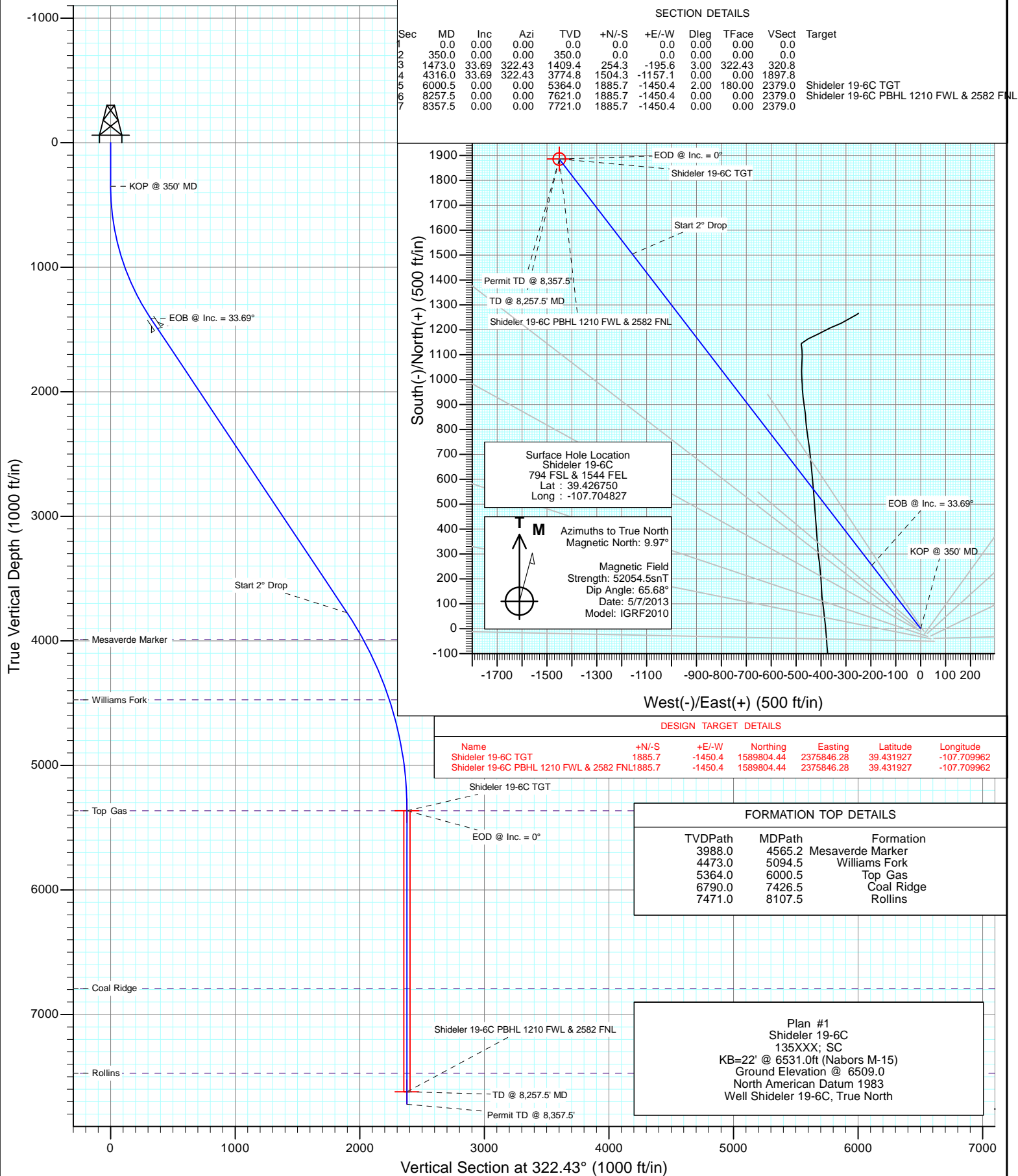
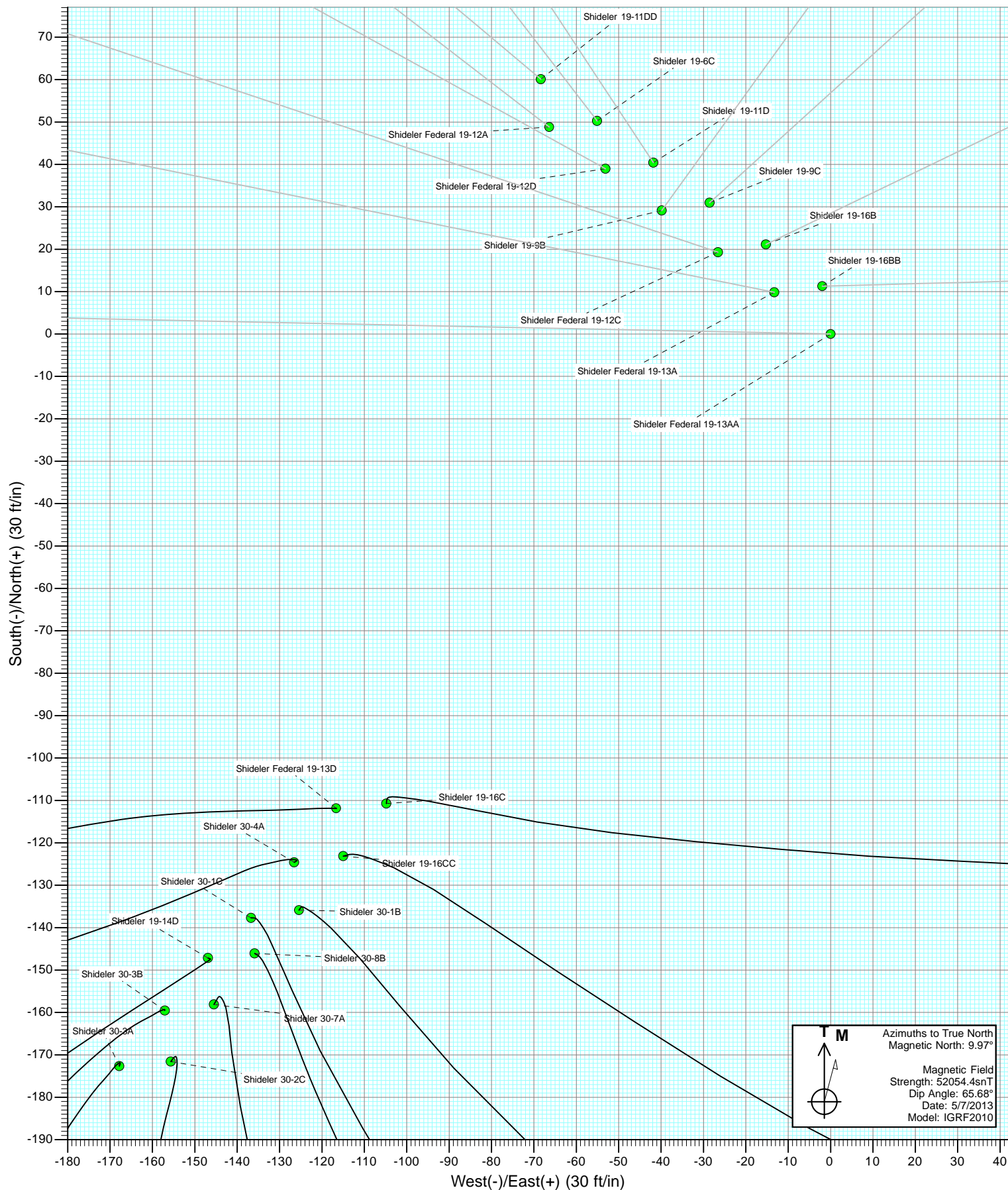
