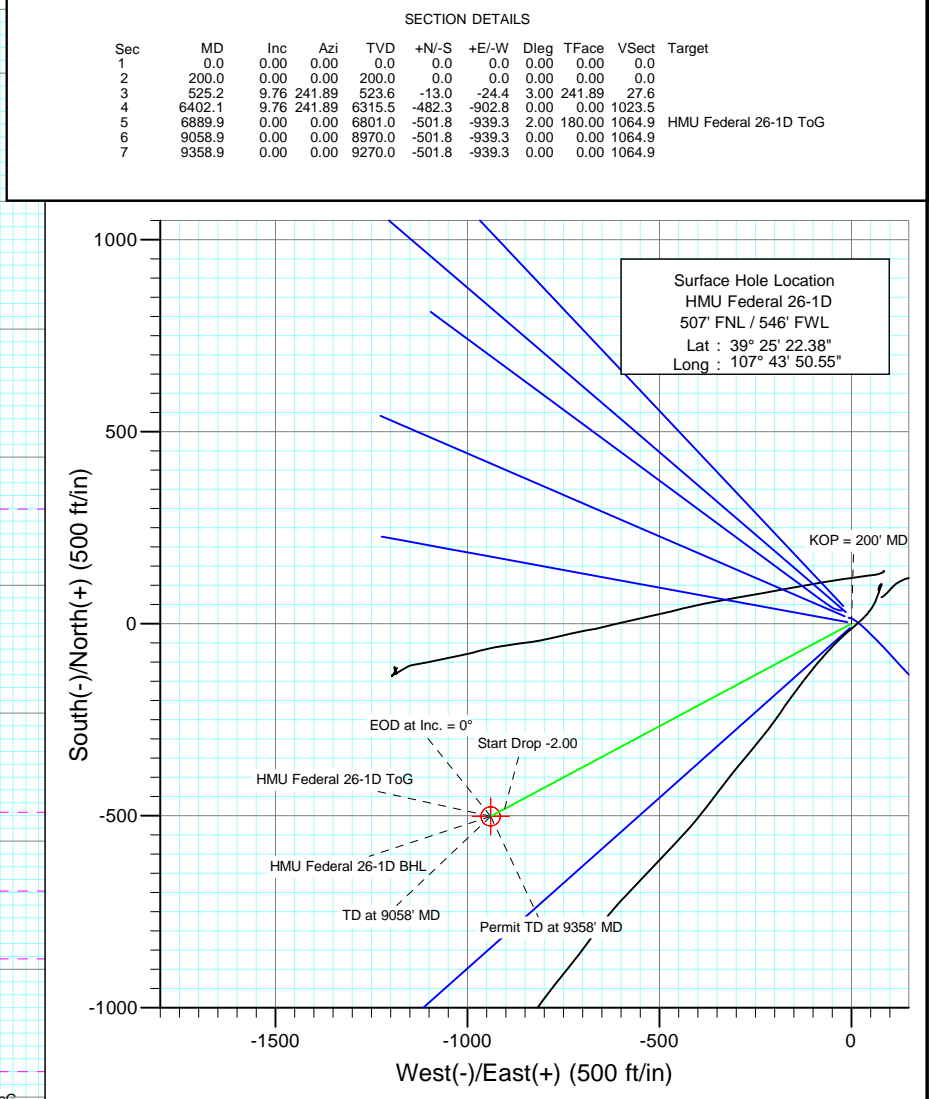
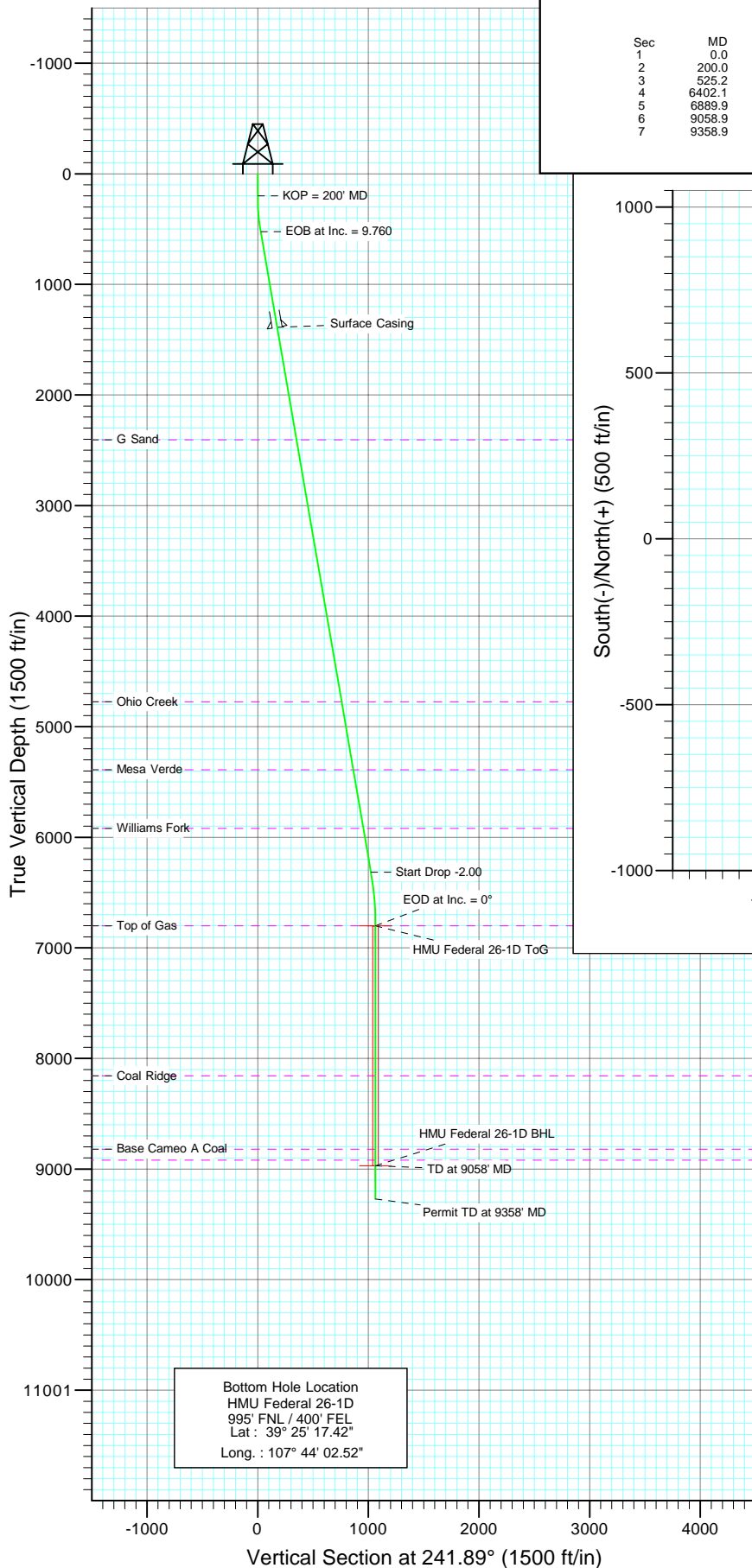




Project: Mamm Creek
 Site: (D25W)
 Well: HMU Federal 26-1D
 Wellbore: DD
 Design: Plan #2



Azimuths to True North
 Magnetic North: 10.30°

Magnetic Field
 Strength: 52346.2snT
 Dip Angle: 65.76°
 Date: 8/25/2010
 Model: IGRF200510

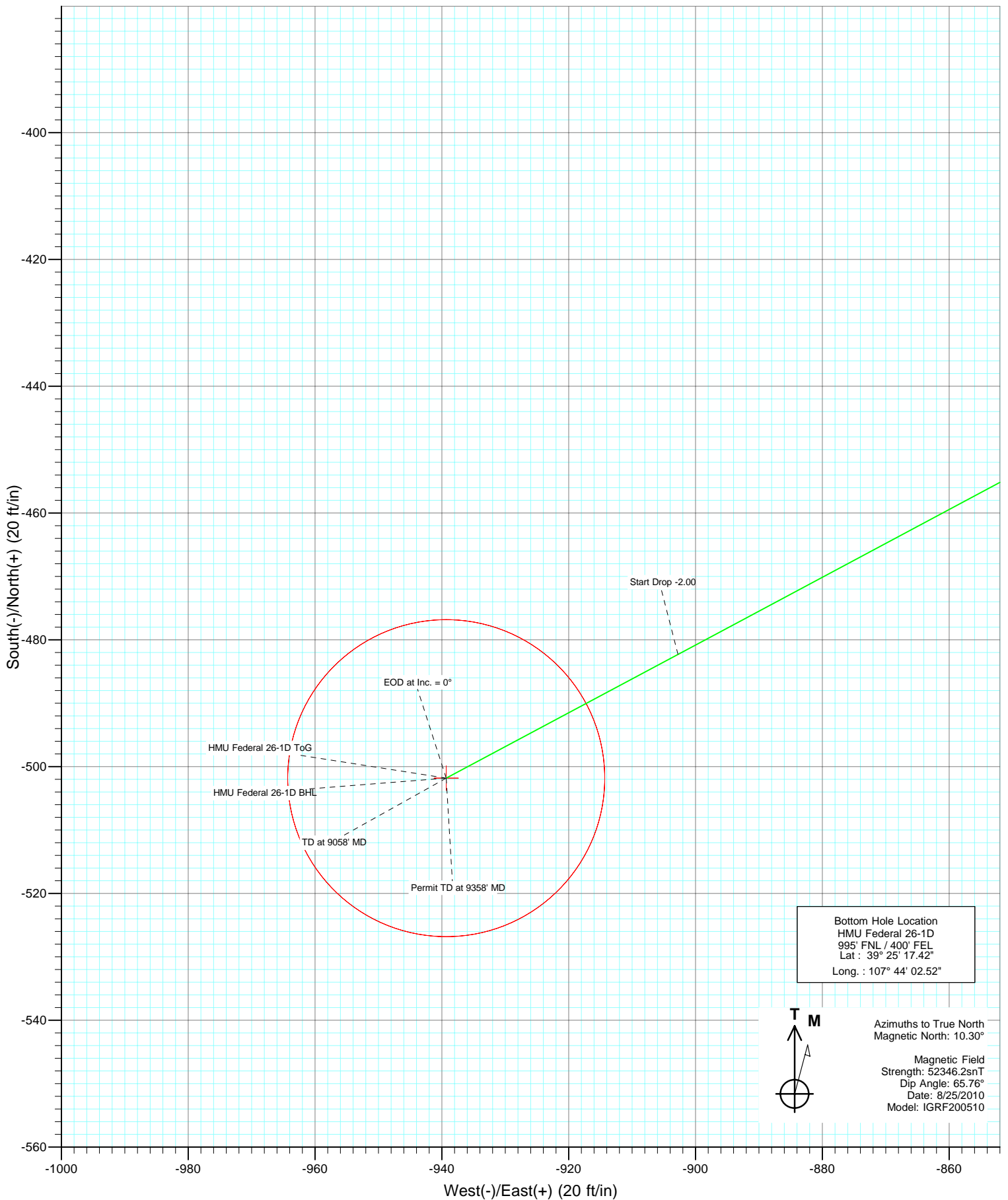
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2406.0	2435.2	G Sand
4775.0	4839.0	Ohio Creek
5390.0	5463.0	Mesa Verde
5919.0	5999.7	Williams Fork
6801.0	6889.9	Top of Gas
8157.0	8245.9	Coal Ridge
8820.0	8908.9	Base Cameo A Coal
8919.0	9007.9	Rollins

DESIGN DETAILS: Plan #2
 Job #10xxx: KR
 WELL @ 7250.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
HMU Federal 26-1D BHL	241.89	Slot	0.0	0.0	0.0



Project: Mamm Creek
Site: (D25W)
Well: HMU Federal 26-1D
Wellbore: DD
Design: Plan #2



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site:	(D25W)	North Reference:	True
Well:	HMU Federal 26-1D	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		(D25W)			
Site Position:		Northing:	1,586,700.90 ft	Latitude:	39.423009
From:	Lat/Long	Easting:	2,369,887.50 ft	Longitude:	-107.730782
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.41 °

Well	HMU Federal 26-1D					
Well Position	+N/-S	0.0 ft	Northing:	1,586,654.62 ft	Latitude:	39.422883
	+E/-W	0.0 ft	Easting:	2,369,907.18 ft	Longitude:	-107.730708
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,228.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/25/2010	10.30	65.76	52,346

