

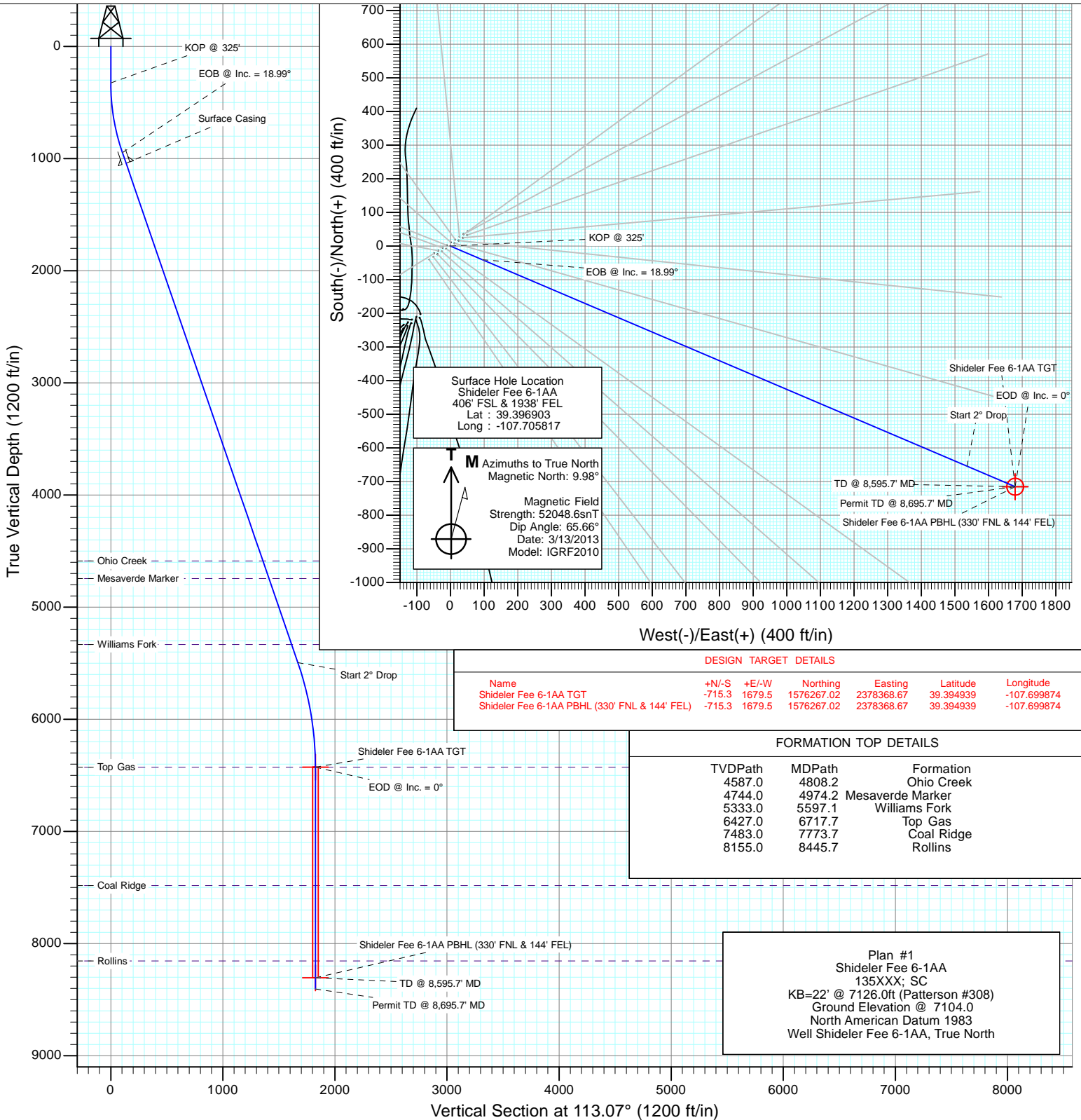


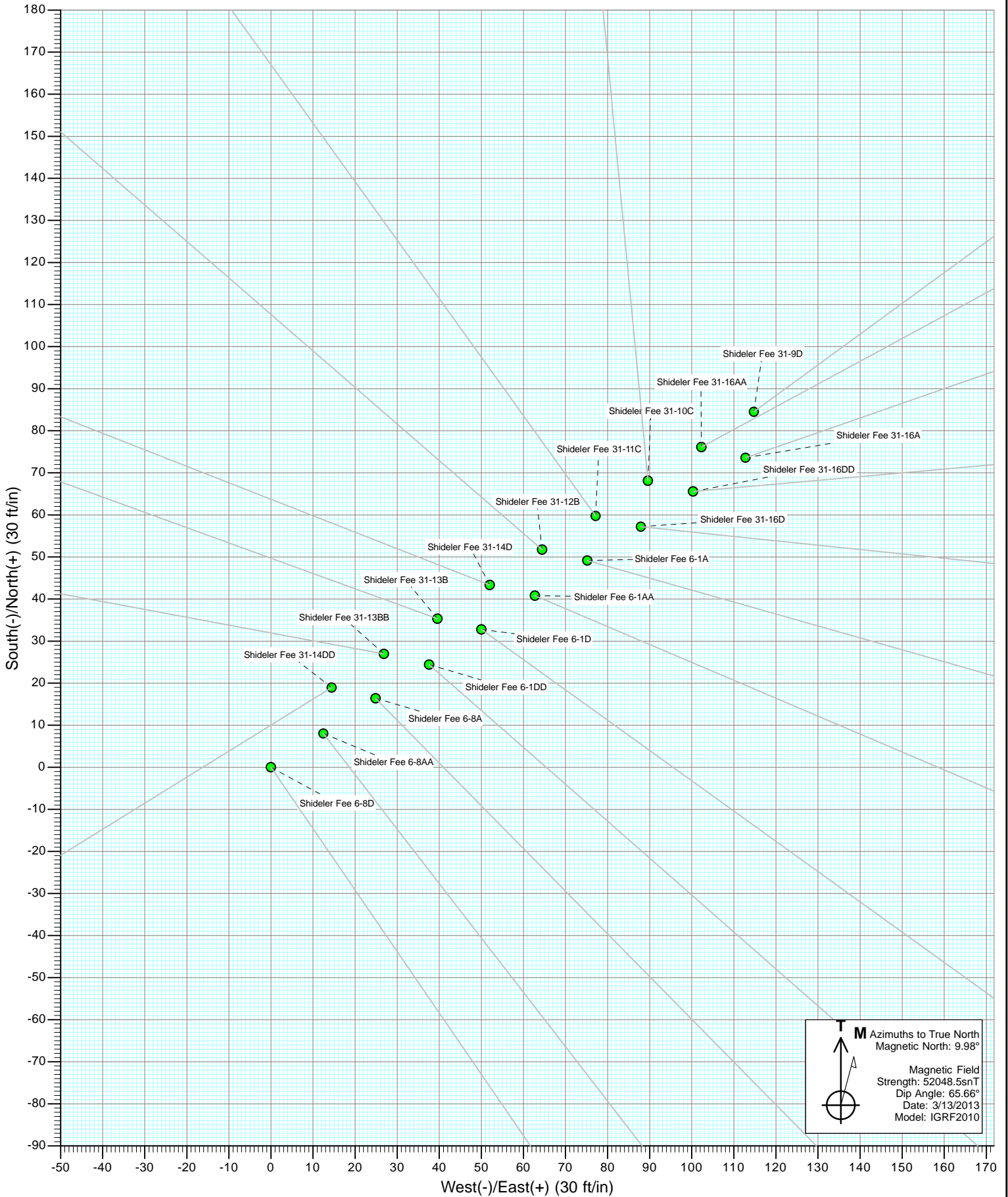
Project: Mamm Creek
 Site: O31E Pad (2nd Occupation)
 Well: Shideler Fee 6-1AA
 Wellbore: OH
 Design: Plan #1

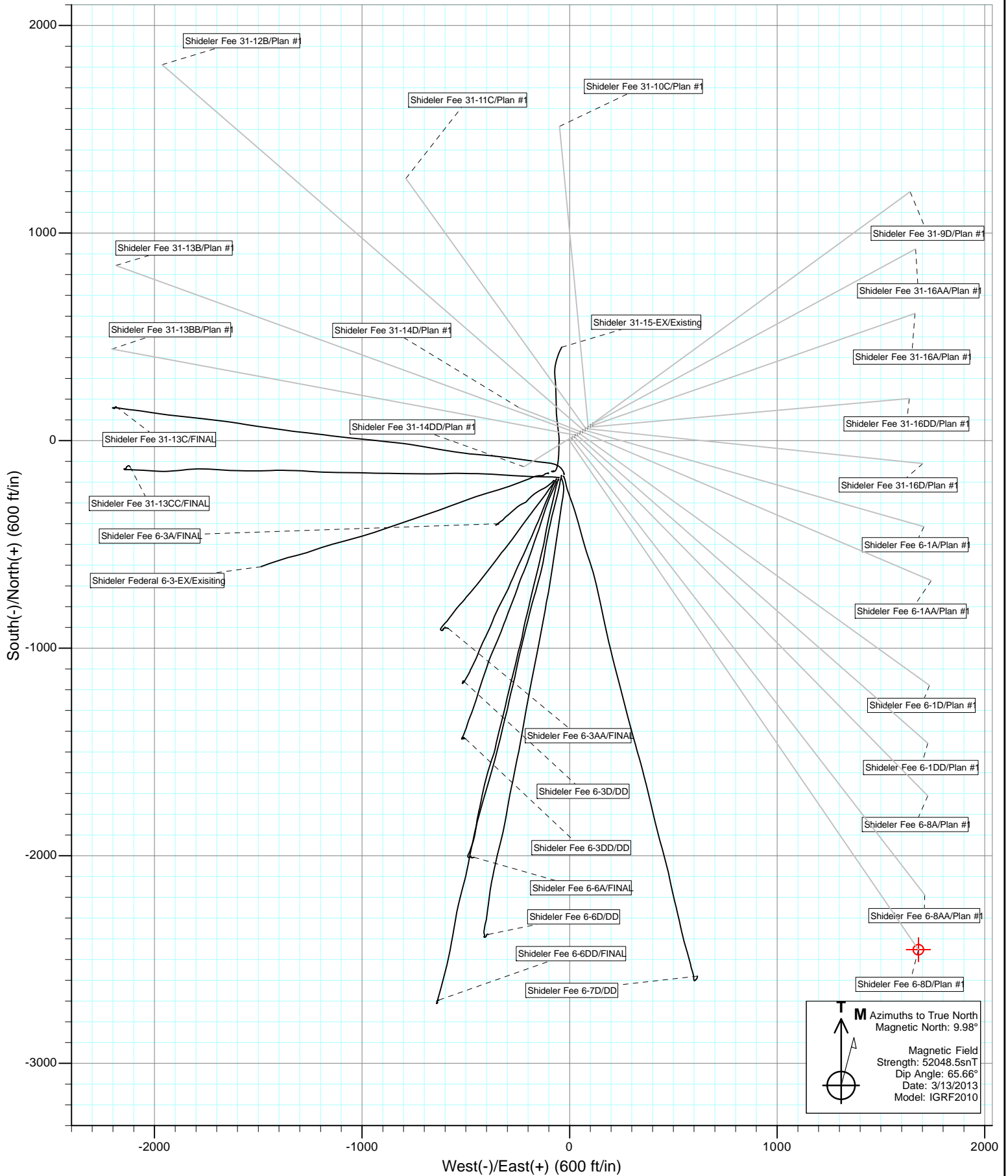


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	325.0	0.00	0.00	325.0	0.0	0.0	0.00	0.00	0.0	
3	958.2	18.99	113.07	946.6	-40.7	95.7	3.00	113.07	104.0	
4	5768.0	18.99	113.07	5494.6	-654.2	1536.0	0.00	0.00	1669.5	
5	6717.7	0.00	0.00	6427.0	-715.3	1679.5	2.00	180.00	1825.5	Shideler Fee 6-1AA TGT
6	8595.7	0.00	0.00	8305.0	-715.3	1679.5	0.00	0.00	1825.5	Shideler Fee 6-1AA PBHL (330' FNL & 144' FEL)
7	8695.7	0.00	0.00	8405.0	-715.3	1679.5	0.00	0.00	1825.5	

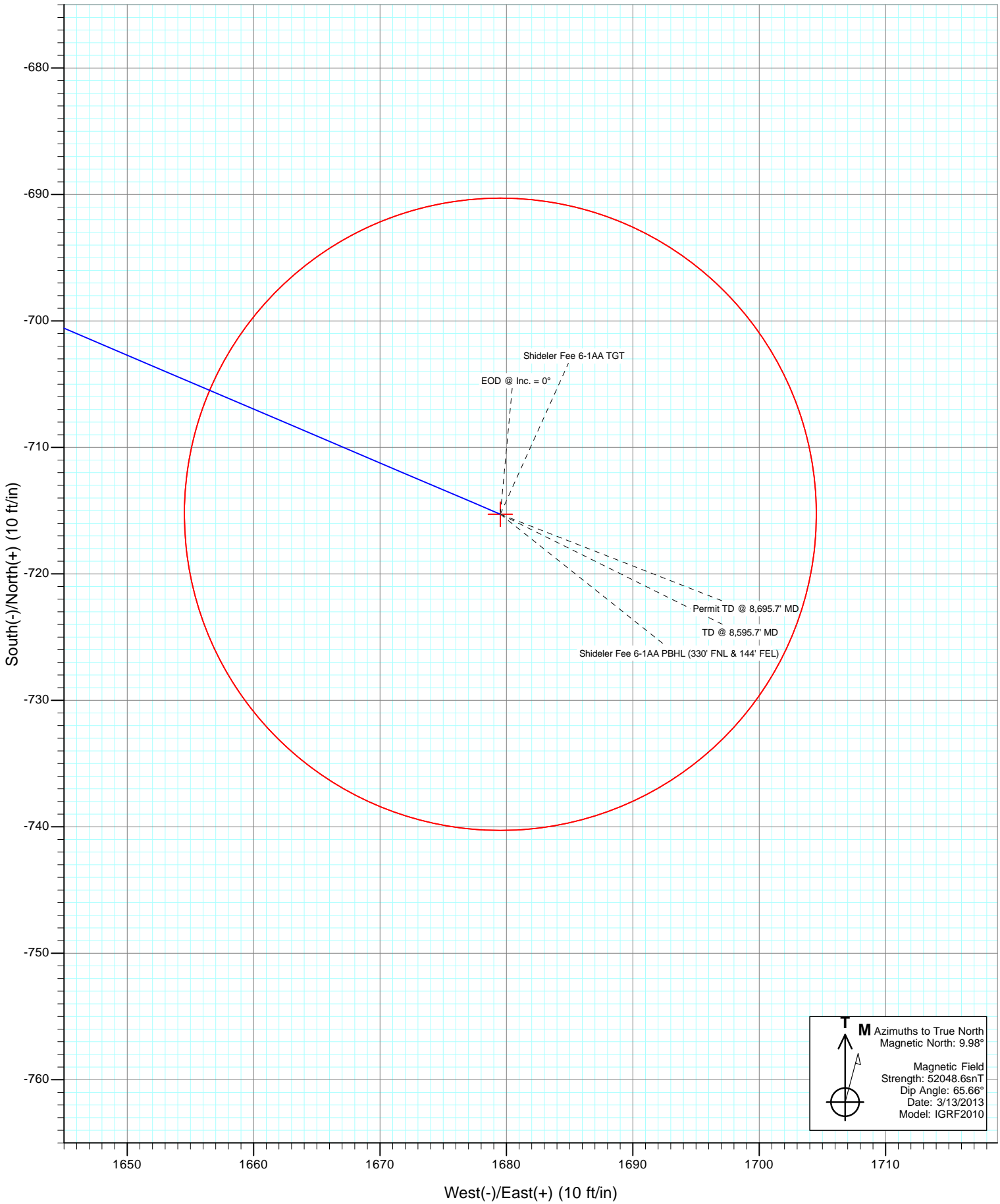








Project: Mamm Creek
Site: O31E Pad (2nd Occupation)
Well: Shideler Fee 6-1AA
Wellbore: OH
Design: Plan #1



M Azimuths to True North
Magnetic North: 9.98°

Magnetic Field
Strength: 52048.6snT
Dip Angle: 65.66°
Date: 3/13/2013
Model: IGRF2010

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB	Local Co-ordinate Reference: Well Shideler Fee 6-1AA
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: KB=22' @ 7126.0ft (Patterson #308)
Project: Mamm Creek	MD Reference: KB=22' @ 7126.0ft (Patterson #308)
Site: O31E Pad (2nd Occupation)	North Reference: True
Well: Shideler Fee 6-1AA	Survey Calculation Method: Minimum Curvature
Wellbore: OH	
Design: Plan #1	

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

Site O31E Pad (2nd Occupation)					
Site Position:		Northing:	1,577,065.31 ft	Latitude:	39.397023
From:	Lat/Long	Easting:	2,376,760.05 ft	Longitude:	-107.705633
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.39 °

Well Shideler Fee 6-1AA					
Well Position	+N/-S	0.0 ft	Northing:	1,577,022.87 ft	Latitude: 39.396903
	+E/-W	0.0 ft	Easting:	2,376,707.00 ft	Longitude: -107.705817
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 7,104.0 ft

Wellbore OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	3/13/2013	(°) 9.98	(°) 65.66	(nT) 52,049

