	415.4	406.1	9.27	44.818	
2,200.0	2,179.6	2,158.9	2,145.0	6.3	5.5	-140.12	-225.0	-166.1	434.9	425.1	9.74	44.632	
2,300.0	2,278.4	2,257.0	2,242.3	6.6	5.8	-140.13	-233.1	-175.1	454.3	444.1	10.22	44.464	
2,400.0	2,377.3	2,355.1	2,339.6	6.9	6.1	-140.14	-241.3	-184.1	473.8	463.1	10.69	44.309	
2,500.0	2,476.2	2,453.2	2,436.9	7.2	6.3	-140.15	-249.5	-193.1	493.2	482.1	11.17	44.168	
2,600.0	2,575.1	2,551.3	2,534.3	7.5	6.6	-140.16	-257.6	-202.1	512.7	501.1	11.64	44.038	
2,700.0	2,673.9	2,649.4	2,631.6	7.9	6.9	-140.17	-265.8	-211.1	532.2	520.0	12.12	43.918	
2,800.0	2,772.8	2,747.4	2,728.9	8.2	7.2	-140.18	-274.0	-220.2	551.6	539.0	12.59	43.807	
2,900.0	2,871.7	2,845.5	2,826.3	8.5	7.4	-140.18	-282.1	-229.2	571.1	558.0	13.07	43.703	
3,000.0	2,970.5	2,943.6	2,923.6	8.8	7.7	-140.19	-290.3	-238.2	590.5	577.0	13.54	43.607	
3,100.0	3,069.4	3,041.7	3,020.9	9.1	8.0	-140.20	-298.5	-247.2	610.0	596.0	14.02	43.517	
3,200.0	3,168.3	3,139.8	3,118.3	9.4	8.3	-140.20	-306.6	-256.2	629.5	615.0	14.49	43.433	
3,300.0	3,267.2	3,237.9	3,215.6	9.8	8.5	-140.21	-314.8	-265.3	648.9	634.0	14.97	43.355	
3,400.0	3,366.0	3,336.0	3,312.9	10.1	8.8	-140.22	-323.0	-274.3	668.4	652.9	15.44	43.281	
3,500.0	3,464.9	3,434.1	3,410.2	10.4	9.1	-140.22	-331.2	-283.3	687.8	671.9	15.92	43.211	
3,600.0	3,563.8	3,532.1	3,507.6	10.7	9.4	-140.23	-339.3	-292.3	707.3	690.9	16.39	43.145	
3,700.0	3,662.6	3,630.2	3,604.9	11.0	9.6	-140.23	-347.5	-301.3	726.8	709.9	16.87	43.083	
3,800.0	3,761.5	3,728.3	3,702.2	11.3	9.9	-140.23	-355.7	-310.4	746.2	728.9	17.34	43.025	
3,900.0	3,860.4	3,826.4	3,799.6	11.6	10.2	-140.24	-363.8	-319.4	765.7	747.9	17.82	42.969	
4,000.0	3,959.3	3,924.5	3,896.9	12.0	10.4	-140.24	-372.0	-328.4	785.2	766.9	18.29	42.916	
4,100.0	4,058.1	4,022.6	3,994.2	12.3	10.7	-140.25	-380.2	-337.4	804.6	785.8	18.77	42.866	
4,200.0	4,157.0	4,120.7	4,091.6	12.6	11.0	-140.25	-388.3	-346.4	824.1	804.8	19.25	42.818	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-14B2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-118.84	-59.4	-107.8	123.1				
100.0	100.0	100.0	100.0	0.1	0.1	-118.84	-59.4	-107.8	123.1	122.8	0.27	452.016	
200.0	200.0	200.0	200.0	0.3	0.3	-118.84	-59.4	-107.8	123.1	122.4	0.62	198.074	CC, ES
300.0	300.0	294.8	294.7	0.5	0.5	-78.94	-61.5	-108.9	124.6	123.6	0.97	128.198	
400.0	399.6	388.6	388.3	0.7	0.7	-83.63	-67.7	-112.0	129.9	128.5	1.37	95.123	
487.3	486.2	468.9	468.0	1.0	0.9	-89.43	-76.2	-116.3	138.8	137.1	1.76	79.024	
500.0	498.8	480.4	479.4	1.0	0.9	-90.39	-77.7	-117.1	140.5	138.7	1.81	77.508	
600.0	597.6	574.9	572.6	1.3	1.2	-97.59	-91.2	-123.9	157.1	154.9	2.27	69.379	
700.0	696.5	671.5	668.0	1.6	1.5	-103.54	-105.2	-131.0	176.1	173.4	2.71	64.972	
800.0	795.4	768.2	763.4	1.9	1.8	-108.33	-119.3	-138.1	196.7	193.5	3.15	62.431	
900.0	894.3	864.8	858.7	2.2	2.2	-112.20	-133.3	-145.2	218.3	214.7	3.59	60.869	
1,000.0	993.1	961.5	954.1	2.5	2.5	-115.38	-147.4	-152.3	240.7	236.7	4.02	59.851	
1,100.0	1,092.0	1,058.1	1,049.5	2.8	2.8	-118.02	-161.4	-159.4	263.7	259.2	4.46	59.153	
1,200.0	1,190.9	1,154.8	1,144.8	3.1	3.1	-120.24	-175.5	-166.5	287.1	282.2	4.90	58.655	
1,300.0	1,289.7	1,251.5	1,240.2	3.5	3.4	-122.12	-189.5	-173.6	310.9	305.6	5.33	58.285	
1,400.0	1,388.6	1,348.1	1,335.6	3.8	3.8	-123.74	-203.5	-180.8	335.0	329.2	5.78	58.004	
1,500.0	1,487.5	1,444.8	1,430.9	4.1	4.1	-125.14	-217.6	-187.9	359.3	353.1	6.22	57.784	
1,600.0	1,586.4	1,541.4	1,526.3	4.4	4.4	-126.36	-231.6	-195.0	383.7	377.1	6.66	57.608	
1,700.0	1,685.2	1,638.1	1,621.6	4.7	4.7	-127.44	-245.7	-202.1	408.3	401.2	7.11	57.466	
1,800.0	1,784.1	1,734.7	1,717.0	5.0	5.0	-128.39	-259.7	-209.2	433.1	425.5	7.55	57.350	
1,900.0	1,883.0	1,831.4	1,812.4	5.3	5.4	-129.25	-273.8	-216.3	457.9	449.9	8.00	57.253	
2,000.0	1,981.8	1,928.0	1,907.7	5.7	5.7	-130.01	-287.8	-223.4	482.8	474.4	8.45	57.171	
2,100.0	2,080.7	2,024.7	2,003.1	6.0	6.0	-130.70	-301.8	-230.5	507.8	498.9	8.89	57.102	
2,200.0	2,179.6	2,121.3	2,098.5	6.3	6.3	-131.33	-315.9	-237.6	532.9	523.5	9.34	57.043	
2,300.0	2,278.4	2,218.0	2,193.8	6.6	6.7	-131.90	-329.9	-244.7	558.0	548.2	9.79	56.992	
2,400.0	2,377.3	2,314.6	2,289.2	6.9	7.0	-132.42	-344.0	-251.8	583.1	572.9	10.24	56.948	
2,500.0	2,476.2	2,411.3	2,384.6	7.2	7.3	-132.89	-358.0	-258.9	608.3	597.7	10.69	56.909	
2,600.0	2,575.1	2,507.9	2,479.9	7.5	7.6	-133.33	-372.1	-266.0	633.6	622.4	11.14	56.876	
2,700.0	2,673.9	2,604.6	2,575.3	7.9	7.9	-133.74	-386.1	-273.1	658.8	647.3	11.59	56.846	
2,800.0	2,772.8	2,701.3	2,670.7	8.2	8.3	-134.11	-400.1	-280.2	684.1	672.1	12.04	56.820	
2,900.0	2,871.7	2,797.9	2,766.0	8.5	8.6	-134.46	-414.2	-287.3	709.5	697.0	12.49	56.796	
3,000.0	2,970.5	2,894.6	2,861.4	8.8	8.9	-134.79	-428.2	-294.5	734.8	721.9	12.94	56.776	
3,100.0	3,069.4	2,991.2	2,956.7	9.1	9.2	-135.09	-442.3	-301.6	760.2	746.8	13.39	56.757	
3,200.0	3,168.3	3,087.9	3,052.1	9.4	9.6	-135.37	-456.3	-308.7	785.6	771.7	13.84	56.740	
3,300.0	3,267.2	3,184.5	3,147.5	9.8	9.9	-135.64	-470.4	-315.8	811.0	796.7	14.30	56.726	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-14C - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-117.06	-51.0	-99.8	112.1				
100.0	100.0	100.0	100.0	0.1	0.1	-117.06	-51.0	-99.8	112.1	111.8	0.27	411.647	
200.0	200.0	200.0	200.0	0.3	0.3	-117.06	-51.0	-99.8	112.1	111.5	0.62	180.385	CC, ES
300.0	300.0	295.7	295.7	0.5	0.5	-77.49	-53.2	-100.6	113.3	112.4	0.97	116.294	
400.0	399.6	390.3	390.0	0.7	0.7	-83.13	-59.9	-103.1	118.0	116.6	1.37	85.860	
487.3	486.2	471.2	470.2	1.0	0.9	-90.08	-69.0	-106.4	126.4	124.7	1.77	71.358	
500.0	498.8	482.8	481.7	1.0	0.9	-91.21	-70.6	-107.0	128.1	126.3	1.83	70.051	
600.0	597.6	573.0	570.6	1.3	1.3	-99.40	-85.1	-112.3	145.7	143.4	2.28	63.929	
700.0	696.5	664.9	660.4	1.6	1.6	-106.21	-103.3	-118.9	169.7	167.0	2.71	62.655	SF
800.0	795.4	759.9	753.2	1.9	2.0	-111.55	-122.5	-125.9	196.1	192.9	3.13	62.686	