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	241.89

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	
525.2	9.76	241.89	523.6	-13.0	-24.4	3.00	3.00	0.00	241.89	
6,402.1	9.76	241.89	6,315.5	-482.3	-902.8	0.00	0.00	0.00	0.00	
6,889.9	0.00	0.00	6,801.0	-501.8	-939.3	2.00	-2.00	0.00	180.00	HMU Federal 26-1D 1
9,058.9	0.00	0.00	8,970.0	-501.8	-939.3	0.00	0.00	0.00	0.00	
9,358.9	0.00	0.00	9,270.0	-501.8	-939.3	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site:	(D25W)	North Reference:	True
Well:	HMU Federal 26-1D	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	241.89	300.0	-1.2	-2.3	2.6	3.00	3.00	
400.0	6.00	241.89	399.6	-4.9	-9.2	10.5	3.00	3.00	
500.0	9.00	241.89	498.8	-11.1	-20.7	23.5	3.00	3.00	
525.2	9.76	241.89	523.6	-13.0	-24.4	27.6	3.00	3.00	EOB at Inc. = 9.760
600.0	9.76	241.89	597.3	-19.0	-35.5	40.3	0.00	0.00	
700.0	9.76	241.89	695.9	-27.0	-50.5	57.2	0.00	0.00	
800.0	9.76	241.89	794.5	-35.0	-65.4	74.2	0.00	0.00	
900.0	9.76	241.89	893.0	-42.9	-80.4	91.1	0.00	0.00	
1,000.0	9.76	241.89	991.6	-50.9	-95.3	108.1	0.00	0.00	
1,100.0	9.76	241.89	1,090.1	-58.9	-110.3	125.0	0.00	0.00	
1,200.0	9.76	241.89	1,188.7	-66.9	-125.2	142.0	0.00	0.00	
1,300.0	9.76	241.89	1,287.2	-74.9	-140.2	158.9	0.00	0.00	
1,400.0	9.76	241.89	1,385.8	-82.9	-155.1	175.9	0.00	0.00	
1,403.0	9.76	241.89	1,388.7	-83.1	-155.6	176.4	0.00	0.00	Surface Casing
1,500.0	9.76	241.89	1,484.3	-90.9	-170.1	192.8	0.00	0.00	
1,600.0	9.76	241.89	1,582.9	-98.8	-185.0	209.8	0.00	0.00	
1,700.0	9.76	241.89	1,681.4	-106.8	-200.0	226.7	0.00	0.00	
1,800.0	9.76	241.89	1,780.0	-114.8	-214.9	243.6	0.00	0.00	
1,900.0	9.76	241.89	1,878.5	-122.8	-229.8	260.6	0.00	0.00	
2,000.0	9.76	241.89	1,977.1	-130.8	-244.8	277.5	0.00	0.00	
2,100.0	9.76	241.89	2,075.7	-138.8	-259.7	294.5	0.00	0.00	
2,200.0	9.76	241.89	2,174.2	-146.7	-274.7	311.4	0.00	0.00	
2,300.0	9.76	241.89	2,272.8	-154.7	-289.6	328.4	0.00	0.00	
2,400.0	9.76	241.89	2,371.3	-162.7	-304.6	345.3	0.00	0.00	
2,435.2	9.76	241.89	2,406.0	-165.5	-309.8	351.3	0.00	0.00	G Sand
2,500.0	9.76	241.89	2,469.9	-170.7	-319.5	362.3	0.00	0.00	
2,600.0	9.76	241.89	2,568.4	-178.7	-334.5	379.2	0.00	0.00	
2,700.0	9.76	241.89	2,667.0	-186.7	-349.4	396.2	0.00	0.00	
2,800.0	9.76	241.89	2,765.5	-194.7	-364.4	413.1	0.00	0.00	
2,900.0	9.76	241.89	2,864.1	-202.6	-379.3	430.1	0.00	0.00	
3,000.0	9.76	241.89	2,962.6	-210.6	-394.3	447.0	0.00	0.00	
3,100.0	9.76	241.89	3,061.2	-218.6	-409.2	463.9	0.00	0.00	
3,200.0	9.76	241.89	3,159.7	-226.6	-424.2	480.9	0.00	0.00	
3,300.0	9.76	241.89	3,258.3	-234.6	-439.1	497.8	0.00	0.00	
3,400.0	9.76	241.89	3,356.9	-242.6	-454.1	514.8	0.00	0.00	
3,500.0	9.76	241.89	3,455.4	-250.6	-469.0	531.7	0.00	0.00	
3,600.0	9.76	241.89	3,554.0	-258.5	-483.9	548.7	0.00	0.00	
3,700.0	9.76	241.89	3,652.5	-266.5	-498.9	565.6	0.00	0.00	
3,800.0	9.76	241.89	3,751.1	-274.5	-513.8	582.6	0.00	0.00	
3,900.0	9.76	241.89	3,849.6	-282.5	-528.8	599.5	0.00	0.00	
4,000.0	9.76	241.89	3,948.2	-290.5	-543.7	616.5	0.00	0.00	
4,100.0	9.76	241.89	4,046.7	-298.5	-558.7	633.4	0.00	0.00	
4,200.0	9.76	241.89	4,145.3	-306.4	-573.6	650.3	0.00	0.00	
4,300.0	9.76	241.89	4,243.8	-314.4	-588.6	667.3	0.00	0.00	
4,400.0	9.76	241.89	4,342.4	-322.4	-603.5	684.2	0.00	0.00	
4,500.0	9.76	241.89	4,440.9	-330.4	-618.5	701.2	0.00	0.00	
4,600.0	9.76	241.89	4,539.5	-338.4	-633.4	718.1	0.00	0.00	
4,700.0	9.76	241.89	4,638.1	-346.4	-648.4	735.1	0.00	0.00	
4,800.0	9.76	241.89	4,736.6	-354.4	-663.3	752.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site:	(D25W)	North Reference:	True
Well:	HMU Federal 26-1D	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
4,839.0	9.76	241.89	4,775.0	-357.5	-669.1	758.6	0.00	0.00	Ohio Creek
4,900.0	9.76	241.89	4,835.2	-362.3	-678.3	769.0	0.00	0.00	
5,000.0	9.76	241.89	4,933.7	-370.3	-693.2	785.9	0.00	0.00	
5,100.0	9.76	241.89	5,032.3	-378.3	-708.1	802.9	0.00	0.00	
5,200.0	9.76	241.89	5,130.8	-386.3	-723.1	819.8	0.00	0.00	
5,300.0	9.76	241.89	5,229.4	-394.3	-738.0	836.8	0.00	0.00	
5,400.0	9.76	241.89	5,327.9	-402.3	-753.0	853.7	0.00	0.00	
5,463.0	9.76	241.89	5,390.0	-407.3	-762.4	864.4	0.00	0.00	Mesa Verde
5,500.0	9.76	241.89	5,426.5	-410.3	-767.9	870.6	0.00	0.00	
5,600.0	9.76	241.89	5,525.0	-418.2	-782.9	887.6	0.00	0.00	
5,700.0	9.76	241.89	5,623.6	-426.2	-797.8	904.5	0.00	0.00	
5,800.0	9.76	241.89	5,722.1	-434.2	-812.8	921.5	0.00	0.00	
5,900.0	9.76	241.89	5,820.7	-442.2	-827.7	938.4	0.00	0.00	
5,999.7	9.76	241.89	5,919.0	-450.2	-842.6	955.3	0.00	0.00	Williams Fork
6,000.0	9.76	241.89	5,919.2	-450.2	-842.7	955.4	0.00	0.00	
6,100.0	9.76	241.89	6,017.8	-458.2	-857.6	972.3	0.00	0.00	
6,200.0	9.76	241.89	6,116.4	-466.1	-872.6	989.3	0.00	0.00	
6,300.0	9.76	241.89	6,214.9	-474.1	-887.5	1,006.2	0.00	0.00	
6,400.0	9.76	241.89	6,313.5	-482.1	-902.5	1,023.2	0.00	0.00	
6,402.1	9.76	241.89	6,315.5	-482.3	-902.8	1,023.5	0.00	0.00	Start Drop -2.00
6,500.0	7.80	241.89	6,412.3	-489.3	-915.9	1,038.5	2.00	-2.00	
6,600.0	5.80	241.89	6,511.6	-494.9	-926.4	1,050.3	2.00	-2.00	
6,700.0	3.80	241.89	6,611.2	-498.8	-933.8	1,058.7	2.00	-2.00	
6,800.0	1.80	241.89	6,711.1	-501.1	-938.1	1,063.5	2.00	-2.00	
6,889.9	0.00	0.00	6,801.0	-501.8	-939.3	1,064.9	2.00	-2.00	EOD at Inc. = 0° - Top of Gas - HMU Federal 26-1D
6,900.0	0.00	0.00	6,811.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,000.0	0.00	0.00	6,911.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,100.0	0.00	0.00	7,011.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,200.0	0.00	0.00	7,111.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,300.0	0.00	0.00	7,211.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,400.0	0.00	0.00	7,311.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,500.0	0.00	0.00	7,411.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,600.0	0.00	0.00	7,511.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,700.0	0.00	0.00	7,611.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,800.0	0.00	0.00	7,711.1	-501.8	-939.3	1,064.9	0.00	0.00	
7,900.0	0.00	0.00	7,811.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,000.0	0.00	0.00	7,911.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,100.0	0.00	0.00	8,011.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,200.0	0.00	0.00	8,111.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,245.9	0.00	0.00	8,157.0	-501.8	-939.3	1,064.9	0.00	0.00	Coal Ridge
8,300.0	0.00	0.00	8,211.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,400.0	0.00	0.00	8,311.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,500.0	0.00	0.00	8,411.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,600.0	0.00	0.00	8,511.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,700.0	0.00	0.00	8,611.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,800.0	0.00	0.00	8,711.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,900.0	0.00	0.00	8,811.1	-501.8	-939.3	1,064.9	0.00	0.00	
8,908.9	0.00	0.00	8,820.0	-501.8	-939.3	1,064.9	0.00	0.00	Base Cameo A Coal
9,000.0	0.00	0.00	8,911.1	-501.8	-939.3	1,064.9	0.00	0.00	
9,007.9	0.00	0.00	8,919.0	-501.8	-939.3	1,064.9	0.00	0.00	Rollins
9,058.9	0.00	0.00	8,970.0	-501.8	-939.3	1,064.9	0.00	0.00	TD at 9058' MD - HMU Federal 26-1D BHL
9,100.0	0.00	0.00	9,011.1	-501.8	-939.3	1,064.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site:	(D25W)	North Reference:	True
Well:	HMU Federal 26-1D	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
9,200.0	0.00	0.00	9,111.1	-501.8	-939.3	1,064.9	0.00	0.00	
9,300.0	0.00	0.00	9,211.1	-501.8	-939.3	1,064.9	0.00	0.00	
9,358.9	0.00	0.00	9,270.0	-501.8	-939.3	1,064.9	0.00	0.00	Permit TD at 9358' MD

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	
- Shape									Latitude Longitude
HMU Federal 26-1D BHI	- plan hits target center - Circle (radius 25.0)	0.00	0.00	8,970.0	-501.8	-939.3	1,586,176.03	2,368,955.84	39.421506 -107.734033
HMU Federal 26-1D ToC	- plan hits target center - Point	0.00	0.00	6,801.0	-501.8	-939.3	1,586,176.03	2,368,955.84	39.421506 -107.734033

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,403.0	1,388.7	Surface Casing	5.500	6.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,435.2	2,406.0	G Sand			
4,839.0	4,775.0	Ohio Creek			
5,463.0	5,390.0	Mesa Verde			
5,999.7	5,919.0	Williams Fork			
6,889.9	6,801.0	Top of Gas			
8,245.9	8,157.0	Coal Ridge			
8,908.9	8,820.0	Base Cameo A Coal			
9,007.9	8,919.0	Rollins			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP = 200' MD
525.2	523.6	-13.0	-24.4	EOB at Inc. = 9.760
6,402.1	6,315.5	-482.3	-902.8	Start Drop -2.00
6,889.9	6,801.0	-501.8	-939.3	EOD at Inc. = 0°
9,058.9	8,970.0	-501.8	-939.3	TD at 9058' MD
9,358.9	9,270.0	-501.8	-939.3	Permit TD at 9358' MD

EnCana Oil & Gas (USA) Inc

Mamm Creek

(D25W)