Design Plan #1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	113.07

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	
325.0	0.00	0.00	325.0	0.0	0.0	0.00	0.00	0.00	0.00	
958.2	18.99	113.07	946.6	-40.7	95.7	3.00	3.00	0.00	113.07	
5,768.0	18.99	113.07	5,494.6	-654.2	1,536.0	0.00	0.00	0.00	0.00	
6,717.7	0.00	0.00	6,427.0	-715.3	1,679.5	2.00	-2.00	0.00	180.00	Shideler Fee 6-1AA T
8,595.7	0.00	0.00	8,305.0	-715.3	1,679.5	0.00	0.00	0.00	0.00	Shideler Fee 6-1AA P
8,695.7	0.00	0.00	8,405.0	-715.3	1,679.5	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Project:	Mamm Creek	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site:	O31E Pad (2nd Occupation)	North Reference:	True
Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
325.0	0.00	0.00	325.0	0.0	0.0	0.0	0.00	0.00	KOP @ 325'
400.0	2.25	113.07	400.0	-0.6	1.4	1.5	3.00	3.00	
500.0	5.25	113.07	499.8	-3.1	7.4	8.0	3.00	3.00	
600.0	8.25	113.07	599.1	-7.7	18.2	19.8	3.00	3.00	
700.0	11.25	113.07	697.6	-14.4	33.8	36.7	3.00	3.00	
800.0	14.25	113.07	795.1	-23.0	54.1	58.8	3.00	3.00	
900.0	17.25	113.07	891.4	-33.7	79.0	85.9	3.00	3.00	
958.2	18.99	113.07	946.6	-40.7	95.7	104.0	3.00	3.00	EOB @ Inc. = 18.99°
1,000.0	18.99	113.07	986.2	-46.1	108.2	117.6	0.00	0.00	
1,058.2	18.99	113.07	1,041.2	-53.5	125.6	136.6	0.00	0.00	Surface Casing
1,100.0	18.99	113.07	1,080.7	-58.8	138.2	150.2	0.00	0.00	
1,200.0	18.99	113.07	1,175.3	-71.6	168.1	182.7	0.00	0.00	
1,300.0	18.99	113.07	1,269.9	-84.3	198.0	215.3	0.00	0.00	
1,400.0	18.99	113.07	1,364.4	-97.1	228.0	247.8	0.00	0.00	
1,500.0	18.99	113.07	1,459.0	-109.9	257.9	280.4	0.00	0.00	
1,600.0	18.99	113.07	1,553.5	-122.6	287.9	312.9	0.00	0.00	
1,700.0	18.99	113.07	1,648.1	-135.4	317.8	345.5	0.00	0.00	
1,800.0	18.99	113.07	1,742.6	-148.1	347.8	378.0	0.00	0.00	
1,900.0	18.99	113.07	1,837.2	-160.9	377.7	410.5	0.00	0.00	
2,000.0	18.99	113.07	1,931.7	-173.6	407.7	443.1	0.00	0.00	
2,100.0	18.99	113.07	2,026.3	-186.4	437.6	475.6	0.00	0.00	
2,200.0	18.99	113.07	2,120.8	-199.1	467.6	508.2	0.00	0.00	
2,300.0	18.99	113.07	2,215.4	-211.9	497.5	540.7	0.00	0.00	
2,400.0	18.99	113.07	2,310.0	-224.6	527.4	573.3	0.00	0.00	
2,500.0	18.99	113.07	2,404.5	-237.4	557.4	605.8	0.00	0.00	
2,600.0	18.99	113.07	2,499.1	-250.1	587.3	638.4	0.00	0.00	
2,700.0	18.99	113.07	2,593.6	-262.9	617.3	670.9	0.00	0.00	
2,800.0	18.99	113.07	2,688.2	-275.6	647.2	703.5	0.00	0.00	
2,900.0	18.99	113.07	2,782.7	-288.4	677.2	736.0	0.00	0.00	
3,000.0	18.99	113.07	2,877.3	-301.2	707.1	768.6	0.00	0.00	
3,100.0	18.99	113.07	2,971.8	-313.9	737.1	801.1	0.00	0.00	
3,200.0	18.99	113.07	3,066.4	-326.7	767.0	833.7	0.00	0.00	
3,300.0	18.99	113.07	3,160.9	-339.4	797.0	866.2	0.00	0.00	
3,400.0	18.99	113.07	3,255.5	-352.2	826.9	898.8	0.00	0.00	
3,500.0	18.99	113.07	3,350.1	-364.9	856.8	931.3	0.00	0.00	
3,600.0	18.99	113.07	3,444.6	-377.7	886.8	963.9	0.00	0.00	
3,700.0	18.99	113.07	3,539.2	-390.4	916.7	996.4	0.00	0.00	
3,800.0	18.99	113.07	3,633.7	-403.2	946.7	1,029.0	0.00	0.00	
3,900.0	18.99	113.07	3,728.3	-415.9	976.6	1,061.5	0.00	0.00	
4,000.0	18.99	113.07	3,822.8	-428.7	1,006.6	1,094.1	0.00	0.00	
4,100.0	18.99	113.07	3,917.4	-441.4	1,036.5	1,126.6	0.00	0.00	
4,200.0	18.99	113.07	4,011.9	-454.2	1,066.5	1,159.2	0.00	0.00	
4,300.0	18.99	113.07	4,106.5	-466.9	1,096.4	1,191.7	0.00	0.00	
4,400.0	18.99	113.07	4,201.1	-479.7	1,126.4	1,224.2	0.00	0.00	
4,500.0	18.99	113.07	4,295.6	-492.5	1,156.3	1,256.8	0.00	0.00	
4,600.0	18.99	113.07	4,390.2	-505.2	1,186.2	1,289.3	0.00	0.00	
4,700.0	18.99	113.07	4,484.7	-518.0	1,216.2	1,321.9	0.00	0.00	
4,800.0	18.99	113.07	4,579.3	-530.7	1,246.1	1,354.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB	Local Co-ordinate Reference: Well Shideler Fee 6-1AA
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: KB=22' @ 7126.0ft (Patterson #308)
Project: Mamm Creek	MD Reference: KB=22' @ 7126.0ft (Patterson #308)
Site: O31E Pad (2nd Occupation)	North Reference: True
Well: Shideler Fee 6-1AA	Survey Calculation Method: Minimum Curvature
Wellbore: OH	
Design: Plan #1	

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,808.2	18.99	113.07	4,587.0	-531.8	1,248.6	1,357.1	0.00	0.00	Ohio Creek
4,900.0	18.99	113.07	4,673.8	-543.5	1,276.1	1,387.0	0.00	0.00	
4,974.2	18.99	113.07	4,744.0	-552.9	1,298.3	1,411.1	0.00	0.00	Mesaverde Marker
5,000.0	18.99	113.07	4,768.4	-556.2	1,306.0	1,419.5	0.00	0.00	
5,100.0	18.99	113.07	4,862.9	-569.0	1,336.0	1,452.1	0.00	0.00	
5,200.0	18.99	113.07	4,957.5	-581.7	1,365.9	1,484.6	0.00	0.00	
5,300.0	18.99	113.07	5,052.0	-594.5	1,395.9	1,517.2	0.00	0.00	
5,400.0	18.99	113.07	5,146.6	-607.2	1,425.8	1,549.7	0.00	0.00	
5,500.0	18.99	113.07	5,241.2	-620.0	1,455.8	1,582.3	0.00	0.00	
5,597.1	18.99	113.07	5,333.0	-632.4	1,484.8	1,613.9	0.00	0.00	Williams Fork
5,600.0	18.99	113.07	5,335.7	-632.7	1,485.7	1,614.8	0.00	0.00	
5,700.0	18.99	113.07	5,430.3	-645.5	1,515.6	1,647.4	0.00	0.00	
5,768.0	18.99	113.07	5,494.6	-654.2	1,536.0	1,669.5	0.00	0.00	Start 2° Drop
5,800.0	18.35	113.07	5,524.9	-658.2	1,545.4	1,679.8	2.00	-2.00	
5,900.0	16.35	113.07	5,620.3	-669.9	1,572.9	1,709.6	2.00	-2.00	
6,000.0	14.35	113.07	5,716.7	-680.2	1,597.2	1,736.1	2.00	-2.00	
6,100.0	12.35	113.07	5,814.0	-689.3	1,618.5	1,759.2	2.00	-2.00	
6,200.0	10.35	113.07	5,912.1	-697.0	1,636.6	1,778.8	2.00	-2.00	
6,300.0	8.35	113.07	6,010.7	-703.4	1,651.6	1,795.1	2.00	-2.00	
6,400.0	6.35	113.07	6,109.9	-708.4	1,663.3	1,807.9	2.00	-2.00	
6,500.0	4.35	113.07	6,209.5	-712.0	1,671.9	1,817.2	2.00	-2.00	
6,600.0	2.35	113.07	6,309.3	-714.3	1,677.3	1,823.1	2.00	-2.00	
6,700.0	0.35	113.07	6,409.3	-715.3	1,679.5	1,825.4	2.00	-2.00	
6,717.7	0.00	0.00	6,427.0	-715.3	1,679.5	1,825.5	2.00	-2.00	EOD @ Inc. = 0° - Top Gas
6,800.0	0.00	0.00	6,509.3	-715.3	1,679.5	1,825.5	0.00	0.00	
6,900.0	0.00	0.00	6,609.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,000.0	0.00	0.00	6,709.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,100.0	0.00	0.00	6,809.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,200.0	0.00	0.00	6,909.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,300.0	0.00	0.00	7,009.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,400.0	0.00	0.00	7,109.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,500.0	0.00	0.00	7,209.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,600.0	0.00	0.00	7,309.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,700.0	0.00	0.00	7,409.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,773.7	0.00	0.00	7,483.0	-715.3	1,679.5	1,825.5	0.00	0.00	Coal Ridge
7,800.0	0.00	0.00	7,509.3	-715.3	1,679.5	1,825.5	0.00	0.00	
7,900.0	0.00	0.00	7,609.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,000.0	0.00	0.00	7,709.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,100.0	0.00	0.00	7,809.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,200.0	0.00	0.00	7,909.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,300.0	0.00	0.00	8,009.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,400.0	0.00	0.00	8,109.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,445.7	0.00	0.00	8,155.0	-715.3	1,679.5	1,825.5	0.00	0.00	Rollins
8,500.0	0.00	0.00	8,209.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,595.7	0.00	0.00	8,305.0	-715.3	1,679.5	1,825.5	0.00	0.00	TD @ 8,595.7' MD
8,600.0	0.00	0.00	8,309.3	-715.3	1,679.5	1,825.5	0.00	0.00	
8,695.7	0.00	0.00	8,405.0	-715.3	1,679.5	1,825.5	0.00	0.00	Permit TD @ 8,695.7' MD

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Mamm Creek
Site: O31E Pad (2nd Occupation)
Well: Shideler Fee 6-1AA
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Shideler Fee 6-1AA
TVD Reference: KB=22' @ 7126.0ft (Patterson #308)
MD Reference: KB=22' @ 7126.0ft (Patterson #308)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Shideler Fee 6-1AA PBI - plan hits target center - Circle (radius 25.0)	0.00	0.00	8,305.0	-715.3	1,679.5	1,576,267.02	2,378,368.67	39.394939	-107.699874
Shideler Fee 6-1AA TGT - plan hits target center - Point	0.00	0.00	6,427.0	-715.3	1,679.5	1,576,267.02	2,378,368.67	39.394939	-107.699874

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(in)	(in)
1,058.2	1,041.2	Surface Casing		

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,808.2	4,587.0	Ohio Creek			
4,974.2	4,744.0	Mesaverde Marker			
5,597.1	5,333.0	Williams Fork			
6,717.7	6,427.0	Top Gas			
7,773.7	7,483.0	Coal Ridge			
8,445.7	8,155.0	Rollins			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
325.0	325.0	0.0	0.0	KOP @ 325'	
958.2	946.6	-40.7	95.7	EOB @ Inc. = 18.99°	
5,768.0	5,494.6	-654.2	1,536.0	Start 2° Drop	
6,717.7	6,427.0	-715.3	1,679.5	EOD @ Inc. = 0°	
8,595.7	8,305.0	-715.3	1,679.5	TD @ 8,595.7' MD	
8,695.7	8,405.0	-715.3	1,679.5	Permit TD @ 8,695.7' MD	

EnCana Oil & Gas (USA) Inc

Mamm Creek

O31E Pad (2nd Occupation)

Shideler Fee 6-1AA

OH

Plan #1

Anticollision Report

21 March, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	3/14/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,695.7	Plan #1 (OH)	MWD	Geolink MWD	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
Offset Well - Wellbore - Design						
O31E Pad						
Shideler 31-15-EX - Existing - Existing	400.0	379.4	239.8	238.8	240.968	CC, ES
Shideler 31-15-EX - Existing - Existing	1,400.0	1,345.0	377.8	372.9	75.609	SF
Shideler Federal 6-3-EX - Existing - Existing	287.9	265.9	257.3	256.6	369.577	CC
Shideler Federal 6-3-EX - Existing - Existing	300.0	277.7	257.3	256.6	353.590	ES
Shideler Federal 6-3-EX - Existing - Existing	1,500.0	1,426.7	455.7	450.3	84.616	SF
Shideler Fee 31-13C - OH - FINAL	633.2	644.5	207.8	205.4	86.126	CC, ES
Shideler Fee 31-13C - OH - FINAL	900.0	859.8	249.4	245.3	62.078	SF
Shideler Fee 31-13CC - OH - FINAL	0.0	3.0	246.6			
Shideler Fee 31-13CC - OH - FINAL	100.0	102.3	246.7	246.4	883.291	ES
Shideler Fee 31-13CC - OH - FINAL	1,000.0	900.2	382.2	377.7	84.410	SF
Shideler Fee 6-3A - DD - FINAL	0.0	3.0	271.8			
Shideler Fee 6-3A - DD - FINAL	100.0	102.1	271.9	271.7	974.188	ES
Shideler Fee 6-3A - DD - FINAL	1,500.0	1,438.1	479.0	472.0	68.248	SF
Shideler Fee 6-3AA - DD - FINAL	0.0	0.0	282.1			
Shideler Fee 6-3AA - DD - FINAL	1,200.0	1,117.5	483.1	477.4	84.509	SF
Shideler Fee 6-3D - DD - DD	0.0	3.0	259.3			
Shideler Fee 6-3D - DD - DD	200.0	201.9	259.7	259.1	415.643	ES
Shideler Fee 6-3D - DD - DD	1,300.0	1,206.9	475.0	468.4	71.998	SF
Shideler Fee 6-3DD - DD - DD	0.0	3.0	269.5			
Shideler Fee 6-3DD - DD - DD	100.0	102.2	269.7	269.4	965.521	ES
Shideler Fee 6-3DD - DD - DD	1,200.0	1,100.3	471.8	465.8	78.373	SF
Shideler Fee 6-6A - DD - FINAL	334.6	337.8	256.4	255.3	233.519	CC, ES
Shideler Fee 6-6A - DD - FINAL	1,400.0	1,258.6	491.1	483.5	65.027	SF
Shideler Fee 6-6D - DD - DD	133.2	136.3	243.3	242.9	618.195	CC, ES
Shideler Fee 6-6D - DD - DD	1,300.0	1,155.0	489.6	482.1	65.782	SF
Shideler Fee 6-6DD - DD - FINAL	153.2	156.2	233.1	232.6	503.222	CC
Shideler Fee 6-6DD - DD - FINAL	200.0	200.7	233.3	232.6	374.618	ES
Shideler Fee 6-6DD - DD - FINAL	1,200.0	1,039.5	471.6	465.4	76.088	SF
Shideler Fee 6-7D - DD - DD	140.0	140.0	231.4	231.0	554.605	CC, ES
Shideler Fee 6-7D - DD - DD	1,400.0	1,255.5	483.6	474.2	51.392	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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
O31E Pad (2nd Occupation)						
Shideler Fee 31-10C - OH - Plan #1	200.0	200.0	38.3	37.7	61.638	CC, ES
Shideler Fee 31-10C - OH - Plan #1	500.0	493.9	52.8	51.1	30.915	SF
Shideler Fee 31-11C - OH - Plan #1	235.8	235.8	23.8	23.1	31.888	CC
Shideler Fee 31-11C - OH - Plan #1	300.0	299.8	24.0	23.0	24.733	ES
Shideler Fee 31-11C - OH - Plan #1	400.0	399.0	26.1	24.8	19.586	SF
Shideler Fee 31-12B - OH - Plan #1	200.0	200.0	11.1	10.4	17.797	CC, ES
Shideler Fee 31-12B - OH - Plan #1	300.0	299.6	12.6	11.7	12.941	SF
Shideler Fee 31-13B - OH - Plan #1	200.0	200.0	23.8	23.2	38.318	CC, ES
Shideler Fee 31-13B - OH - Plan #1	400.0	397.1	34.3	32.9	25.915	SF
Shideler Fee 31-13BB - OH - Plan #1	300.0	300.0	38.5	37.5	39.640	CC, ES
Shideler Fee 31-13BB - OH - Plan #1	400.0	398.6	40.8	39.5	30.949	SF
Shideler Fee 31-14D - OH - Plan #1	300.0	300.0	11.0	10.1	11.374	CC, ES
Shideler Fee 31-14D - OH - Plan #1	400.0	400.0	12.5	11.2	9.471	SF
Shideler Fee 31-14DD - OH - Plan #1	300.0	300.0	53.0	52.1	54.654	CC, ES
Shideler Fee 31-14DD - OH - Plan #1	600.0	595.9	78.8	76.7	38.522	SF
Shideler Fee 31-16A - OH - Plan #1	482.9	480.4	58.1	56.5	35.833	CC
Shideler Fee 31-16A - OH - Plan #1	500.0	497.0	58.1	56.4	34.523	ES
Shideler Fee 31-16A - OH - Plan #1	2,700.0	2,633.5	488.5	465.1	20.923	SF
Shideler Fee 31-16AA - OH - Plan #1	300.0	300.0	53.0	52.1	54.660	CC, ES
Shideler Fee 31-16AA - OH - Plan #1	2,300.0	2,217.3	497.3	478.2	26.029	SF
Shideler Fee 31-16D - OH - Plan #1	300.0	300.0	30.0	29.1	30.936	CC
Shideler Fee 31-16D - OH - Plan #1	400.0	399.1	30.3	29.0	22.980	ES
Shideler Fee 31-16D - OH - Plan #1	2,200.0	2,185.8	168.7	149.7	8.867	SF
Shideler Fee 31-16DD - OH - Plan #1	300.0	300.0	45.0	44.0	46.385	CC, ES
Shideler Fee 31-16DD - OH - Plan #1	2,200.0	2,169.9	263.0	244.5	14.224	SF
Shideler Fee 31-9D - OH - Plan #1	200.0	200.0	67.9	67.3	109.329	CC, ES
Shideler Fee 31-9D - OH - Plan #1	2,000.0	1,898.3	499.2	483.6	31.972	SF
Shideler Fee 6-1A - OH - Plan #1	456.9	456.4	14.5	13.0	9.462	CC
Shideler Fee 6-1A - OH - Plan #1	500.0	499.3	14.6	12.9	8.579	ES
Shideler Fee 6-1A - OH - Plan #1	8,695.7	8,656.7	262.4	198.2	4.087	SF
Shideler Fee 6-1D - OH - Plan #1	400.0	400.3	14.9	13.6	11.254	CC, ES
Shideler Fee 6-1D - OH - Plan #1	1,000.0	999.3	40.3	34.3	6.745	SF
Shideler Fee 6-1DD - OH - Plan #1	400.0	400.4	29.9	28.5	22.414	CC, ES
Shideler Fee 6-1DD - OH - Plan #1	1,300.0	1,294.0	105.1	95.5	10.919	SF
Shideler Fee 6-8A - OH - Plan #1	353.9	354.3	44.9	43.7	38.367	CC
Shideler Fee 6-8A - OH - Plan #1	400.0	400.5	44.9	43.6	33.487	ES
Shideler Fee 6-8A - OH - Plan #1	1,300.0	1,288.3	141.3	131.6	14.504	SF
Shideler Fee 6-8AA - OH - Plan #1	316.6	316.8	59.9	58.9	57.861	CC, ES
Shideler Fee 6-8AA - OH - Plan #1	1,200.0	1,177.1	168.0	159.5	19.598	SF
Shideler Fee 6-8D - OH - Plan #1	283.1	283.1	74.8	73.9	81.955	CC
Shideler Fee 6-8D - OH - Plan #1	300.0	300.0	74.8	73.8	76.986	ES
Shideler Fee 6-8D - OH - Plan #1	1,300.0	1,261.5	225.7	215.9	23.020	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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 100-Gyro													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-141.93	-189.3	-148.3	241.5						
100.0	100.0	78.3	78.3	0.1	0.1	-141.99	-189.4	-148.1	240.4	240.2		0.20	1,175.508		
200.0	200.0	178.7	178.7	0.3	0.2	-142.15	-189.7	-147.4	240.2	239.7		0.47	514.745		
300.0	300.0	278.8	278.8	0.5	0.2	-142.39	-190.0	-146.4	239.9	239.2		0.73	329.275		
361.5	361.5	340.6	340.6	0.6	0.3	104.48	-190.5	-145.5	239.9	239.0		0.89	268.669		
400.0	400.0	379.4	379.4	0.7	0.3	104.47	-190.8	-144.8	239.8	238.8		1.00	240.968	CC, ES	
500.0	499.8	480.6	480.5	0.9	0.4	105.50	-191.3	-142.7	240.7	239.4		1.28	187.786		
600.0	599.1	582.5	582.4	1.1	0.5	108.00	-190.5	-141.1	242.4	240.8		1.61	150.407		
700.0	697.6	680.4	680.3	1.4	0.6	111.78	-188.2	-140.3	246.0	244.0		2.00	123.254		
800.0	795.1	774.1	773.9	1.8	0.7	116.23	-186.4	-140.5	254.0	251.6		2.44	104.309		
900.0	891.4	869.1	868.9	2.4	0.8	121.05	-185.9	-141.0	267.5	264.6		2.92	91.578		
1,000.0	986.2	964.3	964.2	2.9	0.8	126.00	-186.3	-140.8	285.8	282.4		3.41	83.784		
1,100.0	1,080.7	1,059.6	1,059.5	3.5	0.9	130.60	-187.3	-140.2	306.5	302.7		3.86	79.403		
1,200.0	1,175.3	1,154.3	1,154.2	4.1	1.0	134.60	-188.2	-139.5	328.9	324.7		4.27	76.965		
1,300.0	1,269.9	1,249.1	1,249.0	4.7	1.1	138.20	-188.6	-139.1	352.9	348.3		4.65	75.897		
1,400.0	1,364.4	1,345.0	1,344.8	5.3	1.2	141.36	-189.1	-138.5	377.8	372.9		5.00	75.609	SF	
1,500.0	1,459.0	1,441.4	1,441.2	5.9	1.3	144.16	-189.5	-137.6	403.5	398.2		5.32	75.835		
1,600.0	1,553.5	1,538.3	1,538.1	6.5	1.3	146.69	-189.4	-136.3	429.5	423.8		5.62	76.402		
1,700.0	1,648.1	1,635.8	1,635.6	7.1	1.4	149.02	-188.7	-134.7	455.7	449.8		5.90	77.252		
1,800.0	1,742.6	1,737.8	1,737.6	7.8	1.5	151.34	-186.6	-132.1	481.8	475.6		6.15	78.345		