900.0	894.3	854.9	846.0	2.2	2.4	-115.63	-141.8	-133.0	223.7	220.2	3.54	63.151	
1,000.0	993.1	949.9	938.8	2.5	2.8	-118.81	-161.1	-140.0	252.2	248.2	3.96	63.720	
1,100.0	1,092.0	1,044.9	1,031.5	2.8	3.1	-121.35	-180.3	-147.0	281.3	276.9	4.38	64.271	
1,200.0	1,190.9	1,139.9	1,124.3	3.1	3.5	-123.42	-199.6	-154.1	310.7	305.9	4.80	64.763	
1,300.0	1,289.7	1,234.9	1,217.1	3.5	3.9	-125.13	-218.8	-161.1	340.5	335.3	5.22	65.189	
1,400.0	1,388.6	1,329.9	1,309.8	3.8	4.3	-126.57	-238.1	-168.1	370.5	364.9	5.65	65.552	
1,500.0	1,487.5	1,424.9	1,402.6	4.1	4.7	-127.79	-257.4	-175.2	400.7	394.7	6.08	65.862	
1,600.0	1,586.4	1,519.9	1,495.4	4.4	5.1	-128.84	-276.6	-182.2	431.1	424.6	6.52	66.126	
1,700.0	1,685.2	1,614.9	1,588.1	4.7	5.5	-129.75	-295.9	-189.2	461.5	454.6	6.96	66.354	
1,800.0	1,784.1	1,709.9	1,680.9	5.0	5.9	-130.56	-315.1	-196.3	492.1	484.7	7.39	66.550	
1,900.0	1,883.0	1,804.9	1,773.7	5.3	6.3	-131.26	-334.4	-203.3	522.7	514.9	7.83	66.720	
2,000.0	1,981.8	1,900.0	1,866.4	5.7	6.7	-131.89	-353.6	-210.3	553.4	545.1	8.28	66.869	
2,100.0	2,080.7	1,995.0	1,959.2	6.0	7.1	-132.46	-372.9	-217.4	584.2	575.5	8.72	67.000	
2,200.0	2,179.6	2,090.0	2,052.0	6.3	7.5	-132.96	-392.2	-224.4	615.0	605.8	9.16	67.116	
2,300.0	2,278.4	2,185.0	2,144.7	6.6	7.9	-133.42	-411.4	-231.4	645.8	636.2	9.61	67.219	
2,400.0	2,377.3	2,280.0	2,237.5	6.9	8.3	-133.84	-430.7	-238.5	676.7	666.6	10.05	67.312	
2,500.0	2,476.2	2,375.0	2,330.3	7.2	8.7	-134.22	-449.9	-245.5	707.6	697.1	10.50	67.395	
2,600.0	2,575.1	2,470.0	2,423.0	7.5	9.0	-134.57	-469.2	-252.5	738.5	727.6	10.95	67.470	
2,700.0	2,673.9	2,565.0	2,515.8	7.9	9.4	-134.89	-488.4	-259.6	769.4	758.1	11.39	67.538	
2,800.0	2,772.8	2,660.0	2,608.6	8.2	9.8	-135.19	-507.7	-266.6	800.4	788.6	11.84	67.600	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 28-16C - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	172.15	-59.4	8.2	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	172.15	-59.4	8.2	59.9	59.7	0.27	220.120	
200.0	200.0	200.0	200.0	0.3	0.3	172.15	-59.4	8.2	59.9	59.3	0.62	96.457	CC, ES
300.0	300.0	297.4	297.3	0.5	0.5	-148.88	-61.1	10.0	64.2	63.2	0.97	66.098	
400.0	399.6	393.2	392.9	0.7	0.7	-154.89	-66.0	15.4	77.4	76.1	1.33	58.278	SF
487.3	486.2	474.5	473.5	1.0	0.9	-160.42	-72.7	22.7	97.1	95.4	1.64	59.304	
500.0	498.8	486.1	485.0	1.0	1.0	-161.19	-73.9	23.9	100.5	98.9	1.68	59.847	
600.0	597.6	575.9	573.4	1.3	1.3	-166.13	-84.4	35.3	130.7	128.7	2.02	64.684	
700.0	696.5	662.7	658.2	1.6	1.6	-169.61	-97.2	49.2	165.7	163.3	2.35	70.489	
800.0	795.4	746.3	738.9	1.9	2.1	-172.13	-112.0	65.2	205.1	202.4	2.67	76.783	
900.0	894.3	826.7	815.5	2.2	2.5	-174.00	-128.5	83.1	248.6	245.6	2.98	83.351	
1,000.0	993.1	905.9	889.9	2.5	3.0	-175.47	-146.8	102.9	295.8	292.5	3.29	89.944	
1,100.0	1,092.0	993.1	971.5	2.8	3.6	-176.69	-167.7	125.6	344.4	340.8	3.61	95.448	
1,200.0	1,190.9	1,080.3	1,053.1	3.1	4.1	-177.61	-188.6	148.2	393.0	389.1	3.93	100.092	
1,300.0	1,289.7	1,167.5	1,134.7	3.5	4.7	-178.33	-209.5	170.9	441.7	437.5	4.24	104.070	
1,400.0	1,388.6	1,254.7	1,216.3	3.8	5.3	-178.91	-230.4	193.5	490.5	485.9	4.56	107.509	
1,500.0	1,487.5	1,341.9	1,297.9	4.1	5.8	-179.38	-251.3	216.2	539.3	534.4	4.88	110.511	
1,600.0	1,586.4	1,429.2	1,379.4	4.4	6.4	-179.78	-272.2	238.9	588.1	582.9	5.20	113.151	
1,700.0	1,685.2	1,516.4	1,461.0	4.7	7.0	179.89	-293.1	261.5	636.9	631.4	5.51	115.491	
1,800.0	1,784.1	1,603.6	1,542.6	5.0	7.6	179.60	-314.1	284.2	685.7	679.9	5.83	117.578	
1,900.0	1,883.0	1,690.8	1,624.2	5.3	8.1	179.36	-335.0	306.8	734.6	728.4	6.15	119.449	
2,000.0	1,981.8	1,778.0	1,705.8	5.7	8.7	179.14	-355.9	329.5	783.4	777.0	6.47	121.137	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 33-3B - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-124.31	-68.1	-99.8	120.8				
100.0	100.0	100.0	100.0	0.1	0.1	-124.31	-68.1	-99.8	120.8	120.6	0.27	443.800	
200.0	200.0	200.0	200.0	0.3	0.3	-124.31	-68.1	-99.8	120.8	120.2	0.62	194.474	CC, ES
300.0	300.0	297.5	297.5	0.5	0.5	-84.55	-69.8	-99.8	121.5	120.6	0.98	124.392	
400.0	399.6	394.2	394.0	0.7	0.7	-89.77	-74.7	-99.8	124.4	123.0	1.38	90.279	
487.3	486.2	476.4	476.0	1.0	0.9	-96.44	-81.5	-99.9	130.2	128.4	1.77	73.427	
500.0	498.8	488.1	487.6	1.0	0.9	-97.52	-82.7	-99.9	131.5	129.7	1.83	71.822	
600.0	597.6	578.5	577.3	1.3	1.1	-105.49	-94.3	-101.2	145.9	143.6	2.28	63.985	
700.0	696.5	667.1	664.5	1.6	1.4	-112.09	-109.5	-103.7	167.5	164.7	2.70	61.943	SF
800.0	795.4	753.4	748.7	1.9	1.8	-117.17	-128.1	-107.4	195.3	192.2	3.10	62.978	
900.0	894.3	837.2	829.6	2.2	2.2	-120.92	-149.5	-112.2	228.7	225.2	3.48	65.644	
1,000.0	993.1	918.4	906.9	2.5	2.6	-123.63	-173.4	-117.9	266.9	263.0	3.86	69.166	
1,100.0	1,092.0	1,006.4	990.0	2.8	3.1	-125.81	-201.7	-124.9	308.2	303.9	4.24	72.617	
1,200.0	1,190.9	1,096.9	1,075.3	3.1	3.7	-127.53	-230.8	-132.2	349.8	345.2	4.64	75.455	
1,300.0	1,289.7	1,187.4	1,160.7	3.5	4.2	-128.88	-260.0	-139.4	391.7	386.7	5.03	77.804	
1,400.0	1,388.6	1,277.8	1,246.0	3.8	4.7	-129.97	-289.1	-146.6	433.7	428.3	5.44	79.758	
1,500.0	1,487.5	1,368.3	1,331.3	4.1	5.3	-130.88	-318.2	-153.8	475.9	470.0	5.85	81.394	
1,600.0	1,586.4	1,458.7	1,416.7	4.4	5.8	-131.63	-347.3	-161.0	518.1	511.8	6.26	82.771	
1,700.0	1,685.2	1,549.2	1,502.0	4.7	6.4	-132.27	-376.5	-168.3	560.4	553.7	6.68	83.941	
1,800.0	1,784.1	1,639.6	1,587.3	5.0	6.9	-132.82	-405.6	-175.5	602.7	595.6	7.10	84.941	
1,900.0	1,883.0	1,730.1	1,672.7	5.3	7.5	-133.30	-434.7	-182.7	645.1	637.6	7.52	85.802	
2,000.0	1,981.8	1,820.6	1,758.0	5.7	8.0	-133.73	-463.8	-189.9	687.5	679.5	7.94	86.549	
2,100.0	2,080.7	1,911.0	1,843.3	6.0	8.5	-134.10	-493.0	-197.1	729.9	721.5	8.37	87.202	
2,200.0	2,179.6	2,001.5	1,928.7	6.3	9.1	-134.43	-522.1	-204.4	772.4	763.6	8.80	87.776	