HMU Federal 26-1D

DD

Plan #2

Anticollision Report

09 September, 2010

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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
Depth Range:	0.0 to 999,999.0ft
Results Limited by:	Maximum center-center distance of 500.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date	9/9/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	9,358.9	Plan #2 (DD)	MWD	Geolink MWD	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
(D25W)						
HMU 25-3D (Existing) - Excel Drilling - Surveys	0.0	0.0	104.4			
HMU 25-3D (Existing) - Excel Drilling - Surveys	100.0	99.5	104.6	104.3	354.405	ES
HMU 25-3D (Existing) - Excel Drilling - Surveys	1,000.0	969.7	251.0	247.7	74.543	SF
HMU 26-1C (Existing) - Baker Hughes (Inteq) - Surveys	201.9	202.0	161.0	160.4	255.628	CC, ES
HMU 26-1C (Existing) - Baker Hughes (Inteq) - Surveys	9,358.9	9,404.9	445.1	393.3	8.596	SF
HMU Federal 24-13A1 - DD - Plan #2	200.0	200.0	250.8	250.2	403.674	CC, ES
HMU Federal 24-13A1 - DD - Plan #2	1,100.0	1,025.5	472.5	468.4	112.859	SF
HMU Federal 24-13D1 - DD - Plan #2	200.0	200.0	255.4	254.8	411.031	CC, ES
HMU Federal 24-13D1 - DD - Plan #2	1,200.0	1,143.4	480.3	475.8	107.452	SF
HMU Federal 24-13D2 - DD - Plan #2	200.0	200.0	245.0	244.3	394.253	CC, ES
HMU Federal 24-13D2 - DD - Plan #2	1,800.0	1,780.0	485.0	478.8	78.280	SF
HMU Federal 24-14A1 - DD - Plan #2	200.0	200.0	250.6	250.0	403.370	CC, ES
HMU Federal 24-14A1 - DD - Plan #2	1,000.0	843.0	490.2	487.1	154.374	SF
HMU Federal 24-14A2 - DD - Plan #2	200.0	200.0	240.6	240.0	387.215	CC, ES
HMU Federal 24-14A2 - DD - Plan #2	1,000.0	910.4	400.0	396.8	122.514	SF
HMU Federal 24-14A3 - DD - Plan #2	200.0	200.0	246.3	245.7	396.459	CC, ES
HMU Federal 24-14A3 - DD - Plan #2	1,000.0	865.2	485.1	481.9	152.774	SF
HMU Federal 25-3C - DD - Plan #2	200.0	200.0	243.8	243.2	392.340	CC, ES
HMU Federal 25-3C - DD - Plan #2	1,400.0	1,363.1	478.6	473.3	90.221	SF
HMU Federal 26-1B - DD - Plan #2	200.0	200.0	11.0	10.4	17.663	CC, ES
HMU Federal 26-1B - DD - Plan #2	400.0	398.6	15.6	14.2	11.267	SF
HMU Federal 26-8B1 - DD - Plan #2	200.0	200.0	11.6	10.9	18.611	CC, ES
HMU Federal 26-8B1 - DD - Plan #2	600.0	597.7	19.8	17.3	7.900	SF
HMU Fee 23-16B1 - DD - Plan #1	200.0	200.0	50.3	49.7	80.930	CC, ES
HMU Fee 23-16B1 - DD - Plan #1	600.0	584.5	94.8	92.5	39.859	SF
HMU Fee 23-16B2 - DD - Plan #1	200.0	200.0	33.5	32.9	53.881	CC
HMU Fee 23-16B2 - DD - Plan #1	300.0	300.0	33.7	32.7	34.458	ES
HMU Fee 23-16B2 - DD - Plan #1	500.0	498.8	42.0	40.2	23.680	SF
HMU Fee 23-16C1 - DD - Plan #1	200.0	200.0	25.8	25.2	41.583	CC, ES
HMU Fee 23-16C1 - DD - Plan #1	525.2	519.6	46.5	44.5	22.740	SF
HMU Fee 23-16D - DD - Plan #1	200.0	200.0	42.1	41.5	67.808	CC, ES
HMU Fee 23-16D - DD - Plan #1	600.0	589.2	70.8	68.4	28.857	SF
HMU Fee 25-6B - DD - Plan #1	100.0	100.0	236.8	236.5	869.547	CC
HMU Fee 25-6B - DD - Plan #1	200.0	200.0	236.8	236.1	381.038	ES
HMU Fee 25-6B - DD - Plan #1	1,300.0	1,225.5	478.7	472.8	80.392	SF
HMU Fee 25-6D - DD - Plan #1	278.9	279.1	16.4	15.5	18.070	CC, ES
HMU Fee 25-6D - DD - Plan #1	400.0	399.7	21.4	20.0	15.613	SF
MCU 26-8C (Existing) - Excel Drilling - Surveys	0.0	0.0	112.1			
MCU 26-8C (Existing) - Excel Drilling - Surveys	100.0	99.5	112.3	112.0	379.510	ES
MCU 26-8C (Existing) - Excel Drilling - Surveys	3,100.0	3,152.4	187.2	165.9	8.792	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU 25-3D (Existing) - Excel Drilling - Surveys													Offset Site Error:	0.0 ft
Survey Program: 238-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	48.76	68.8	78.5	104.4					
100.0	100.0	99.5	99.5	0.1	0.2	48.83	68.9	78.8	104.6	104.3	0.30	354.405	ES	
200.0	200.0	198.9	198.9	0.3	0.3	49.04	69.1	79.6	105.4	104.8	0.63	167.635		
300.0	300.0	297.9	297.9	0.5	0.5	167.70	69.6	81.0	109.4	108.4	0.97	112.955		
400.0	399.6	396.1	396.0	0.7	0.7	168.56	71.0	83.0	119.5	118.2	1.31	91.006		
500.0	498.8	493.4	493.2	1.0	0.9	169.50	73.3	85.6	135.8	134.2	1.65	82.136		
525.2	523.6	517.7	517.5	1.1	0.9	169.74	74.0	86.3	140.9	139.2	1.74	81.053		
600.0	597.3	589.6	589.4	1.3	1.1	170.40	76.4	88.8	156.9	154.9	2.00	78.525		
700.0	695.9	685.6	685.2	1.6	1.3	171.06	80.1	92.5	179.0	176.7	2.34	76.384		
800.0	794.5	781.1	780.6	2.0	1.5	171.54	84.5	96.9	202.1	199.4	2.69	75.210		
900.0	893.0	876.2	875.4	2.3	1.7	171.89	89.5	101.9	226.0	223.0	3.03	74.647		
1,000.0	991.6	969.7	968.5	2.7	1.9	172.12	95.1	107.5	251.0	247.7	3.37	74.543	SF	
1,100.0	1,090.1	1,062.0	1,060.4	3.0	2.1	172.27	101.7	114.1	277.6	273.9	3.70	74.923		
1,200.0	1,188.7	1,153.1	1,150.9	3.3	2.4	172.65	107.9	122.5	305.5	301.5	4.04	75.699		
1,300.0	1,287.2	1,240.5	1,237.4	3.7	2.6	173.28	113.5	133.1	335.6	331.3	4.36	77.034		
1,400.0	1,385.8	1,328.7	1,324.4	4.0	2.9	174.22	118.1	146.9	367.9	363.2	4.68	78.694		
1,500.0	1,484.3	1,424.0	1,418.1	4.4	3.2	175.69	120.1	164.5	401.0	396.0	5.01	80.107		
1,600.0	1,582.9	1,526.7	1,518.7	4.7	3.5	177.66	117.7	184.7	433.2	427.8	5.36	80.833		
1,700.0	1,681.4	1,639.4	1,628.9	5.1	3.8	-179.79	108.5	206.5	463.0	457.2	5.76	80.313		
1,800.0	1,780.0	1,744.4	1,731.1	5.4	4.2	-177.15	93.8	225.4	489.7	483.5	6.18	79.182		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU 26-1C (Existing) - Baker Hughes (Inteq) - Surveys													Offset Site Error: 0.0 ft	
Survey Program: 170-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	31.39	137.6	84.0	161.2					
100.0	100.0	100.2	100.2	0.1	0.2	31.48	137.4	84.2	161.1	160.9	0.29	558.785		
200.0	200.0	200.1	200.1	0.3	0.3	31.76	136.9	84.7	161.0	160.4	0.62	258.933		
201.9	201.9	202.0	202.0	0.3	0.3	149.88	136.9	84.8	161.0	160.4	0.63	255.628	CC, ES	
300.0	300.0	301.6	301.6	0.5	0.5	150.72	136.1	85.6	163.1	162.1	0.98	166.933		
400.0	399.6	408.3	408.2	0.7	0.7	151.54	134.1	82.5	166.8	165.4	1.35	123.937		
500.0	498.8	511.3	510.9	1.0	0.9	152.25	131.0	75.6	172.1	170.4	1.73	99.760		
525.2	523.6	537.0	536.5	1.1	0.9	152.43	130.2	73.4	173.9	172.1	1.82	95.408		
600.0	597.3	612.8	611.9	1.3	1.1	152.79	128.1	66.2	179.4	177.3	2.13	84.346		
700.0	695.9	715.4	713.8	1.6	1.4	152.38	126.1	53.4	185.8	183.3	2.57	72.398		
800.0	794.5	818.5	815.5	2.0	1.7	151.12	124.0	37.2	190.4	187.4	3.06	62.291		
900.0	893.0	922.7	917.9	2.3	2.1	149.23	121.6	17.8	193.2	189.6	3.61	53.532		
1,000.0	991.6	1,022.9	1,016.0	2.7	2.4	147.11	118.7	-2.4	194.9	190.7	4.20	46.403		
1,100.0	1,090.1	1,123.3	1,114.2	3.0	2.8	144.93	115.7	-23.1	196.6	191.8	4.83	40.686		
1,200.0	1,188.7	1,224.4	1,212.8	3.3	3.2	142.59	112.4	-44.8	197.9	192.4	5.51	35.903		
1,300.0	1,287.2	1,323.1	1,309.3	3.7	3.6	140.45	109.1	-65.6	199.7	193.5	6.20	32.208		
1,400.0	1,385.8	1,424.0	1,407.9	4.0	4.1	138.25	105.7	-87.1	201.7	194.8	6.93	29.102		
1,500.0	1,484.3	1,524.5	1,505.8	4.4	4.5	136.10	101.7	-108.7	203.2	195.6	7.68	26.452		
1,600.0	1,582.9	1,623.7	1,602.7	4.7	4.9	133.96	97.8	-130.2	205.1	196.7	8.45	24.271		
1,700.0	1,681.4	1,722.6	1,699.2	5.1	5.3	131.96	94.2	-151.2	207.6	198.4	9.23	22.497		
1,800.0	1,780.0	1,824.0	1,798.2	5.4	5.7	130.00	90.3	-172.6	210.2	200.2	10.02	20.978		
1,900.0	1,878.5	1,922.0	1,894.1	5.8	6.1	128.29	86.3	-192.9	212.9	202.1	10.79	19.728		
2,000.0	1,977.1	2,022.4	1,992.2	6.1	6.5	126.53	82.6	-213.8	216.1	204.5	11.60	18.629		
2,100.0	2,075.7	2,121.8	2,089.3	6.5	6.9	124.82	78.8	-234.6	219.5	207.1	12.40	17.694		
2,200.0	2,174.2	2,222.0	2,187.2	6.8	7.4	123.14	75.0	-255.6	222.9	209.7	13.22	16.858		
2,300.0	2,272.8	2,321.3	2,284.1	7.1	7.8	121.33	71.2	-277.1	226.5	212.5	14.06	16.109		
2,400.0	2,371.3	2,420.4	2,380.9	7.5	8.2	119.71	67.7	-298.1	230.7	215.9	14.88	15.503		
2,500.0	2,469.9	2,521.0	2,479.0	7.8	8.6	118.06	64.1	-319.7	234.9	219.2	15.73	14.936		
2,600.0	2,568.4	2,620.7	2,576.1	8.2	9.1	116.22	60.2	-342.2	239.1	222.5	16.60	14.406		
2,700.0	2,667.0	2,721.6	2,674.3	8.5	9.5	114.47	56.2	-364.7	243.5	226.0	17.45	13.950		
2,800.0	2,765.5	2,822.7	2,773.0	8.9	9.9	112.98	51.5	-386.3	247.2	228.9	18.28	13.526		
2,900.0	2,864.1	2,922.6	2,870.7	9.2	10.4	111.82	46.7	-406.6	250.9	231.8	19.07	13.153		
3,000.0	2,962.6	3,022.5	2,968.4	9.6	10.8	110.65	41.8	-427.0	254.6	234.7	19.88	12.810		
3,100.0	3,061.2	3,122.8	3,066.3	9.9	11.2	109.38	36.8	-448.0	258.4	237.7	20.69	12.486		
3,200.0	3,159.7	3,221.3	3,162.4	10.3	11.6	108.05	31.8	-469.3	262.3	240.8	21.51	12.197		
3,300.0	3,258.3	3,321.1	3,259.7	10.6	12.1	106.73	27.0	-490.9	266.7	244.4	22.32	11.949		
3,400.0	3,356.9	3,421.6	3,357.9	10.9	12.5	105.60	22.2	-511.9	271.0	247.9	23.11	11.730		
3,500.0	3,455.4	3,520.6	3,454.7	11.3	12.9	104.68	17.6	-531.9	275.4	251.6	23.87	11.537		
3,600.0	3,554.0	3,619.3	3,551.1	11.6	13.3	103.62	13.3	-552.7	280.4	255.7	24.67	11.368		
3,700.0	3,652.5	3,720.9	3,650.1	12.0	13.7	102.40	8.2	-574.8	285.1	259.6	25.47	11.194		
3,800.0	3,751.1	3,820.1	3,747.0	12.3	14.1	101.47	3.7	-595.4	289.9	263.7	26.23	11.055		
3,900.0	3,849.6	3,922.2	3,846.9	12.7	14.6	100.62	-1.4	-616.1	294.4	267.4	27.00	10.904		
4,000.0	3,948.2	4,021.9	3,944.3	13.0	15.0	99.76	-6.9	-636.4	298.3	270.6	27.76	10.748		
4,100.0	4,046.7	4,118.0	4,038.3	13.4	15.4	98.89	-11.7	-656.5	303.1	274.6	28.51	10.632		
4,200.0	4,145.3	4,215.3	4,133.0	13.7	15.8	97.81	-15.7	-678.3	309.2	279.9	29.28	10.561		
4,300.0	4,243.8	4,314.8	4,229.8	14.1	16.3	96.71	-19.8	-700.9	315.7	285.6	30.04	10.509		
4,400.0	4,342.4	4,417.2	4,329.6	14.4	16.7	95.75	-23.9	-723.4	322.0	291.2	30.80	10.452		
4,500.0	4,440.9	4,518.8	4,428.5	14.8	17.2	94.75	-29.1	-745.9	327.4	295.8	31.56	10.372		
4,600.0	4,539.5	4,618.5	4,525.6	15.1	17.6	93.75	-34.5	-768.1	332.7	300.4	32.31	10.297		
4,700.0	4,638.1	4,717.8	4,622.3	15.4	18.0	92.81	-39.7	-790.0	338.2	305.1	33.04	10.235		
4,800.0	4,736.6	4,813.7	4,715.9	15.8	18.4	92.14	-43.8	-810.4	344.3	310.6	33.73	10.206		
4,900.0	4,835.2	4,912.0	4,811.6	16.1	18.9	91.36	-47.4	-832.3	351.4	316.9	34.48	10.192		