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 100-Gyro													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-140.17	-198.5	-165.5	259.4						
100.0	100.0	79.3	79.3	0.1	0.1	-140.19	-198.4	-165.3	258.2	258.0	0.21	1,257.129			
200.0	200.0	179.6	179.6	0.3	0.2	-140.24	-198.0	-164.8	257.6	257.2	0.47	550.959			
287.9	287.9	265.9	265.9	0.5	0.2	-140.24	-197.8	-164.6	257.3	256.6	0.70	369.577	CC		
300.0	300.0	277.7	277.7	0.5	0.2	-140.23	-197.8	-164.6	257.3	256.6	0.73	353.590	ES		
400.0	400.0	376.9	376.9	0.7	0.3	107.09	-197.7	-165.1	258.1	257.1	0.99	260.551			
500.0	499.8	476.1	476.1	0.9	0.4	108.53	-197.7	-166.0	260.6	259.3	1.27	204.605			
600.0	599.1	574.7	574.7	1.1	0.5	110.94	-197.7	-167.1	265.3	263.7	1.60	165.882			
700.0	697.6	671.8	671.8	1.4	0.6	114.13	-197.9	-168.4	273.0	271.0	1.98	137.801			
800.0	795.1	767.2	767.1	1.8	0.7	117.92	-198.2	-170.2	284.7	282.3	2.42	117.666			
900.0	891.4	861.2	861.2	2.4	0.8	122.06	-198.8	-172.7	301.1	298.2	2.90	103.684			
1,000.0	986.2	954.0	953.9	2.9	0.8	126.50	-199.4	-175.5	322.7	319.3	3.39	95.045			
1,100.0	1,080.7	1,047.6	1,047.4	3.5	0.9	130.80	-200.3	-178.5	347.0	343.2	3.85	90.200			
1,200.0	1,175.3	1,142.3	1,142.0	4.1	1.0	134.52	-201.5	-181.3	372.9	368.6	4.27	87.369			
1,300.0	1,269.9	1,237.5	1,237.3	4.7	1.1	137.70	-203.2	-183.6	399.8	395.2	4.66	85.752			
1,400.0	1,364.4	1,333.0	1,332.7	5.3	1.2	140.46	-205.0	-185.4	427.4	422.3	5.03	84.895			
1,500.0	1,459.0	1,426.7	1,426.4	5.9	1.3	142.87	-206.6	-187.2	455.7	450.3	5.39	84.616	SF		
1,600.0	1,553.5	1,518.7	1,518.3	6.5	1.3	145.00	-207.9	-189.3	484.9	479.2	5.72	84.803			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	-156.23	-202.2	-89.0	220.9						
100.0	100.0	102.3	102.3	0.1	0.1	-156.25	-202.3	-89.0	221.1	220.8	0.28	791.118			
200.0	200.0	203.2	203.2	0.3	0.3	-156.25	-202.5	-89.1	221.3	220.6	0.63	352.901			
300.0	300.0	305.9	305.9	0.5	0.5	-156.17	-201.9	-89.2	220.7	219.7	0.98	225.032			
400.0	400.0	413.6	413.5	0.7	0.7	91.94	-197.7	-90.1	217.6	216.2	1.35	161.411			
500.0	499.8	516.8	516.3	0.9	0.9	95.74	-189.2	-93.6	212.1	210.4	1.75	121.362			
600.0	599.1	613.4	612.1	1.1	1.1	101.70	-179.1	-99.6	208.1	205.9	2.23	93.509			
633.2	631.9	644.5	643.0	1.2	1.2	104.11	-175.6	-102.1	207.8	205.4	2.41	86.126	CC, ES		
700.0	697.6	702.7	700.4	1.4	1.4	109.16	-168.8	-108.2	209.8	207.0	2.80	74.998			
800.0	795.1	783.6	779.9	1.8	1.7	116.96	-160.2	-120.4	222.7	219.3	3.41	65.258			
900.0	891.4	859.8	854.4	2.4	1.9	124.04	-154.1	-135.6	249.4	245.3	4.02	62.078	SF		
1,000.0	986.2	937.0	929.3	2.9	2.3	130.59	-149.9	-153.6	287.9	283.4	4.56	63.170			
1,100.0	1,080.7	1,007.8	997.6	3.5	2.6	135.85	-147.3	-172.1	333.9	328.9	5.01	66.638			
1,200.0	1,175.3	1,079.4	1,066.1	4.1	2.9	140.11	-145.1	-192.8	385.0	379.6	5.42	71.104			
1,300.0	1,269.9	1,146.9	1,130.0	4.7	3.3	143.48	-142.6	-214.2	440.1	434.3	5.78	76.102			
1,400.0	1,364.4	1,213.0	1,191.9	5.3	3.8	146.30	-139.5	-237.3	499.1	493.0	6.12	81.511			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD, 1242-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	3.0	3.0	0.0	0.0	-152.42	-218.6	-114.2	246.6						
100.0	100.0	102.3	102.3	0.1	0.1	-152.40	-218.6	-114.3	246.7	246.4	0.28	883.291	ES		
200.0	200.0	201.6	201.6	0.3	0.3	-152.40	-219.1	-114.5	247.2	246.6	0.62	395.914			
300.0	300.0	299.1	299.1	0.5	0.5	-151.88	-219.0	-117.0	248.3	247.4	0.97	256.260			
400.0	400.0	395.8	395.5	0.7	0.7	96.71	-217.9	-123.4	250.7	249.3	1.34	187.683			
500.0	499.8	486.3	485.5	0.9	0.9	99.88	-216.9	-133.2	256.4	254.7	1.74	147.783			
600.0	599.1	577.6	575.8	1.1	1.2	104.28	-216.5	-146.6	267.2	265.0	2.21	120.954			
700.0	697.6	666.0	662.7	1.4	1.5	109.39	-215.9	-162.5	283.8	281.1	2.75	103.300			
800.0	795.1	753.0	747.7	1.8	1.8	114.82	-215.3	-181.3	308.0	304.7	3.34	92.324			
900.0	891.4	826.7	819.0	2.4	2.2	119.28	-214.8	-199.6	340.8	336.9	3.94	86.492			
1,000.0	986.2	900.2	889.7	2.9	2.6	123.96	-214.4	-220.2	382.2	377.7	4.53	84.410	SF		
1,100.0	1,080.7	968.1	954.2	3.5	3.0	128.31	-214.0	-241.0	429.6	424.6	5.05	85.077			
1,200.0	1,175.3	1,029.0	1,011.4	4.1	3.4	131.84	-213.1	-262.1	482.7	477.2	5.53	87.324			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	-149.37	-233.8	-138.5	271.8						
100.0	100.0	102.1	102.1	0.1	0.1	-149.36	-234.0	-138.6	271.9	271.7	0.28	974.188	ES		
200.0	200.0	199.6	199.6	0.3	0.3	-149.27	-234.4	-139.4	272.7	272.1	0.62	439.115			
300.0	300.0	295.0	295.0	0.5	0.5	-149.11	-235.3	-140.8	274.3	273.4	0.96	284.848			
400.0	400.0	387.0	386.9	0.7	0.7	98.22	-238.0	-143.7	278.7	277.4	1.30	214.282			
500.0	499.8	485.2	484.9	0.9	0.8	99.58	-242.2	-148.0	285.7	284.0	1.67	170.960			
600.0	599.1	586.4	586.0	1.1	1.0	101.92	-246.3	-152.3	293.7	291.6	2.09	140.283			
700.0	697.6	683.8	683.2	1.4	1.2	104.92	-250.1	-156.4	303.4	300.8	2.57	117.881			
800.0	795.1	780.0	779.2	1.8	1.4	108.57	-253.6	-161.0	315.9	312.7	3.12	101.234			
900.0	891.4	875.2	874.2	2.4	1.6	112.61	-257.0	-165.7	331.9	328.2	3.73	89.091			
1,000.0	986.2	969.2	968.1	2.9	1.8	116.97	-260.5	-170.2	352.1	347.7	4.35	80.941			
1,100.0	1,080.7	1,062.8	1,061.5	3.5	2.0	121.33	-263.5	-174.9	374.7	369.7	4.94	75.809			
1,200.0	1,175.3	1,155.4	1,153.9	4.1	2.2	125.18	-266.4	-179.6	399.4	393.9	5.50	72.563			
1,300.0	1,269.9	1,252.9	1,251.2	4.7	2.4	128.75	-269.5	-184.2	425.3	419.3	6.04	70.438			
1,400.0	1,364.4	1,351.6	1,349.9	5.3	2.6	131.93	-272.2	-187.7	451.4	444.8	6.55	68.955			
1,500.0	1,459.0	1,438.1	1,436.3	5.9	2.7	134.53	-273.9	-191.3	479.0	472.0	7.02	68.248	SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
O31E Pad - Shideler Fee 6-3AA - DD - FINAL															
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	-150.34	-245.1	-139.6	282.1						
100.0	100.0	97.0	97.0	0.1	0.1	-150.33	-245.6	-139.9	282.6	282.4	0.27	1,036.471			
200.0	200.0	187.7	187.6	0.3	0.3	-150.29	-247.4	-141.1	285.1	284.4	0.61	470.959			
300.0	300.0	274.8	274.6	0.5	0.5	-150.14	-251.8	-144.6	291.5	290.6	0.95	306.289			
400.0	400.0	363.0	362.2	0.7	0.7	97.05	-259.5	-150.6	302.6	301.4	1.26	240.335			
500.0	499.8	453.6	451.9	0.9	1.0	97.92	-269.6	-157.9	317.2	315.6	1.62	196.317			
600.0	599.1	544.0	541.1	1.1	1.3	99.41	-281.7	-166.6	335.5	333.5	2.02	166.195			
700.0	697.6	641.4	637.0	1.4	1.6	101.51	-295.8	-176.1	356.2	353.7	2.50	142.440			
800.0	795.1	742.3	736.6	1.8	1.9	104.30	-308.9	-185.9	377.8	374.7	3.07	123.208			
900.0	891.4	839.2	832.4	2.4	2.2	107.29	-320.6	-194.6	400.8	397.1	3.70	108.222			
1,000.0	986.2	933.0	925.1	2.9	2.5	110.61	-331.8	-202.6	426.6	422.2	4.38	97.364			
1,100.0	1,080.7	1,026.0	1,017.2	3.5	2.8	114.07	-342.6	-210.7	454.1	449.1	5.05	89.845			
1,200.0	1,175.3	1,117.5	1,107.8	4.1	3.1	117.10	-353.2	-218.6	483.1	477.4	5.72	84.509 SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 111-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	3.0	3.0	0.0	0.0	-150.91	-226.6	-126.0	259.3					
100.0	100.0	102.2	102.2	0.1	0.1	-150.90	-226.7	-126.2	259.4	259.1	0.28	929.112		
200.0	200.0	201.9	201.9	0.3	0.3	-150.92	-227.0	-126.2	259.7	259.1	0.62	415.643 ES		
300.0	300.0	295.0	295.0	0.5	0.5	-150.90	-227.9	-126.8	261.0	260.0	0.96	271.084		
400.0	400.0	387.0	386.9	0.7	0.6	96.33	-231.1	-129.3	265.5	264.2	1.30	204.418		
500.0	499.8	473.7	473.3	0.9	0.8	97.32	-237.4	-133.3	274.9	273.2	1.65	166.737		
600.0	599.1	562.4	561.3	1.1	1.1	98.87	-247.3	-138.6	289.2	287.2	2.05	141.060		
700.0	697.6	651.7	649.5	1.4	1.3	100.85	-259.9	-144.6	307.7	305.2	2.52	121.900		
800.0	795.1	745.4	741.7	1.8	1.6	103.16	-275.2	-150.8	329.7	326.7	3.09	106.669		
900.0	891.4	837.3	832.0	2.4	1.9	105.72	-290.9	-156.9	354.6	350.8	3.74	94.740		
1,000.0	986.2	929.6	922.7	2.9	2.3	108.86	-306.8	-163.7	382.5	378.1	4.45	85.994		
1,100.0	1,080.7	1,022.0	1,013.4	3.5	2.6	112.16	-322.7	-170.8	412.3	407.2	5.16	79.889		
1,200.0	1,175.3	1,115.0	1,104.8	4.1	2.9	114.98	-339.0	-177.6	443.2	437.3	5.88	75.357		
1,300.0	1,269.9	1,206.9	1,195.0	4.7	3.3	117.39	-355.4	-184.2	475.0	468.4	6.60	71.998 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	-151.78	-237.5	-127.5	269.5						
100.0	100.0	102.2	102.2	0.1	0.1	-151.82	-237.7	-127.4	269.7	269.4	0.28	965.521 ES			
200.0	200.0	199.9	199.9	0.3	0.3	-151.96	-238.7	-127.1	270.4	269.8	0.62	434.613			
300.0	300.0	290.1	290.0	0.5	0.5	-152.10	-241.3	-127.7	273.3	272.4	0.96	284.688			
400.0	400.0	379.0	378.8	0.7	0.7	94.79	-246.9	-129.9	280.1	278.8	1.29	217.767			
500.0	499.8	466.6	465.8	0.9	0.9	95.36	-255.6	-133.3	291.4	289.7	1.64	177.702			
600.0	599.1	555.7	554.0	1.1	1.1	96.56	-267.6	-138.0	306.9	304.9	2.05	149.986			
700.0	697.6	639.0	636.0	1.4	1.4	98.14	-281.2	-143.8	327.0	324.5	2.52	129.904			
800.0	795.1	726.6	721.5	1.8	1.8	100.15	-298.4	-151.4	352.1	349.0	3.08	114.268			
900.0	891.4	822.0	814.4	2.4	2.2	102.68	-318.0	-160.0	379.9	376.2	3.75	101.215			
1,000.0	986.2	916.5	906.7	2.9	2.5	105.63	-337.2	-167.5	409.4	404.9	4.49	91.096			
1,100.0	1,080.7	1,009.7	997.6	3.5	2.9	108.63	-356.4	-174.3	440.0	434.7	5.25	83.774			
1,200.0	1,175.3	1,100.3	1,085.9	4.1	3.3	111.13	-375.5	-180.8	471.8	465.8	6.02	78.373 SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	-153.27	-229.5	-115.6	256.9						
100.0	100.0	103.1	103.1	0.1	0.1	-153.23	-229.4	-115.7	256.9	256.7	0.28	916.407			
200.0	200.0	203.3	203.3	0.3	0.3	-153.12	-229.1	-116.1	256.8	256.2	0.63	409.458			
300.0	300.0	304.1	304.1	0.5	0.5	-153.02	-228.6	-116.4	256.5	255.5	0.98	262.266			
334.6	334.6	337.8	337.8	0.5	0.6	94.01	-228.4	-116.5	256.4	255.3	1.10	233.519 CC, ES			
400.0	400.0	401.3	401.3	0.7	0.7	94.37	-228.4	-117.0	256.7	255.4	1.32	193.788			
500.0	499.8	494.9	494.9	0.9	0.8	95.70	-229.7	-118.0	259.1	257.4	1.69	153.601			
600.0	599.1	584.9	584.8	1.1	1.0	97.64	-233.7	-119.3	265.0	262.9	2.09	126.728			
700.0	697.6	673.5	673.1	1.4	1.2	100.05	-240.9	-121.5	276.0	273.5	2.56	107.660			
800.0	795.1	759.4	758.3	1.8	1.4	102.66	-251.2	-124.6	292.6	289.4	3.11	93.944			
900.0	891.4	844.0	841.6	2.4	1.6	105.23	-265.0	-128.4	315.1	311.4	3.75	83.946			
1,000.0	986.2	927.4	923.2	2.9	1.9	107.88	-281.9	-132.3	343.3	338.8	4.46	76.974			
1,100.0	1,080.7	1,008.4	1,001.7	3.5	2.3	110.30	-301.5	-136.6	375.7	370.5	5.19	72.390			
1,200.0	1,175.3	1,088.0	1,078.0	4.1	2.7	112.09	-323.7	-141.6	411.7	405.8	5.94	69.277			
1,300.0	1,269.9	1,171.3	1,156.9	4.7	3.1	113.50	-349.3	-147.7	450.8	444.0	6.73	66.971			
1,400.0	1,364.4	1,258.6	1,239.4	5.3	3.6	114.65	-377.4	-154.4	491.1	483.5	7.55	65.027 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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 111-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	3.0	3.0	0.0	0.0	-154.92	-220.4	-103.1	243.3					
100.0	100.0	103.1	103.1	0.1	0.1	-154.90	-220.3	-103.2	243.3	243.0	0.28	867.383		
133.2	133.2	136.3	136.3	0.2	0.2	-154.90	-220.3	-103.2	243.3	242.9	0.39	618.195 CC, ES		
200.0	200.0	199.0	199.0	0.3	0.3	-155.04	-220.9	-102.8	243.7	243.1	0.62	393.081		
300.0	300.0	290.5	290.4	0.5	0.5	-155.77	-224.7	-101.1	246.7	245.7	0.96	256.179		
400.0	400.0	383.7	383.2	0.7	0.7	89.92	-232.6	-97.9	253.1	251.8	1.32	191.699		
500.0	499.8	473.5	472.2	0.9	0.9	89.27	-243.5	-94.4	262.8	261.1	1.71	153.347		
600.0	599.1	563.0	560.6	1.1	1.2	89.43	-257.6	-91.8	276.1	273.9	2.16	127.819		
700.0	697.6	647.5	643.5	1.4	1.5	90.35	-273.8	-91.0	293.5	290.8	2.67	109.754		
800.0	795.1	729.3	723.0	1.8	1.9	91.77	-292.9	-92.2	316.1	312.8	3.27	96.545		
900.0	891.4	808.9	799.5	2.4	2.3	93.49	-314.7	-95.3	344.1	340.1	3.98	86.547		
1,000.0	986.2	888.3	874.8	2.9	2.7	95.65	-339.5	-99.5	377.2	372.4	4.77	79.015		
1,100.0	1,080.7	973.6	954.9	3.5	3.3	98.13	-368.6	-104.3	414.0	408.3	5.63	73.555		
1,200.0	1,175.3	1,066.4	1,041.8	4.1	3.8	100.32	-400.6	-109.3	451.5	444.9	6.53	69.169		
1,300.0	1,269.9	1,155.0	1,124.7	4.7	4.4	102.05	-431.6	-113.6	489.6	482.1	7.44	65.782 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	-154.30	-210.2	-101.2	233.3						
100.0	100.0	103.5	103.5	0.1	0.1	-154.33	-210.1	-101.0	233.2	232.9	0.28	829.948			
153.2	153.2	156.2	156.2	0.2	0.2	-154.34	-210.1	-100.9	233.1	232.6	0.46	503.222 CC			
200.0	200.0	200.7	200.7	0.3	0.3	-154.34	-210.2	-101.0	233.3	232.6	0.62	374.618 ES			
300.0	300.0	291.4	291.4	0.5	0.5	-154.37	-212.8	-102.1	236.3	235.3	0.96	246.351			
400.0	400.0	380.3	380.0	0.7	0.7	92.38	-219.1	-103.6	243.6	242.3	1.29	189.101			
500.0	499.8	467.5	466.5	0.9	0.9	92.82	-229.3	-106.2	255.6	254.0	1.64	155.718			
600.0	599.1	554.9	552.7	1.1	1.1	93.77	-243.7	-109.4	272.8	270.7	2.05	132.892			
700.0	697.6	639.0	634.8	1.4	1.5	94.90	-261.3	-112.6	294.5	291.9	2.54	115.917			
800.0	795.1	722.0	715.1	1.8	1.9	96.29	-282.2	-117.0	321.4	318.3	3.13	102.843			
900.0	891.4	803.6	793.1	2.4	2.3	97.78	-305.6	-122.1	353.0	349.2	3.81	92.650			
1,000.0	986.2	883.8	869.0	2.9	2.8	99.83	-330.7	-128.6	389.3	384.7	4.57	85.089			
1,100.0	1,080.7	963.2	943.3	3.5	3.3	102.08	-357.6	-135.6	428.9	423.5	5.38	79.759			
1,200.0	1,175.3	1,039.5	1,013.8	4.1	3.8	103.76	-385.7	-142.9	471.6	465.4	6.20	76.088 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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 111-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-156.81	-213.1	-91.3	231.8						
100.0	100.0	101.1	101.1	0.1	0.1	-156.81	-212.9	-91.2	231.6	231.3	0.28	819.549			
140.0	140.0	140.0	140.0	0.2	0.2	-156.81	-212.8	-91.1	231.4	231.0	0.42	554.605 CC, ES			
200.0	200.0	194.5	194.5	0.3	0.3	-156.99	-213.6	-90.7	232.1	231.5	0.62	375.884			
300.0	300.0	288.2	288.1	0.5	0.5	-157.87	-218.2	-88.7	235.9	234.9	0.97	243.834			
400.0	400.0	378.5	377.9	0.7	0.7	87.86	-226.5	-86.0	243.2	241.9	1.32	184.645			
500.0	499.8	466.9	465.5	0.9	0.9	87.27	-238.2	-83.1	254.2	252.5	1.70	149.363			
600.0	599.1	556.2	553.3	1.1	1.2	87.08	-254.0	-79.1	268.7	266.5	2.16	124.429			
700.0	697.6	648.8	643.6	1.4	1.6	87.53	-273.9	-75.0	286.5	283.7	2.75	104.262			
800.0	795.1	737.6	729.2	1.8	2.1	87.68	-296.4	-67.0	306.2	302.7	3.46	88.423			
900.0	891.4	824.3	811.4	2.4	2.6	87.94	-322.0	-57.7	328.9	324.6	4.31	76.335			
1,000.0	986.2	910.3	891.9	2.9	3.1	88.63	-350.7	-47.4	354.8	349.5	5.27	67.339			
1,100.0	1,080.7	995.3	970.3	3.5	3.7	89.47	-381.8	-36.8	383.6	377.3	6.27	61.169			
1,200.0	1,175.3	1,080.0	1,047.4	4.1	4.4	90.10	-415.0	-26.7	415.0	407.7	7.29	56.906			
1,300.0	1,269.9	1,166.3	1,125.4	4.7	5.0	90.56	-450.7	-16.8	448.7	440.3	8.34	53.798			
1,400.0	1,364.4	1,255.5	1,205.4	5.3	5.7	90.93	-488.9	-6.8	483.6	474.2	9.41	51.392 SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	44.51	27.3	26.8	38.3						
100.0	100.0	100.0	100.0	0.1	0.1	44.51	27.3	26.8	38.3	38.0	0.27	140.661			
200.0	200.0	200.0	200.0	0.3	0.3	44.51	27.3	26.8	38.3	37.7	0.62	61.638 CC, ES			
300.0	300.0	299.0	299.0	0.5	0.5	42.90	28.7	26.7	39.2	38.3	0.97	40.427			
400.0	400.0	397.2	397.0	0.7	0.7	-78.12	35.0	26.1	43.5	42.1	1.33	32.684			
500.0	499.8	493.9	493.0	0.9	0.9	-92.64	46.1	25.1	52.8	51.1	1.71	30.915 SF			
600.0	599.1	588.1	585.9	1.1	1.2	-106.94	61.6	23.6	70.8	68.7	2.10	33.697			
700.0	697.6	678.7	674.4	1.4	1.6	-117.37	80.7	21.8	98.6	96.1	2.52	39.113			
800.0	795.1	769.3	762.3	1.8	2.0	-124.53	102.9	19.6	134.6	131.6	2.99	45.012			
900.0	891.4	859.3	849.5	2.4	2.4	-129.64	125.1	17.5	175.3	171.8	3.51	49.958			
1,000.0	986.2	947.5	934.9	2.9	2.8	-133.83	146.8	15.5	220.1	216.0	4.05	54.288			
1,100.0	1,080.7	1,035.2	1,019.9	3.5	3.2	-137.19	168.4	13.4	266.3	261.7	4.61	57.777			
1,200.0	1,175.3	1,123.0	1,104.9	4.1	3.6	-139.57	190.1	11.3	313.0	307.9	5.17	60.570			