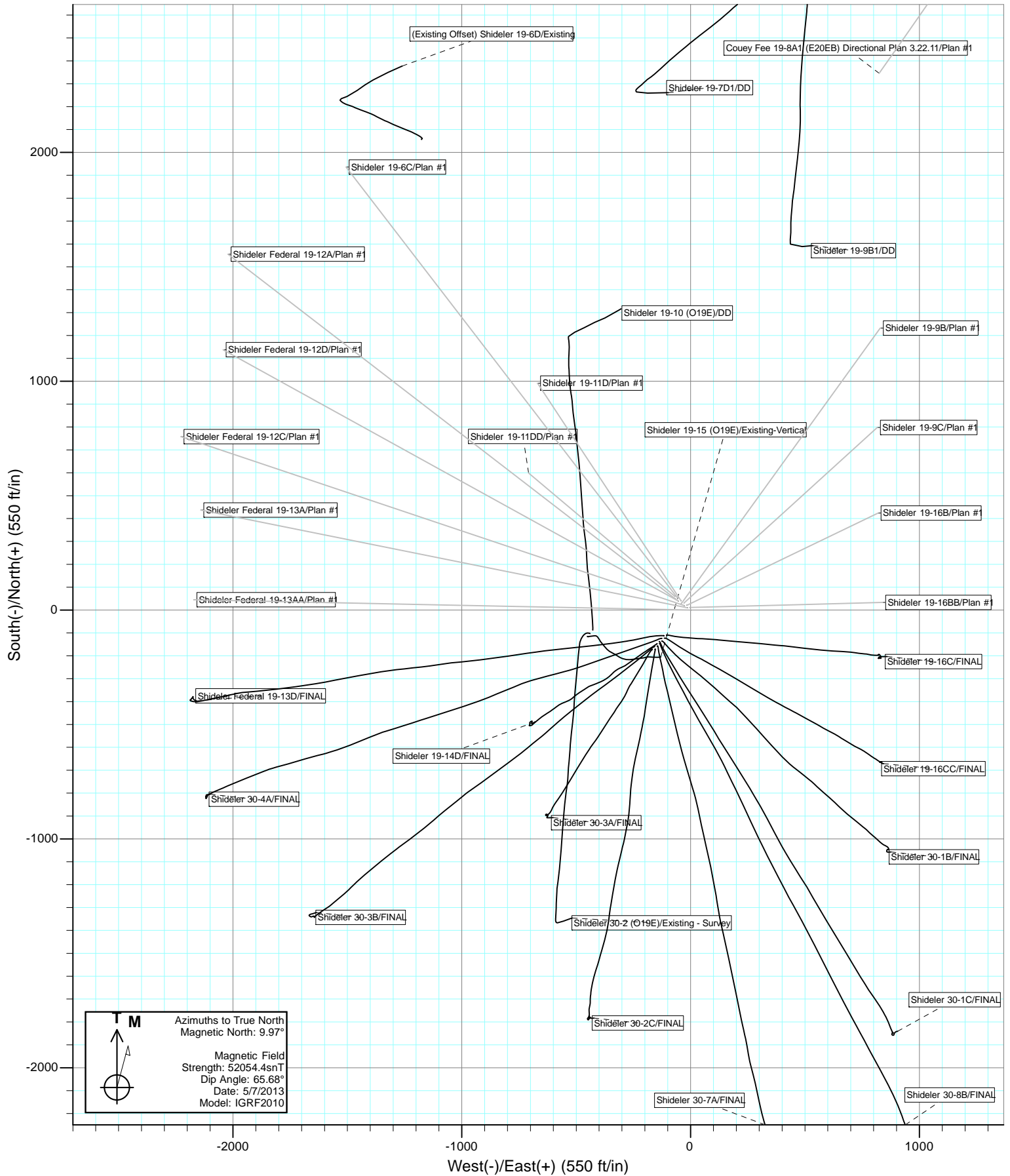