CC - Min centre to center distance or convergent 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 HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU 26-1C (Existing) - Baker Hughes (Inteq) - Surveys												Offset Site Error:	0.0 ft
Survey Program: 170-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,933.7	5,008.5	4,905.5	16.5	19.3	90.51	-50.8	-854.8	359.2	324.0	35.17	10.214	
5,100.0	5,032.3	5,108.3	5,002.6	16.8	19.7	89.79	-53.6	-877.4	367.3	331.5	35.88	10.239	
5,200.0	5,130.8	5,209.9	5,101.7	17.2	20.2	89.25	-56.2	-899.4	375.4	338.8	36.57	10.263	
5,300.0	5,229.4	5,316.6	5,206.2	17.5	20.6	88.84	-59.8	-921.1	382.0	344.7	37.30	10.241	
5,400.0	5,327.9	5,418.5	5,305.9	17.9	21.0	88.45	-64.4	-941.2	387.4	349.4	38.00	10.194	
5,500.0	5,426.5	5,519.4	5,404.8	18.2	21.4	88.11	-69.0	-960.9	392.7	354.0	38.70	10.147	
5,600.0	5,525.0	5,621.0	5,504.3	18.6	21.8	87.75	-74.1	-980.6	397.4	358.0	39.40	10.086	
5,700.0	5,623.6	5,716.3	5,597.5	18.9	22.2	87.30	-79.2	-999.9	402.4	362.3	40.08	10.038	
5,800.0	5,722.1	5,814.0	5,693.1	19.3	22.6	86.87	-83.3	-1,020.2	408.7	367.9	40.75	10.027	
5,900.0	5,820.7	5,916.2	5,793.2	19.6	23.0	86.63	-87.0	-1,040.1	414.7	373.2	41.45	10.004	
6,000.0	5,919.2	6,018.5	5,893.6	19.9	23.4	86.46	-91.1	-1,059.3	420.1	378.0	42.14	9.969	
6,100.0	6,017.8	6,119.4	5,992.8	20.3	23.7	86.41	-95.1	-1,077.3	425.1	382.3	42.83	9.925	
6,200.0	6,116.4	6,219.6	6,091.4	20.6	24.1	86.45	-98.8	-1,094.6	430.0	386.4	43.52	9.880	
6,300.0	6,214.9	6,319.3	6,189.6	21.0	24.4	86.58	-102.1	-1,111.2	434.8	390.6	44.21	9.836	
6,402.1	6,315.5	6,421.2	6,290.2	21.3	24.8	86.81	-105.0	-1,127.5	439.8	394.9	44.91	9.794	
6,500.0	6,412.3	6,519.9	6,387.7	21.6	25.1	87.00	-107.7	-1,142.6	444.6	399.1	45.52	9.767	
6,600.0	6,511.6	6,644.0	6,510.3	21.9	25.5	86.52	-114.7	-1,160.2	446.4	400.3	46.09	9.686	
6,700.0	6,611.2	6,743.7	6,609.2	22.1	25.7	85.87	-121.4	-1,171.7	446.2	399.8	46.45	9.607	
6,708.7	6,619.9	6,752.5	6,617.8	22.1	25.7	85.82	-121.9	-1,172.6	446.2	399.7	46.47	9.602	
6,800.0	6,711.1	6,844.2	6,709.1	22.2	25.9	85.17	-126.6	-1,180.7	446.3	399.6	46.70	9.557	
6,889.9	6,801.0	6,934.7	6,799.4	22.3	26.1	-33.58	-129.8	-1,186.3	446.5	399.7	46.84	9.533	
6,900.0	6,811.1	6,944.8	6,809.4	22.3	26.1	-33.65	-130.1	-1,186.8	446.6	399.7	46.86	9.531	
7,000.0	6,911.1	7,044.9	6,909.4	22.4	26.2	-34.35	-132.8	-1,191.5	447.0	400.0	47.00	9.510	
7,100.0	7,011.1	7,145.7	7,010.2	22.5	26.4	-34.85	-134.7	-1,194.9	447.3	400.1	47.14	9.489	
7,200.0	7,111.1	7,246.5	7,110.9	22.6	26.5	-34.99	-135.3	-1,195.9	447.4	400.1	47.31	9.457	
7,300.0	7,211.1	7,346.4	7,210.8	22.7	26.5	-35.05	-135.5	-1,196.2	447.4	399.9	47.49	9.421	
7,400.0	7,311.1	7,445.5	7,309.9	22.8	26.6	-35.05	-135.5	-1,196.4	447.5	399.9	47.67	9.388	
7,500.0	7,411.1	7,544.4	7,408.8	22.9	26.7	-34.96	-134.7	-1,196.0	447.9	400.1	47.86	9.359	
7,600.0	7,511.1	7,644.7	7,509.1	23.0	26.8	-34.78	-133.4	-1,195.1	448.5	400.4	48.05	9.333	
7,700.0	7,611.1	7,745.2	7,609.6	23.1	26.8	-34.43	-131.6	-1,193.1	448.8	400.6	48.26	9.300	
7,800.0	7,711.1	7,845.7	7,710.0	23.2	26.9	-34.02	-129.5	-1,190.6	449.1	400.7	48.48	9.265	
7,900.0	7,811.1	7,944.9	7,809.2	23.3	26.9	-33.66	-127.7	-1,188.4	449.4	400.8	48.69	9.230	
8,000.0	7,911.1	8,044.6	7,908.8	23.4	27.0	-33.41	-126.3	-1,187.1	449.9	401.0	48.91	9.200	
8,100.0	8,011.1	8,141.9	8,006.2	23.5	27.1	-33.26	-125.0	-1,186.5	450.7	401.6	49.11	9.177	
8,200.0	8,111.1	8,239.0	8,103.2	23.6	27.2	-33.17	-123.3	-1,186.7	452.2	402.9	49.32	9.169	
8,300.0	8,211.1	8,335.0	8,199.2	23.7	27.2	-33.06	-121.0	-1,187.1	454.5	405.0	49.52	9.178	
8,400.0	8,311.1	8,432.8	8,296.9	23.8	27.3	-32.94	-118.2	-1,187.9	457.3	407.6	49.73	9.197	
8,500.0	8,411.1	8,532.0	8,396.1	23.9	27.4	-32.82	-114.9	-1,188.9	460.6	410.7	49.94	9.224	
8,600.0	8,511.1	8,640.9	8,504.9	24.0	27.5	-32.73	-111.7	-1,190.0	463.8	413.6	50.16	9.245	
8,700.0	8,611.1	8,775.9	8,639.8	24.1	27.7	-32.93	-115.8	-1,189.4	460.8	410.4	50.42	9.140	
8,800.0	8,711.1	8,873.5	8,737.2	24.2	27.8	-33.37	-123.0	-1,188.8	454.4	403.7	50.62	8.976	
8,900.0	8,811.1	8,959.5	8,823.0	24.3	27.9	-33.73	-127.6	-1,189.1	450.0	399.2	50.80	8.860	
9,000.0	8,911.1	9,056.3	8,919.8	24.5	28.0	-33.89	-129.9	-1,189.1	448.1	397.1	50.98	8.789	
9,058.9	8,970.0	9,112.9	8,976.3	24.5	28.0	-33.82	-130.5	-1,188.1	447.0	395.9	51.10	8.749	
9,100.0	9,011.1	9,151.2	9,014.6	24.6	28.0	-33.71	-130.3	-1,187.2	446.6	395.4	51.18	8.725	
9,200.0	9,111.1	9,251.7	9,115.1	24.7	28.1	-33.41	-129.6	-1,184.9	445.9	394.5	51.43	8.670	
9,300.0	9,211.1	9,350.2	9,213.6	24.8	28.2	-33.42	-130.3	-1,184.5	445.1	393.5	51.66	8.617	
9,336.9	9,248.0	9,384.6	9,248.0	24.8	28.3	-33.45	-130.5	-1,184.6	445.0	393.3	51.73	8.603	
9,358.9	9,270.0	9,404.9	9,268.3	24.9	28.3	-33.46	-130.5	-1,184.7	445.1	393.3	51.78	8.596 SF	