1,300.0	1,269.9	1,210.8	1,190.0	4.7	4.0	-141.33	211.7	9.3	360.1	354.3	5.73	62.850			
1,400.0	1,364.4	1,298.5	1,275.0	5.3	4.4	-142.69	233.3	7.2	407.3	401.0	6.29	64.743			
1,500.0	1,459.0	1,386.3	1,360.0	5.9	4.8	-143.77	254.9	5.1	454.7	447.9	6.85	66.339			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	37.27	18.9	14.4	23.8						
100.0	100.0	100.0	100.0	0.1	0.1	37.27	18.9	14.4	23.8	23.5	0.27	87.413			
200.0	200.0	200.0	200.0	0.3	0.3	37.27	18.9	14.4	23.8	23.2	0.62	38.305			
235.8	235.8	235.8	235.8	0.4	0.4	37.27	18.9	14.4	23.8	23.1	0.75	31.888 CC			
300.0	300.0	299.8	299.8	0.5	0.5	35.79	19.5	14.0	24.0	23.0	0.97	24.733 ES			
400.0	400.0	399.0	398.9	0.7	0.7	-91.23	23.7	11.0	26.1	24.8	1.33	19.586 SF			
500.0	499.8	496.6	495.9	0.9	0.9	-116.12	31.8	5.1	35.3	33.6	1.71	20.648			
600.0	599.1	591.1	589.3	1.1	1.2	-134.46	43.6	-3.3	56.5	54.5	2.06	27.412			
700.0	697.6	681.3	677.6	1.4	1.6	-144.29	58.3	-13.9	89.2	86.8	2.41	37.054			
800.0	795.1	768.5	762.2	1.8	1.9	-149.63	75.5	-26.3	131.3	128.5	2.76	47.651			
900.0	891.4	855.8	846.8	2.4	2.3	-152.94	93.3	-39.1	179.0	175.9	3.12	57.435			
1,000.0	986.2	940.8	929.0	2.9	2.7	-155.43	110.6	-51.5	230.9	227.4	3.49	66.251			
1,100.0	1,080.7	1,025.4	1,010.9	3.5	3.1	-157.38	127.8	-63.9	283.8	279.9	3.87	73.407			
1,200.0	1,175.3	1,109.9	1,092.7	4.1	3.5	-158.73	145.0	-76.3	336.9	332.6	4.25	79.258			
1,300.0	1,269.9	1,194.5	1,174.6	4.7	3.9	-159.71	162.3	-88.7	390.0	385.4	4.64	84.119			
1,400.0	1,364.4	1,279.0	1,256.4	5.3	4.3	-160.45	179.5	-101.1	443.2	438.2	5.02	88.215			
1,500.0	1,459.0	1,363.5	1,338.2	5.9	4.7	-161.04	196.7	-113.4	496.5	491.1	5.41	91.715			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	8.82	10.9	1.7	11.1						
100.0	100.0	100.0	100.0	0.1	0.1	8.82	10.9	1.7	11.1	10.8	0.27	40.613			
200.0	200.0	200.0	200.0	0.3	0.3	8.82	10.9	1.7	11.1	10.4	0.62	17.797 CC, ES			
300.0	300.0	299.6	299.6	0.5	0.5	-1.20	12.6	-0.3	12.6	11.7	0.98	12.941 SF			
400.0	400.0	398.5	398.1	0.7	0.7	-135.08	17.7	-6.1	19.8	18.5	1.33	14.901			
500.0	499.8	495.3	494.1	0.9	1.0	-150.85	25.9	-15.5	37.4	35.7	1.67	22.389			
600.0	599.1	588.5	585.8	1.1	1.3	-158.34	36.7	-28.0	65.5	63.5	2.00	32.755			
700.0	697.6	677.0	672.1	1.4	1.7	-162.00	49.8	-43.1	103.3	101.0	2.32	44.484			
800.0	795.1	759.9	751.9	1.8	2.1	-163.93	64.3	-59.8	149.9	147.3	2.63	56.917			
900.0	891.4	836.4	824.7	2.4	2.6	-165.00	79.8	-77.6	204.6	201.7	2.93	69.720			
1,000.0	986.2	906.4	890.4	2.9	3.0	-165.78	95.6	-95.9	266.2	263.0	3.23	82.329			
1,100.0	1,080.7	972.1	951.2	3.5	3.5	-166.47	111.8	-114.6	331.3	327.8	3.55	93.433			
1,200.0	1,175.3	1,034.0	1,007.7	4.1	4.0	-166.88	128.4	-133.7	398.9	395.1	3.85	103.547			
1,300.0	1,269.9	1,095.3	1,062.9	4.7	4.5	-167.14	145.9	-153.9	468.7	464.6	4.16	112.728			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-103.27	-5.5	-23.2	23.8						
100.0	100.0	100.0	100.0	0.1	0.1	-103.27	-5.5	-23.2	23.8	23.5	0.27	87.444			
200.0	200.0	200.0	200.0	0.3	0.3	-103.27	-5.5	-23.2	23.8	23.2	0.62	38.318 CC, ES			
300.0	300.0	298.9	298.8	0.5	0.5	-100.17	-4.6	-25.6	26.0	25.0	0.97	26.775			
400.0	400.0	397.1	396.7	0.7	0.7	154.44	-2.0	-32.7	34.3	32.9	1.32	25.915 SF			
500.0	499.8	493.1	492.0	0.9	1.0	162.53	2.2	-44.3	52.5	50.8	1.66	31.547			
600.0	599.1	585.6	583.0	1.1	1.3	167.74	7.8	-59.6	81.0	79.0	1.99	40.659			
700.0	697.6	673.3	668.5	1.4	1.7	170.77	14.5	-78.0	119.1	116.8	2.30	51.720			
800.0	795.1	755.4	747.6	1.8	2.1	172.57	21.9	-98.5	166.0	163.4	2.59	63.991			
900.0	891.4	831.1	819.7	2.4	2.6	173.67	29.8	-120.3	221.1	218.3	2.87	77.098			
1,000.0	986.2	900.0	884.4	2.9	3.0	174.45	37.8	-142.4	283.2	280.1	3.14	90.328			
1,100.0	1,080.7	965.1	944.8	3.5	3.5	175.07	46.2	-165.3	348.7	345.3	3.41	102.152			
1,200.0	1,175.3	1,039.5	1,013.4	4.1	4.0	175.57	56.1	-192.6	415.5	411.8	3.70	112.143			
1,300.0	1,269.9	1,114.0	1,081.9	4.7	4.6	175.94	66.0	-219.8	482.2	478.2	3.99	120.727			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-111.09	-13.8	-35.9	38.5						
100.0	100.0	100.0	100.0	0.1	0.1	-111.09	-13.8	-35.9	38.5	38.2	0.27	141.279			
200.0	200.0	200.0	200.0	0.3	0.3	-111.09	-13.8	-35.9	38.5	37.8	0.62	61.909			
300.0	300.0	300.0	300.0	0.5	0.5	-111.09	-13.8	-35.9	38.5	37.5	0.97	39.640	CC, ES		
400.0	400.0	398.6	398.6	0.7	0.7	138.26	-13.6	-37.3	40.8	39.5	1.32	30.949	SF		
500.0	499.8	495.7	495.4	0.9	0.9	146.18	-12.4	-43.4	51.8	50.1	1.67	31.017			
600.0	599.1	590.1	589.2	1.1	1.1	154.03	-10.5	-53.9	72.8	70.8	2.01	36.156			
700.0	697.6	680.5	678.5	1.4	1.4	159.52	-7.8	-68.3	104.1	101.7	2.35	44.379			
800.0	795.1	765.9	762.0	1.8	1.7	162.98	-4.6	-85.7	144.8	142.2	2.66	54.454			
900.0	891.4	845.5	839.1	2.4	2.1	165.13	-1.0	-105.2	194.3	191.3	2.96	65.657			
1,000.0	986.2	918.9	909.3	2.9	2.5	166.65	2.9	-125.9	251.3	248.0	3.25	77.236			
1,100.0	1,080.7	987.9	974.7	3.5	2.9	167.82	7.0	-147.9	312.1	308.5	3.55	87.834			
1,200.0	1,175.3	1,053.2	1,035.7	4.1	3.3	168.57	11.2	-170.7	375.7	371.9	3.85	97.657			
1,300.0	1,269.9	1,124.9	1,102.0	4.7	3.8	169.17	16.2	-197.5	441.3	437.2	4.15	106.343			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-76.64	2.5	-10.7	11.0						
100.0	100.0	100.0	100.0	0.1	0.1	-76.64	2.5	-10.7	11.0	10.8	0.27	40.538			
200.0	200.0	200.0	200.0	0.3	0.3	-76.64	2.5	-10.7	11.0	10.4	0.62	17.764			
300.0	300.0	300.0	300.0	0.5	0.5	-76.64	2.5	-10.7	11.0	10.1	0.97	11.374 CC, ES			
400.0	400.0	400.0	400.0	0.7	0.7	171.42	2.5	-10.7	12.5	11.2	1.32	9.471 SF			
500.0	499.8	499.8	499.8	0.9	0.8	174.35	2.5	-10.7	19.0	17.3	1.66	11.405			
600.0	599.1	597.4	597.4	1.1	1.0	176.60	3.5	-13.1	33.2	31.2	2.00	16.595			
700.0	697.6	694.8	694.6	1.4	1.2	177.77	5.4	-17.9	55.4	53.1	2.33	23.741			
800.0	795.1	791.0	790.7	1.8	1.4	178.37	7.2	-22.7	82.7	80.0	2.66	31.119			
900.0	891.4	885.6	885.2	2.4	1.6	178.73	9.1	-27.5	114.9	112.0	2.97	38.703			
1,000.0	986.2	978.6	978.0	2.9	1.7	178.97	10.9	-32.1	151.7	148.4	3.29	46.161			
1,100.0	1,080.7	1,071.3	1,070.6	3.5	1.9	179.12	12.7	-36.8	189.3	185.6	3.62	52.303			
1,200.0	1,175.3	1,164.0	1,163.1	4.1	2.1	179.23	14.6	-41.4	226.8	222.9	3.95	57.416			
1,300.0	1,269.9	1,256.6	1,255.6	4.7	2.3	179.31	16.4	-46.0	264.4	260.1	4.28	61.739			
1,400.0	1,364.4	1,349.3	1,348.2	5.3	2.5	179.36	18.2	-50.7	302.0	297.4	4.61	65.442			
1,500.0	1,459.0	1,442.0	1,440.7	5.9	2.6	179.41	20.0	-55.3	339.6	334.6	4.95	68.651			
1,600.0	1,553.5	1,534.7	1,533.3	6.5	2.8	179.44	21.8	-59.9	377.2	371.9	5.28	71.458			
1,700.0	1,648.1	1,627.3	1,625.8	7.1	3.0	179.47	23.6	-64.6	414.7	409.1	5.61	73.934			
1,800.0	1,742.6	1,720.0	1,718.3	7.8	3.2	179.49	25.5	-69.2	452.3	446.4	5.94	76.135			
1,900.0	1,837.2	1,812.7	1,810.9	8.4	3.4	179.51	27.3	-73.8	489.9	483.6	6.27	78.104			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-114.33	-21.9	-48.3	53.0						
100.0	100.0	100.0	100.0	0.1	0.1	-114.33	-21.9	-48.3	53.0	52.8	0.27	194.791			
200.0	200.0	200.0	200.0	0.3	0.3	-114.33	-21.9	-48.3	53.0	52.4	0.62	85.358			
300.0	300.0	300.0	300.0	0.5	0.5	-114.33	-21.9	-48.3	53.0	52.1	0.97	54.654 CC, ES			
400.0	400.0	397.5	397.5	0.7	0.7	133.28	-23.1	-50.4	56.5	55.2	1.32	42.950			
500.0	499.8	497.0	496.9	0.9	0.8	136.71	-25.5	-54.2	65.5	63.9	1.67	39.150			
600.0	599.1	595.9	595.7	1.1	1.0	141.67	-27.8	-57.9	78.8	76.7	2.04	38.522 SF			
700.0	697.6	693.9	693.6	1.4	1.2	146.82	-30.1	-61.6	96.8	94.3	2.42	39.932			
800.0	795.1	790.8	790.4	1.8	1.4	151.45	-32.3	-65.3	119.8	117.0	2.80	42.792			
900.0	891.4	886.3	885.7	2.4	1.6	155.32	-34.6	-68.9	148.0	144.9	3.17	46.713			
1,000.0	986.2	980.2	979.6	2.9	1.8	158.56	-36.8	-72.5	181.0	177.5	3.53	51.260			
1,100.0	1,080.7	1,073.8	1,073.1	3.5	1.9	161.05	-39.0	-76.0	215.2	211.3	3.90	55.238			
1,200.0	1,175.3	1,167.4	1,166.6	4.1	2.1	162.86	-41.2	-79.5	249.7	245.4	4.26	58.652			
1,300.0	1,269.9	1,261.1	1,260.2	4.7	2.3	164.23	-43.4	-83.1	284.3	279.7	4.61	61.602			
1,400.0	1,364.4	1,354.7	1,353.7	5.3	2.5	165.31	-45.6	-86.6	319.0	314.0	4.97	64.171			
1,500.0	1,459.0	1,448.3	1,447.2	5.9	2.6	166.17	-47.7	-90.2	353.8	348.5	5.33	66.426			
1,600.0	1,553.5	1,541.9	1,540.8	6.5	2.8	166.88	-49.9	-93.7	388.7	383.0	5.68	68.418			
1,700.0	1,648.1	1,635.6	1,634.3	7.1	3.0	167.48	-52.1	-97.3	423.6	417.5	6.03	70.190			
1,800.0	1,742.6	1,729.2	1,727.8	7.8	3.2	167.98	-54.3	-100.8	458.5	452.1	6.39	71.776			
1,900.0	1,837.2	1,822.8	1,821.4	8.4	3.4	168.41	-56.5	-104.3	493.5	486.7	6.74	73.202			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	56.76	32.8	50.0	59.8						
100.0	100.0	100.0	100.0	0.1	0.1	56.76	32.8	50.0	59.8	59.5	0.27	219.650			
200.0	200.0	200.0	200.0	0.3	0.3	56.76	32.8	50.0	59.8	59.2	0.62	96.251			
300.0	300.0	300.0	300.0	0.5	0.5	56.76	32.8	50.0	59.8	58.8	0.97	61.628			
400.0	400.0	400.0	400.0	0.7	0.7	-57.52	32.8	50.0	59.0	57.7	1.32	44.674			
482.9	482.7	480.4	480.4	0.8	0.8	-61.18	33.3	51.6	58.1	56.5	1.62	35.833 CC			
500.0	499.8	497.0	497.0	0.9	0.8	-62.18	33.6	52.3	58.1	56.4	1.68	34.523 ES			
600.0	599.1	594.0	593.6	1.1	1.0	-69.34	36.0	59.3	60.3	58.2	2.10	28.669			
700.0	697.6	690.6	689.5	1.4	1.3	-77.64	40.0	70.9	66.3	63.7	2.63	25.227			
800.0	795.1	786.8	784.1	1.8	1.6	-85.55	45.6	86.9	76.9	73.5	3.31	23.239			
900.0	891.4	882.3	877.2	2.4	2.0	-92.10	52.7	107.2	91.9	87.8	4.15	22.136			
1,000.0	986.2	977.7	968.9	2.9	2.5	-97.13	61.2	131.9	111.3	106.1	5.13	21.702			
1,100.0	1,080.7	1,074.4	1,061.3	3.5	3.0	-100.41	70.7	159.1	132.7	126.5	6.15	21.563			
1,200.0	1,175.3	1,171.9	1,154.3	4.1	3.5	-102.79	80.2	186.6	154.4	147.2	7.20	21.441			
1,300.0	1,269.9	1,269.3	1,247.3	4.7	4.0	-104.59	89.8	214.0	176.3	168.0	8.26	21.344			
1,400.0	1,364.4	1,366.8	1,340.3	5.3	4.6	-105.98	99.3	241.4	198.3	189.0	9.33	21.266			
1,500.0	1,459.0	1,464.2	1,433.4	5.9	5.1	-107.10	108.8	268.8	220.4	210.0	10.40	21.204			
1,600.0	1,553.5	1,561.6	1,526.4	6.5	5.6	-108.02	118.4	296.2	242.6	231.2	11.47	21.153			
1,700.0	1,648.1	1,659.1	1,619.4	7.1	6.2	-108.78	127.9	323.7	264.9	252.3	12.55	21.112			
1,800.0	1,742.6	1,756.5	1,712.4	7.8	6.7	-109.42	137.4	351.1	287.1	273.5	13.62	21.078			
1,900.0	1,837.2	1,854.0	1,805.4	8.4	7.3	-109.97	146.9	378.5	309.4	294.7	14.70	21.049			
2,000.0	1,931.7	1,951.4	1,898.4	9.0	7.8	-110.45	156.5	405.9	331.8	316.0	15.78	21.025			
2,100.0	2,026.3	2,048.9	1,991.5	9.6	8.4	-110.87	166.0	433.3	354.1	337.3	16.86	21.004			
2,200.0	2,120.8	2,146.3	2,084.5	10.2	8.9	-111.23	175.5	460.7	376.5	358.5	17.94	20.986			
2,300.0	2,215.4	2,243.7	2,177.5	10.8	9.5	-111.56	185.1	488.2	398.9	379.8	19.02	20.970			
2,400.0	2,310.0	2,341.2	2,270.5	11.5	10.0	-111.85	194.6	515.6	421.2	401.1	20.10	20.956			
2,500.0	2,404.5	2,438.6	2,363.5	12.1	10.6	-112.11	204.1	543.0	443.6	422.5	21.18	20.944			
2,600.0	2,499.1	2,536.1	2,456.5	12.7	11.1	-112.35	213.7	570.4	466.0	443.8	22.26	20.933			
2,700.0	2,593.6	2,633.5	2,549.6	13.3	11.7	-112.56	223.2	597.8	488.5	465.1	23.34	20.923 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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	48.24	35.3	39.6	53.0						
100.0	100.0	100.0	100.0	0.1	0.1	48.24	35.3	39.6	53.0	52.8	0.27	194.815			
200.0	200.0	200.0	200.0	0.3	0.3	48.24	35.3	39.6	53.0	52.4	0.62	85.368			
300.0	300.0	300.0	300.0	0.5	0.5	48.24	35.3	39.6	53.0	52.1	0.97	54.660	CC, ES		
400.0	400.0	397.3	397.3	0.7	0.7	-65.54	36.5	41.7	54.9	53.6	1.32	41.693			
500.0	499.8	494.3	494.0	0.9	0.9	-69.23	40.0	48.2	59.7	58.0	1.69	35.432			
600.0	599.1	590.8	589.6	1.1	1.1	-74.81	45.8	59.0	68.0	65.9	2.12	32.098			
700.0	697.6	686.3	683.7	1.4	1.4	-80.87	53.9	73.8	80.3	77.7	2.67	30.140			
800.0	795.1	780.8	775.8	1.8	1.9	-86.39	64.0	92.5	97.1	93.7	3.36	28.870			
900.0	891.4	874.0	865.4	2.4	2.3	-90.95	76.1	114.8	118.3	114.1	4.22	28.008			
1,000.0	986.2	968.1	954.8	2.9	2.9	-94.94	90.1	140.8	143.5	138.3	5.21	27.551			
1,100.0	1,080.7	1,064.2	1,045.9	3.5	3.4	-98.28	104.7	167.6	169.8	163.5	6.25	27.179			
1,200.0	1,175.3	1,160.3	1,137.0	4.1	4.0	-100.73	119.2	194.5	196.4	189.1	7.30	26.908			
1,300.0	1,269.9	1,256.4	1,228.1	4.7	4.5	-102.59	133.8	221.4	223.3	215.0	8.36	26.707			
1,400.0	1,364.4	1,352.5	1,319.2	5.3	5.1	-104.05	148.4	248.3	250.4	241.0	9.43	26.556			
1,500.0	1,459.0	1,448.6	1,410.3	5.9	5.7	-105.23	162.9	275.2	277.6	267.1	10.50	26.439			
1,600.0	1,553.5	1,544.7	1,501.3	6.5	6.2	-106.20	177.5	302.1	304.9	293.4	11.57	26.347			
1,700.0	1,648.1	1,640.7	1,592.4	7.1	6.8	-107.01	192.1	329.0	332.3	319.7	12.65	26.273			
1,800.0	1,742.6	1,736.8	1,683.5	7.8	7.4	-107.69	206.6	355.9	359.7	346.0	13.72	26.213			
1,900.0	1,837.2	1,832.9	1,774.6	8.4	8.0	-108.28	221.2	382.8	387.2	372.4	14.80	26.163			
2,000.0	1,931.7	1,929.0	1,865.7	9.0	8.5	-108.79	235.7	409.7	414.7	398.8	15.87	26.121			
2,100.0	2,026.3	2,025.1	1,956.8	9.6	9.1	-109.24	250.3	436.6	442.2	425.2	16.95	26.086			
2,200.0	2,120.8	2,121.2	2,047.9	10.2	9.7	-109.63	264.9	463.5	469.7	451.7	18.03	26.055			
2,300.0	2,215.4	2,217.3	2,139.0	10.8	10.3	-109.98	279.4	490.4	497.3	478.2	19.10	26.029	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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: O-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	56.91	16.4	25.2	30.0						
100.0	100.0	100.0	100.0	0.1	0.1	56.91	16.4	25.2	30.0	29.7	0.27	110.259			
200.0	200.0	200.0	200.0	0.3	0.3	56.91	16.4	25.2	30.0	29.4	0.62	48.316			
300.0	300.0	300.0	300.0	0.5	0.5	56.91	16.4	25.2	30.0	29.1	0.97	30.936 CC			
400.0	400.0	399.1	399.1	0.7	0.7	-56.72	16.2	26.6	30.3	29.0	1.32	22.980 ES			
500.0	499.8	497.9	497.6	0.9	0.9	-59.10	15.6	32.9	31.8	30.1	1.70	18.729			
600.0	599.1	596.6	595.7	1.1	1.1	-62.85	14.4	44.3	34.4	32.3	2.14	16.058			
700.0	697.6	695.2	692.9	1.4	1.4	-67.29	12.7	60.7	38.5	35.8	2.72	14.139			
800.0	795.1	793.7	789.0	1.8	1.8	-71.78	10.5	82.1	44.1	40.6	3.48	12.664			
900.0	891.4	892.2	883.9	2.4	2.3	-75.93	7.7	108.3	51.2	46.8	4.44	11.550			
1,000.0	986.2	991.7	979.2	2.9	2.8	-81.84	4.8	136.8	58.8	53.2	5.56	10.575			
1,100.0	1,080.7	1,091.2	1,074.5	3.5	3.3	-87.23	1.8	165.3	66.8	60.0	6.72	9.937			
1,200.0	1,175.3	1,190.7	1,169.8	4.1	3.9	-91.45	-1.2	193.9	75.2	67.3	7.88	9.547			
1,300.0	1,269.9	1,290.2	1,265.1	4.7	4.4	-94.80	-4.1	222.4	84.0	74.9	9.03	9.302			
1,400.0	1,364.4	1,389.8	1,360.4	5.3	4.9	-97.51	-7.1	250.9	93.0	82.8	10.17	9.144			
1,500.0	1,459.0	1,489.3	1,455.6	5.9	5.5	-99.74	-10.1	279.4	102.1	90.8	11.30	9.041			
1,600.0	1,553.5	1,588.8	1,550.9	6.5	6.0	-101.60	-13.0	307.9	111.4	99.0	12.42	8.974			
1,700.0	1,648.1	1,688.3	1,646.2	7.1	6.6	-103.17	-16.0	336.5	120.8	107.3	13.53	8.929			
1,800.0	1,742.6	1,787.8	1,741.5	7.8	7.1	-104.52	-19.0	365.0	130.3	115.7	14.64	8.901			
1,900.0	1,837.2	1,887.3	1,836.8	8.4	7.7	-105.68	-21.9	393.5	139.8	124.1	15.74	8.883			
2,000.0	1,931.7	1,986.8	1,932.1	9.0	8.2	-106.69	-24.9	422.0	149.4	132.6	16.84	8.873			
2,100.0	2,026.3	2,086.3	2,027.4	9.6	8.8	-107.58	-27.9	450.5	159.0	141.1	17.93	8.868			
2,200.0	2,120.8	2,185.8	2,122.6	10.2	9.3	-108.37	-30.8	479.1	168.7	149.7	19.03	8.867 SF			
2,300.0	2,215.4	2,285.3	2,217.9	10.8	9.8	-109.08	-33.8	507.6	178.4	158.3	20.11	8.868			
2,400.0	2,310.0	2,384.8	2,313.2	11.5	10.4	-109.71	-36.8	536.1	188.1	166.9	21.20	8.872			
2,500.0	2,404.5	2,484.3	2,408.5	12.1	10.9	-110.28	-39.7	564.6	197.8	175.5	22.29	8.877			
2,600.0	2,499.1	2,583.8	2,503.8	12.7	11.5	-110.79	-42.7	593.1	207.6	184.2	23.37	8.882			
2,700.0	2,593.6	2,683.3	2,599.1	13.3	12.0	-111.26	-45.7	621.7	217.3	192.9	24.45	8.889			
2,800.0	2,688.2	2,782.9	2,694.4	13.9	12.6	-111.69	-48.6	650.2	227.1	201.6	25.53	8.895			
2,900.0	2,782.7	2,882.4	2,789.6	14.5	13.1	-112.09	-51.6	678.7	236.9	210.3	26.61	8.902			