Project: Mamm Creek
Site: O19EB Pad (2nd Occupation)
Well: Shideler 19-6C
Wellbore: OH
Design: Plan #1

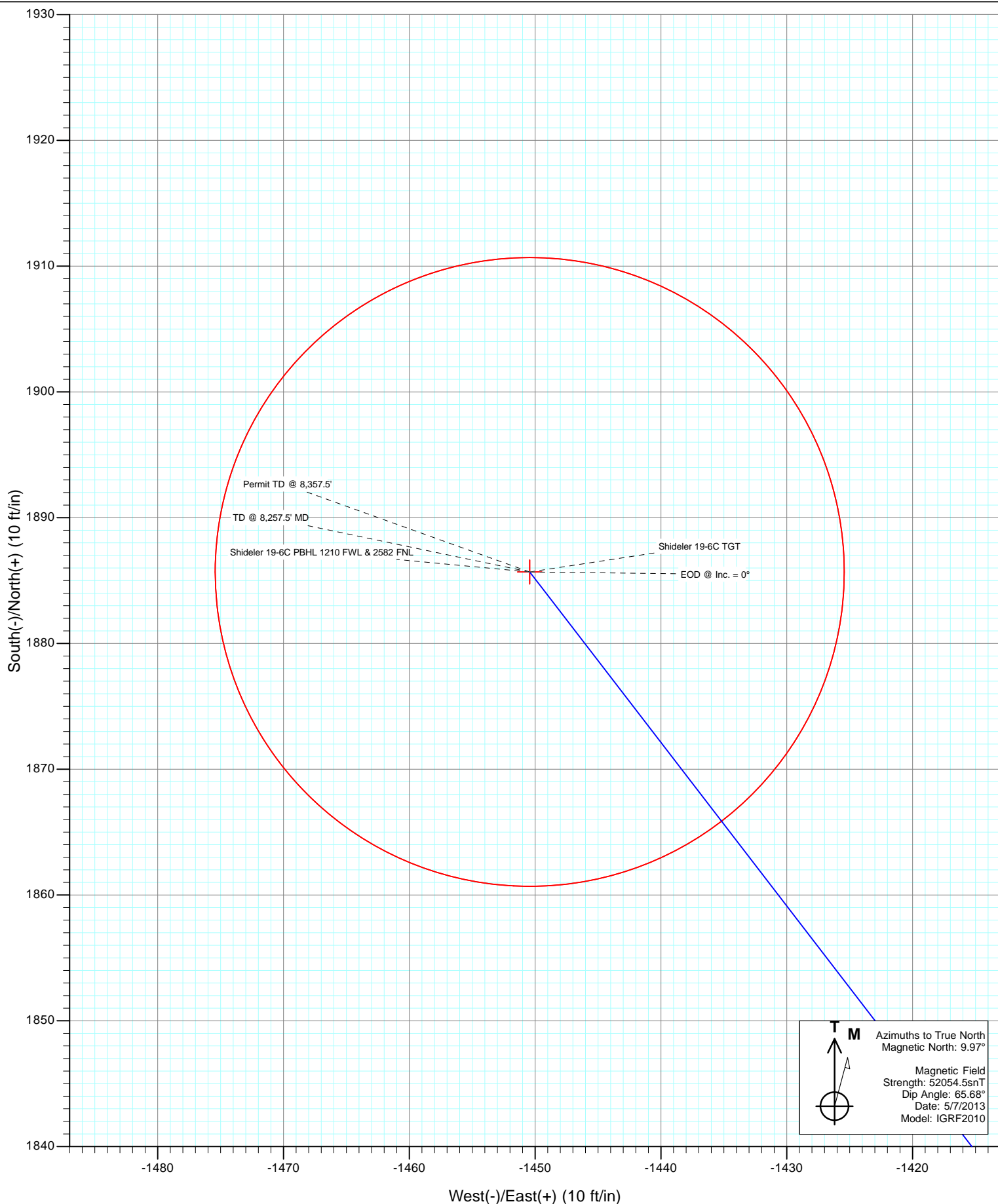








Project: Mamm Creek
Site: O19EB Pad (2nd Occupation)
Well: Shideler 19-6C
Wellbore: OH
Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler 19-6C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Project:	Mamm Creek	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site:	O19EB Pad (2nd Occupation)	North Reference:	True
Well:	Shideler 19-6C	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		O19EB Pad (2nd Occupation)			
Site Position:		Northing:	1,587,894.27 ft	Latitude:	39.426777
From:	Lat/Long	Easting:	2,377,237.48 ft	Longitude:	-107.704874
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.39 °

Well	Shideler 19-6C					
Well Position	+N/-S	0.0 ft	Northing:	1,587,884.11 ft	Latitude:	39.426750
	+E/-W	0.0 ft	Easting:	2,377,250.51 ft	Longitude:	-107.704827
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,509.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	5/7/2013	9.97	65.68	52,054