2,300.0	2,278.4	2,091.9	2,014.0	6.6	9.6	-134.72	-551.2	-211.6	814.8	805.6	9.23	88.282	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Federal 33-4B - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-111.57	-42.6	-107.8	115.9				
100.0	100.0	100.0	100.0	0.1	0.1	-111.57	-42.6	-107.8	115.9	115.6	0.27	425.755	
200.0	200.0	200.0	200.0	0.3	0.3	-111.57	-42.6	-107.8	115.9	115.3	0.62	186.567	CC, ES
300.0	300.0	294.5	294.5	0.5	0.5	-71.49	-44.2	-109.5	117.4	116.4	0.97	121.076	
400.0	399.6	388.3	388.0	0.7	0.7	-75.71	-48.9	-114.6	122.3	120.9	1.35	90.257	
487.3	486.2	469.0	468.1	1.0	0.9	-80.99	-55.4	-121.7	130.3	128.6	1.74	74.957	
500.0	498.8	480.7	479.6	1.0	0.9	-81.86	-56.5	-123.0	131.9	130.1	1.80	73.455	
600.0	597.6	571.4	569.1	1.3	1.3	-88.09	-67.0	-134.3	147.7	145.5	2.25	65.677	
700.0	696.5	660.5	656.1	1.6	1.6	-92.97	-80.0	-148.5	169.7	167.0	2.71	62.717	
800.0	795.4	747.6	740.1	1.9	2.1	-96.57	-95.4	-165.2	197.2	194.0	3.17	62.262	SF
900.0	894.3	832.4	820.9	2.2	2.6	-99.10	-112.8	-184.2	229.5	225.9	3.63	63.150	
1,000.0	993.1	914.6	898.1	2.5	3.1	-100.83	-132.1	-205.1	266.2	262.1	4.11	64.798	
1,100.0	1,092.0	1,000.0	976.8	2.8	3.7	-102.05	-154.4	-229.4	307.0	302.4	4.60	66.717	
1,200.0	1,190.9	1,070.9	1,041.0	3.1	4.3	-102.72	-174.7	-251.4	351.3	346.2	5.07	69.215	
1,300.0	1,289.7	1,144.6	1,106.6	3.5	5.0	-103.18	-197.5	-276.3	399.1	393.5	5.56	71.755	
1,400.0	1,388.6	1,218.8	1,171.2	3.8	5.6	-103.44	-222.2	-303.1	450.0	443.9	6.05	74.357	
1,500.0	1,487.5	1,304.3	1,245.2	4.1	6.4	-103.65	-251.1	-334.6	501.9	495.3	6.57	76.346	
1,600.0	1,586.4	1,389.7	1,319.2	4.4	7.2	-103.82	-280.0	-366.0	553.7	546.6	7.10	77.991	
1,700.0	1,685.2	1,475.2	1,393.2	4.7	8.0	-103.96	-309.0	-397.5	605.6	598.0	7.63	79.377	
1,800.0	1,784.1	1,560.7	1,467.2	5.0	8.8	-104.08	-337.9	-429.0	657.5	649.4	8.16	80.561	
1,900.0	1,883.0	1,646.2	1,541.3	5.3	9.6	-104.18	-366.9	-460.5	709.4	700.7	8.70	81.582	
2,000.0	1,981.8	1,731.7	1,615.3	5.7	10.4	-104.27	-395.8	-492.0	761.3	752.1	9.23	82.470	
2,100.0	2,080.7	1,817.1	1,689.3	6.0	11.2	-104.35	-424.8	-523.4	813.2	803.4	9.77	83.250	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-10D2 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	162.20	-25.5	8.2	26.8				
100.0	100.0	100.0	100.0	0.1	0.1	162.20	-25.5	8.2	26.8	26.5	0.27	98.351	
200.0	200.0	200.0	200.0	0.3	0.3	162.20	-25.5	8.2	26.8	26.2	0.62	43.097	CC, ES
300.0	300.0	299.4	299.4	0.5	0.5	-162.96	-25.4	10.8	30.1	29.1	0.98	30.786	SF
400.0	399.6	397.5	397.2	0.7	0.7	-175.99	-25.0	18.4	41.6	40.2	1.35	30.843	
487.3	486.2	481.1	480.1	1.0	0.9	174.78	-24.6	28.8	59.6	57.9	1.68	35.489	
500.0	498.8	493.1	491.9	1.0	1.0	173.72	-24.5	30.6	62.8	61.1	1.73	36.364	
600.0	597.6	586.7	584.1	1.3	1.3	167.04	-23.7	47.0	90.6	88.5	2.12	42.667	
700.0	696.5	682.0	677.6	1.6	1.6	163.02	-22.9	65.1	120.1	117.6	2.53	47.534	
800.0	795.4	777.2	771.2	1.9	2.0	160.59	-22.1	83.2	150.0	147.1	2.93	51.115	
900.0	894.3	872.5	864.7	2.2	2.3	158.96	-21.3	101.3	180.0	176.7	3.34	53.835	
1,000.0	993.1	967.8	958.3	2.5	2.7	157.80	-20.5	119.4	210.2	206.4	3.76	55.964	
1,100.0	1,092.0	1,063.1	1,051.8	2.8	3.1	156.94	-19.7	137.4	240.4	236.2	4.17	57.671	
1,200.0	1,190.9	1,158.4	1,145.3	3.1	3.4	156.26	-18.8	155.5	270.6	266.0	4.58	59.070	
1,300.0	1,289.7	1,253.6	1,238.9	3.5	3.8	155.72	-18.0	173.6	300.8	295.8	4.99	60.235	
1,400.0	1,388.6	1,348.9	1,332.4	3.8	4.1	155.28	-17.2	191.7	331.1	325.7	5.41	61.221	
1,500.0	1,487.5	1,444.2	1,426.0	4.1	4.5	154.91	-16.4	209.8	361.4	355.6	5.82	62.065	
1,600.0	1,586.4	1,539.5	1,519.5	4.4	4.8	154.60	-15.6	227.9	391.7	385.5	6.24	62.797	
1,700.0	1,685.2	1,634.8	1,613.1	4.7	5.2	154.34	-14.8	245.9	422.0	415.4	6.65	63.436	
1,800.0	1,784.1	1,730.0	1,706.6	5.0	5.6	154.11	-13.9	264.0	452.3	445.3	7.07	63.999	
1,900.0	1,883.0	1,825.3	1,800.2	5.3	5.9	153.90	-13.1	282.1	482.6	475.2	7.48	64.500	
2,000.0	1,981.8	1,920.6	1,893.7	5.7	6.3	153.73	-12.3	300.2	513.0	505.1	7.90	64.947	
2,100.0	2,080.7	2,015.9	1,987.2	6.0	6.6	153.57	-11.5	318.3	543.3	535.0	8.31	65.349	
2,200.0	2,179.6	2,111.2	2,080.8	6.3	7.0	153.43	-10.7	336.3	573.6	564.9	8.73	65.713	
2,300.0	2,278.4	2,206.4	2,174.3	6.6	7.4	153.30	-9.9	354.4	604.0	594.8	9.15	66.043	
2,400.0	2,377.3	2,301.7	2,267.9	6.9	7.7	153.19	-9.0	372.5	634.3	624.8	9.56	66.344	
2,500.0	2,476.2	2,397.0	2,361.4	7.2	8.1	153.08	-8.2	390.6	664.7	654.7	9.98	66.620	
2,600.0	2,575.1	2,492.3	2,455.0	7.5	8.5	152.99	-7.4	408.7	695.0	684.6	10.39	66.874	
2,700.0	2,673.9	2,587.6	2,548.5	7.9	8.8	152.90	-6.6	426.7	725.3	714.5	10.81	67.108	
2,800.0	2,772.8	2,682.8	2,642.1	8.2	9.2	152.82	-5.8	444.8	755.7	744.5	11.22	67.325	
2,900.0	2,871.7	2,778.1	2,735.6	8.5	9.5	152.75	-5.0	462.9	786.0	774.4	11.64	67.526	
3,000.0	2,970.5	2,873.4	2,829.1	8.8	9.9	152.68	-4.1	481.0	816.4	804.3	12.06	67.713	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-11A - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-17.1	0.0	17.1				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-17.1	0.0	17.1	16.8	0.27	62.876	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-17.1	0.0	17.1	16.5	0.62	27.552	CC, ES
300.0	300.0	300.5	300.4	0.5	0.5	-136.70	-15.8	-2.3	17.7	16.8	0.98	18.079	
400.0	399.6	400.9	400.5	0.7	0.7	-132.22	-11.7	-9.1	19.7	18.3	1.40	14.113	
487.3	486.2	488.1	487.2	1.0	0.9	-130.52	-6.8	-17.5	23.1	21.3	1.81	12.808	
500.0	498.8	500.8	499.8	1.0	1.0	-130.84	-6.1	-18.7	23.8	22.0	1.87	12.767	
600.0	597.6	600.7	599.0	1.3	1.2	-132.83	-0.3	-28.4	29.3	26.9	2.34	12.500	
700.0	696.5	700.5	698.3	1.6	1.5	-134.19	5.4	-38.0	34.7	31.9	2.82	12.318	
800.0	795.4	800.4	797.5	1.9	1.7	-135.19	11.1	-47.7	40.2	36.9	3.30	12.189	
900.0	894.3	900.2	896.7	2.2	2.0	-135.94	16.8	-57.3	45.7	41.9	3.78	12.094	
1,000.0	993.1	1,000.1	995.9	2.5	2.2	-136.53	22.5	-67.0	51.2	46.9	4.26	12.021	
1,100.0	1,092.0	1,099.9	1,095.1	2.8	2.5	-137.01	28.2	-76.6	56.7	51.9	4.74	11.965	
1,200.0	1,190.9	1,199.8	1,194.3	3.1	2.8	-137.40	33.9	-86.3	62.2	57.0	5.22	11.919	