3,000.0	2,877.3	2,981.9	2,884.9	15.1	13.7	-112.45	-54.6	707.2	246.7	219.0	27.69	8.910			
3,100.0	2,971.8	3,081.4	2,980.2	15.8	14.2	-112.78	-57.5	735.8	256.5	227.7	28.77	8.917			
3,200.0	3,066.4	3,180.9	3,075.5	16.4	14.8	-113.09	-60.5	764.3	266.3	236.5	29.84	8.924			
3,300.0	3,160.9	3,280.4	3,170.8	17.0	15.3	-113.38	-63.5	792.8	276.1	245.2	30.92	8.931			
3,400.0	3,255.5	3,379.9	3,266.1	17.6	15.9	-113.65	-66.4	821.3	286.0	254.0	31.99	8.938			
3,500.0	3,350.1	3,479.4	3,361.4	18.2	16.4	-113.90	-69.4	849.8	295.8	262.7	33.07	8.945			
3,600.0	3,444.6	3,578.9	3,456.6	18.9	17.0	-114.13	-72.4	878.4	305.6	271.5	34.14	8.952			
3,700.0	3,539.2	3,678.4	3,551.9	19.5	17.5	-114.35	-75.3	906.9	315.5	280.3	35.22	8.959			
3,800.0	3,633.7	3,777.9	3,647.2	20.1	18.1	-114.56	-78.3	935.4	325.3	289.1	36.29	8.965			
3,900.0	3,728.3	3,877.4	3,742.5	20.7	18.6	-114.75	-81.3	963.9	335.2	297.8	37.36	8.971			
4,000.0	3,822.8	3,976.9	3,837.8	21.3	19.2	-114.94	-84.2	992.4	345.1	306.6	38.44	8.977			
4,100.0	3,917.4	4,076.4	3,933.1	21.9	19.7	-115.11	-87.2	1,021.0	354.9	315.4	39.51	8.983			
4,200.0	4,011.9	4,176.0	4,028.4	22.6	20.3	-115.27	-90.2	1,049.5	364.8	324.2	40.58	8.989			
4,300.0	4,106.5	4,275.5	4,123.6	23.2	20.8	-115.43	-93.1	1,078.0	374.6	333.0	41.65	8.995			
4,400.0	4,201.1	4,375.0	4,218.9	23.8	21.3	-115.58	-96.1	1,106.5	384.5	341.8	42.72	9.000			
4,500.0	4,295.6	4,474.5	4,314.2	24.4	21.9	-115.72	-99.1	1,135.0	394.4	350.6	43.80	9.005			
4,600.0	4,390.2	4,574.0	4,409.5	25.0	22.4	-115.85	-102.0	1,163.6	404.3	359.4	44.87	9.010			
4,700.0	4,484.7	4,673.5	4,504.8	25.6	23.0	-115.98	-105.0	1,192.1	414.1	368.2	45.94	9.015			
4,800.0	4,579.3	4,773.0	4,600.1	26.3	23.5	-116.10	-108.0	1,220.6	424.0	377.0	47.01	9.020			
4,900.0	4,673.8	4,872.5	4,695.4	26.9	24.1	-116.21	-110.9	1,249.1	433.9	385.8	48.08	9.025			
5,000.0	4,768.4	4,972.0	4,790.6	27.5	24.6	-116.32	-113.9	1,277.6	443.8	394.6	49.15	9.029			
5,100.0	4,862.9	5,071.5	4,885.9	28.1	25.2	-116.43	-116.9	1,306.2	453.7	403.4	50.22	9.034			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset															
Semi Major Axis															
Distance															
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
5,200.0	4,957.5	5,171.0	4,981.2	28.7	25.7	-116.53	-119.8	1,334.7	463.5	412.2	51.29	9.038			
5,300.0	5,052.0	5,270.5	5,076.5	29.4	26.3	-116.62	-122.8	1,363.2	473.4	421.1	52.36	9.042			
5,400.0	5,146.6	5,370.0	5,171.8	30.0	26.8	-116.72	-125.8	1,391.7	483.3	429.9	53.43	9.046			
5,500.0	5,241.2	5,469.5	5,267.1	30.6	27.4	-116.81	-128.8	1,420.3	493.2	438.7	54.50	9.050			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	56.62	24.8	37.6	45.0						
100.0	100.0	100.0	100.0	0.1	0.1	56.62	24.8	37.6	45.0	44.7	0.27	165.321			
200.0	200.0	200.0	200.0	0.3	0.3	56.62	24.8	37.6	45.0	44.4	0.62	72.444			
300.0	300.0	300.0	300.0	0.5	0.5	56.62	24.8	37.6	45.0	44.0	0.97	46.385	CC, ES		
400.0	400.0	397.9	397.9	0.7	0.7	-56.43	25.0	40.1	46.5	45.1	1.32	35.234			
500.0	499.8	495.7	495.4	0.9	0.9	-58.40	25.7	47.6	49.6	47.9	1.69	29.360			
600.0	599.1	593.3	592.1	1.1	1.1	-61.93	26.8	60.0	54.6	52.5	2.13	25.669			
700.0	697.6	690.5	687.8	1.4	1.5	-66.30	28.3	77.2	61.7	59.0	2.69	22.968			
800.0	795.1	787.4	782.2	1.8	1.9	-70.82	30.3	99.2	71.0	67.6	3.41	20.811			
900.0	891.4	885.5	876.6	2.4	2.4	-75.60	32.6	125.4	82.2	77.9	4.33	19.004			
1,000.0	986.2	984.4	971.7	2.9	2.8	-81.97	35.0	152.2	93.4	88.0	5.41	17.257			
1,100.0	1,080.7	1,083.1	1,066.8	3.5	3.3	-87.57	37.4	179.0	105.5	98.9	6.54	16.132			
1,200.0	1,175.3	1,181.9	1,161.9	4.1	3.8	-91.99	39.8	205.8	118.3	110.7	7.67	15.438			
1,300.0	1,269.9	1,280.7	1,256.9	4.7	4.3	-95.54	42.2	232.6	131.8	123.0	8.78	15.000			
1,400.0	1,364.4	1,379.5	1,352.0	5.3	4.9	-98.42	44.5	259.4	145.6	135.7	9.89	14.718			
1,500.0	1,459.0	1,478.3	1,447.1	5.9	5.4	-100.80	46.9	286.2	159.8	148.8	10.99	14.534			
1,600.0	1,553.5	1,577.1	1,542.1	6.5	5.9	-102.79	49.3	313.0	174.1	162.0	12.08	14.413			
1,700.0	1,648.1	1,675.9	1,637.2	7.1	6.4	-104.48	51.7	339.8	188.7	175.5	13.16	14.333			
1,800.0	1,742.6	1,774.7	1,732.2	7.8	6.9	-105.93	54.1	366.6	203.4	189.1	14.24	14.283			
1,900.0	1,837.2	1,873.5	1,827.3	8.4	7.4	-107.18	56.5	393.4	218.1	202.8	15.31	14.251			
2,000.0	1,931.7	1,972.3	1,922.4	9.0	7.9	-108.27	58.9	420.2	233.0	216.7	16.37	14.234			
2,100.0	2,026.3	2,071.1	2,017.4	9.6	8.4	-109.23	61.3	446.9	248.0	230.5	17.43	14.226			
2,200.0	2,120.8	2,169.9	2,112.5	10.2	9.0	-110.08	63.7	473.7	263.0	244.5	18.49	14.224	SF		
2,300.0	2,215.4	2,268.7	2,207.6	10.8	9.5	-110.84	66.0	500.5	278.1	258.5	19.54	14.228			
2,400.0	2,310.0	2,367.5	2,302.6	11.5	10.0	-111.52	68.4	527.3	293.2	272.6	20.59	14.235			
2,500.0	2,404.5	2,466.3	2,397.7	12.1	10.5	-112.13	70.8	554.1	308.3	286.7	21.64	14.244			
2,600.0	2,499.1	2,565.1	2,492.7	12.7	11.0	-112.69	73.2	580.9	323.5	300.8	22.69	14.255			
2,700.0	2,593.6	2,663.9	2,587.8	13.3	11.5	-113.20	75.6	607.7	338.7	314.9	23.74	14.268			
2,800.0	2,688.2	2,762.7	2,682.9	13.9	12.0	-113.66	78.0	634.5	353.9	329.1	24.78	14.281			
2,900.0	2,782.7	2,861.5	2,777.9	14.5	12.6	-114.09	80.4	661.3	369.2	343.3	25.83	14.294			
3,000.0	2,877.3	2,960.3	2,873.0	15.1	13.1	-114.48	82.8	688.1	384.4	357.6	26.87	14.308			
3,100.0	2,971.8	3,059.1	2,968.1	15.8	13.6	-114.84	85.2	714.9	399.7	371.8	27.91	14.321			
3,200.0	3,066.4	3,157.8	3,063.1	16.4	14.1	-115.17	87.6	741.7	415.0	386.0	28.95	14.335			
3,300.0	3,160.9	3,256.6	3,158.2	17.0	14.6	-115.48	89.9	768.5	430.3	400.3	29.99	14.348			
3,400.0	3,255.5	3,355.4	3,253.3	17.6	15.1	-115.77	92.3	795.3	445.6	414.6	31.03	14.362			
3,500.0	3,350.1	3,454.2	3,348.3	18.2	15.6	-116.04	94.7	822.0	461.0	428.9	32.07	14.375			
3,600.0	3,444.6	3,553.0	3,443.4	18.9	16.2	-116.30	97.1	848.8	476.3	443.2	33.10	14.387			
3,700.0	3,539.2	3,651.8	3,538.4	19.5	16.7	-116.53	99.5	875.6	491.6	457.5	34.14	14.400			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	49.95	43.7	52.0	67.9						
100.0	100.0	100.0	100.0	0.1	0.1	49.95	43.7	52.0	67.9	67.7	0.27	249.495			
200.0	200.0	200.0	200.0	0.3	0.3	49.95	43.7	52.0	67.9	67.3	0.62	109.329 CC, ES			
300.0	300.0	296.5	296.4	0.5	0.5	50.08	45.1	54.0	70.5	69.5	0.97	72.572			
400.0	400.0	392.5	392.2	0.7	0.7	-63.42	49.4	59.8	77.3	76.0	1.31	59.085			
500.0	499.8	487.9	486.8	0.9	1.0	-66.26	56.5	69.5	87.1	85.4	1.67	52.039			
600.0	599.1	582.2	579.6	1.1	1.3	-70.57	66.2	82.8	100.1	98.0	2.09	47.793			
700.0	697.6	675.1	670.2	1.4	1.7	-75.38	78.4	99.5	116.9	114.3	2.62	44.693			
800.0	795.1	766.4	758.1	1.8	2.2	-80.02	92.9	119.3	138.1	134.8	3.28	42.117			
900.0	891.4	856.4	843.5	2.4	2.7	-84.14	109.6	142.2	163.7	159.6	4.09	40.000			
1,000.0	986.2	951.2	933.0	2.9	3.3	-88.61	128.2	167.7	191.7	186.6	5.06	37.861			
1,100.0	1,080.7	1,045.9	1,022.3	3.5	3.8	-92.54	146.8	193.1	220.7	214.6	6.09	36.254			
1,200.0	1,175.3	1,140.6	1,111.6	4.1	4.4	-95.56	165.4	218.6	250.5	243.4	7.13	35.118			
1,300.0	1,269.9	1,235.3	1,200.9	4.7	5.0	-97.95	184.0	244.0	280.8	272.6	8.19	34.295			
1,400.0	1,364.4	1,330.1	1,290.2	5.3	5.6	-99.87	202.5	269.5	311.5	302.2	9.25	33.683			
1,500.0	1,459.0	1,424.8	1,379.5	5.9	6.2	-101.45	221.1	294.9	342.4	332.1	10.31	33.215			
1,600.0	1,553.5	1,519.5	1,468.9	6.5	6.8	-102.77	239.7	320.4	373.5	362.1	11.37	32.851			
1,700.0	1,648.1	1,614.2	1,558.2	7.1	7.4	-103.89	258.3	345.8	404.8	392.3	12.43	32.561			
1,800.0	1,742.6	1,708.9	1,647.5	7.8	8.0	-104.84	276.9	371.2	436.2	422.7	13.49	32.326			
1,900.0	1,837.2	1,803.6	1,736.8	8.4	8.5	-105.67	295.5	396.7	467.7	453.1	14.55	32.133			
2,000.0	1,931.7	1,898.3	1,826.1	9.0	9.1	-106.40	314.1	422.1	499.2	483.6	15.61	31.972 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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: O-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	56.04	8.4	12.4	15.0						
100.0	100.0	100.0	100.0	0.1	0.1	56.04	8.4	12.4	15.0	14.7	0.27	55.057			
200.0	200.0	200.0	200.0	0.3	0.3	56.04	8.4	12.4	15.0	14.4	0.62	24.126			
300.0	300.0	300.0	300.0	0.5	0.5	56.04	8.4	12.4	15.0	14.0	0.97	15.448			
400.0	400.0	399.8	399.7	0.7	0.7	-59.91	8.2	13.1	14.6	13.3	1.32	11.076			
456.9	456.8	456.4	456.3	0.8	0.8	-63.12	7.6	15.3	14.5	13.0	1.53	9.462 CC			
500.0	499.8	499.3	499.2	0.9	0.8	-65.86	6.8	18.0	14.6	12.9	1.70	8.579 ES			
600.0	599.1	598.9	598.2	1.1	1.1	-72.74	3.9	28.0	15.3	13.1	2.17	7.056			
700.0	697.6	698.6	696.7	1.4	1.4	-79.53	-0.3	43.0	16.8	14.1	2.79	6.046			
800.0	795.1	798.3	794.2	1.8	1.8	-85.41	-5.9	62.8	19.2	15.6	3.59	5.359			
900.0	891.4	898.1	890.6	2.4	2.2	-90.06	-13.0	87.6	22.4	17.8	4.58	4.892			
1,000.0	986.2	997.9	985.9	2.9	2.8	-94.60	-21.1	116.3	26.2	20.6	5.68	4.619			
1,100.0	1,080.7	1,097.8	1,081.1	3.5	3.3	-98.87	-29.4	145.4	30.3	23.5	6.79	4.465			
1,200.0	1,175.3	1,197.7	1,176.3	4.1	3.9	-102.11	-37.7	174.6	34.5	26.6	7.89	4.375			
1,300.0	1,269.9	1,297.6	1,271.5	4.7	4.4	-104.64	-46.0	203.7	38.8	29.9	8.99	4.321			
1,400.0	1,364.4	1,397.5	1,366.6	5.3	5.0	-106.66	-54.2	232.9	43.2	33.1	10.07	4.288			
1,500.0	1,459.0	1,497.4	1,461.8	5.9	5.6	-108.32	-62.5	262.0	47.6	36.5	11.15	4.268			
1,600.0	1,553.5	1,597.3	1,557.0	6.5	6.1	-109.69	-70.8	291.1	52.0	39.8	12.23	4.256			
1,700.0	1,648.1	1,697.2	1,652.2	7.1	6.7	-110.84	-79.1	320.3	56.5	43.2	13.30	4.249			
1,800.0	1,742.6	1,797.1	1,747.4	7.8	7.3	-111.83	-87.3	349.4	61.0	46.6	14.36	4.246			
1,900.0	1,837.2	1,897.0	1,842.6	8.4	7.8	-112.68	-95.6	378.5	65.5	50.1	15.43	4.245			
2,000.0	1,931.7	1,996.9	1,937.8	9.0	8.4	-113.42	-103.9	407.7	70.0	53.5	16.49	4.246			
2,100.0	2,026.3	2,096.8	2,033.0	9.6	9.0	-114.07	-112.2	436.8	74.5	57.0	17.54	4.248			
2,200.0	2,120.8	2,196.7	2,128.2	10.2	9.6	-114.64	-120.4	466.0	79.0	60.4	18.60	4.250			
2,300.0	2,215.4	2,296.6	2,223.4	10.8	10.1	-115.16	-128.7	495.1	83.6	63.9	19.65	4.253			
2,400.0	2,310.0	2,396.5	2,318.6	11.5	10.7	-115.62	-137.0	524.2	88.1	67.4	20.71	4.256			
2,500.0	2,404.5	2,496.4	2,413.7	12.1	11.3	-116.03	-145.3	553.4	92.7	70.9	21.76	4.259			
2,600.0	2,499.1	2,596.3	2,508.9	12.7	11.9	-116.41	-153.5	582.5	97.2	74.4	22.81	4.262			
2,700.0	2,593.6	2,696.2	2,604.1	13.3	12.4	-116.75	-161.8	611.7	101.8	77.9	23.86	4.266			
2,800.0	2,688.2	2,796.0	2,699.3	13.9	13.0	-117.07	-170.1	640.8	106.3	81.4	24.91	4.269			
2,900.0	2,782.7	2,895.9	2,794.5	14.5	13.6	-117.36	-178.4	669.9	110.9	84.9	25.96	4.272			
3,000.0	2,877.3	2,995.8	2,889.7	15.1	14.2	-117.62	-186.6	699.1	115.5	88.5	27.01	4.275			
3,100.0	2,971.8	3,095.7	2,984.9	15.8	14.8	-117.87	-194.9	728.2	120.0	92.0	28.05	4.278			
3,200.0	3,066.4	3,195.6	3,080.1	16.4	15.3	-118.09	-203.2	757.3	124.6	95.5	29.10	4.281			
3,300.0	3,160.9	3,295.5	3,175.3	17.0	15.9	-118.30	-211.5	786.5	129.2	99.0	30.15	4.284			
3,400.0	3,255.5	3,395.4	3,270.5	17.6	16.5	-118.50	-219.7	815.6	133.7	102.5	31.20	4.287			
3,500.0	3,350.1	3,495.3	3,365.7	18.2	17.1	-118.68	-228.0	844.8	138.3	106.1	32.24	4.290			
3,600.0	3,444.6	3,595.2	3,460.9	18.9	17.6	-118.86	-236.3	873.9	142.9	109.6	33.29	4.293			
3,700.0	3,539.2	3,695.1	3,556.0	19.5	18.2	-119.02	-244.6	903.0	147.5	113.1	34.33	4.295			
3,800.0	3,633.7	3,795.0	3,651.2	20.1	18.8	-119.17	-252.8	932.2	152.0	116.7	35.38	4.298			
3,900.0	3,728.3	3,894.9	3,746.4	20.7	19.4	-119.31	-261.1	961.3	156.6	120.2	36.42	4.300			
4,000.0	3,822.8	3,994.8	3,841.6	21.3	19.9	-119.45	-269.4	990.4	161.2	123.7	37.47	4.302			
4,100.0	3,917.4	4,094.7	3,936.8	21.9	20.5	-119.57	-277.7	1,019.6	165.8	127.3	38.51	4.305			
4,200.0	4,011.9	4,194.6	4,032.0	22.6	21.1	-119.69	-285.9	1,048.7	170.4	130.8	39.56	4.307			
4,300.0	4,106.5	4,294.5	4,127.2	23.2	21.7	-119.81	-294.2	1,077.9	174.9	134.3	40.60	4.309			
4,400.0	4,201.1	4,394.4	4,222.4	23.8	22.2	-119.91	-302.5	1,107.0	179.5	137.9	41.65	4.311			
4,500.0	4,295.6	4,494.3	4,317.6	24.4	22.8	-120.02	-310.8	1,136.1	184.1	141.4	42.69	4.313			
4,600.0	4,390.2	4,594.1	4,412.8	25.0	23.4	-120.11	-319.0	1,165.3	188.7	145.0	43.73	4.315			
4,700.0	4,484.7	4,694.0	4,508.0	25.6	24.0	-120.21	-327.3	1,194.4	193.3	148.5	44.78	4.316			
4,800.0	4,579.3	4,793.9	4,603.1	26.3	24.6	-120.30	-335.6	1,223.5	197.9	152.0	45.82	4.318			
4,900.0	4,673.8	4,893.8	4,698.3	26.9	25.1	-120.38	-343.9	1,252.7	202.4	155.6	46.86	4.320			
5,000.0	4,768.4	4,993.7	4,793.5	27.5	25.7	-120.46	-352.1	1,281.8	207.0	159.1	47.91	4.321			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
5,100.0	4,862.9	5,093.6	4,888.7	28.1	26.3	-120.54	-360.4	1,311.0	211.6	162.7	48.95	4.323			
5,200.0	4,957.5	5,193.5	4,983.9	28.7	26.9	-120.61	-368.7	1,340.1	216.2	166.2	50.00	4.324			
5,300.0	5,052.0	5,293.4	5,079.1	29.4	27.4	-120.69	-377.0	1,369.2	220.8	169.8	51.04	4.326			
5,400.0	5,146.6	5,393.3	5,174.3	30.0	28.0	-120.75	-385.3	1,398.4	225.4	173.3	52.08	4.327			
5,500.0	5,241.2	5,493.2	5,269.5	30.6	28.6	-120.82	-393.5	1,427.5	230.0	176.8	53.12	4.329			
5,600.0	5,335.7	5,593.1	5,364.7	31.2	29.2	-120.88	-401.8	1,456.6	234.5	180.4	54.17	4.330			
5,700.0	5,430.3	5,693.0	5,459.9	31.8	29.8	-120.94	-410.1	1,485.8	239.1	183.9	55.21	4.331			
5,800.0	5,524.9	5,792.9	5,555.1	32.4	30.3	-120.99	-418.4	1,514.9	243.6	187.4	56.26	4.330			
5,900.0	5,620.3	5,889.4	5,647.6	33.0	30.8	-120.90	-425.9	1,541.6	247.4	190.2	57.25	4.322			
6,000.0	5,716.7	5,986.0	5,740.9	33.4	31.3	-120.83	-432.7	1,565.3	250.8	192.7	58.13	4.315			
6,100.0	5,814.0	6,082.5	5,835.0	33.9	31.7	-120.77	-438.5	1,585.9	253.8	194.9	58.89	4.309			
6,200.0	5,912.1	6,179.0	5,929.8	34.2	32.0	-120.73	-443.5	1,603.4	256.3	196.7	59.55	4.304			
6,300.0	6,010.7	6,275.5	6,025.1	34.5	32.3	-120.70	-447.6	1,617.9	258.4	198.3	60.10	4.299			
6,400.0	6,109.9	6,372.0	6,120.9	34.7	32.5	-120.68	-450.8	1,629.3	260.0	199.5	60.53	4.296			
6,500.0	6,209.5	6,468.5	6,217.0	34.9	32.7	-120.67	-453.2	1,637.5	261.2	200.4	60.87	4.292			
6,600.0	6,309.3	6,565.0	6,313.3	35.0	32.8	-120.67	-454.6	1,642.7	262.0	200.9	61.10	4.289			
6,700.0	6,409.3	6,661.5	6,409.8	35.1	32.8	-120.68	-455.2	1,644.7	262.4	201.1	61.23	4.285			
6,800.0	6,509.3	6,761.0	6,509.3	35.2	32.9	-7.62	-455.2	1,644.8	262.4	201.0	61.36	4.276			
6,900.0	6,609.3	6,861.0	6,609.3	35.2	33.0	-7.62	-455.2	1,644.8	262.4	200.9	61.50	4.266			
7,000.0	6,709.3	6,961.0	6,709.3	35.3	33.0	-7.62	-455.2	1,644.8	262.4	200.7	61.63	4.257			
7,100.0	6,809.3	7,061.0	6,809.3	35.4	33.1	-7.62	-455.2	1,644.8	262.4	200.6	61.77	4.247			
7,200.0	6,909.3	7,161.0	6,909.3	35.4	33.2	-7.62	-455.2	1,644.8	262.4	200.5	61.91	4.238			
7,300.0	7,009.3	7,261.0	7,009.3	35.5	33.2	-7.62	-455.2	1,644.8	262.4	200.3	62.05	4.228			
7,400.0	7,109.3	7,361.0	7,109.3	35.5	33.3	-7.62	-455.2	1,644.8	262.4	200.2	62.20	4.218			
7,500.0	7,209.3	7,461.0	7,209.3	35.6	33.4	-7.62	-455.2	1,644.8	262.4	200.0	62.34	4.209			
7,600.0	7,309.3	7,561.0	7,309.3	35.7	33.4	-7.62	-455.2	1,644.8	262.4	199.9	62.49	4.199			
7,700.0	7,409.3	7,661.0	7,409.3	35.7	33.5	-7.62	-455.2	1,644.8	262.4	199.7	62.64	4.189			
7,800.0	7,509.3	7,761.0	7,509.3	35.8	33.6	-7.62	-455.2	1,644.8	262.4	199.6	62.79	4.179			
7,900.0	7,609.3	7,861.0	7,609.3	35.9	33.6	-7.62	-455.2	1,644.8	262.4	199.4	62.94	4.169			
8,000.0	7,709.3	7,961.0	7,709.3	35.9	33.7	-7.62	-455.2	1,644.8	262.4	199.3	63.09	4.159			
8,100.0	7,809.3	8,061.0	7,809.3	36.0	33.8	-7.62	-455.2	1,644.8	262.4	199.1	63.25	4.148			
8,200.0	7,909.3	8,161.0	7,909.3	36.1	33.9	-7.62	-455.2	1,644.8	262.4	199.0	63.40	4.138			
8,300.0	8,009.3	8,261.0	8,009.3	36.1	33.9	-7.62	-455.2	1,644.8	262.4	198.8	63.56	4.128			
8,400.0	8,109.3	8,361.0	8,109.3	36.2	34.0	-7.62	-455.2	1,644.8	262.4	198.7	63.72	4.118			