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	322.43

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	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,473.0	33.69	322.43	1,409.4	254.3	-195.6	3.00	3.00	0.00	322.43	
4,316.0	33.69	322.43	3,774.8	1,504.3	-1,157.1	0.00	0.00	0.00	0.00	
6,000.5	0.00	0.00	5,364.0	1,885.7	-1,450.4	2.00	-2.00	0.00	180.00	Shideler 19-6C TGT
8,257.5	0.00	0.00	7,621.0	1,885.7	-1,450.4	0.00	0.00	0.00	0.00	Shideler 19-6C PBHL
8,357.5	0.00	0.00	7,721.0	1,885.7	-1,450.4	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 19-6C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Project:	Mamm Creek	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site:	O19EB Pad (2nd Occupation)	North Reference:	True
Well:	Shideler 19-6C	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	
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	KOP @ 350' MD
400.0	1.50	322.43	400.0	0.5	-0.4	0.7	3.00	3.00	
500.0	4.50	322.43	499.8	4.7	-3.6	5.9	3.00	3.00	
600.0	7.50	322.43	599.3	13.0	-10.0	16.3	3.00	3.00	
700.0	10.50	322.43	698.0	25.3	-19.5	32.0	3.00	3.00	
800.0	13.50	322.43	795.8	41.8	-32.2	52.8	3.00	3.00	
900.0	16.50	322.43	892.4	62.3	-48.0	78.6	3.00	3.00	
1,000.0	19.50	322.43	987.5	86.8	-66.8	109.5	3.00	3.00	
1,100.0	22.50	322.43	1,080.9	115.2	-88.6	145.4	3.00	3.00	
1,200.0	25.50	322.43	1,172.2	147.5	-113.4	186.0	3.00	3.00	
1,300.0	28.50	322.43	1,261.3	183.5	-141.1	231.4	3.00	3.00	
1,400.0	31.50	322.43	1,347.9	223.1	-171.6	281.4	3.00	3.00	
1,473.0	33.69	322.43	1,409.4	254.3	-195.6	320.8	3.00	3.00	EOB @ Inc. = 33.69°
1,500.0	33.69	322.43	1,431.9	266.1	-204.7	335.7	0.00	0.00	
1,573.0	33.69	322.43	1,492.6	298.2	-229.4	376.2	0.00	0.00	Surface Casing
1,600.0	33.69	322.43	1,515.1	310.1	-238.5	391.2	0.00	0.00	
1,700.0	33.69	322.43	1,598.3	354.1	-272.3	446.7	0.00	0.00	
1,800.0	33.69	322.43	1,681.5	398.0	-306.2	502.2	0.00	0.00	
1,900.0	33.69	322.43	1,764.7	442.0	-340.0	557.6	0.00	0.00	
2,000.0	33.69	322.43	1,847.9	486.0	-373.8	613.1	0.00	0.00	
2,100.0	33.69	322.43	1,931.1	529.9	-407.6	668.6	0.00	0.00	
2,200.0	33.69	322.43	2,014.3	573.9	-441.4	724.0	0.00	0.00	
2,300.0	33.69	322.43	2,097.5	617.9	-475.3	779.5	0.00	0.00	
2,400.0	33.69	322.43	2,180.7	661.8	-509.1	835.0	0.00	0.00	
2,500.0	33.69	322.43	2,263.9	705.8	-542.9	890.5	0.00	0.00	
2,600.0	33.69	322.43	2,347.1	749.8	-576.7	945.9	0.00	0.00	
2,700.0	33.69	322.43	2,430.3	793.8	-610.5	1,001.4	0.00	0.00	
2,800.0	33.69	322.43	2,513.5	837.7	-644.4	1,056.9	0.00	0.00	
2,900.0	33.69	322.43	2,596.7	881.7	-678.2	1,112.3	0.00	0.00	
3,000.0	33.69	322.43	2,679.9	925.7	-712.0	1,167.8	0.00	0.00	
3,100.0	33.69	322.43	2,763.1	969.6	-745.8	1,223.3	0.00	0.00	
3,200.0	33.69	322.43	2,846.3	1,013.6	-779.6	1,278.8	0.00	0.00	
3,300.0	33.69	322.43	2,929.5	1,057.6	-813.5	1,334.2	0.00	0.00	
3,400.0	33.69	322.43	3,012.7	1,101.5	-847.3	1,389.7	0.00	0.00	
3,500.0	33.69	322.43	3,095.9	1,145.5	-881.1	1,445.2	0.00	0.00	
3,600.0	33.69	322.43	3,179.1	1,189.5	-914.9	1,500.6	0.00	0.00	
3,700.0	33.69	322.43	3,262.3	1,233.5	-948.7	1,556.1	0.00	0.00	
3,800.0	33.69	322.43	3,345.5	1,277.4	-982.6	1,611.6	0.00	0.00	
3,900.0	33.69	322.43	3,428.8	1,321.4	-1,016.4	1,667.1	0.00	0.00	
4,000.0	33.69	322.43	3,512.0	1,365.4	-1,050.2	1,722.5	0.00	0.00	
4,100.0	33.69	322.43	3,595.2	1,409.3	-1,084.0	1,778.0	0.00	0.00	
4,200.0	33.69	322.43	3,678.4	1,453.3	-1,117.8	1,833.5	0.00	0.00	
4,300.0	33.69	322.43	3,761.6	1,497.3	-1,151.7	1,888.9	0.00	0.00	
4,316.0	33.69	322.43	3,774.8	1,504.3	-1,157.1	1,897.8	0.00	0.00	Start 2° Drop
4,400.0	32.01	322.43	3,845.4	1,540.4	-1,184.9	1,943.4	2.00	-2.00	