CC - Min centre to center distance or convergent 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 HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-13A1 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	44.32	179.4	175.2	250.8					
100.0	100.0	100.0	100.0	0.1	0.1	44.32	179.4	175.2	250.8	250.5	0.27	921.205		
200.0	200.0	200.0	200.0	0.3	0.3	44.32	179.4	175.2	250.8	250.2	0.62	403.674	CC, ES	
300.0	300.0	291.2	291.2	0.5	0.5	162.21	181.6	175.2	255.0	254.1	0.96	265.935		
400.0	399.6	381.3	381.0	0.7	0.7	161.60	188.0	175.3	267.6	266.3	1.31	204.853		
500.0	498.8	468.1	467.2	1.0	0.9	160.78	198.2	175.8	288.8	287.1	1.67	172.758		
525.2	523.6	489.5	488.4	1.1	1.0	160.56	201.3	176.1	295.5	293.8	1.76	167.564		
600.0	597.3	552.3	550.3	1.3	1.2	160.04	211.6	177.2	317.3	315.2	2.05	154.563		
700.0	695.9	645.6	642.0	1.6	1.5	159.20	229.0	179.3	348.2	345.7	2.47	140.978		
800.0	794.5	740.6	735.2	2.0	1.8	158.48	246.8	181.4	379.2	376.3	2.90	130.971		
900.0	893.0	835.5	828.5	2.3	2.2	157.87	264.6	183.5	410.3	407.0	3.32	123.425		
1,000.0	991.6	930.5	921.8	2.7	2.5	157.35	282.3	185.6	441.4	437.6	3.75	117.552		
1,100.0	1,090.1	1,025.5	1,015.0	3.0	2.9	156.90	300.1	187.7	472.5	468.4	4.19	112.859	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-13D1 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	46.74	175.0	186.0	255.4					
100.0	100.0	100.0	100.0	0.1	0.1	46.74	175.0	186.0	255.4	255.1	0.27	937.993		
200.0	200.0	200.0	200.0	0.3	0.3	46.74	175.0	186.0	255.4	254.8	0.62	411.031	CC, ES	
300.0	300.0	290.5	290.4	0.5	0.5	164.65	177.2	186.2	259.7	258.8	0.96	271.475		
400.0	399.6	379.9	379.6	0.7	0.7	164.09	183.4	187.0	272.8	271.5	1.30	209.348		
500.0	498.8	468.8	467.9	1.0	0.9	163.24	193.7	188.3	294.3	292.6	1.66	177.132		
525.2	523.6	493.1	492.0	1.1	1.0	163.01	196.9	188.8	300.8	299.1	1.76	171.179		
600.0	597.3	565.2	563.4	1.3	1.2	162.57	206.5	190.0	320.7	318.6	2.05	156.294		
700.0	695.9	661.5	658.9	1.6	1.4	162.07	219.2	191.6	347.2	344.8	2.45	141.782		
800.0	794.5	757.9	754.4	2.0	1.7	161.63	232.0	193.2	373.8	371.0	2.85	131.171		
900.0	893.0	854.3	850.0	2.3	2.0	161.26	244.7	194.8	400.4	397.2	3.25	123.097		
1,000.0	991.6	950.6	945.5	2.7	2.2	160.93	257.5	196.4	427.0	423.4	3.66	116.756		
1,100.0	1,090.1	1,047.0	1,041.0	3.0	2.5	160.63	270.2	198.1	453.7	449.6	4.06	111.650		
1,200.0	1,188.7	1,143.4	1,136.5	3.3	2.8	160.38	282.9	199.7	480.3	475.8	4.47	107.452	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-13D2 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	48.00	163.9	182.1	245.0					
100.0	100.0	100.0	100.0	0.1	0.1	48.00	163.9	182.1	245.0	244.7	0.27	899.705		
200.0	200.0	200.0	200.0	0.3	0.3	48.00	163.9	182.1	245.0	244.3	0.62	394.253 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	166.24	163.9	182.1	247.5	246.5	0.97	255.142		
400.0	399.6	399.6	399.6	0.7	0.7	166.61	163.9	182.1	255.1	253.8	1.32	193.532		
500.0	498.8	498.8	498.8	1.0	0.8	167.17	163.9	182.1	267.9	266.2	1.67	160.803		
525.2	523.6	523.6	523.6	1.1	0.9	167.33	163.9	182.1	271.9	270.1	1.75	155.104		
600.0	597.3	597.3	597.3	1.3	1.0	167.89	163.9	182.1	284.2	282.2	2.02	140.961		
700.0	695.9	695.9	695.9	1.6	1.2	168.57	163.9	182.1	300.8	298.5	2.37	127.023		
800.0	794.5	794.5	794.5	2.0	1.3	169.18	163.9	182.1	317.5	314.8	2.72	116.744		
900.0	893.0	893.0	893.0	2.3	1.5	169.72	163.9	182.1	334.2	331.1	3.07	108.858		
1,000.0	991.6	991.6	991.6	2.7	1.7	170.22	163.9	182.1	350.8	347.4	3.42	102.618		
1,100.0	1,090.1	1,090.1	1,090.1	3.0	1.9	170.66	163.9	182.1	367.6	363.8	3.77	97.559		
1,200.0	1,188.7	1,188.7	1,188.7	3.3	2.0	171.07	163.9	182.1	384.3	380.2	4.12	93.375		
1,300.0	1,287.2	1,287.2	1,287.2	3.7	2.2	171.45	163.9	182.1	401.1	396.6	4.46	89.858		
1,400.0	1,385.8	1,385.8	1,385.8	4.0	2.4	171.79	163.9	182.1	417.8	413.0	4.81	86.859		
1,500.0	1,484.3	1,484.3	1,484.3	4.4	2.6	172.11	163.9	182.1	434.6	429.5	5.16	84.272		
1,600.0	1,582.9	1,582.9	1,582.9	4.7	2.7	172.41	163.9	182.1	451.4	445.9	5.50	82.018		
1,700.0	1,681.4	1,681.4	1,681.4	5.1	2.9	172.68	163.9	182.1	468.2	462.4	5.85	80.036		
1,800.0	1,780.0	1,780.0	1,780.0	5.4	3.1	172.94	163.9	182.1	485.0	478.8	6.20	78.280 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-14A1 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	50.37	159.8	193.0	250.6					
100.0	100.0	100.0	100.0	0.1	0.1	50.37	159.8	193.0	250.6	250.4	0.27	920.511		
200.0	200.0	200.0	200.0	0.3	0.3	50.37	159.8	193.0	250.6	250.0	0.62	403.370	CC, ES	
300.0	300.0	288.3	288.2	0.5	0.5	168.51	161.3	194.4	255.5	254.5	0.95	268.973		
400.0	399.6	375.3	375.1	0.7	0.7	168.57	165.6	198.6	270.0	268.7	1.28	211.561		
500.0	498.8	460.0	459.2	1.0	0.9	168.64	172.6	205.3	293.9	292.3	1.60	183.953		
525.2	523.6	480.8	479.8	1.1	0.9	168.66	174.7	207.3	301.4	299.7	1.68	179.771		
600.0	597.3	541.7	539.9	1.3	1.1	168.81	181.8	214.2	325.5	323.6	1.92	169.645		
700.0	695.9	621.0	617.6	1.6	1.5	168.92	193.2	225.1	361.3	359.0	2.24	161.437		
800.0	794.5	700.0	694.3	2.0	1.8	168.95	206.8	238.1	400.8	398.2	2.56	156.792		
900.0	893.0	771.7	763.2	2.3	2.2	168.92	221.1	251.9	443.8	440.9	2.87	154.818		
1,000.0	991.6	843.0	830.9	2.7	2.6	168.85	237.1	267.4	490.2	487.1	3.18	154.374	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-14A2 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	51.82	148.7	189.1	240.6					
100.0	100.0	100.0	100.0	0.1	0.1	51.82	148.7	189.1	240.6	240.3	0.27	883.644		
200.0	200.0	200.0	200.0	0.3	0.3	51.82	148.7	189.1	240.6	240.0	0.62	387.215	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	170.02	148.7	189.1	243.2	242.2	0.97	250.735		
400.0	399.6	399.6	399.6	0.7	0.7	170.29	148.7	189.1	250.9	249.6	1.32	190.542		
500.0	498.8	498.8	498.8	1.0	0.8	170.71	148.7	189.1	263.8	262.1	1.66	158.779		
525.2	523.6	520.7	520.7	1.1	0.9	170.81	148.8	189.2	268.0	266.2	1.74	153.757		
600.0	597.3	584.8	584.8	1.3	1.0	171.16	149.9	190.6	282.5	280.5	1.99	142.148		
700.0	695.9	669.1	668.9	1.6	1.1	171.52	153.5	194.8	305.8	303.5	2.31	132.296		
800.0	794.5	751.7	751.0	2.0	1.3	171.75	159.5	201.6	333.2	330.6	2.63	126.508		
900.0	893.0	832.2	830.5	2.3	1.6	171.83	167.9	210.6	364.7	361.8	2.95	123.545		
1,000.0	991.6	910.4	907.3	2.7	1.8	171.80	178.3	221.5	400.0	396.8	3.27	122.514	SF	
1,100.0	1,090.1	986.2	980.9	3.0	2.1	171.70	190.6	234.0	439.0	435.4	3.58	122.739		
1,200.0	1,188.7	1,059.3	1,051.4	3.3	2.5	171.54	204.6	248.0	481.5	477.6	3.89	123.867		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 24-14A3 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	54.32	143.7	200.1	246.3					
100.0	100.0	100.0	100.0	0.1	0.1	54.32	143.7	200.1	246.3	246.1	0.27	904.738		
200.0	200.0	200.0	200.0	0.3	0.3	54.32	143.7	200.1	246.3	245.7	0.62	396.459	CC, ES	
300.0	300.0	288.4	288.4	0.5	0.5	172.44	145.0	201.7	251.2	250.3	0.95	264.499		
400.0	399.6	375.6	375.3	0.7	0.7	172.47	148.9	206.2	265.9	264.6	1.27	208.514		
500.0	498.8	460.3	459.5	1.0	0.9	172.50	155.2	213.6	290.0	288.4	1.59	181.980		
525.2	523.6	481.2	480.2	1.1	0.9	172.50	157.1	215.8	297.5	295.8	1.67	178.024		
600.0	597.3	542.1	540.3	1.3	1.2	172.59	163.6	223.3	321.8	319.9	1.91	168.482		
700.0	695.9	621.4	617.9	1.6	1.5	172.64	173.8	235.3	357.8	355.6	2.22	160.895		
800.0	794.5	700.0	694.3	2.0	1.8	172.63	186.0	249.5	397.6	395.0	2.54	156.813		
900.0	893.0	775.6	766.9	2.3	2.2	172.58	199.6	265.4	440.8	437.9	2.84	155.031		
1,000.0	991.6	865.2	852.8	2.7	2.7	172.52	216.4	284.9	485.1	481.9	3.18	152.774	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 25-3C - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	58.19	128.5	207.2	243.8					
100.0	100.0	100.0	100.0	0.1	0.1	58.19	128.5	207.2	243.8	243.5	0.27	895.340		
200.0	200.0	200.0	200.0	0.3	0.3	58.19	128.5	207.2	243.8	243.2	0.62	392.340	CC, ES	
300.0	300.0	290.0	290.0	0.5	0.5	176.59	128.5	209.3	248.4	247.4	0.95	260.288		
400.0	399.6	381.3	381.0	0.7	0.7	177.41	128.4	215.7	262.2	260.9	1.29	202.834		
500.0	498.8	486.9	486.1	1.0	0.9	179.16	124.7	224.8	280.9	279.2	1.68	167.094		
525.2	523.6	512.6	511.7	1.1	1.0	179.70	123.0	227.0	286.1	284.3	1.78	160.755		
600.0	597.3	585.3	583.9	1.3	1.1	-178.83	117.8	233.3	301.9	299.8	2.07	145.638		
700.0	695.9	682.5	680.5	1.6	1.4	-177.09	110.9	241.6	323.4	320.9	2.47	130.944		
800.0	794.5	779.7	777.2	2.0	1.6	-175.57	104.0	249.9	345.1	342.2	2.87	120.276		
900.0	893.0	877.0	873.8	2.3	1.9	-174.23	97.1	258.3	367.0	363.7	3.27	112.201		
1,000.0	991.6	974.2	970.4	2.7	2.1	-173.03	90.3	266.6	389.1	385.4	3.67	105.884		
1,100.0	1,090.1	1,071.4	1,067.0	3.0	2.4	-171.97	83.4	274.9	411.3	407.2	4.08	100.810		
1,200.0	1,188.7	1,168.6	1,163.7	3.3	2.6	-171.01	76.5	283.3	433.6	429.1	4.49	96.646		
1,300.0	1,287.2	1,265.9	1,260.3	3.7	2.9	-170.15	69.6	291.6	456.1	451.2	4.90	93.169		
1,400.0	1,385.8	1,363.1	1,356.9	4.0	3.1	-169.37	62.7	299.9	478.6	473.3	5.31	90.221	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 26-1B - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-68.36	4.0	-10.2	11.0					
100.0	100.0	100.0	100.0	0.1	0.1	-68.36	4.0	-10.2	11.0	10.7		0.27	40.308	
200.0	200.0	200.0	200.0	0.3	0.3	-68.36	4.0	-10.2	11.0	10.4		0.62	17.663 CC, ES	
300.0	300.0	299.4	299.4	0.5	0.5	56.87	4.5	-12.7	11.9	11.0		0.98	12.222	
400.0	399.6	398.6	398.3	0.7	0.7	71.97	5.9	-20.4	15.6	14.2		1.38	11.267 SF	
500.0	498.8	497.5	496.3	1.0	1.0	84.90	8.2	-33.0	23.0	21.1		1.92	11.982	
525.2	523.6	522.4	520.9	1.1	1.1	87.35	8.9	-36.9	25.4	23.4		2.07	12.275	
600.0	597.3	596.1	593.3	1.3	1.3	90.90	11.4	-50.4	34.1	31.5		2.54	13.408	
700.0	695.9	695.4	690.6	1.6	1.7	92.39	15.0	-69.6	46.4	43.2		3.19	14.554	
800.0	794.5	794.6	787.9	2.0	2.1	93.26	18.5	-88.9	58.7	54.9		3.85	15.263	
900.0	893.0	893.8	885.2	2.3	2.5	93.82	22.0	-108.2	71.1	66.6		4.52	15.740	
1,000.0	991.6	993.1	982.4	2.7	2.8	94.22	25.6	-127.4	83.5	78.3		5.19	16.080	
1,100.0	1,090.1	1,092.3	1,079.7	3.0	3.2	94.51	29.1	-146.7	95.8	89.9		5.87	16.333	
1,200.0	1,188.7	1,191.5	1,177.0	3.3	3.6	94.74	32.6	-165.9	108.2	101.6		6.54	16.530	
1,300.0	1,287.2	1,290.8	1,274.3	3.7	4.0	94.92	36.2	-185.2	120.5	113.3		7.22	16.686	
1,400.0	1,385.8	1,390.0	1,371.6	4.0	4.4	95.07	39.7	-204.4	132.9	125.0		7.90	16.813	
1,500.0	1,484.3	1,489.2	1,468.8	4.4	4.8	95.19	43.2	-223.7	145.2	136.7		8.59	16.918	
1,600.0	1,582.9	1,588.4	1,566.1	4.7	5.2	95.29	46.8	-242.9	157.6	148.3		9.27	17.006	
1,700.0	1,681.4	1,687.7	1,663.4	5.1	5.5	95.38	50.3	-262.2	170.0	160.0		9.95	17.082	
1,800.0	1,780.0	1,786.9	1,760.7	5.4	5.9	95.46	53.9	-281.4	182.3	171.7		10.63	17.147	
1,900.0	1,878.5	1,886.1	1,858.0	5.8	6.3	95.52	57.4	-300.7	194.7	183.4		11.32	17.204	
2,000.0	1,977.1	1,985.4	1,955.3	6.1	6.7	95.58	60.9	-320.0	207.1	195.1		12.00	17.253	
2,100.0	2,075.7	2,084.6	2,052.5	6.5	7.1	95.64	64.5	-339.2	219.4	206.7		12.69	17.298	
2,200.0	2,174.2	2,183.8	2,149.8	6.8	7.5	95.68	68.0	-358.5	231.8	218.4		13.37	17.337	
2,300.0	2,272.8	2,283.1	2,247.1	7.1	7.9	95.72	71.5	-377.7	244.2	230.1		14.05	17.372	
2,400.0	2,371.3	2,382.3	2,344.4	7.5	8.3	95.76	75.1	-397.0	256.5	241.8		14.74	17.404	
2,500.0	2,469.9	2,481.5	2,441.7	7.8	8.6	95.79	78.6	-416.2	268.9	253.5		15.42	17.433	
2,600.0	2,568.4	2,580.8	2,539.0	8.2	9.0	95.83	82.1	-435.5	281.2	265.1		16.11	17.460	
2,700.0	2,667.0	2,680.0	2,636.2	8.5	9.4	95.85	85.7	-454.7	293.6	276.8		16.79	17.484	
2,800.0	2,765.5	2,779.2	2,733.5	8.9	9.8	95.88	89.2	-474.0	306.0	288.5		17.48	17.506	
2,900.0	2,864.1	2,878.5	2,830.8	9.2	10.2	95.91	92.7	-493.2	318.3	300.2		18.16	17.526	
3,000.0	2,962.6	2,977.7	2,928.1	9.6	10.6	95.93	96.3	-512.5	330.7	311.9		18.85	17.545	
3,100.0	3,061.2	3,076.9	3,025.4	9.9	11.0	95.95	99.8	-531.8	343.1	323.5		19.53	17.562	
3,200.0	3,159.7	3,176.2	3,122.6	10.3	11.4	95.97	103.4	-551.0	355.4	335.2		20.22	17.579	
3,300.0	3,258.3	3,275.4	3,219.9	10.6	11.7	95.99	106.9	-570.3	367.8	346.9		20.91	17.594	
3,400.0	3,356.9	3,374.6	3,317.2	10.9	12.1	96.00	110.4	-589.5	380.2	358.6		21.59	17.608	
3,500.0	3,455.4	3,473.9	3,414.5	11.3	12.5	96.02	114.0	-608.8	392.5	370.3		22.28	17.621	
3,600.0	3,554.0	3,573.1	3,511.8	11.6	12.9	96.03	117.5	-628.0	404.9	381.9		22.96	17.634	
3,700.0	3,652.5	3,672.3	3,609.1	12.0	13.3	96.05	121.0	-647.3	417.3	393.6		23.65	17.645	
3,800.0	3,751.1	3,771.6	3,706.3	12.3	13.7	96.06	124.6	-666.5	429.6	405.3		24.33	17.656	
3,900.0	3,849.6	3,870.8	3,803.6	12.7	14.1	96.07	128.1	-685.8	442.0	417.0		25.02	17.667	
4,000.0	3,948.2	3,970.0	3,900.9	13.0	14.5	96.08	131.6	-705.0	454.4	428.7		25.70	17.676	
4,100.0	4,046.7	4,069.3	3,998.2	13.4	14.9	96.10	135.2	-724.3	466.7	440.3		26.39	17.686	
4,200.0	4,145.3	4,168.5	4,095.5	13.7	15.2	96.11	138.7	-743.6	479.1	452.0		27.08	17.694	
4,300.0	4,243.8	4,267.7	4,192.8	14.1	15.6	96.12	142.2	-762.8	491.5	463.7		27.76	17.703	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 26-8B1 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-164.25	-11.1	-3.1	11.6					
100.0	100.0	100.0	100.0	0.1	0.1	-164.25	-11.1	-3.1	11.6	11.3	0.27	42.470		
200.0	200.0	200.0	200.0	0.3	0.3	-164.25	-11.1	-3.1	11.6	10.9	0.62	18.611 CC, ES		
300.0	300.0	299.5	299.4	0.5	0.5	-48.44	-12.9	-5.1	12.0	11.0	0.98	12.237		
400.0	399.6	399.0	398.6	0.7	0.7	-54.49	-18.0	-10.9	13.2	11.8	1.38	9.601		
500.0	498.8	498.4	497.2	1.0	1.0	-62.19	-26.6	-20.5	15.6	13.7	1.89	8.246		
525.2	523.6	523.4	521.9	1.1	1.1	-64.14	-29.3	-23.5	16.4	14.3	2.05	8.005		
600.0	597.3	597.7	594.8	1.3	1.4	-65.68	-38.6	-34.0	19.8	17.3	2.51	7.900 SF		
700.0	695.9	696.6	691.0	1.6	1.8	-59.42	-53.8	-51.1	27.3	24.2	3.07	8.879		
800.0	794.5	796.0	787.0	2.0	2.3	-52.92	-71.0	-70.4	37.1	33.5	3.56	10.410		
900.0	893.0	895.5	883.1	2.3	2.7	-49.15	-88.1	-89.6	47.1	43.1	4.05	11.647		
1,000.0	991.6	994.9	979.1	2.7	3.2	-46.71	-105.2	-108.9	57.3	52.8	4.53	12.646		
1,100.0	1,090.1	1,094.4	1,075.2	3.0	3.7	-45.01	-122.4	-128.2	67.6	62.6	5.02	13.463		
1,200.0	1,188.7	1,193.8	1,171.2	3.3	4.2	-43.76	-139.5	-147.4	77.9	72.4	5.51	14.141		
1,300.0	1,287.2	1,293.3	1,267.3	3.7	4.7	-42.80	-156.7	-166.7	88.3	82.3	6.00	14.712		
1,400.0	1,385.8	1,392.7	1,363.3	4.0	5.2	-42.05	-173.8	-186.0	98.6	92.2	6.49	15.198		
1,500.0	1,484.3	1,492.2	1,459.4	4.4	5.6	-41.43	-191.0	-205.2	109.0	102.0	6.98	15.617		
1,600.0	1,582.9	1,591.7	1,555.5	4.7	6.1	-40.93	-208.1	-224.5	119.4	111.9	7.47	15.981		
1,700.0	1,681.4	1,691.1	1,651.5	5.1	6.6	-40.50	-225.3	-243.8	129.8	121.8	7.96	16.302		
1,800.0	1,780.0	1,790.6	1,747.6	5.4	7.1	-40.14	-242.4	-263.0	140.2	131.8	8.45	16.585		
1,900.0	1,878.5	1,890.0	1,843.6	5.8	7.6	-39.83	-259.6	-282.3	150.6	141.7	8.95	16.837		
2,000.0	1,977.1	1,989.5	1,939.7	6.1	8.1	-39.56	-276.7	-301.6	161.0	151.6	9.44	17.063		
2,100.0	2,075.7	2,088.9	2,035.7	6.5	8.6	-39.32	-293.9	-320.8	171.4	161.5	9.93	17.267		
2,200.0	2,174.2	2,188.4	2,131.8	6.8	9.1	-39.11	-311.0	-340.1	181.9	171.4	10.42	17.451		
2,300.0	2,272.8	2,287.8	2,227.8	7.1	9.6	-38.92	-328.2	-359.4	192.3	181.4	10.91	17.619		
2,400.0	2,371.3	2,387.3	2,323.9	7.5	10.0	-38.75	-345.3	-378.6	202.7	191.3	11.40	17.773		
2,500.0	2,469.9	2,486.7	2,419.9	7.8	10.5	-38.60	-362.5	-397.9	213.1	201.2	11.90	17.914		
2,600.0	2,568.4	2,586.2	2,516.0	8.2	11.0	-38.46	-379.6	-417.2	223.5	211.1	12.39	18.044		
2,700.0	2,667.0	2,685.6	2,612.0	8.5	11.5	-38.33	-396.8	-436.4	234.0	221.1	12.88	18.163		
2,800.0	2,765.5	2,785.1	2,708.1	8.9	12.0	-38.22	-413.9	-455.7	244.4	231.0	13.37	18.274		
2,900.0	2,864.1	2,884.6	2,804.1	9.2	12.5	-38.11	-431.1	-475.0	254.8	240.9	13.87	18.377		
3,000.0	2,962.6	2,984.0	2,900.2	9.6	13.0	-38.01	-448.2	-494.2	265.2	250.9	14.36	18.473		
3,100.0	3,061.2	3,083.5	2,996.2	9.9	13.5	-37.92	-465.4	-513.5	275.7	260.8	14.85	18.563		
3,200.0	3,159.7	3,182.9	3,092.3	10.3	14.0	-37.84	-482.5	-532.8	286.1	270.7	15.34	18.647		
3,300.0	3,258.3	3,282.4	3,188.3	10.6	14.4	-37.76	-499.7	-552.0	296.5	280.7	15.83	18.726		
3,400.0	3,356.9	3,381.8	3,284.4	10.9	14.9	-37.69	-516.8	-571.3	306.9	290.6	16.33	18.800		
3,500.0	3,455.4	3,481.3	3,380.4	11.3	15.4	-37.62	-534.0	-590.6	317.4	300.6	16.82	18.869		
3,600.0	3,554.0	3,580.7	3,476.5	11.6	15.9	-37.56	-551.1	-609.8	327.8	310.5	17.31	18.935		
3,700.0	3,652.5	3,680.2	3,572.5	12.0	16.4	-37.50	-568.3	-629.1	338.2	320.4	17.80	18.997		
3,800.0	3,751.1	3,779.6	3,668.6	12.3	16.9	-37.44	-585.4	-648.4	348.7	330.4	18.30	19.056		
3,900.0	3,849.6	3,879.1	3,764.6	12.7	17.4	-37.39	-602.6	-667.6	359.1	340.3	18.79	19.111		
4,000.0	3,948.2	3,978.5	3,860.7	13.0	17.9	-37.34	-619.7	-686.9	369.5	350.2	19.28	19.164		
4,100.0	4,046.7	4,078.0	3,956.7	13.4	18.4	-37.30	-636.9	-706.2	380.0	360.2	19.77	19.214		
4,200.0	4,145.3	4,177.5	4,052.8	13.7	18.9	-37.25	-654.0	-725.4	390.4	370.1	20.27	19.262		
4,300.0	4,243.8	4,276.9	4,148.8	14.1	19.3	-37.21	-671.2	-744.7	400.8	380.1	20.76	19.308		
4,400.0	4,342.4	4,376.4	4,244.9	14.4	19.8	-37.17	-688.3	-764.0	411.3	390.0	21.25	19.351		
4,500.0	4,440.9	4,475.8	4,340.9	14.8	20.3	-37.13	-705.5	-783.2	421.7	399.9	21.75	19.392		
4,600.0	4,539.5	4,575.3	4,437.0	15.1	20.8	-37.09	-722.6	-802.5	432.1	409.9	22.24	19.432		
4,700.0	4,638.1	4,674.7	4,533.0	15.4	21.3	-37.06	-739.8	-821.8	442.6	419.8	22.73	19.470		
4,800.0	4,736.6	4,774.2	4,629.1	15.8	21.8	-37.03	-756.9	-841.1	453.0	429.8	23.22	19.506		
4,900.0	4,835.2	4,873.6	4,725.1	16.1	22.3	-37.00	-774.0	-860.3	463.4	439.7	23.72	19.541		
5,000.0	4,933.7	4,973.1	4,821.2	16.5	22.8	-36.97	-791.2	-879.6	473.9	449.6	24.21	19.574		