1,300.0	1,289.7	1,299.6	1,293.6	3.5	3.0	-137.73	39.7	-96.0	67.7	62.0	5.70	11.882	
1,400.0	1,388.6	1,399.5	1,392.8	3.8	3.3	-138.01	45.4	-105.6	73.2	67.0	6.18	11.851	
1,500.0	1,487.5	1,499.3	1,492.0	4.1	3.6	-138.25	51.1	-115.3	78.7	72.0	6.65	11.825	
1,600.0	1,586.4	1,599.2	1,591.2	4.4	3.8	-138.46	56.8	-124.9	84.2	77.1	7.13	11.803	
1,700.0	1,685.2	1,699.0	1,690.4	4.7	4.1	-138.65	62.5	-134.6	89.7	82.1	7.61	11.784	
1,800.0	1,784.1	1,798.8	1,789.6	5.0	4.3	-138.81	68.2	-144.2	95.2	87.1	8.09	11.767	
1,900.0	1,883.0	1,898.7	1,888.8	5.3	4.6	-138.95	73.9	-153.9	100.7	92.1	8.57	11.752	
2,000.0	1,981.8	1,998.5	1,988.1	5.7	4.9	-139.08	79.7	-163.5	106.2	97.2	9.05	11.739	
2,100.0	2,080.7	2,098.4	2,087.3	6.0	5.1	-139.20	85.4	-173.2	111.7	102.2	9.53	11.727	
2,200.0	2,179.6	2,198.2	2,186.5	6.3	5.4	-139.31	91.1	-182.9	117.2	107.2	10.01	11.717	
2,300.0	2,278.4	2,298.1	2,285.7	6.6	5.6	-139.40	96.8	-192.5	122.7	112.3	10.48	11.707	
2,400.0	2,377.3	2,397.9	2,384.9	6.9	5.9	-139.49	102.5	-202.2	128.3	117.3	10.96	11.699	
2,500.0	2,476.2	2,497.8	2,484.1	7.2	6.2	-139.57	108.2	-211.8	133.8	122.3	11.44	11.691	
2,600.0	2,575.1	2,597.6	2,583.4	7.5	6.4	-139.64	113.9	-221.5	139.3	127.4	11.92	11.684	
2,700.0	2,673.9	2,697.5	2,682.6	7.9	6.7	-139.71	119.7	-231.1	144.8	132.4	12.40	11.677	
2,800.0	2,772.8	2,797.3	2,781.8	8.2	7.0	-139.78	125.4	-240.8	150.3	137.4	12.88	11.671	
2,900.0	2,871.7	2,897.2	2,881.0	8.5	7.2	-139.84	131.1	-250.5	155.8	142.5	13.36	11.666	
3,000.0	2,970.5	2,997.0	2,980.2	8.8	7.5	-139.89	136.8	-260.1	161.3	147.5	13.83	11.661	
3,100.0	3,069.4	3,096.9	3,079.4	9.1	7.7	-139.94	142.5	-269.8	166.8	152.5	14.31	11.656	
3,200.0	3,168.3	3,196.7	3,178.6	9.4	8.0	-139.99	148.2	-279.4	172.3	157.6	14.79	11.651	
3,300.0	3,267.2	3,296.6	3,277.9	9.8	8.3	-140.04	153.9	-289.1	177.9	162.6	15.27	11.647	
3,400.0	3,366.0	3,396.4	3,377.1	10.1	8.5	-140.08	159.7	-298.7	183.4	167.6	15.75	11.643	
3,500.0	3,464.9	3,496.3	3,476.3	10.4	8.8	-140.12	165.4	-308.4	188.9	172.7	16.23	11.640	
3,600.0	3,563.8	3,596.1	3,575.5	10.7	9.1	-140.16	171.1	-318.0	194.4	177.7	16.71	11.636	
3,700.0	3,662.6	3,696.0	3,674.7	11.0	9.3	-140.19	176.8	-327.7	199.9	182.7	17.18	11.633	
3,800.0	3,761.5	3,795.8	3,773.9	11.3	9.6	-140.23	182.5	-337.4	205.4	187.8	17.66	11.630	
3,900.0	3,860.4	3,895.7	3,873.2	11.6	9.8	-140.26	188.2	-347.0	210.9	192.8	18.14	11.627	
4,000.0	3,959.3	3,995.5	3,972.4	12.0	10.1	-140.29	193.9	-356.7	216.4	197.8	18.62	11.624	
4,100.0	4,058.1	4,095.4	4,071.6	12.3	10.4	-140.32	199.7	-366.3	222.0	202.9	19.10	11.622	
4,200.0	4,157.0	4,195.2	4,170.8	12.6	10.6	-140.34	205.4	-376.0	227.5	207.9	19.58	11.619	
4,300.0	4,255.9	4,295.0	4,270.0	12.9	10.9	-140.37	211.1	-385.6	233.0	212.9	20.05	11.617	
4,400.0	4,354.7	4,394.9	4,369.2	13.2	11.2	-140.40	216.8	-395.3	238.5	218.0	20.53	11.615	
4,500.0	4,453.6	4,494.7	4,468.4	13.5	11.4	-140.42	222.5	-405.0	244.0	223.0	21.01	11.613	
4,600.0	4,552.5	4,594.6	4,567.7	13.8	11.7	-140.44	228.2	-414.6	249.5	228.0	21.49	11.611	
4,700.0	4,651.4	4,694.4	4,666.9	14.2	12.0	-140.46	233.9	-424.3	255.0	233.1	21.97	11.609	
4,800.0	4,750.2	4,794.3	4,766.1	14.5	12.2	-140.49	239.7	-433.9	260.5	238.1	22.45	11.607	
4,900.0	4,849.1	4,894.1	4,865.3	14.8	12.5	-140.51	245.4	-443.6	266.1	243.1	22.93	11.605	
5,000.0	4,948.0	4,994.0	4,964.5	15.1	12.7	-140.52	251.1	-453.2	271.6	248.2	23.40	11.604	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-11A - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,046.8	5,093.8	5,063.7	15.4	13.0	-140.54	256.8	-462.9	277.1	253.2	23.88	11.602	
5,200.0	5,145.7	5,193.7	5,163.0	15.7	13.3	-140.56	262.5	-472.5	282.6	258.2	24.36	11.600	
5,300.0	5,244.6	5,293.5	5,262.2	16.1	13.5	-140.58	268.2	-482.2	288.1	263.3	24.84	11.599	
5,400.0	5,343.4	5,393.4	5,361.4	16.4	13.8	-140.59	273.9	-491.9	293.6	268.3	25.32	11.598	
5,500.0	5,442.3	5,493.2	5,460.6	16.7	14.1	-140.61	279.7	-501.5	299.1	273.3	25.80	11.596	
5,600.0	5,541.2	5,593.1	5,559.8	17.0	14.3	-140.62	285.4	-511.2	304.6	278.4	26.27	11.595	
5,700.0	5,640.1	5,692.9	5,659.0	17.3	14.6	-140.64	291.1	-520.8	310.2	283.4	26.75	11.594	
5,800.0	5,738.9	5,792.8	5,758.2	17.6	14.8	-140.65	296.8	-530.5	315.7	288.4	27.23	11.592	
5,900.0	5,837.8	5,892.6	5,857.5	18.0	15.1	-140.67	302.5	-540.1	321.2	293.5	27.71	11.591	
6,000.0	5,936.7	5,992.5	5,956.7	18.3	15.4	-140.68	308.2	-549.8	326.7	298.5	28.19	11.590	
6,100.0	6,035.5	6,092.3	6,055.9	18.6	15.6	-140.69	313.9	-559.5	332.2	303.5	28.67	11.589	
6,200.0	6,134.4	6,192.2	6,155.1	18.9	15.9	-140.71	319.7	-569.1	337.7	308.6	29.14	11.588	
6,236.7	6,170.7	6,228.8	6,191.5	19.0	16.0	-140.71	321.8	-572.7	339.7	310.4	29.32	11.588	
6,300.0	6,233.4	6,292.0	6,254.4	19.2	16.2	-140.68	325.4	-578.8	342.7	313.1	29.63	11.566	
6,400.0	6,332.8	6,386.4	6,348.2	19.4	16.4	-140.52	330.1	-586.8	345.9	315.8	30.07	11.503	
6,500.0	6,432.5	6,480.2	6,441.9	19.6	16.5	-140.43	333.3	-592.2	348.2	317.7	30.43	11.443	
6,600.0	6,532.4	6,574.0	6,535.6	19.7	16.7	-140.42	334.9	-594.9	349.5	318.8	30.70	11.385	
6,667.6	6,600.0	6,638.4	6,600.0	19.8	16.7	177.98	335.1	-595.2	349.9	319.0	30.85	11.340	
6,700.0	6,632.4	6,670.8	6,632.4	19.8	16.8	177.98	335.1	-595.2	349.9	319.0	30.94	11.309	
6,800.0	6,732.4	6,770.8	6,732.4	19.9	16.9	177.98	335.1	-595.2	349.9	318.7	31.20	11.214	
6,900.0	6,832.4	6,870.8	6,832.4	20.1	17.0	177.98	335.1	-595.2	349.9	318.4	31.47	11.119	
7,000.0	6,932.4	6,970.8	6,932.4	20.2	17.2	177.98	335.1	-595.2	349.9	318.2	31.73	11.026	
7,100.0	7,032.4	7,070.8	7,032.4	20.3	17.3	177.98	335.1	-595.2	349.9	317.9	32.00	10.933	
7,200.0	7,132.4	7,170.8	7,132.4	20.4	17.4	177.98	335.1	-595.2	349.9	317.6	32.27	10.842	
7,300.0	7,232.4	7,270.8	7,232.4	20.5	17.5	177.98	335.1	-595.2	349.9	317.3	32.54	10.752	
7,400.0	7,332.4	7,370.8	7,332.4	20.6	17.7	177.98	335.1	-595.2	349.9	317.1	32.82	10.662	