4,500.0	30.01	322.43	3,931.1	1,581.3	-1,216.3	1,994.9	2.00	-2.00	
4,565.2	28.71	322.43	3,988.0	1,606.6	-1,235.8	2,026.9	2.00	-2.00	Mesaverde Marker
4,600.0	28.01	322.43	4,018.6	1,619.7	-1,245.8	2,043.4	2.00	-2.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler 19-6C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Project:	Mamm Creek	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site:	O19EB Pad (2nd Occupation)	North Reference:	True
Well:	Shideler 19-6C	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
4,700.0	26.01	322.43	4,107.7	1,655.7	-1,273.5	2,088.8	2.00	-2.00	
4,800.0	24.01	322.43	4,198.3	1,689.2	-1,299.3	2,131.1	2.00	-2.00	
4,900.0	22.01	322.43	4,290.3	1,720.2	-1,323.1	2,170.2	2.00	-2.00	
5,000.0	20.01	322.43	4,383.7	1,748.6	-1,345.0	2,206.0	2.00	-2.00	
5,094.5	18.12	322.43	4,473.0	1,773.1	-1,363.8	2,236.9	2.00	-2.00	Williams Fork
5,100.0	18.01	322.43	4,478.2	1,774.4	-1,364.8	2,238.6	2.00	-2.00	
5,200.0	16.01	322.43	4,573.9	1,797.6	-1,382.7	2,267.9	2.00	-2.00	
5,300.0	14.01	322.43	4,670.4	1,818.1	-1,398.5	2,293.8	2.00	-2.00	
5,400.0	12.01	322.43	4,767.9	1,836.0	-1,412.2	2,316.3	2.00	-2.00	
5,500.0	10.01	322.43	4,866.0	1,851.1	-1,423.8	2,335.4	2.00	-2.00	
5,600.0	8.01	322.43	4,964.8	1,863.5	-1,433.4	2,351.0	2.00	-2.00	
5,700.0	6.01	322.43	5,064.0	1,873.2	-1,440.8	2,363.2	2.00	-2.00	
5,800.0	4.01	322.43	5,163.6	1,880.1	-1,446.1	2,372.0	2.00	-2.00	
5,900.0	2.01	322.43	5,263.5	1,884.3	-1,449.3	2,377.2	2.00	-2.00	
6,000.5	0.00	0.00	5,364.0	1,885.7	-1,450.4	2,379.0	2.00	-2.00	EOD @ Inc. = 0° - Top Gas
6,100.0	0.00	0.00	5,463.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,200.0	0.00	0.00	5,563.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,300.0	0.00	0.00	5,663.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,400.0	0.00	0.00	5,763.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,500.0	0.00	0.00	5,863.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,600.0	0.00	0.00	5,963.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,700.0	0.00	0.00	6,063.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,800.0	0.00	0.00	6,163.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
6,900.0	0.00	0.00	6,263.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,000.0	0.00	0.00	6,363.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,100.0	0.00	0.00	6,463.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,200.0	0.00	0.00	6,563.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,300.0	0.00	0.00	6,663.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,400.0	0.00	0.00	6,763.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,426.5	0.00	0.00	6,790.0	1,885.7	-1,450.4	2,379.0	0.00	0.00	Coal Ridge
7,500.0	0.00	0.00	6,863.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,600.0	0.00	0.00	6,963.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,700.0	0.00	0.00	7,063.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,800.0	0.00	0.00	7,163.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
7,900.0	0.00	0.00	7,263.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
8,000.0	0.00	0.00	7,363.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
8,100.0	0.00	0.00	7,463.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
8,107.5	0.00	0.00	7,471.0	1,885.7	-1,450.4	2,379.0	0.00	0.00	Rollins
8,200.0	0.00	0.00	7,563.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
8,257.5	0.00	0.00	7,621.0	1,885.7	-1,450.4	2,379.0	0.00	0.00	TD @ 8,257.5' MD
8,300.0	0.00	0.00	7,663.5	1,885.7	-1,450.4	2,379.0	0.00	0.00	
8,357.5	0.00	0.00	7,721.0	1,885.7	-1,450.4	2,379.0	0.00	0.00	Permit TD @ 8,357.5'