8,500.0	8,209.3	8,461.0	8,209.3	36.3	34.1	-7.62	-455.2	1,644.8	262.4	198.5	63.88	4.107			
8,600.0	8,309.3	8,561.0	8,309.3	36.4	34.2	-7.62	-455.2	1,644.8	262.4	198.3	64.04	4.097			
8,695.7	8,405.0	8,656.7	8,405.0	36.4	34.2	-7.62	-455.2	1,644.8	262.4	198.2	64.20	4.087 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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: O-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-122.22	-8.0	-12.7	15.0						
100.0	100.0	100.0	100.0	0.1	0.1	-122.22	-8.0	-12.7	15.0	14.8	0.27	55.206			
200.0	200.0	200.0	200.0	0.3	0.3	-122.22	-8.0	-12.7	15.0	14.4	0.62	24.191			
300.0	300.0	300.0	300.0	0.5	0.5	-122.22	-8.0	-12.7	15.0	14.1	0.97	15.489			
377.5	377.5	377.7	377.7	0.6	0.6	122.84	-8.9	-11.4	15.1	13.9	1.25	12.134			
400.0	400.0	400.3	400.2	0.7	0.7	120.01	-9.6	-10.6	14.9	13.6	1.33	11.254 CC, ES			
500.0	499.8	500.4	500.1	0.9	0.9	113.33	-14.2	-4.2	16.0	14.2	1.73	9.210			
600.0	599.1	600.5	599.3	1.1	1.2	106.77	-21.8	6.4	18.3	16.1	2.25	8.139			
700.0	697.6	700.4	697.5	1.4	1.5	101.42	-32.5	21.2	22.0	19.1	2.92	7.527			
800.0	795.1	800.2	794.5	1.8	1.9	97.52	-46.1	40.1	26.9	23.2	3.77	7.148			
900.0	891.4	899.9	890.1	2.4	2.5	94.83	-62.6	63.1	33.1	28.3	4.80	6.894			
1,000.0	986.2	999.3	983.8	2.9	3.1	92.47	-82.0	90.0	40.3	34.3	5.98	6.745 SF			
1,100.0	1,080.7	1,098.8	1,076.3	3.5	3.7	87.70	-103.4	119.8	48.4	41.2	7.17	6.754			
1,200.0	1,175.3	1,198.4	1,168.9	4.1	4.4	84.18	-124.9	149.6	56.8	48.4	8.34	6.808			
1,300.0	1,269.9	1,298.0	1,261.4	4.7	5.1	81.56	-146.4	179.5	65.3	55.8	9.50	6.873			
1,400.0	1,364.4	1,397.6	1,354.0	5.3	5.8	79.56	-167.9	209.3	73.9	63.3	10.65	6.940			
1,500.0	1,459.0	1,497.2	1,446.6	5.9	6.5	77.97	-189.4	239.2	82.6	70.8	11.80	7.003			
1,600.0	1,553.5	1,596.8	1,539.1	6.5	7.1	76.69	-210.8	269.0	91.4	78.4	12.94	7.061			
1,700.0	1,648.1	1,696.4	1,631.7	7.1	7.8	75.63	-232.3	298.9	100.2	86.1	14.08	7.114			
1,800.0	1,742.6	1,796.0	1,724.2	7.8	8.5	74.74	-253.8	328.7	109.0	93.8	15.22	7.162			
1,900.0	1,837.2	1,895.6	1,816.8	8.4	9.2	73.99	-275.3	358.6	117.8	101.5	16.35	7.206			
2,000.0	1,931.7	1,995.2	1,909.3	9.0	9.9	73.34	-296.8	388.4	126.7	109.2	17.48	7.246			
2,100.0	2,026.3	2,094.8	2,001.9	9.6	10.6	72.77	-318.3	418.3	135.6	116.9	18.62	7.282			
2,200.0	2,120.8	2,194.4	2,094.5	10.2	11.3	72.28	-339.8	448.1	144.4	124.7	19.75	7.314			
2,300.0	2,215.4	2,294.0	2,187.0	10.8	12.0	71.84	-361.3	478.0	153.3	132.5	20.88	7.344			
2,400.0	2,310.0	2,393.6	2,279.6	11.5	12.6	71.45	-382.8	507.8	162.2	140.2	22.01	7.372			
2,500.0	2,404.5	2,493.2	2,372.1	12.1	13.3	71.10	-404.3	537.7	171.1	148.0	23.14	7.397			
2,600.0	2,499.1	2,592.8	2,464.7	12.7	14.0	70.79	-425.8	567.5	180.1	155.8	24.26	7.421			
2,700.0	2,593.6	2,692.4	2,557.2	13.3	14.7	70.50	-447.3	597.4	189.0	163.6	25.39	7.442			
2,800.0	2,688.2	2,792.0	2,649.8	13.9	15.4	70.24	-468.7	627.2	197.9	171.4	26.52	7.462			
2,900.0	2,782.7	2,891.6	2,742.3	14.5	16.1	70.01	-490.2	657.1	206.8	179.2	27.65	7.481			
3,000.0	2,877.3	2,991.2	2,834.9	15.1	16.8	69.79	-511.7	686.9	215.8	187.0	28.77	7.498			
3,100.0	2,971.8	3,090.8	2,927.5	15.8	17.5	69.59	-533.2	716.8	224.7	194.8	29.90	7.514			
3,200.0	3,066.4	3,190.4	3,020.0	16.4	18.2	69.41	-554.7	746.6	233.6	202.6	31.03	7.529			
3,300.0	3,160.9	3,290.0	3,112.6	17.0	18.9	69.23	-576.2	776.5	242.6	210.4	32.15	7.543			
3,400.0	3,255.5	3,389.6	3,205.1	17.6	19.6	69.08	-597.7	806.3	251.5	218.2	33.28	7.557			
3,500.0	3,350.1	3,489.2	3,297.7	18.2	20.2	68.93	-619.2	836.2	260.4	226.0	34.41	7.569			
3,600.0	3,444.6	3,588.8	3,390.2	18.9	20.9	68.79	-640.7	866.0	269.4	233.8	35.53	7.581			
3,700.0	3,539.2	3,688.4	3,482.8	19.5	21.6	68.66	-662.2	895.9	278.3	241.7	36.66	7.592			
3,800.0	3,633.7	3,788.0	3,575.4	20.1	22.3	68.54	-683.7	925.7	287.3	249.5	37.78	7.603			
3,900.0	3,728.3	3,887.6	3,667.9	20.7	23.0	68.43	-705.2	955.6	296.2	257.3	38.91	7.613			
4,000.0	3,822.8	3,987.2	3,760.5	21.3	23.7	68.32	-726.6	985.4	305.2	265.1	40.04	7.622			
4,100.0	3,917.4	4,086.8	3,853.0	21.9	24.4	68.22	-748.1	1,015.3	314.1	272.9	41.16	7.631			
4,200.0	4,011.9	4,186.4	3,945.6	22.6	25.1	68.12	-769.6	1,045.1	323.1	280.8	42.29	7.640			
4,300.0	4,106.5	4,286.0	4,038.1	23.2	25.8	68.03	-791.1	1,075.0	332.0	288.6	43.41	7.648			
4,400.0	4,201.1	4,385.6	4,130.7	23.8	26.5	67.95	-812.6	1,104.8	341.0	296.4	44.54	7.655			
4,500.0	4,295.6	4,485.1	4,223.3	24.4	27.2	67.86	-834.1	1,134.7	349.9	304.2	45.66	7.663			
4,600.0	4,390.2	4,584.7	4,315.8	25.0	27.9	67.79	-855.6	1,164.5	358.9	312.1	46.79	7.670			
4,700.0	4,484.7	4,684.3	4,408.4	25.6	28.5	67.71	-877.1	1,194.4	367.8	319.9	47.91	7.677			
4,800.0	4,579.3	4,783.9	4,500.9	26.3	29.2	67.64	-898.6	1,224.2	376.8	327.7	49.04	7.683			
4,900.0	4,673.8	4,883.5	4,593.5	26.9	29.9	67.58	-920.1	1,254.1	385.7	335.6	50.16	7.689			
5,000.0	4,768.4	4,983.1	4,686.0	27.5	30.6	67.51	-941.6	1,283.9	394.7	343.4	51.29	7.695			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
5,100.0	4,862.9	5,082.7	4,778.6	28.1	31.3	67.45	-963.1	1,313.8	403.6	351.2	52.41	7.701			
5,200.0	4,957.5	5,182.3	4,871.1	28.7	32.0	67.39	-984.5	1,343.6	412.6	359.0	53.54	7.706			
5,300.0	5,052.0	5,281.9	4,963.7	29.4	32.7	67.34	-1,006.0	1,373.5	421.5	366.9	54.66	7.712			
5,400.0	5,146.6	5,381.5	5,056.3	30.0	33.4	67.29	-1,027.5	1,403.3	430.5	374.7	55.79	7.717			
5,500.0	5,241.2	5,481.1	5,148.8	30.6	34.1	67.23	-1,049.0	1,433.2	439.4	382.5	56.91	7.721			
5,600.0	5,335.7	5,580.7	5,241.4	31.2	34.8	67.18	-1,070.5	1,463.0	448.4	390.4	58.04	7.726			
5,700.0	5,430.3	5,680.3	5,333.9	31.8	35.5	67.14	-1,092.0	1,492.9	457.4	398.2	59.16	7.731			
5,800.0	5,524.9	5,785.5	5,431.9	32.4	36.2	67.18	-1,114.4	1,523.9	466.1	405.7	60.33	7.726			
5,900.0	5,620.3	5,895.5	5,535.6	33.0	36.8	67.36	-1,135.7	1,553.5	473.8	412.4	61.44	7.713			
6,000.0	5,716.7	6,005.7	5,640.9	33.4	37.4	67.52	-1,154.7	1,579.9	480.8	418.4	62.42	7.702			
6,100.0	5,814.0	6,116.1	5,747.6	33.9	37.9	67.65	-1,171.4	1,603.1	486.9	423.6	63.28	7.694			
6,200.0	5,912.1	6,226.7	5,855.5	34.2	38.3	67.75	-1,185.6	1,622.9	492.1	428.1	64.02	7.687			
6,300.0	6,010.7	6,337.5	5,964.4	34.5	38.7	67.83	-1,197.5	1,639.4	496.4	431.8	64.63	7.681			
6,400.0	6,109.9	6,448.5	6,074.2	34.7	39.0	67.89	-1,206.9	1,652.4	499.9	434.7	65.12	7.676			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: O-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-123.10	-16.4	-25.2	30.0						
100.0	100.0	100.0	100.0	0.1	0.1	-123.10	-16.4	-25.2	30.0	29.8	0.27	110.268			
200.0	200.0	200.0	200.0	0.3	0.3	-123.10	-16.4	-25.2	30.0	29.4	0.62	48.320			
300.0	300.0	300.1	300.1	0.5	0.5	-123.40	-16.5	-25.0	30.0	29.0	0.97	30.887			
369.1	369.1	369.5	369.4	0.6	0.6	121.02	-17.9	-23.4	30.0	28.7	1.22	24.561			
400.0	400.0	400.4	400.3	0.7	0.7	118.57	-19.1	-22.1	29.9	28.5	1.33	22.414	CC, ES		
500.0	499.8	500.6	500.0	0.9	0.9	112.52	-25.2	-15.2	31.5	29.8	1.75	17.972			
600.0	599.1	600.5	598.9	1.1	1.2	106.69	-34.6	-4.4	35.1	32.8	2.29	15.333			
700.0	697.6	700.2	696.7	1.4	1.6	101.81	-47.5	10.3	40.6	37.6	2.98	13.638			
800.0	795.1	799.5	793.0	1.8	2.0	98.09	-63.6	28.6	47.9	44.1	3.84	12.498			
900.0	891.4	898.6	887.6	2.4	2.6	95.40	-82.9	50.7	57.0	52.1	4.87	11.701			
1,000.0	986.2	997.3	980.2	2.9	3.2	93.27	-105.4	76.3	67.6	61.6	6.05	11.177			
1,100.0	1,080.7	1,095.9	1,071.1	3.5	3.9	89.29	-130.7	105.1	79.7	72.4	7.26	10.976			
1,200.0	1,175.3	1,195.0	1,162.0	4.1	4.6	85.89	-156.5	134.5	92.3	83.8	8.45	10.920			
1,300.0	1,269.9	1,294.0	1,253.0	4.7	5.3	83.32	-182.4	164.0	105.1	95.5	9.63	10.919	SF		
1,400.0	1,364.4	1,393.1	1,344.0	5.3	6.1	81.30	-208.2	193.4	118.1	107.3	10.79	10.944			
1,500.0	1,459.0	1,492.2	1,435.0	5.9	6.8	79.69	-234.0	222.9	131.2	119.3	11.95	10.981			
1,600.0	1,553.5	1,591.3	1,526.0	6.5	7.5	78.37	-259.9	252.3	144.5	131.3	13.10	11.023			
1,700.0	1,648.1	1,690.3	1,617.0	7.1	8.2	77.27	-285.7	281.8	157.7	143.5	14.25	11.066			
1,800.0	1,742.6	1,789.4	1,708.0	7.8	9.0	76.34	-311.6	311.2	171.0	155.6	15.40	11.109			
1,900.0	1,837.2	1,888.5	1,799.0	8.4	9.7	75.55	-337.4	340.7	184.4	167.9	16.54	11.149			
2,000.0	1,931.7	1,987.6	1,890.0	9.0	10.4	74.86	-363.3	370.1	197.8	180.1	17.68	11.188			
2,100.0	2,026.3	2,086.6	1,981.0	9.6	11.2	74.27	-389.1	399.6	211.2	192.4	18.82	11.224			
2,200.0	2,120.8	2,185.7	2,072.0	10.2	11.9	73.74	-415.0	429.0	224.6	204.7	19.95	11.258			
2,300.0	2,215.4	2,284.8	2,163.0	10.8	12.6	73.27	-440.8	458.5	238.1	217.0	21.09	11.290			
2,400.0	2,310.0	2,383.9	2,254.0	11.5	13.3	72.85	-466.6	487.9	251.5	229.3	22.22	11.320			
2,500.0	2,404.5	2,482.9	2,345.0	12.1	14.1	72.48	-492.5	517.4	265.0	241.6	23.35	11.348			
2,600.0	2,499.1	2,582.0	2,436.0	12.7	14.8	72.14	-518.3	546.8	278.5	254.0	24.48	11.374			
2,700.0	2,593.6	2,681.1	2,527.0	13.3	15.5	71.83	-544.2	576.3	292.0	266.3	25.61	11.399			
2,800.0	2,688.2	2,780.2	2,618.0	13.9	16.3	71.55	-570.0	605.7	305.5	278.7	26.74	11.422			
2,900.0	2,782.7	2,879.2	2,709.0	14.5	17.0	71.29	-595.9	635.2	319.0	291.1	27.87	11.443			
3,000.0	2,877.3	2,978.3	2,800.0	15.1	17.7	71.06	-621.7	664.6	332.5	303.5	29.00	11.463			
3,100.0	2,971.8	3,077.4	2,891.0	15.8	18.5	70.84	-647.6	694.1	346.0	315.9	30.13	11.483			
3,200.0	3,066.4	3,176.4	2,982.0	16.4	19.2	70.64	-673.4	723.5	359.5	328.2	31.26	11.500			
3,300.0	3,160.9	3,275.5	3,073.0	17.0	19.9	70.45	-699.2	753.0	373.0	340.6	32.39	11.517			
3,400.0	3,255.5	3,374.6	3,164.0	17.6	20.7	70.28	-725.1	782.4	386.6	353.0	33.52	11.533			
3,500.0	3,350.1	3,473.7	3,255.0	18.2	21.4	70.11	-750.9	811.9	400.1	365.4	34.64	11.548			
3,600.0	3,444.6	3,572.7	3,346.0	18.9	22.1	69.96	-776.8	841.3	413.6	377.8	35.77	11.563			
3,700.0	3,539.2	3,671.8	3,437.0	19.5	22.9	69.82	-802.6	870.8	427.2	390.3	36.90	11.576			
3,800.0	3,633.7	3,770.9	3,528.0	20.1	23.6	69.69	-828.5	900.2	440.7	402.7	38.03	11.589			
3,900.0	3,728.3	3,870.0	3,619.0	20.7	24.3	69.56	-854.3	929.7	454.2	415.1	39.15	11.602			
4,000.0	3,822.8	3,969.0	3,710.0	21.3	25.1	69.45	-880.2	959.1	467.8	427.5	40.28	11.613			
4,100.0	3,917.4	4,068.1	3,801.0	21.9	25.8	69.33	-906.0	988.6	481.3	439.9	41.41	11.624			
4,200.0	4,011.9	4,167.2	3,892.0	22.6	26.5	69.23	-931.8	1,018.0	494.9	452.3	42.53	11.635			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-122.80	-24.4	-37.9	45.1						
100.0	100.0	100.0	100.0	0.1	0.1	-122.80	-24.4	-37.9	45.1	44.8	0.27	165.461			
200.0	200.0	200.0	200.0	0.3	0.3	-122.80	-24.4	-37.9	45.1	44.4	0.62	72.505			
300.0	300.0	300.2	300.2	0.5	0.5	-123.62	-24.9	-37.4	44.9	44.0	0.97	46.270			
353.9	353.9	354.3	354.2	0.6	0.6	121.18	-26.4	-35.9	44.9	43.7	1.17	38.367 CC			
400.0	400.0	400.5	400.3	0.7	0.7	118.27	-28.6	-33.7	44.9	43.6	1.34	33.487 ES			
500.0	499.8	500.5	499.8	0.9	0.9	112.52	-36.1	-26.4	47.2	45.4	1.78	26.521			
600.0	599.1	600.2	598.2	1.1	1.2	107.04	-47.2	-15.4	51.8	49.5	2.33	22.223			
700.0	697.6	699.4	695.3	1.4	1.6	102.39	-61.9	-0.9	58.9	55.9	3.04	19.392			
800.0	795.1	798.3	790.8	1.8	2.1	98.77	-80.1	17.0	68.2	64.3	3.91	17.459			
900.0	891.4	896.7	884.4	2.4	2.7	96.07	-101.7	38.2	79.6	74.7	4.95	16.096			
1,000.0	986.2	994.5	975.8	2.9	3.3	94.02	-126.5	62.7	93.0	86.9	6.13	15.178			
1,100.0	1,080.7	1,091.6	1,064.6	3.5	4.1	90.60	-154.4	90.1	108.2	100.8	7.35	14.708			
1,200.0	1,175.3	1,189.9	1,153.7	4.1	4.8	86.99	-184.2	119.5	124.6	116.0	8.56	14.553			
1,300.0	1,269.9	1,288.3	1,242.7	4.7	5.6	84.23	-214.0	148.8	141.3	131.6	9.74	14.504 SF			
1,400.0	1,364.4	1,386.7	1,331.8	5.3	6.4	82.05	-243.8	178.1	158.3	147.4	10.91	14.508			
1,500.0	1,459.0	1,485.1	1,420.8	5.9	7.1	80.29	-273.6	207.4	175.5	163.4	12.07	14.539			
1,600.0	1,553.5	1,583.5	1,509.9	6.5	7.9	78.85	-303.4	236.8	192.8	179.6	13.22	14.584			
1,700.0	1,648.1	1,681.9	1,598.9	7.1	8.7	77.65	-333.2	266.1	210.3	195.9	14.37	14.636			
1,800.0	1,742.6	1,780.2	1,688.0	7.8	9.5	76.63	-362.9	295.4	227.8	212.3	15.50	14.690			
1,900.0	1,837.2	1,878.6	1,777.1	8.4	10.2	75.76	-392.7	324.8	245.3	228.7	16.64	14.744			
2,000.0	1,931.7	1,977.0	1,866.1	9.0	11.0	75.00	-422.5	354.1	262.9	245.2	17.77	14.796			
2,100.0	2,026.3	2,075.4	1,955.2	9.6	11.8	74.34	-452.3	383.4	280.6	261.7	18.90	14.846			
2,200.0	2,120.8	2,173.8	2,044.2	10.2	12.6	73.75	-482.1	412.8	298.2	278.2	20.02	14.894			
2,300.0	2,215.4	2,272.2	2,133.3	10.8	13.3	73.24	-511.9	442.1	316.0	294.8	21.15	14.940			
2,400.0	2,310.0	2,370.5	2,222.3	11.5	14.1	72.77	-541.7	471.4	333.7	311.4	22.27	14.983			
2,500.0	2,404.5	2,468.9	2,311.4	12.1	14.9	72.36	-571.5	500.8	351.4	328.0	23.39	15.023			
2,600.0	2,499.1	2,567.3	2,400.5	12.7	15.7	71.98	-601.3	530.1	369.2	344.7	24.51	15.062			
2,700.0	2,593.6	2,665.7	2,489.5	13.3	16.5	71.64	-631.1	559.4	387.0	361.3	25.63	15.097			
2,800.0	2,688.2	2,764.1	2,578.6	13.9	17.2	71.33	-660.9	588.8	404.8	378.0	26.75	15.131			
2,900.0	2,782.7	2,862.4	2,667.6	14.5	18.0	71.04	-690.7	618.1	422.5	394.7	27.87	15.163			
3,000.0	2,877.3	2,960.8	2,756.7	15.1	18.8	70.78	-720.4	647.4	440.4	411.4	28.98	15.194			
3,100.0	2,971.8	3,059.2	2,845.7	15.8	19.6	70.54	-750.2	676.7	458.2	428.1	30.10	15.222			
3,200.0	3,066.4	3,157.6	2,934.8	16.4	20.3	70.31	-780.0	706.1	476.0	444.8	31.21	15.249			
3,300.0	3,160.9	3,256.0	3,023.9	17.0	21.1	70.10	-809.8	735.4	493.8	461.5	32.33	15.275			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-123.09	-32.8	-50.3	60.0						
100.0	100.0	100.0	100.0	0.1	0.1	-123.09	-32.8	-50.3	60.0	59.8	0.27	220.519			
200.0	200.0	200.0	200.0	0.3	0.3	-123.09	-32.8	-50.3	60.0	59.4	0.62	96.632			
300.0	300.0	300.2	300.1	0.5	0.5	-124.50	-34.0	-49.4	59.9	59.0	0.97	61.730			
316.6	316.6	316.8	316.8	0.5	0.5	121.78	-34.5	-49.0	59.9	58.9	1.04	57.861 CC, ES			
400.0	400.0	400.1	399.8	0.7	0.7	117.40	-39.1	-45.4	60.6	59.2	1.35	44.752			
500.0	499.8	499.6	498.6	0.9	1.0	112.01	-48.4	-38.3	64.3	62.4	1.81	35.552			
600.0	599.1	598.6	596.2	1.1	1.3	107.08	-61.6	-28.0	71.0	68.6	2.38	29.900			
700.0	697.6	697.0	692.3	1.4	1.7	103.01	-78.7	-14.8	80.8	77.7	3.08	26.183			
800.0	795.1	794.8	786.4	1.8	2.2	99.87	-99.5	1.3	93.3	89.4	3.95	23.629			
900.0	891.4	891.9	878.4	2.4	2.8	97.55	-124.0	20.2	108.6	103.6	4.98	21.808			
1,000.0	986.2	988.2	968.0	2.9	3.4	95.90	-151.8	41.7	126.2	120.1	6.14	20.560			
1,100.0	1,080.7	1,083.4	1,054.8	3.5	4.2	93.47	-182.8	65.7	145.9	138.6	7.36	19.842			
1,200.0	1,175.3	1,177.1	1,138.2	4.1	5.0	90.16	-216.7	91.9	168.0	159.5	8.57	19.598 SF			
1,300.0	1,269.9	1,273.2	1,222.3	4.7	5.8	86.80	-253.4	120.3	192.0	182.3	9.77	19.660			
1,400.0	1,364.4	1,369.7	1,306.9	5.3	6.7	84.16	-290.3	148.8	216.6	205.6	10.94	19.795			
1,500.0	1,459.0	1,466.3	1,391.4	5.9	7.5	82.05	-327.1	177.3	241.4	229.3	12.09	19.962			
1,600.0	1,553.5	1,562.8	1,475.9	6.5	8.4	80.34	-364.0	205.8	266.5	253.3	13.24	20.138			
1,700.0	1,648.1	1,659.3	1,560.4	7.1	9.2	78.92	-400.9	234.3	291.8	277.5	14.37	20.313			
1,800.0	1,742.6	1,755.8	1,644.9	7.8	10.1	77.73	-437.8	262.8	317.3	301.8	15.49	20.482			
1,900.0	1,837.2	1,852.3	1,729.4	8.4	11.0	76.72	-474.6	291.3	342.8	326.2	16.61	20.641			
2,000.0	1,931.7	1,948.8	1,814.0	9.0	11.8	75.84	-511.5	319.8	368.4	350.7	17.72	20.791			
2,100.0	2,026.3	2,045.4	1,898.5	9.6	12.7	75.08	-548.4	348.3	394.2	375.3	18.83	20.930			
2,200.0	2,120.8	2,141.9	1,983.0	10.2	13.5	74.42	-585.2	376.8	419.9	400.0	19.94	21.060			
2,300.0	2,215.4	2,238.4	2,067.5	10.8	14.4	73.82	-622.1	405.3	445.7	424.7	21.04	21.181			
2,400.0	2,310.0	2,334.9	2,152.0	11.5	15.3	73.30	-659.0	433.8	471.6	449.4	22.15	21.294			
2,500.0	2,404.5	2,431.4	2,236.5	12.1	16.1	72.83	-695.9	462.4	497.4	474.2	23.25	21.399			