7,500.0	7,432.4	7,470.8	7,432.4	20.7	17.8	177.98	335.1	-595.2	349.9	316.8	33.09	10.574	
7,600.0	7,532.4	7,570.8	7,532.4	20.8	17.9	177.98	335.1	-595.2	349.9	316.5	33.36	10.487	
7,700.0	7,632.4	7,670.8	7,632.4	20.9	18.0	177.98	335.1	-595.2	349.9	316.2	33.64	10.400	
7,800.0	7,732.4	7,770.8	7,732.4	21.0	18.2	177.98	335.1	-595.2	349.9	316.0	33.92	10.315	
7,900.0	7,832.4	7,870.8	7,832.4	21.1	18.3	177.98	335.1	-595.2	349.9	315.7	34.20	10.231	
8,000.0	7,932.4	7,970.8	7,932.4	21.3	18.4	177.98	335.1	-595.2	349.9	315.4	34.48	10.148	
8,100.0	8,032.4	8,070.8	8,032.4	21.4	18.6	177.98	335.1	-595.2	349.9	315.1	34.76	10.065	
8,200.0	8,132.4	8,170.8	8,132.4	21.5	18.7	177.98	335.1	-595.2	349.9	314.8	35.05	9.984	
8,300.0	8,232.4	8,270.8	8,232.4	21.6	18.8	177.98	335.1	-595.2	349.9	314.6	35.33	9.903	
8,400.0	8,332.4	8,370.8	8,332.4	21.7	19.0	177.98	335.1	-595.2	349.9	314.3	35.62	9.824	
8,500.0	8,432.4	8,470.8	8,432.4	21.8	19.1	177.98	335.1	-595.2	349.9	314.0	35.90	9.746	
8,600.0	8,532.4	8,570.8	8,532.4	22.0	19.2	177.98	335.1	-595.2	349.9	313.7	36.19	9.668	
8,692.6	8,625.0	8,663.4	8,625.0	22.1	19.4	177.98	335.1	-595.2	349.9	313.4	36.46	9.597	
8,700.0	8,632.4	8,670.8	8,632.4	22.1	19.4	177.98	335.1	-595.2	349.9	313.4	36.48	9.592	
8,800.0	8,732.4	8,770.8	8,732.4	22.2	19.5	177.98	335.1	-595.2	349.9	313.1	36.77	9.516	
8,900.0	8,832.4	8,870.8	8,832.4	22.3	19.6	177.98	335.1	-595.2	349.9	312.8	37.06	9.441	
8,992.6	8,925.0	8,963.4	8,925.0	22.4	19.8	177.98	335.1	-595.2	349.9	312.6	37.33	9.373	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-15A - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	169.13	-42.6	8.2	43.4				
100.0	100.0	100.0	100.0	0.1	0.1	169.13	-42.6	8.2	43.4	43.1	0.27	159.381	
200.0	200.0	200.0	200.0	0.3	0.3	169.13	-42.6	8.2	43.4	42.8	0.62	69.841	CC, ES
300.0	300.0	298.3	298.3	0.5	0.5	-153.19	-43.8	10.4	47.4	46.4	0.97	48.716	
400.0	399.6	395.1	394.8	0.7	0.7	-161.54	-47.4	16.9	60.4	59.0	1.33	45.267	SF
487.3	486.2	477.2	476.2	1.0	0.9	-168.47	-52.3	25.8	79.9	78.3	1.64	48.647	
500.0	498.8	489.0	487.9	1.0	1.0	-169.36	-53.1	27.3	83.4	81.7	1.69	49.455	
600.0	597.6	579.7	577.2	1.3	1.3	-174.94	-60.7	41.2	113.4	111.4	2.03	55.782	
700.0	696.5	668.8	664.1	1.6	1.7	-178.80	-70.1	58.3	148.2	145.8	2.37	62.451	
800.0	795.4	761.6	754.4	1.9	2.0	178.52	-80.5	77.3	184.6	181.9	2.72	67.909	
900.0	894.3	854.5	844.7	2.2	2.5	176.73	-90.9	96.3	221.2	218.2	3.06	72.243	
1,000.0	993.1	947.3	935.0	2.5	2.9	175.45	-101.3	115.3	258.0	254.6	3.41	75.738	
1,100.0	1,092.0	1,040.2	1,025.3	2.8	3.3	174.48	-111.7	134.3	294.9	291.1	3.75	78.608	
1,200.0	1,190.9	1,133.0	1,115.6	3.1	3.7	173.73	-122.1	153.3	331.8	327.7	4.10	81.005	
1,300.0	1,289.7	1,225.9	1,205.9	3.5	4.1	173.13	-132.5	172.3	368.8	364.4	4.44	83.035	
1,400.0	1,388.6	1,318.8	1,296.2	3.8	4.5	172.64	-142.9	191.3	405.8	401.0	4.79	84.776	
1,500.0	1,487.5	1,411.6	1,386.4	4.1	4.9	172.24	-153.3	210.3	442.8	437.7	5.13	86.284	
1,600.0	1,586.4	1,504.5	1,476.7	4.4	5.3	171.89	-163.7	229.3	479.8	474.4	5.48	87.603	
1,700.0	1,685.2	1,597.3	1,567.0	4.7	5.8	171.59	-174.1	248.3	516.9	511.1	5.82	88.766	
1,800.0	1,784.1	1,690.2	1,657.3	5.0	6.2	171.34	-184.5	267.3	554.0	547.8	6.17	89.798	
1,900.0	1,883.0	1,783.0	1,747.6	5.3	6.6	171.11	-194.9	286.3	591.0	584.5	6.51	90.722	
2,000.0	1,981.8	1,875.9	1,837.9	5.7	7.0	170.92	-205.3	305.3	628.1	621.2	6.86	91.552	
2,100.0	2,080.7	1,968.7	1,928.2	6.0	7.4	170.74	-215.7	324.3	665.2	658.0	7.21	92.303	
2,200.0	2,179.6	2,061.6	2,018.5	6.3	7.8	170.58	-226.1	343.3	702.3	694.7	7.55	92.986	
2,300.0	2,278.4	2,154.4	2,108.8	6.6	8.3	170.44	-236.5	362.3	739.3	731.4	7.90	93.608	
2,400.0	2,377.3	2,247.3	2,199.1	6.9	8.7	170.31	-246.9	381.3	776.4	768.2	8.24	94.178	
2,500.0	2,476.2	2,340.1	2,289.4	7.2	9.1	170.20	-257.3	400.2	813.5	804.9	8.59	94.703	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-6C - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	44.33	8.4	8.2	11.7				
100.0	100.0	100.0	100.0	0.1	0.1	44.33	8.4	8.2	11.7	11.4	0.27	43.014	
200.0	200.0	200.0	200.0	0.3	0.3	44.33	8.4	8.2	11.7	11.1	0.62	18.849	CC, ES
300.0	300.0	299.9	299.8	0.5	0.5	86.24	10.6	6.8	12.1	11.2	0.99	12.309	
400.0	399.6	399.7	399.3	0.7	0.7	87.08	17.2	2.7	13.4	12.0	1.43	9.432	
487.3	486.2	486.8	485.7	1.0	1.0	88.03	26.6	-3.2	15.3	13.4	1.91	8.006	
500.0	498.8	499.5	498.3	1.0	1.0	88.02	28.3	-4.2	15.6	13.6	1.98	7.877	
600.0	597.6	599.3	596.4	1.3	1.3	79.67	43.5	-13.7	18.9	16.3	2.59	7.316	SF
700.0	696.5	699.1	694.3	1.6	1.7	70.46	60.1	-24.1	23.2	20.1	3.15	7.383	
800.0	795.4	799.0	792.2	1.9	2.1	64.23	76.7	-34.4	28.0	24.3	3.68	7.606	
900.0	894.3	898.8	890.1	2.2	2.5	59.83	93.3	-44.8	32.9	28.7	4.18	7.867	
1,000.0	993.1	998.7	988.1	2.5	2.8	56.60	109.9	-55.1	38.0	33.3	4.68	8.123	
1,100.0	1,092.0	1,098.5	1,086.0	2.8	3.2	54.14	126.5	-65.5	43.2	38.0	5.17	8.359	
1,200.0	1,190.9	1,198.4	1,183.9	3.1	3.6	52.20	143.0	-75.8	48.4	42.8	5.65	8.573	
1,300.0	1,289.7	1,298.2	1,281.8	3.5	4.0	50.65	159.6	-86.1	53.7	47.6	6.13	8.765	
1,400.0	1,388.6	1,398.1	1,379.7	3.8	4.4	49.38	176.2	-96.5	59.1	52.5	6.61	8.937	
1,500.0	1,487.5	1,497.9	1,477.7	4.1	4.7	48.31	192.8	-106.8	64.4	57.3	7.09	9.091	
1,600.0	1,586.4	1,597.8	1,575.6	4.4	5.1	47.41	209.4	-117.2	69.8	62.2	7.56	9.230	
1,700.0	1,685.2	1,697.6	1,673.5	4.7	5.5	46.64	225.9	-127.5	75.2	67.1	8.03	9.355	
1,800.0	1,784.1	1,797.5	1,771.4	5.0	5.9	45.97	242.5	-137.9	80.6	72.1	8.51	9.468	
1,900.0	1,883.0	1,897.3	1,869.3	5.3	6.3	45.39	259.1	-148.2	86.0	77.0	8.98	9.571	
2,000.0	1,981.8	1,997.2	1,967.3	5.7	6.7	44.88	275.7	-158.5	91.4	81.9	9.45	9.666	
2,100.0	2,080.7	2,097.0	2,065.2	6.0	7.0	44.42	292.3	-168.9	96.8	86.9	9.93	9.752	
2,200.0	2,179.6	2,196.9	2,163.1	6.3	7.4	44.01	308.8	-179.2	102.2	91.8	10.40	9.831	
2,300.0	2,278.4	2,296.7	2,261.0	6.6	7.8	43.64	325.4	-189.6	107.6	96.8	10.87	9.903	
2,400.0	2,377.3	2,396.6	2,358.9	6.9	8.2	43.31	342.0	-199.9	113.1	101.7	11.34	9.971	