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler 19-6C
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Project:	Mamm Creek	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site:	O19EB Pad (2nd Occupation)	North Reference:	True
Well:	Shideler 19-6C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Shideler 19-6C PBHL 12	0.00	0.00	7,621.0	1,885.7	-1,450.4	1,589,804.44	2,375,846.28	39.431927	-107.709962
- plan hits target center									
- Circle (radius 25.0)									
Shideler 19-6C TGT	0.00	0.00	5,364.0	1,885.7	-1,450.4	1,589,804.44	2,375,846.28	39.431927	-107.709962
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
(ft)	(ft)	Name	(in)	(in)
1,573.0	1,492.6	Surface Casing		

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,565.2	3,988.0	Mesaverde Marker			
5,094.5	4,473.0	Williams Fork			
6,000.5	5,364.0	Top Gas			
7,426.5	6,790.0	Coal Ridge			
8,107.5	7,471.0	Rollins			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
350.0	350.0	0.0	0.0	KOP @ 350' MD
1,473.0	1,409.4	254.3	-195.6	EOB @ Inc. = 33.69°
4,316.0	3,774.8	1,504.3	-1,157.1	Start 2° Drop
6,000.5	5,364.0	1,885.7	-1,450.4	EOD @ Inc. = 0°
8,257.5	7,621.0	1,885.7	-1,450.4	TD @ 8,257.5' MD
8,357.5	7,721.0	1,885.7	-1,450.4	Permit TD @ 8,357.5'

EnCana Oil & Gas (USA) Inc

Mamm Creek

O19EB Pad (2nd Occupation)