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 Shideler Fee 6-1AA
Project:	Mamm Creek	TVD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Reference Site:	O31E Pad (2nd Occupation)	MD Reference:	KB=22' @ 7126.0ft (Patterson #308)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Fee 6-1AA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-123.03	-40.8	-62.7	74.8						
100.0	100.0	100.0	100.0	0.1	0.1	-123.03	-40.8	-62.7	74.8	74.6	0.27	274.849			
200.0	200.0	200.0	200.0	0.3	0.3	-123.03	-40.8	-62.7	74.8	74.2	0.62	120.439			
283.1	283.1	283.1	283.1	0.5	0.5	-124.42	-42.3	-61.7	74.8	73.9	0.91	81.955 CC			
300.0	300.0	300.0	300.0	0.5	0.5	-125.04	-43.0	-61.3	74.8	73.8	0.97	76.986 ES			
400.0	400.0	399.6	399.2	0.7	0.7	116.91	-49.4	-56.8	76.0	74.6	1.37	55.283			
500.0	499.8	498.6	497.4	0.9	1.0	111.74	-60.0	-49.6	80.5	78.7	1.85	43.631			
600.0	599.1	597.1	594.3	1.1	1.4	107.06	-74.7	-39.5	88.5	86.1	2.43	36.450			
700.0	697.6	694.9	689.4	1.4	1.8	103.19	-93.4	-26.7	99.8	96.7	3.15	31.713			
800.0	795.1	791.9	782.4	1.8	2.3	100.18	-115.8	-11.3	114.2	110.2	4.02	28.439			
900.0	891.4	887.9	873.2	2.4	2.9	97.92	-141.9	6.5	131.5	126.5	5.04	26.093			
1,000.0	986.2	983.0	961.3	2.9	3.6	96.34	-171.4	26.7	151.5	145.3	6.19	24.462			
1,100.0	1,080.7	1,076.9	1,046.4	3.5	4.3	94.26	-204.0	49.1	173.7	166.3	7.40	23.478			
1,200.0	1,175.3	1,169.2	1,128.1	4.1	5.1	91.48	-239.3	73.3	198.4	189.8	8.62	23.021			
1,300.0	1,269.9	1,261.5	1,207.8	4.7	6.0	88.36	-277.7	99.6	225.7	215.9	9.80	23.020 SF			
1,400.0	1,364.4	1,356.7	1,289.6	5.3	6.9	85.64	-318.0	127.2	254.1	243.1	10.98	23.137			
1,500.0	1,459.0	1,452.0	1,371.4	5.9	7.8	83.46	-358.3	154.8	282.9	270.8	12.14	23.305			
1,600.0	1,553.5	1,547.2	1,453.2	6.5	8.6	81.68	-398.6	182.4	312.0	298.7	13.28	23.495			
1,700.0	1,648.1	1,642.5	1,534.9	7.1	9.5	80.21	-438.9	210.0	341.4	327.0	14.41	23.689			
1,800.0	1,742.6	1,737.7	1,616.7	7.8	10.4	78.97	-479.2	237.6	370.9	355.4	15.53	23.879			
1,900.0	1,837.2	1,833.0	1,698.5	8.4	11.3	77.91	-519.4	265.2	400.6	383.9	16.65	24.062			
2,000.0	1,931.7	1,928.3	1,780.3	9.0	12.2	76.99	-559.7	292.8	430.4	412.6	17.76	24.236			
2,100.0	2,026.3	2,023.5	1,862.1	9.6	13.1	76.20	-600.0	320.4	460.2	441.4	18.86	24.399			
2,200.0	2,120.8	2,118.8	1,943.9	10.2	14.0	75.50	-640.3	348.0	490.2	470.2	19.96	24.552			