2,500.0	2,476.2	2,496.4	2,456.9	7.2	8.6	43.01	358.6	-210.2	118.5	106.7	11.81	10.033	
2,600.0	2,575.1	2,596.3	2,554.8	7.5	9.0	42.73	375.2	-220.6	124.0	111.7	12.28	10.091	
2,700.0	2,673.9	2,696.1	2,652.7	7.9	9.3	42.48	391.8	-230.9	129.4	116.6	12.75	10.145	
2,800.0	2,772.8	2,796.0	2,750.6	8.2	9.7	42.25	408.3	-241.3	134.8	121.6	13.23	10.195	
2,900.0	2,871.7	2,895.8	2,848.5	8.5	10.1	42.04	424.9	-251.6	140.3	126.6	13.70	10.242	
3,000.0	2,970.5	2,995.7	2,946.4	8.8	10.5	41.84	441.5	-262.0	145.7	131.6	14.17	10.287	
3,100.0	3,069.4	3,095.5	3,044.4	9.1	10.9	41.65	458.1	-272.3	151.2	136.5	14.64	10.328	
3,200.0	3,168.3	3,195.4	3,142.3	9.4	11.3	41.48	474.7	-282.6	156.6	141.5	15.11	10.367	
3,300.0	3,267.2	3,295.2	3,240.2	9.8	11.6	41.32	491.2	-293.0	162.1	146.5	15.58	10.404	
3,400.0	3,366.0	3,395.1	3,338.1	10.1	12.0	41.18	507.8	-303.3	167.5	151.5	16.05	10.439	
3,500.0	3,464.9	3,494.9	3,436.0	10.4	12.4	41.04	524.4	-313.7	173.0	156.5	16.52	10.472	
3,600.0	3,563.8	3,594.8	3,534.0	10.7	12.8	40.91	541.0	-324.0	178.5	161.5	16.99	10.503	
3,700.0	3,662.6	3,694.6	3,631.9	11.0	13.2	40.78	557.6	-334.3	183.9	166.5	17.46	10.532	
3,800.0	3,761.5	3,794.5	3,729.8	11.3	13.6	40.67	574.2	-344.7	189.4	171.4	17.93	10.560	
3,900.0	3,860.4	3,894.3	3,827.7	11.6	14.0	40.56	590.7	-355.0	194.8	176.4	18.40	10.587	
4,000.0	3,959.3	3,994.2	3,925.6	12.0	14.3	40.45	607.3	-365.4	200.3	181.4	18.87	10.612	
4,100.0	4,058.1	4,094.0	4,023.6	12.3	14.7	40.35	623.9	-375.7	205.7	186.4	19.34	10.636	
4,200.0	4,157.0	4,193.9	4,121.5	12.6	15.1	40.26	640.5	-386.1	211.2	191.4	19.81	10.659	
4,300.0	4,255.9	4,293.7	4,219.4	12.9	15.5	40.17	657.1	-396.4	216.7	196.4	20.28	10.681	
4,400.0	4,354.7	4,393.6	4,317.3	13.2	15.9	40.09	673.6	-406.7	222.1	201.4	20.75	10.702	
4,500.0	4,453.6	4,493.4	4,415.2	13.5	16.3	40.01	690.2	-417.1	227.6	206.4	21.23	10.723	
4,600.0	4,552.5	4,593.3	4,513.2	13.8	16.6	39.93	706.8	-427.4	233.1	211.4	21.70	10.742	
4,700.0	4,651.4	4,693.1	4,611.1	14.2	17.0	39.86	723.4	-437.8	238.5	216.3	22.17	10.760	
4,800.0	4,750.2	4,793.0	4,709.0	14.5	17.4	39.79	740.0	-448.1	244.0	221.3	22.64	10.778	
4,900.0	4,849.1	4,892.8	4,806.9	14.8	17.8	39.72	756.5	-458.4	249.4	226.3	23.11	10.795	
5,000.0	4,948.0	4,992.7	4,904.8	15.1	18.2	39.66	773.1	-468.8	254.9	231.3	23.58	10.812	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-6C - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,046.8	5,092.5	5,002.8	15.4	18.6	39.60	789.7	-479.1	260.4	236.3	24.05	10.828	
5,200.0	5,145.7	5,192.4	5,100.7	15.7	18.9	39.54	806.3	-489.5	265.8	241.3	24.52	10.843	
5,300.0	5,244.6	5,292.2	5,198.6	16.1	19.3	39.48	822.9	-499.8	271.3	246.3	24.99	10.857	
5,400.0	5,343.4	5,392.1	5,296.5	16.4	19.7	39.43	839.5	-510.2	276.8	251.3	25.46	10.871	
5,500.0	5,442.3	5,491.9	5,394.4	16.7	20.1	39.38	856.0	-520.5	282.2	256.3	25.93	10.885	
5,600.0	5,541.2	5,591.8	5,492.3	17.0	20.5	39.33	872.6	-530.8	287.7	261.3	26.40	10.898	
5,700.0	5,640.1	5,691.6	5,590.3	17.3	20.9	39.28	889.2	-541.2	293.2	266.3	26.87	10.911	
5,800.0	5,738.9	5,791.5	5,688.2	17.6	21.3	39.24	905.8	-551.5	298.6	271.3	27.34	10.923	
5,900.0	5,837.8	5,891.3	5,786.1	18.0	21.6	39.19	922.4	-561.9	304.1	276.3	27.81	10.935	
6,000.0	5,936.7	5,991.2	5,884.0	18.3	22.0	39.15	938.9	-572.2	309.5	281.3	28.28	10.946	
6,100.0	6,035.5	6,091.0	5,981.9	18.6	22.4	39.11	955.5	-582.6	315.0	286.3	28.75	10.958	
6,200.0	6,134.4	6,193.7	6,082.6	18.9	22.8	39.08	972.5	-593.1	320.4	291.1	29.23	10.961	
6,236.7	6,170.7	6,234.3	6,122.6	19.0	22.9	39.12	978.6	-597.0	321.8	292.4	29.42	10.939	
6,300.0	6,233.4	6,304.4	6,191.8	19.2	23.1	39.26	988.1	-602.9	323.8	294.1	29.75	10.885	
6,400.0	6,332.8	6,415.3	6,301.8	19.4	23.4	39.42	1,000.2	-610.4	326.4	296.2	30.20	10.810	
6,500.0	6,432.5	6,526.3	6,412.3	19.6	23.6	39.51	1,008.7	-615.7	328.4	297.8	30.56	10.744	
6,600.0	6,532.4	6,637.4	6,523.2	19.7	23.8	39.53	1,013.5	-618.7	329.7	298.8	30.85	10.686	
6,667.6	6,600.0	6,712.5	6,598.3	19.8	23.9	-2.07	1,014.7	-619.5	330.2	299.2	31.01	10.648	
6,700.0	6,632.4	6,746.5	6,632.4	19.8	23.9	-2.07	1,014.8	-619.5	330.2	299.1	31.10	10.619	
6,800.0	6,732.4	6,846.5	6,732.4	19.9	24.0	-2.07	1,014.8	-619.5	330.2	298.9	31.36	10.530	
6,900.0	6,832.4	6,946.5	6,832.4	20.1	24.1	-2.07	1,014.8	-619.5	330.2	298.6	31.62	10.442	
7,000.0	6,932.4	7,046.5	6,932.4	20.2	24.2	-2.07	1,014.8	-619.5	330.2	298.3	31.89	10.355	
7,100.0	7,032.4	7,146.5	7,032.4	20.3	24.2	-2.07	1,014.8	-619.5	330.2	298.1	32.16	10.268	
7,200.0	7,132.4	7,246.5	7,132.4	20.4	24.3	-2.07	1,014.8	-619.5	330.2	297.8	32.43	10.183	
7,300.0	7,232.4	7,346.5	7,232.4	20.5	24.4	-2.07	1,014.8	-619.5	330.2	297.5	32.70	10.098	
7,400.0	7,332.4	7,446.5	7,332.4	20.6	24.5	-2.07	1,014.8	-619.5	330.2	297.2	32.97	10.015	
7,500.0	7,432.4	7,546.5	7,432.4	20.7	24.6	-2.07	1,014.8	-619.5	330.2	297.0	33.25	9.932	
7,600.0	7,532.4	7,646.5	7,532.4	20.8	24.7	-2.07	1,014.8	-619.5	330.2	296.7	33.52	9.850	
7,700.0	7,632.4	7,746.5	7,632.4	20.9	24.8	-2.07	1,014.8	-619.5	330.2	296.4	33.80	9.770	
7,800.0	7,732.4	7,846.5	7,732.4	21.0	24.9	-2.07	1,014.8	-619.5	330.2	296.1	34.08	9.690	
7,900.0	7,832.4	7,946.5	7,832.4	21.1	25.0	-2.07	1,014.8	-619.5	330.2	295.9	34.36	9.611	
8,000.0	7,932.4	8,046.5	7,932.4	21.3	25.1	-2.07	1,014.8	-619.5	330.2	295.6	34.64	9.533	
8,100.0	8,032.4	8,146.5	8,032.4	21.4	25.2	-2.07	1,014.8	-619.5	330.2	295.3	34.92	9.456	
8,200.0	8,132.4	8,246.5	8,132.4	21.5	25.3	-2.07	1,014.8	-619.5	330.2	295.0	35.20	9.380	
8,300.0	8,232.4	8,346.5	8,232.4	21.6	25.4	-2.07	1,014.8	-619.5	330.2	294.7	35.49	9.305	
8,400.0	8,332.4	8,446.5	8,332.4	21.7	25.5	-2.07	1,014.8	-619.5	330.2	294.4	35.77	9.231	
8,500.0	8,432.4	8,546.5	8,432.4	21.8	25.6	-2.07	1,014.8	-619.5	330.2	294.2	36.06	9.157	
8,600.0	8,532.4	8,646.5	8,532.4	22.0	25.7	-2.07	1,014.8	-619.5	330.2	293.9	36.35	9.085	
8,692.6	8,625.0	8,739.2	8,625.0	22.1	25.8	-2.07	1,014.8	-619.5	330.2	293.6	36.62	9.018	