Shideler 19-6C

OH

Plan #1

Anticollision Report

09 May, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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	5/8/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,357.5	Plan #1 (OH)	MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
O19E Pad						
Shideler 19-10 (O19E) - DD - DD	1,800.0	1,820.8	218.2	204.9	16.399	SF
Shideler 19-10 (O19E) - DD - DD	1,831.1	1,850.1	218.0	204.7	16.406	CC, ES
Shideler 19-10 (O19E) - DD - Plan #3	1,778.8	1,794.5	221.2	207.8	16.577	CC, ES, SF
O19EB Pad (1st Occupation)						
(Existing Offset) Shideler 19-6D - Existing - Existing	5,925.9	5,302.9	304.8	266.5	7.973	CC, ES
(Existing Offset) Shideler 19-6D - Existing - Existing	6,500.0	5,862.9	328.1	284.8	7.578	SF
Shideler 19-14D - OH - FINAL	202.8	202.8	217.7	217.0	344.848	CC, ES
Shideler 19-14D - OH - FINAL	1,400.0	1,313.5	492.7	485.5	68.523	SF
Shideler 19-14D - OH - Plan #5	202.8	202.8	217.7	217.0	344.848	CC, ES
Shideler 19-14D - OH - Plan #5	1,400.0	1,313.5	492.7	485.5	68.523	SF
Shideler 19-16C - OH - FINAL	400.0	401.8	165.9	164.5	123.496	CC, ES
Shideler 19-16C - OH - FINAL	800.0	785.2	219.6	216.3	67.127	SF
Shideler 19-16C - OH - Plan #5	400.0	401.8	165.9	164.5	123.496	CC, ES
Shideler 19-16C - OH - Plan #5	800.0	785.2	219.6	216.3	67.127	SF
Shideler 19-16CC - OH - FINAL	352.4	353.1	182.2	181.0	156.920	CC
Shideler 19-16CC - OH - FINAL	400.0	399.6	182.3	181.0	136.851	ES
Shideler 19-16CC - OH - FINAL	800.0	763.0	247.3	244.2	79.922	SF
Shideler 19-16CC - OH - Plan #5	352.4	353.1	182.2	181.0	156.920	CC
Shideler 19-16CC - OH - Plan #5	400.0	399.6	182.3	181.0	136.851	ES
Shideler 19-16CC - OH - Plan #5	800.0	763.0	247.3	244.2	79.922	SF
Shideler 30-1B - OH - FINAL	308.2	308.3	197.9	196.9	198.019	CC, ES
Shideler 30-1B - OH - FINAL	900.0	833.9	308.7	305.2	88.681	SF
Shideler 30-1B - OH - Plan #5	308.2	308.3	197.9	196.9	198.019	CC, ES
Shideler 30-1B - OH - Plan #5	900.0	833.9	308.7	305.2	88.681	SF
Shideler 30-1C - OH - FINAL	234.4	234.5	204.6	203.8	275.803	CC, ES
Shideler 30-1C - OH - FINAL	900.0	802.5	349.9	346.4	99.937	SF
Shideler 30-1C - OH - Plan #5	234.4	234.5	204.6	203.8	275.803	CC, ES
Shideler 30-1C - OH - Plan #5	900.0	802.5	349.9	346.4	99.937	SF
Shideler 30-2C - OH - FINAL	236.2	236.2	242.0	241.3	323.596	CC, ES
Shideler 30-2C - OH - FINAL	1,100.0	922.7	493.3	488.8	111.214	SF
Shideler 30-2C - OH - Plan #4	236.2	236.2	242.0	241.3	323.596	CC, ES
Shideler 30-2C - OH - Plan #4	1,100.0	922.7	493.3	488.8	111.214	SF
Shideler 30-3A - OH - FINAL	222.0	222.0	249.0	248.3	356.517	CC, ES
Shideler 30-3A - OH - FINAL	1,200.0	1,094.7	490.8	485.4	90.656	SF
Shideler 30-3A - OH - Plan #3	200.0	200.0	249.8	249.2	402.018	CC, ES
Shideler 30-3A - OH - Plan #3	1,200.0	1,103.9	487.2	481.8	89.708	SF
Shideler 30-3B - OH - FINAL	213.0	213.0	233.0	232.4	349.548	CC, ES
Shideler 30-3B - OH - FINAL	1,100.0	948.3	453.7	448.6	88.582	SF
Shideler 30-3B - OH - Plan #4	213.0	213.0	233.0	232.4	349.548	CC, ES
Shideler 30-3B - OH - Plan #4	1,100.0	948.3	453.7	448.6	88.582	SF
Shideler 30-4A - OH - FINAL	209.2	209.2	188.2	187.5	287.963	CC, ES
Shideler 30-4A - OH - FINAL	1,300.0	1,174.2	473.0	464.9	58.540	SF
Shideler 30-4A - OH - Plan #5	209.2	209.2	188.2	187.5	287.963	CC, ES
Shideler 30-4A - OH - Plan #5	1,300.0	1,174.2	473.0	464.9	58.540	SF
Shideler 30-7A - OH - FINAL	259.0	259.0	224.9	224.0	271.627	CC, ES
Shideler 30-7A - OH - FINAL	1,000.0	862.8	414.9	411.0	107.405	SF
Shideler 30-7A - OH - Plan #4	259.0	259.0	224.9	224.0	271.627	CC, ES
Shideler 30-7A - OH - Plan #4	1,000.0	862.8	414.9	411.0	107.405	SF
Shideler 30-8B - OH - FINAL	0.0	0.0	212.3			
Shideler 30-8B - OH - FINAL	200.0	198.9	212.5	211.9	342.476	ES
Shideler 30-8B - OH - FINAL	900.0	792.3	363.8	360.4	105.962	SF
Shideler 30-8B - OH - Plan #5	0.0	0.0	212.3			