CC - Min centre to center distance or convergent 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 HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Federal 26-8B1 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,032.3	5,072.5	4,917.2	16.8	23.3	-36.94	-808.3	-898.9	484.3	459.6	24.70	19.606		
5,200.0	5,130.8	5,172.0	5,013.3	17.2	23.8	-36.91	-825.5	-918.1	494.7	469.5	25.19	19.637		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 23-16B1 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-24.45	45.8	-20.8	50.3					
100.0	100.0	100.0	100.0	0.1	0.1	-24.45	45.8	-20.8	50.3	0.27	184.686			
200.0	200.0	200.0	200.0	0.3	0.3	-24.45	45.8	-20.8	50.3	0.62	80.930 CC, ES			
300.0	300.0	297.5	297.4	0.5	0.5	95.48	47.6	-22.5	52.9	0.98	54.222			
400.0	399.6	394.4	394.0	0.7	0.7	99.92	53.0	-27.6	61.0	1.37	44.440			
500.0	498.8	490.2	489.1	1.0	1.0	105.04	61.8	-35.9	75.1	1.85	40.660			
525.2	523.6	514.1	512.7	1.1	1.0	106.26	64.5	-38.5	79.6	1.98	40.265			
600.0	597.3	584.5	581.9	1.3	1.3	109.13	73.9	-47.3	94.8	2.38	39.859 SF			
700.0	695.9	677.4	672.4	1.6	1.7	110.56	89.0	-61.5	118.8	2.96	40.206			
800.0	794.5	768.4	760.1	2.0	2.2	110.40	106.9	-78.4	146.5	3.56	41.130			
900.0	893.0	857.3	844.4	2.3	2.7	109.44	127.3	-97.6	177.9	4.18	42.544			
1,000.0	991.6	951.2	932.7	2.7	3.3	108.33	150.5	-119.4	211.2	4.82	43.791			
1,100.0	1,090.1	1,045.4	1,021.3	3.0	3.9	107.52	173.8	-141.3	244.6	5.47	44.745			
1,200.0	1,188.7	1,139.6	1,109.9	3.3	4.4	106.90	197.0	-163.3	278.1	6.11	45.494			
1,300.0	1,287.2	1,233.8	1,198.6	3.7	5.0	106.41	220.3	-185.2	311.5	6.76	46.098			
1,400.0	1,385.8	1,328.0	1,287.2	4.0	5.6	106.02	243.6	-207.1	345.0	7.40	46.596			
1,500.0	1,484.3	1,422.2	1,375.8	4.4	6.2	105.70	266.9	-229.0	378.4	8.05	47.013			
1,600.0	1,582.9	1,516.4	1,464.4	4.7	6.8	105.43	290.1	-250.9	411.9	8.70	47.368			
1,700.0	1,681.4	1,610.6	1,553.0	5.1	7.4	105.20	313.4	-272.9	445.4	9.34	47.673			
1,800.0	1,780.0	1,704.8	1,641.7	5.4	8.0	105.00	336.7	-294.8	478.9	9.99	47.938			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 23-16B2 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-24.95	30.4	-14.1	33.5					
100.0	100.0	100.0	100.0	0.1	0.1	-24.95	30.4	-14.1	33.5	33.2	0.27	122.959		
200.0	200.0	200.0	200.0	0.3	0.3	-24.95	30.4	-14.1	33.5	32.9	0.62	53.881 CC		
300.0	300.0	300.0	300.0	0.5	0.5	97.59	30.4	-14.1	33.7	32.7	0.98	34.458 ES		
400.0	399.6	399.6	399.6	0.7	0.7	110.11	30.4	-14.1	35.6	34.3	1.37	26.058		
500.0	498.8	498.8	498.8	1.0	0.8	126.84	30.4	-14.1	42.0	40.2	1.77	23.680 SF		
525.2	523.6	523.4	523.4	1.1	0.9	130.78	30.4	-14.2	44.6	42.8	1.87	23.885		
600.0	597.3	596.5	596.4	1.3	1.0	138.61	31.9	-16.0	54.6	52.4	2.15	25.337		
700.0	695.9	694.2	693.9	1.6	1.2	141.90	36.8	-21.6	70.0	67.4	2.57	27.233		
800.0	794.5	791.6	790.5	2.0	1.4	140.77	44.8	-31.0	87.0	83.9	3.06	28.416		
900.0	893.0	888.1	885.4	2.3	1.7	137.44	55.9	-44.0	105.6	102.0	3.64	29.027		
1,000.0	991.6	983.2	978.1	2.7	2.1	133.10	69.9	-60.3	126.6	122.3	4.30	29.432		
1,100.0	1,090.1	1,076.6	1,067.9	3.0	2.6	128.42	86.6	-79.7	150.3	145.3	5.02	29.938		
1,200.0	1,188.7	1,169.9	1,156.4	3.3	3.1	123.86	105.7	-102.1	177.1	171.4	5.76	30.768		
1,300.0	1,287.2	1,265.2	1,246.6	3.7	3.6	120.26	125.7	-125.4	205.2	198.7	6.49	31.622		
1,400.0	1,385.8	1,360.5	1,336.8	4.0	4.2	117.52	145.7	-148.7	233.8	226.6	7.20	32.456		
1,500.0	1,484.3	1,455.8	1,427.0	4.4	4.7	115.38	165.7	-172.0	262.8	254.9	7.91	33.235		
1,600.0	1,582.9	1,551.1	1,517.3	4.7	5.3	113.67	185.6	-195.3	292.1	283.5	8.60	33.952		
1,700.0	1,681.4	1,646.3	1,607.5	5.1	5.8	112.26	205.6	-218.5	321.6	312.3	9.29	34.607		
1,800.0	1,780.0	1,741.6	1,697.7	5.4	6.4	111.09	225.6	-241.8	351.2	341.3	9.98	35.203		
1,900.0	1,878.5	1,836.9	1,787.9	5.8	7.0	110.10	245.5	-265.1	381.0	370.3	10.66	35.745		
2,000.0	1,977.1	1,932.2	1,878.1	6.1	7.5	109.26	265.5	-288.4	410.8	399.5	11.34	36.239		
2,100.0	2,075.7	2,027.5	1,968.3	6.5	8.1	108.53	285.5	-311.7	440.7	428.7	12.01	36.690		
2,200.0	2,174.2	2,122.8	2,058.5	6.8	8.7	107.89	305.5	-335.0	470.7	458.0	12.69	37.104		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 23-16C1 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-41.93	19.2	-17.3	25.8					
100.0	100.0	100.0	100.0	0.1	0.1	-41.93	19.2	-17.3	25.8	25.6	0.27	94.895		
200.0	200.0	200.0	200.0	0.3	0.3	-41.93	19.2	-17.3	25.8	25.2	0.62	41.583 CC, ES		
300.0	300.0	298.7	298.7	0.5	0.5	79.13	20.2	-19.6	27.6	26.6	0.98	28.211		
400.0	399.6	397.2	396.8	0.7	0.7	85.98	23.3	-26.6	33.2	31.8	1.39	23.956		
500.0	498.8	495.0	493.9	1.0	1.0	93.16	28.2	-38.1	43.3	41.4	1.90	22.796		
525.2	523.6	519.6	518.1	1.1	1.1	94.76	29.8	-41.8	46.5	44.5	2.05	22.740 SF		
600.0	597.3	592.1	589.3	1.3	1.3	97.72	35.1	-54.1	57.8	55.3	2.50	23.097		
700.0	695.9	690.3	685.4	1.6	1.7	98.75	43.3	-73.1	74.6	71.5	3.13	23.849		
800.0	794.5	788.9	781.7	2.0	2.1	99.38	51.6	-92.3	91.5	87.8	3.77	24.257		
900.0	893.0	887.4	878.0	2.3	2.5	99.81	59.9	-111.4	108.5	104.0	4.43	24.499		
1,000.0	991.6	986.0	974.3	2.7	2.9	100.12	68.2	-130.6	125.4	120.3	5.09	24.654		
1,100.0	1,090.1	1,084.5	1,070.6	3.0	3.3	100.36	76.4	-149.8	142.3	136.6	5.75	24.760		
1,200.0	1,188.7	1,183.1	1,167.0	3.3	3.7	100.55	84.7	-168.9	159.3	152.8	6.41	24.834		
1,300.0	1,287.2	1,281.7	1,263.3	3.7	4.1	100.71	93.0	-188.1	176.2	169.1	7.08	24.889		
1,400.0	1,385.8	1,380.2	1,359.6	4.0	4.5	100.83	101.2	-207.2	193.1	185.4	7.75	24.930		
1,500.0	1,484.3	1,478.8	1,455.9	4.4	4.9	100.94	109.5	-226.4	210.1	201.6	8.42	24.962		
1,600.0	1,582.9	1,577.3	1,552.2	4.7	5.3	101.03	117.8	-245.5	227.0	217.9	9.08	24.987		
1,700.0	1,681.4	1,675.9	1,648.6	5.1	5.8	101.10	126.1	-264.7	243.9	234.2	9.75	25.008		
1,800.0	1,780.0	1,774.4	1,744.9	5.4	6.2	101.17	134.3	-283.9	260.9	250.5	10.42	25.024		
1,900.0	1,878.5	1,873.0	1,841.2	5.8	6.6	101.23	142.6	-303.0	277.8	266.7	11.10	25.038		
2,000.0	1,977.1	1,971.5	1,937.5	6.1	7.0	101.28	150.9	-322.2	294.8	283.0	11.77	25.049		
2,100.0	2,075.7	2,070.1	2,033.8	6.5	7.4	101.33	159.1	-341.3	311.7	299.3	12.44	25.059		
2,200.0	2,174.2	2,168.6	2,130.2	6.8	7.8	101.37	167.4	-360.5	328.6	315.5	13.11	25.067		
2,300.0	2,272.8	2,267.2	2,226.5	7.1	8.2	101.41	175.7	-379.6	345.6	331.8	13.78	25.074		
2,400.0	2,371.3	2,365.8	2,322.8	7.5	8.6	101.44	184.0	-398.8	362.5	348.1	14.45	25.081		
2,500.0	2,469.9	2,464.3	2,419.1	7.8	9.0	101.47	192.2	-418.0	379.5	364.3	15.13	25.086		
2,600.0	2,568.4	2,562.9	2,515.4	8.2	9.4	101.50	200.5	-437.1	396.4	380.6	15.80	25.091		
2,700.0	2,667.0	2,661.4	2,611.8	8.5	9.8	101.53	208.8	-456.3	413.3	396.9	16.47	25.095		
2,800.0	2,765.5	2,760.0	2,708.1	8.9	10.2	101.55	217.0	-475.4	430.3	413.1	17.14	25.098		
2,900.0	2,864.1	2,858.5	2,804.4	9.2	10.6	101.57	225.3	-494.6	447.2	429.4	17.82	25.102		
3,000.0	2,962.6	2,957.1	2,900.7	9.6	11.1	101.59	233.6	-513.7	464.2	445.7	18.49	25.105		
3,100.0	3,061.2	3,055.6	2,997.0	9.9	11.5	101.61	241.9	-532.9	481.1	461.9	19.16	25.107		
3,200.0	3,159.7	3,154.2	3,093.4	10.3	11.9	101.63	250.1	-552.1	498.0	478.2	19.83	25.110		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 23-16D - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-35.27	34.4	-24.3	42.1					
100.0	100.0	100.0	100.0	0.1	0.1	-35.27	34.4	-24.3	42.1	41.9	0.27	154.742		
200.0	200.0	200.0	200.0	0.3	0.3	-35.27	34.4	-24.3	42.1	41.5	0.62	67.808 CC, ES		
300.0	300.0	298.6	298.5	0.5	0.5	83.62	34.6	-26.9	43.5	42.5	0.98	44.302		
400.0	399.6	396.7	396.4	0.7	0.7	85.88	35.5	-34.3	47.7	46.3	1.40	34.139		
500.0	498.8	493.6	492.6	1.0	1.0	91.39	39.4	-45.0	56.4	54.5	1.89	29.770		
525.2	523.6	517.8	516.5	1.1	1.0	93.11	41.0	-48.2	59.5	57.4	2.03	29.267		
600.0	597.3	589.2	586.9	1.3	1.3	97.49	47.2	-58.4	70.8	68.4	2.45	28.857 SF		
700.0	695.9	684.9	680.6	1.6	1.6	100.71	58.6	-74.3	90.1	87.1	3.04	29.626		
800.0	794.5	782.7	776.1	2.0	2.0	102.66	71.0	-91.2	110.6	107.0	3.65	30.266		
900.0	893.0	880.5	871.7	2.3	2.4	104.00	83.5	-108.0	131.2	126.9	4.28	30.674		
1,000.0	991.6	978.4	967.2	2.7	2.8	104.97	95.9	-124.9	151.8	146.9	4.90	30.950		
1,100.0	1,090.1	1,076.2	1,062.8	3.0	3.2	105.72	108.4	-141.7	172.4	166.9	5.53	31.146		
1,200.0	1,188.7	1,174.0	1,158.3	3.3	3.6	106.30	120.8	-158.6	193.0	186.9	6.17	31.290		
1,300.0	1,287.2	1,271.8	1,253.9	3.7	4.0	106.77	133.2	-175.5	213.7	206.9	6.81	31.401		
1,400.0	1,385.8	1,369.7	1,349.5	4.0	4.4	107.16	145.7	-192.3	234.4	226.9	7.44	31.487		
1,500.0	1,484.3	1,467.5	1,445.0	4.4	4.8	107.48	158.1	-209.2	255.1	247.0	8.08	31.556		
1,600.0	1,582.9	1,565.3	1,540.6	4.7	5.2	107.76	170.6	-226.0	275.8	267.1	8.72	31.613		