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

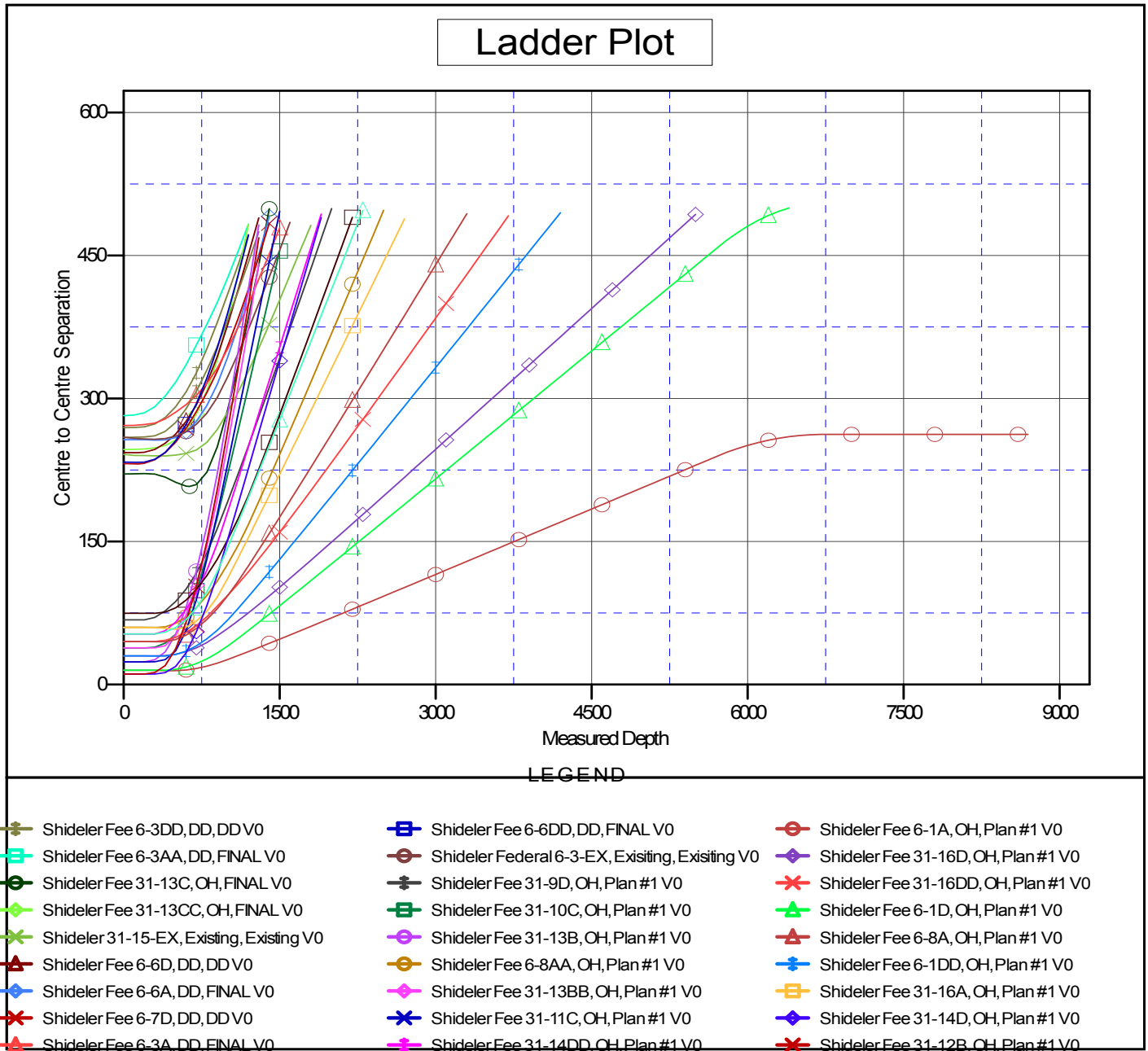
Cathedral Energy Services

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Shideler Fee 6-1AA	
Project: Mamm Creek	TVD Reference: KB=22' @ 7126.0ft (Patterson #308)	
Reference Site: O31E Pad (2nd Occupation)	MD Reference: KB=22' @ 7126.0ft (Patterson #308)	
Site Error: 0.0ft	North Reference: True	
Reference Well: Shideler Fee 6-1AA	Survey Calculation Method: Minimum Curvature	
Well Error: 0.0ft	Output errors are at 2.00 sigma	
Reference Wellbore OH	Database: USA EDM 5000 Multi Users DB	
Reference Design: Plan #1	Offset TVD Reference: Offset Datum	

Reference Depths are relative to KB=22' @ 7126.0ft (Patterson #308)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Shideler Fee 6-1AA
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.39°



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