8,700.0	8,632.4	8,746.5	8,632.4	22.1	25.8	-2.07	1,014.8	-619.5	330.2	293.6	36.64	9.013	
8,800.0	8,732.4	8,846.5	8,732.4	22.2	25.9	-2.07	1,014.8	-619.5	330.2	293.3	36.93	8.942	
8,900.0	8,832.4	8,946.5	8,832.4	22.3	26.0	-2.07	1,014.8	-619.5	330.2	293.0	37.22	8.872	
8,992.6	8,925.0	9,039.2	8,925.0	22.4	26.1	-2.07	1,014.8	-619.5	330.2	292.7	37.49	8.809	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 28-9B - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	135.67	-8.4	8.2	11.7				
100.0	100.0	100.0	100.0	0.1	0.1	135.67	-8.4	8.2	11.7	11.4	0.27	43.014	
200.0	200.0	200.0	200.0	0.3	0.3	135.67	-8.4	8.2	11.7	11.1	0.62	18.849	CC, ES
300.0	300.0	299.6	299.5	0.5	0.5	168.76	-7.4	10.6	15.5	14.5	0.98	15.871	SF
400.0	399.6	398.1	397.7	0.7	0.7	157.92	-4.5	17.7	27.6	26.3	1.35	20.448	
487.3	486.2	482.4	481.4	1.0	0.9	152.63	-0.5	27.5	45.3	43.6	1.71	26.495	
500.0	498.8	494.5	493.3	1.0	1.0	152.11	0.1	29.2	48.3	46.6	1.76	27.435	
600.0	597.6	588.6	586.0	1.3	1.3	148.20	6.4	44.7	74.6	72.4	2.21	33.738	
700.0	696.5	680.4	675.4	1.6	1.7	144.78	14.2	63.9	104.8	102.1	2.68	39.085	
800.0	795.4	774.9	766.9	1.9	2.1	142.25	23.1	85.7	137.0	133.9	3.16	43.321	
900.0	894.3	869.4	858.5	2.2	2.6	140.68	31.9	107.4	169.5	165.8	3.65	46.452	
1,000.0	993.1	964.0	950.0	2.5	3.0	139.62	40.8	129.2	202.0	197.8	4.13	48.847	
1,100.0	1,092.0	1,058.5	1,041.5	2.8	3.5	138.85	49.6	151.0	234.5	229.9	4.62	50.734	
1,200.0	1,190.9	1,153.0	1,133.1	3.1	3.9	138.27	58.5	172.8	267.1	261.9	5.11	52.258	
1,300.0	1,289.7	1,247.5	1,224.6	3.5	4.4	137.81	67.3	194.6	299.6	294.0	5.60	53.513	
1,400.0	1,388.6	1,342.0	1,316.2	3.8	4.8	137.44	76.2	216.4	332.2	326.1	6.09	54.564	
1,500.0	1,487.5	1,436.6	1,407.7	4.1	5.3	137.14	85.0	238.2	364.8	358.3	6.58	55.457	
1,600.0	1,586.4	1,531.1	1,499.3	4.4	5.7	136.89	93.9	260.0	397.5	390.4	7.07	56.225	
1,700.0	1,685.2	1,625.6	1,590.8	4.7	6.2	136.68	102.7	281.8	430.1	422.5	7.56	56.892	
1,800.0	1,784.1	1,720.1	1,682.4	5.0	6.6	136.50	111.6	303.5	462.7	454.7	8.05	57.476	
1,900.0	1,883.0	1,814.6	1,773.9	5.3	7.1	136.34	120.4	325.3	495.3	486.8	8.54	57.993	
2,000.0	1,981.8	1,909.2	1,865.5	5.7	7.5	136.20	129.2	347.1	528.0	518.9	9.03	58.453	
2,100.0	2,080.7	2,003.7	1,957.0	6.0	8.0	136.08	138.1	368.9	560.6	551.1	9.52	58.865	
2,200.0	2,179.6	2,098.2	2,048.6	6.3	8.4	135.97	146.9	390.7	593.2	583.2	10.01	59.236	
2,300.0	2,278.4	2,192.7	2,140.1	6.6	8.9	135.87	155.8	412.5	625.9	615.4	10.51	59.572	
2,400.0	2,377.3	2,287.2	2,231.6	6.9	9.3	135.78	164.6	434.3	658.5	647.5	11.00	59.878	
2,500.0	2,476.2	2,381.7	2,323.2	7.2	9.8	135.70	173.5	456.1	691.2	679.7	11.49	60.157	
2,600.0	2,575.1	2,476.3	2,414.7	7.5	10.2	135.63	182.3	477.9	723.8	711.8	11.98	60.413	
2,700.0	2,673.9	2,570.8	2,506.3	7.9	10.7	135.56	191.2	499.6	756.4	744.0	12.47	60.649	
2,800.0	2,772.8	2,665.3	2,597.8	8.2	11.1	135.50	200.0	521.4	789.1	776.1	12.96	60.867	
2,900.0	2,871.7	2,759.8	2,689.4	8.5	11.6	135.44	208.9	543.2	821.7	808.3	13.46	61.069	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - Benjamin Fee 33-1B - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-108.74	-33.9	-99.8	105.4				
100.0	100.0	100.0	100.0	0.1	0.1	-108.74	-33.9	-99.8	105.4	105.1	0.27	387.105	
200.0	200.0	200.0	200.0	0.3	0.3	-108.74	-33.9	-99.8	105.4	104.8	0.62	169.630	
300.0	300.0	300.0	300.0	0.5	0.5	-68.51	-33.9	-99.8	104.4	103.4	0.98	106.800	
400.0	399.6	399.6	399.6	0.7	0.7	-72.69	-33.9	-99.8	101.8	100.4	1.37	74.381	
487.3	486.2	490.2	490.1	1.0	0.8	-79.83	-33.9	-97.7	97.3	95.5	1.77	54.986	
500.0	498.8	503.2	503.2	1.0	0.8	-81.18	-33.9	-97.0	96.4	94.6	1.83	52.686	
600.0	597.6	603.2	602.8	1.3	1.0	-93.56	-34.2	-89.2	89.7	87.3	2.32	38.669	
659.9	656.9	660.5	659.8	1.5	1.2	-102.63	-35.8	-83.1	88.1	85.5	2.62	33.595	CC, ES
700.0	696.5	698.3	697.3	1.6	1.3	-109.21	-37.7	-78.7	88.9	86.1	2.82	31.561	
800.0	795.4	791.0	788.8	1.9	1.5	-125.51	-45.0	-66.1	98.6	95.4	3.27	30.165	SF
900.0	894.3	880.8	876.8	2.2	1.9	-139.04	-55.7	-51.7	119.5	115.8	3.64	32.855	
1,000.0	993.1	967.5	960.9	2.5	2.2	-148.83	-69.4	-35.7	149.6	145.6	3.94	37.920	
1,100.0	1,092.0	1,051.0	1,041.0	2.8	2.7	-155.56	-85.7	-18.5	186.8	182.6	4.23	44.181	
1,200.0	1,190.9	1,131.2	1,116.8	3.1	3.1	-160.19	-104.1	-0.4	229.6	225.1	4.50	51.003	
1,300.0	1,289.7	1,207.9	1,188.4	3.5	3.6	-163.43	-124.3	18.6	277.2	272.4	4.77	58.067	
1,400.0	1,388.6	1,281.1	1,255.6	3.8	4.2	-165.75	-145.9	38.0	328.7	323.6	5.04	65.156	
1,500.0	1,487.5	1,359.6	1,326.7	4.1	4.7	-167.63	-170.9	59.9	383.2	377.8	5.32	72.014	
1,600.0	1,586.4	1,442.7	1,401.8	4.4	5.4	-169.14	-197.6	83.2	438.1	432.5	5.60	78.164	
1,700.0	1,685.2	1,525.7	1,477.0	4.7	6.0	-170.32	-224.2	106.5	493.2	487.3	5.89	83.719	
1,800.0	1,784.1	1,608.8	1,552.1	5.0	6.6	-171.26	-250.9	129.7	548.4	542.2	6.18	88.749	
1,900.0	1,883.0	1,691.9	1,627.3	5.3	7.3	-172.03	-277.5	153.0	603.7	597.2	6.47	93.312	
2,000.0	1,981.8	1,774.9	1,702.4	5.7	7.9	-172.67	-304.2	176.3	659.1	652.3	6.76	97.469	
2,100.0	2,080.7	1,858.0	1,777.6	6.0	8.6	-173.21	-330.8	199.6	714.5	707.4	7.06	101.273	
2,200.0	2,179.6	1,941.0	1,852.7	6.3	9.2	-173.68	-357.5	222.9	770.0	762.6	7.35	104.765	
2,300.0	2,278.4	2,024.1	1,927.9	6.6	9.9	-174.08	-384.2	246.2	825.4	817.8	7.64	107.980	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - GMR 28-7D Existing - DD - Schlumberger Surveys

Offset Site Error: 0.0 ft

Survey Program: 140-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-131.24	-87.5	-99.8	132.7				
100.0	100.0	102.6	102.6	0.1	0.2	-131.07	-86.5	-99.3	131.7	131.5	0.29	451.091	
200.0	200.0	205.1	205.0	0.3	0.3	-130.69	-83.9	-97.6	128.8	128.2	0.64	200.467	
300.0	300.0	310.1	309.9	0.5	0.6	-90.51	-79.9	-93.1	123.1	122.1	1.00	123.433	
400.0	399.6	412.2	411.5	0.7	0.8	-95.27	-74.1	-85.4	114.1	112.7	1.40	81.653	
487.3	486.2	500.6	499.3	1.0	1.0	-102.24	-67.5	-77.6	105.7	103.9	1.79	58.950	