1,700.0	1,681.4	1,663.2	1,636.1	5.1	5.6	108.00	183.0	-242.9	296.5	287.1	9.36	31.659		
1,800.0	1,780.0	1,761.0	1,731.7	5.4	6.0	108.21	195.5	-259.7	317.2	307.2	10.01	31.699		
1,900.0	1,878.5	1,858.8	1,827.3	5.8	6.4	108.39	207.9	-276.6	337.9	327.2	10.65	31.732		
2,000.0	1,977.1	1,956.6	1,922.8	6.1	6.8	108.55	220.3	-293.4	358.6	347.3	11.29	31.761		
2,100.0	2,075.7	2,054.5	2,018.4	6.5	7.2	108.69	232.8	-310.3	379.3	367.4	11.93	31.786		
2,200.0	2,174.2	2,152.3	2,113.9	6.8	7.7	108.82	245.2	-327.1	400.0	387.4	12.58	31.808		
2,300.0	2,272.8	2,250.1	2,209.5	7.1	8.1	108.93	257.7	-344.0	420.7	407.5	13.22	31.827		
2,400.0	2,371.3	2,347.9	2,305.0	7.5	8.5	109.04	270.1	-360.8	441.5	427.6	13.86	31.844		
2,500.0	2,469.9	2,445.8	2,400.6	7.8	8.9	109.13	282.5	-377.7	462.2	447.7	14.51	31.859		
2,600.0	2,568.4	2,543.6	2,496.2	8.2	9.3	109.22	295.0	-394.5	482.9	467.8	15.15	31.873		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 25-6B - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	55.96	132.5	196.2	236.8					
100.0	100.0	100.0	100.0	0.1	0.1	55.96	132.5	196.2	236.8	236.5	0.27	869.547	CC	
200.0	200.0	200.0	200.0	0.3	0.3	55.96	132.5	196.2	236.8	236.1	0.62	381.038	ES	
300.0	300.0	307.4	307.3	0.5	0.5	174.74	129.5	196.2	237.8	236.8	0.99	240.142		
400.0	399.6	408.1	407.7	0.7	0.7	176.55	121.5	196.6	241.7	240.3	1.37	176.429		
500.0	498.8	500.0	499.0	1.0	1.0	179.05	111.8	200.4	253.0	251.2	1.77	142.826		
525.2	523.6	522.5	521.3	1.1	1.0	179.75	109.2	202.0	257.2	255.4	1.88	136.718		
600.0	597.3	589.2	587.2	1.3	1.2	-178.02	100.7	208.0	271.6	269.4	2.22	122.403		
700.0	695.9	676.5	672.9	1.6	1.5	-174.91	88.4	219.1	294.2	291.5	2.71	108.676		
800.0	794.5	761.4	755.4	2.0	1.9	-171.78	74.9	233.4	320.8	317.5	3.22	99.627		
900.0	893.0	851.7	842.6	2.3	2.3	-168.59	59.4	251.3	350.7	347.0	3.76	93.183		
1,000.0	991.6	945.2	932.8	2.7	2.8	-165.78	43.3	270.0	381.8	377.5	4.32	88.430		
1,100.0	1,090.1	1,038.6	1,022.9	3.0	3.2	-163.38	27.2	288.6	413.6	408.7	4.87	84.973		
1,200.0	1,188.7	1,132.1	1,113.1	3.3	3.7	-161.32	11.1	307.3	445.9	440.5	5.41	82.383		
1,300.0	1,287.2	1,225.5	1,203.2	3.7	4.1	-159.53	-5.0	325.9	478.7	472.8	5.96	80.392	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - HMU Fee 25-6D - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-24.95	15.2	-7.1	16.7					
100.0	100.0	100.0	100.0	0.1	0.1	-24.95	15.2	-7.1	16.7	16.5	0.27	61.480		
200.0	200.0	200.0	200.0	0.3	0.3	-24.95	15.2	-7.1	16.7	16.1	0.62	26.941		
278.9	278.9	279.1	279.1	0.5	0.5	104.08	15.2	-5.4	16.4	15.5	0.91	18.070 CC, ES		
300.0	300.0	300.1	300.1	0.5	0.5	110.71	15.2	-4.4	16.5	15.6	0.99	16.775		
400.0	399.6	399.7	399.4	0.7	0.7	150.62	13.1	2.3	21.4	20.0	1.37	15.613 SF		
500.0	498.8	497.5	496.5	1.0	1.0	179.16	7.0	12.0	37.5	35.7	1.74	21.500		
525.2	523.6	521.8	520.5	1.1	1.0	-176.33	4.9	14.8	43.2	41.4	1.85	23.417		
600.0	597.3	592.9	590.6	1.3	1.3	-166.63	-2.8	24.3	62.3	60.2	2.16	28.800		
700.0	695.9	686.4	681.9	1.6	1.7	-158.03	-16.0	39.0	91.2	88.5	2.64	34.517		
800.0	794.5	777.4	769.9	2.0	2.1	-151.85	-32.3	55.8	123.7	120.6	3.16	39.164		
900.0	893.0	865.8	854.1	2.3	2.6	-147.05	-51.4	74.5	160.0	156.3	3.70	43.201		
1,000.0	991.6	951.2	934.3	2.7	3.2	-143.17	-72.8	94.8	199.8	195.5	4.25	47.029		
1,100.0	1,090.1	1,040.5	1,017.3	3.0	3.7	-139.99	-97.0	117.3	242.0	237.2	4.81	50.301		
1,200.0	1,188.7	1,130.5	1,100.9	3.3	4.3	-137.73	-121.4	140.0	284.6	279.2	5.37	53.004		
1,300.0	1,287.2	1,220.5	1,184.5	3.7	5.0	-136.05	-145.8	162.6	327.5	321.6	5.93	55.263		
1,400.0	1,385.8	1,310.4	1,268.0	4.0	5.6	-134.77	-170.1	185.3	370.6	364.1	6.48	57.174		
1,500.0	1,484.3	1,400.4	1,351.6	4.4	6.2	-133.74	-194.5	208.0	413.8	406.8	7.04	58.809		
1,600.0	1,582.9	1,490.3	1,435.2	4.7	6.8	-132.92	-218.9	230.6	457.1	449.5	7.59	60.220		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 (D25W) - MCU 26-8C (Existing) - Excel Drilling - Surveys													Offset Site Error:	0.0 ft
Survey Program: 264-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	39.06	87.0	70.6	112.1					
100.0	100.0	99.5	99.5	0.1	0.2	39.02	87.2	70.7	112.3	112.0	0.30	379.510	ES	
200.0	200.0	199.0	199.0	0.3	0.3	38.89	87.9	70.9	112.9	112.3	0.63	179.210		
300.0	300.0	298.5	298.5	0.5	0.5	157.25	89.0	71.2	116.4	115.4	0.97	120.065		
400.0	399.6	397.8	397.7	0.7	0.7	158.12	90.6	71.4	125.0	123.7	1.32	94.535		
500.0	498.8	495.3	495.2	1.0	0.8	159.37	92.9	71.5	139.0	137.3	1.68	82.851		
525.2	523.6	519.2	519.2	1.1	0.9	159.72	93.6	71.6	143.6	141.8	1.77	81.286		
600.0	597.3	592.2	592.0	1.3	1.0	160.84	96.4	72.4	158.1	156.1	2.04	77.647		
700.0	695.9	690.5	690.4	1.6	1.2	162.27	99.5	73.7	177.4	175.0	2.39	74.069		
800.0	794.5	787.8	787.6	2.0	1.4	163.73	101.8	75.9	196.8	194.1	2.75	71.688		
900.0	893.0	889.4	889.2	2.3	1.6	165.24	103.2	78.4	215.9	212.8	3.10	69.676		
1,000.0	991.6	995.0	994.7	2.7	1.7	166.75	102.1	79.4	232.3	228.8	3.45	67.261		
1,100.0	1,090.1	1,095.8	1,095.5	3.0	1.9	167.91	100.1	78.7	247.1	243.3	3.80	64.976		
1,200.0	1,188.7	1,200.6	1,200.2	3.3	2.1	169.05	96.9	77.2	260.7	256.5	4.16	62.726		
1,300.0	1,287.2	1,307.1	1,306.5	3.7	2.2	170.50	90.4	74.5	271.6	267.1	4.51	60.262		
1,400.0	1,385.8	1,414.8	1,413.6	4.0	2.4	172.38	79.9	70.9	279.9	275.1	4.86	57.603		
1,500.0	1,484.3	1,525.4	1,523.1	4.4	2.7	174.61	65.3	65.4	285.2	279.9	5.23	54.540		
1,600.0	1,582.9	1,640.5	1,636.0	4.7	3.0	177.32	45.2	56.2	286.0	280.3	5.63	50.833		
1,700.0	1,681.4	1,754.7	1,747.2	5.1	3.3	179.54	24.3	40.6	281.8	275.8	6.03	46.696		
1,800.0	1,780.0	1,870.8	1,859.0	5.4	3.8	-178.65	2.4	18.1	272.6	266.1	6.46	42.210		
1,900.0	1,878.5	1,982.7	1,964.8	5.8	4.3	-176.81	-21.0	-9.4	257.7	250.8	6.90	37.325		
2,000.0	1,977.1	2,086.5	2,061.5	6.1	4.9	-174.18	-46.8	-36.9	239.6	232.1	7.41	32.318		
2,100.0	2,075.7	2,182.8	2,150.6	6.5	5.5	-170.68	-73.2	-62.2	221.2	213.2	8.02	27.570		
2,200.0	2,174.2	2,278.8	2,239.3	6.8	6.1	-166.14	-101.0	-86.4	204.4	195.6	8.81	23.192		
2,300.0	2,272.8	2,374.3	2,327.4	7.1	6.7	-160.56	-129.6	-109.6	189.8	180.0	9.84	19.291		
2,400.0	2,371.3	2,470.0	2,415.9	7.5	7.3	-154.15	-158.2	-132.1	178.2	167.1	11.11	16.038		
2,500.0	2,469.9	2,564.6	2,503.7	7.8	8.0	-147.14	-186.5	-153.3	170.4	157.8	12.59	13.532		
2,600.0	2,568.4	2,661.0	2,593.2	8.2	8.6	-139.48	-215.6	-174.1	166.4	152.2	14.24	11.686		
2,644.4	2,612.1	2,703.2	2,632.4	8.3	8.8	-136.07	-228.3	-183.0	166.0	151.0	14.98	11.079		
2,700.0	2,667.0	2,756.9	2,682.4	8.5	9.2	-131.74	-244.5	-193.9	166.6	150.7	15.91	10.477		
2,800.0	2,765.5	2,857.6	2,776.4	8.9	9.8	-124.16	-273.5	-215.2	169.1	151.6	17.50	9.663		
2,900.0	2,864.1	2,955.9	2,868.3	9.2	10.5	-117.12	-301.2	-236.6	173.5	154.6	18.93	9.164		
3,000.0	2,962.6	3,055.6	2,961.7	9.6	11.1	-110.63	-328.1	-258.8	179.3	159.1	20.19	8.879		
3,100.0	3,061.2	3,152.4	3,051.9	9.9	11.7	-104.41	-354.9	-281.2	187.2	165.9	21.29	8.792	SF	
3,200.0	3,159.7	3,249.0	3,141.9	10.3	12.4	-98.62	-382.3	-303.6	197.7	175.5	22.21	8.903		
3,300.0	3,258.3	3,345.6	3,231.9	10.6	13.0	-93.61	-409.7	-325.3	210.5	187.5	22.97	9.162		
3,400.0	3,356.9	3,441.7	3,321.5	10.9	13.6	-89.23	-437.4	-346.5	225.3	201.7	23.63	9.537		
3,500.0	3,455.4	3,539.3	3,412.2	11.3	14.3	-85.22	-465.9	-368.4	241.6	217.5	24.20	9.987		
3,600.0	3,554.0	3,638.1	3,504.0	11.6	15.0	-81.56	-494.6	-391.1	258.6	233.9	24.69	10.471		
3,700.0	3,652.5	3,739.7	3,598.8	12.0	15.6	-78.43	-523.1	-414.0	275.6	250.4	25.16	10.954		
3,800.0	3,751.1	3,842.8	3,695.4	12.3	16.3	-75.68	-550.0	-437.7	291.2	265.6	25.60	11.373		
3,900.0	3,849.6	3,942.7	3,789.4	12.7	16.9	-73.30	-574.9	-460.9	306.2	280.2	26.04	11.761		
4,000.0	3,948.2	4,038.5	3,879.2	13.0	17.5	-71.06	-599.0	-484.0	321.7	295.3	26.43	12.174		
4,100.0	4,046.7	4,132.9	3,967.3	13.4	18.1	-68.98	-623.7	-507.0	338.7	311.9	26.80	12.640		
4,200.0	4,145.3	4,231.4	4,058.9	13.7	18.8	-66.85	-650.1	-531.9	356.8	329.6	27.13	13.150		
4,300.0	4,243.8	4,330.9	4,151.7	14.1	19.5	-64.96	-676.1	-556.8	374.5	347.1	27.46	13.639		
4,400.0	4,342.4	4,426.0	4,240.4	14.4	20.1	-63.40	-700.9	-580.1	392.7	364.9	27.81	14.119		
4,500.0	4,440.9	4,523.8	4,331.5	14.8	20.7	-61.89	-727.1	-604.3	411.8	383.6	28.16	14.624		
4,600.0	4,539.5	4,616.9	4,418.3	15.1	21.4	-60.65	-752.2	-626.8	431.2	402.7	28.51	15.125		
4,700.0	4,638.1	4,709.3	4,504.4	15.4	22.0	-59.67	-778.3	-648.1	452.2	423.3	28.89	15.653		
4,800.0	4,736.6	4,806.1	4,594.6	15.8	22.6	-58.92	-806.5	-668.8	473.9	444.6	29.33	16.159		
4,900.0	4,835.2	4,900.4	4,682.5	16.1	23.3	-58.27	-834.0	-688.9	495.9	466.1	29.78	16.649		