500.0	498.8	513.5	512.1	1.0	1.1	-103.37	-66.3	-76.5	104.5	102.7	1.85	56.419	
600.0	597.6	614.4	611.9	1.3	1.4	-113.83	-56.1	-66.1	95.1	92.8	2.34	40.641	
700.0	696.5	714.4	710.4	1.6	1.8	-127.05	-44.0	-53.6	87.0	84.1	2.86	30.376	
800.0	795.4	814.3	808.2	1.9	2.2	-142.96	-28.9	-39.8	81.3	77.8	3.44	23.633	
861.1	855.8	874.3	866.6	2.1	2.4	-153.93	-18.5	-30.6	80.1	76.2	3.82	20.972	CC, ES
900.0	894.3	912.5	903.6	2.2	2.6	-161.23	-11.4	-24.5	80.6	76.5	4.07	19.800	
1,000.0	993.1	1,009.5	997.2	2.5	3.1	-179.55	8.3	-8.2	86.8	82.1	4.76	18.242	SF
1,100.0	1,092.0	1,104.0	1,087.5	2.8	3.6	164.30	29.5	9.9	101.7	96.1	5.51	18.460	
1,200.0	1,190.9	1,197.3	1,175.8	3.1	4.2	151.71	52.2	29.6	123.8	117.5	6.25	19.809	
1,300.0	1,289.7	1,288.6	1,261.6	3.5	4.8	142.67	75.3	50.4	151.6	144.7	6.93	21.891	
1,400.0	1,388.6	1,380.9	1,347.9	3.8	5.4	136.08	99.2	72.9	183.6	176.1	7.55	24.331	
1,500.0	1,487.5	1,478.1	1,439.1	4.1	6.0	131.29	124.0	95.4	216.0	207.9	8.16	26.489	
1,600.0	1,586.4	1,567.8	1,523.4	4.4	6.6	128.06	146.9	116.1	249.3	240.5	8.73	28.555	
1,700.0	1,685.2	1,659.4	1,609.0	4.7	7.2	125.51	170.2	138.5	284.4	275.1	9.30	30.583	
1,800.0	1,784.1	1,756.5	1,700.1	5.0	7.8	123.43	194.8	161.6	319.3	309.4	9.88	32.301	
1,900.0	1,883.0	1,852.5	1,790.4	5.3	8.4	121.79	219.0	183.5	353.5	343.0	10.47	33.770	
2,000.0	1,981.8	1,940.2	1,872.8	5.7	8.9	120.53	241.3	203.5	388.1	377.1	11.03	35.193	
2,100.0	2,080.7	2,027.9	1,954.7	6.0	9.5	119.43	264.0	225.2	424.7	413.1	11.58	36.658	
2,200.0	2,179.6	2,123.1	2,043.6	6.3	10.2	118.43	288.7	248.8	461.4	449.2	12.16	37.931	
2,300.0	2,278.4	2,215.3	2,129.7	6.6	10.8	117.60	312.5	271.4	497.9	485.2	12.73	39.101	
2,400.0	2,377.3	2,314.7	2,222.6	6.9	11.4	116.83	338.2	295.5	534.4	521.1	13.33	40.105	
2,500.0	2,476.2	2,419.8	2,321.5	7.2	12.0	116.15	364.7	319.2	569.1	555.2	13.93	40.845	
2,600.0	2,575.1	2,518.5	2,414.9	7.5	12.6	115.61	389.1	340.2	602.5	588.0	14.52	41.496	
2,700.0	2,673.9	2,616.0	2,507.3	7.9	13.2	115.18	412.7	360.4	635.3	620.2	15.10	42.066	
2,800.0	2,772.8	2,710.7	2,597.2	8.2	13.7	114.83	435.1	380.0	667.9	652.2	15.67	42.610	
2,900.0	2,871.7	2,799.6	2,681.6	8.5	14.3	114.56	456.0	398.5	700.7	684.5	16.24	43.142	
3,000.0	2,970.5	2,883.5	2,760.8	8.8	14.8	114.27	476.6	416.9	734.8	718.0	16.80	43.745	
3,100.0	3,069.4	2,978.7	2,850.4	9.1	15.4	113.94	500.5	438.4	769.6	752.3	17.37	44.298	
3,200.0	3,168.3	3,079.2	2,945.4	9.4	16.0	113.66	525.1	460.5	803.8	785.8	17.97	44.735	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design K28NW Pad - GMU 28-14D Existing - Schlumberger Surveys - Schlumberger Surveys

Offset Site Error: 0.0 ft

Survey Program: 270-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-136.87	-124.9	-117.1	171.2				
100.0	100.0	100.2	100.2	0.1	0.2	-136.85	-124.9	-117.1	171.2	170.9	0.30	576.710	
200.0	200.0	200.3	200.3	0.3	0.3	-136.81	-124.7	-117.0	171.0	170.4	0.63	270.614	
246.8	246.8	247.2	247.2	0.4	0.4	-95.40	-124.6	-117.0	171.0	170.2	0.79	215.885	CC
300.0	300.0	300.1	300.1	0.5	0.5	-96.04	-124.4	-117.0	171.1	170.1	0.98	174.733	ES
400.0	399.6	398.0	398.0	0.7	0.7	-98.61	-124.8	-117.1	172.4	171.0	1.37	125.866	
487.3	486.2	482.3	482.3	1.0	0.8	-101.89	-125.7	-118.2	175.8	174.1	1.75	100.306	
500.0	498.8	494.7	494.7	1.0	0.8	-102.47	-125.9	-118.4	176.5	174.7	1.81	97.526	
600.0	597.6	591.2	591.1	1.3	1.0	-106.85	-128.0	-120.1	183.2	180.9	2.26	81.099	
700.0	696.5	685.3	685.1	1.6	1.2	-111.07	-132.0	-121.8	192.8	190.1	2.70	71.401	
800.0	795.4	779.5	779.1	1.9	1.4	-114.79	-138.0	-124.8	205.8	202.7	3.13	65.678	
900.0	894.3	876.0	875.3	2.2	1.6	-117.98	-145.1	-128.9	221.0	217.4	3.57	61.965	
1,000.0	993.1	968.9	967.6	2.5	1.8	-120.30	-152.4	-134.5	237.7	233.7	4.00	59.500	
1,100.0	1,092.0	1,058.6	1,056.6	2.8	2.0	-121.88	-161.6	-142.3	257.8	253.4	4.43	58.227	
1,200.0	1,190.9	1,147.2	1,143.8	3.1	2.3	-122.83	-172.8	-152.5	281.1	276.2	4.87	57.701	SF
1,300.0	1,289.7	1,235.2	1,229.9	3.5	2.6	-123.33	-186.2	-164.8	307.4	302.1	5.33	57.706	
1,400.0	1,388.6	1,322.1	1,314.5	3.8	3.0	-123.70	-201.5	-177.7	336.3	330.6	5.79	58.112	
1,500.0	1,487.5	1,407.8	1,397.3	4.1	3.4	-124.01	-219.0	-191.0	368.1	361.8	6.26	58.837	
1,600.0	1,586.4	1,498.1	1,484.1	4.4	3.8	-124.09	-238.6	-206.6	401.4	394.6	6.76	59.397	
1,700.0	1,685.2	1,592.4	1,574.3	4.7	4.3	-123.92	-259.2	-224.6	435.3	428.1	7.28	59.812	
1,800.0	1,784.1	1,691.4	1,669.1	5.0	4.8	-123.69	-280.0	-244.0	468.6	460.8	7.82	59.928	
1,900.0	1,883.0	1,784.3	1,758.2	5.3	5.3	-123.46	-298.9	-262.4	501.2	492.9	8.35	60.033	
2,000.0	1,981.8	1,872.5	1,842.6	5.7	5.7	-123.24	-317.6	-280.3	534.8	526.0	8.87	60.295	
2,100.0	2,080.7	1,962.4	1,928.2	6.0	6.2	-123.03	-337.5	-298.8	569.4	560.0	9.40	60.586	
2,200.0	2,179.6	2,054.1	2,015.5	6.3	6.7	-122.82	-358.1	-318.0	604.4	594.5	9.93	60.839	
2,300.0	2,278.4	2,153.4	2,110.0	6.6	7.3	-122.59	-380.4	-339.0	639.4	628.9	10.51	60.857	
2,400.0	2,377.3	2,263.0	2,214.6	6.9	7.9	-122.23	-402.6	-363.2	672.7	661.5	11.12	60.467	
2,500.0	2,476.2	2,355.6	2,303.0	7.2	8.4	-121.85	-419.8	-384.5	704.6	692.9	11.71	60.156	
2,600.0	2,575.1	2,441.8	2,384.9	7.5	8.9	-121.44	-436.3	-405.5	737.6	725.3	12.29	60.033	
2,700.0	2,673.9	2,537.0	2,474.9	7.9	9.5	-120.94	-455.4	-430.0	771.7	758.9	12.88	59.904	
2,800.0	2,772.8	2,607.9	2,541.7	8.2	9.9	-120.62	-470.6	-448.1	807.0	793.7	13.36	60.409	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Benjamin Fee 28-11B
Project:	Mamm Creek	**TVD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Reference Site:	K28NW Pad	**MD Reference:**	WELL @ 5965.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Benjamin Fee 28-11B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5965.0ft (Original Well Elev)	Coordinates are relative to: Benjamin Fee 28-11B
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Central Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: -1.44°