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

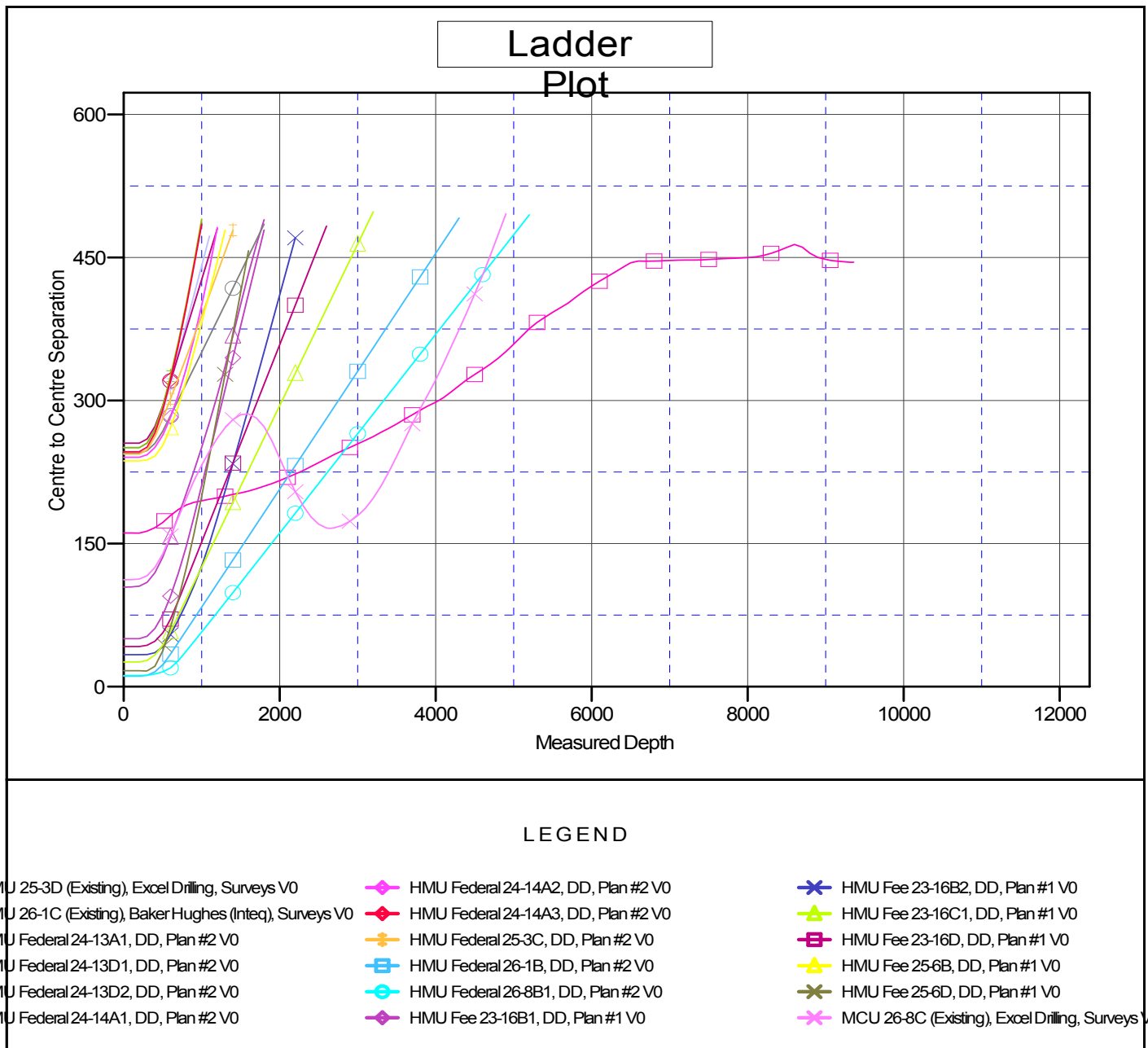
Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HMU Federal 26-1D
Project:	Mamm Creek	TVD Reference:	WELL @ 7250.0ft (Original Well Elev)
Reference Site:	(D25W)	MD Reference:	WELL @ 7250.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	HMU Federal 26-1D	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 @ 7250.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: HMU Federal 26-1D
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.41°



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