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 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
Offset Well - Wellbore - Design						
O19EB Pad (1st Occupation)						
Shideler 30-8B - OH - Plan #5	200.0	198.9	212.5	211.9	342.476	ES
Shideler 30-8B - OH - Plan #5	900.0	792.3	363.8	360.4	105.962	SF
Shideler Federal 19-13D - OH - FINAL	0.0	0.0	173.4			
Shideler Federal 19-13D - OH - FINAL	200.0	199.7	173.4	172.8	279.355	ES
Shideler Federal 19-13D - OH - FINAL	1,400.0	1,283.5	482.7	472.3	46.449	SF
Shideler Federal 19-13D - OH - Plan #4	0.0	0.0	173.4			
Shideler Federal 19-13D - OH - Plan #4	200.0	199.7	173.4	172.8	279.355	ES
Shideler Federal 19-13D - OH - Plan #4	1,400.0	1,279.0	483.9	473.6	46.886	SF
O19EB Pad (2nd Occupation)						
Shideler 19-11D - OH - Plan #1	300.0	300.0	16.5	15.6	17.026	CC, ES
Shideler 19-11D - OH - Plan #1	900.0	905.5	30.7	27.5	9.586	SF
Shideler 19-11DD - OH - Plan #1	200.0	200.0	16.5	15.9	26.587	CC, ES
Shideler 19-11DD - OH - Plan #1	1,016.8	1,009.9	28.0	22.6	5.190	SF
Shideler 19-16B - OH - Plan #1	300.0	300.0	49.4	48.4	50.855	CC, ES
Shideler 19-16B - OH - Plan #1	500.0	496.6	60.3	58.6	35.667	SF
Shideler 19-16BB - OH - Plan #1	300.0	300.0	65.9	64.9	67.881	CC, ES
Shideler 19-16BB - OH - Plan #1	500.0	496.9	73.5	71.9	44.207	SF
Shideler 19-9B - OH - Plan #1	400.0	400.3	26.0	24.7	19.615	CC, ES
Shideler 19-9B - OH - Plan #1	500.0	500.1	30.4	28.7	17.754	SF
Shideler 19-9C - OH - Plan #1	200.0	200.0	32.8	32.2	52.840	CC, ES
Shideler 19-9C - OH - Plan #1	400.0	398.6	37.0	35.6	27.179	SF
Shideler Federal 19-12A - OH - Plan #1	200.0	200.0	11.4	10.8	18.336	CC, ES
Shideler Federal 19-12A - OH - Plan #1	4,300.0	4,237.8	497.9	426.1	6.939	SF
Shideler Federal 19-12C - OH - Plan #1	300.0	300.0	42.1	41.1	43.388	CC
Shideler Federal 19-12C - OH - Plan #1	400.0	401.0	42.2	40.9	31.924	ES
Shideler Federal 19-12C - OH - Plan #1	1,300.0	1,298.9	149.3	139.8	15.701	SF
Shideler Federal 19-12D - OH - Plan #1	400.6	400.8	11.1	9.8	8.424	CC, ES
Shideler Federal 19-12D - OH - Plan #1	500.0	500.5	12.2	10.5	7.160	SF
Shideler Federal 19-13A - OH - Plan #1	551.2	557.4	50.4	48.4	25.743	CC, ES
Shideler Federal 19-13A - OH - Plan #1	900.0	904.2	83.1	78.4	17.688	SF
Shideler Federal 19-13AA - OH - Plan #1	520.7	527.8	64.4	62.4	33.572	CC, ES
Shideler Federal 19-13AA - OH - Plan #1	900.0	900.0	112.8	107.9	23.024	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19E Pad - Shideler 19-10 (O19E) - DD - DD													Offset Site Error:	0.0 ft
Survey Program: 154--MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	26.0	26.0	0.0	0.0	-110.29	-137.6	-372.2	396.8					
100.0	100.0	125.9	125.9	0.1	0.2	-110.26	-137.4	-372.2	396.8	396.5	0.34	1,181.165		
200.0	200.0	226.2	226.2	0.3	0.4	-110.20	-137.0	-372.4	396.8	396.1	0.68	582.348		
300.0	300.0	326.6	326.6	0.5	0.5	-110.10	-136.3	-372.5	396.7	395.7	1.03	384.529		
400.0	400.0	432.3	432.3	0.7	0.7	-72.34	-133.9	-372.4	395.6	394.2	1.40	283.146		
500.0	499.8	536.1	535.9	0.8	0.9	-72.35	-127.8	-372.3	391.9	390.1	1.79	218.785		
600.0	599.3	641.9	641.0	1.1	1.2	-72.44	-116.1	-373.0	385.6	383.3	2.27	169.827		
700.0	698.0	747.3	744.9	1.4	1.5	-72.60	-98.8	-373.5	375.7	372.9	2.87	130.781		
800.0	795.8	848.7	844.0	1.8	1.9	-72.85	-77.2	-374.9	363.5	359.9	3.61	100.727		
900.0	892.4	950.1	942.1	2.2	2.4	-73.35	-51.9	-377.0	349.1	344.7	4.48	77.864		
1,000.0	987.5	1,050.5	1,038.8	2.8	2.9	-74.44	-24.6	-379.2	332.7	327.2	5.48	60.714		
1,100.0	1,080.9	1,148.7	1,132.8	3.5	3.4	-76.31	3.4	-381.6	314.6	308.0	6.59	47.754		
1,200.0	1,172.2	1,246.0	1,225.7	4.2	3.9	-79.08	32.4	-384.4	295.7	287.9	7.80	37.934		
1,300.0	1,261.3	1,342.3	1,317.4	5.1	4.4	-83.05	61.5	-387.7	276.8	267.7	9.08	30.466		
1,400.0	1,347.9	1,437.6	1,407.9	6.0	4.9	-88.35	91.2	-391.3	258.5	248.1	10.40	24.860		
1,500.0	1,431.9	1,531.6	1,497.5	7.0	5.4	-95.28	119.6	-394.8	243.2	231.6	11.61	20.959		
1,600.0	1,515.1	1,631.2	1,592.1	8.0	6.0	-103.38	150.8	-397.0	230.4	217.9	12.55	18.356		
1,700.0	1,598.3	1,724.3	1,680.3	9.0	6.6	-111.60	180.3	-398.6	222.0	208.9	13.13	16.904		
1,800.0	1,681.5	1,820.8	1,771.3	10.1	7.1	-120.25	212.2	-401.0	218.2	204.9	13.31	16.399 SF		
1,831.1	1,707.3	1,850.1	1,798.9	10.4	7.3	-122.86	222.1	-401.8	218.0	204.7	13.28	16.406 CC, ES		
1,900.0	1,764.7	1,915.0	1,860.0	11.1	7.7	-128.55	244.1	-403.9	219.2	206.0	13.12	16.707		
2,000.0	1,847.9	2,008.8	1,948.1	12.1	8.3	-136.41	276.0	-407.5	225.2	212.6	12.66	17.791		
2,100.0	1,931.1	2,102.6	2,036.3	13.1	8.9	-143.64	307.7	-411.7	236.0	223.9	12.08	19.538		
2,200.0	2,014.3	2,195.5	2,123.8	14.2	9.4	-150.49	338.7	-414.2	251.1	239.6	11.45	21.918		
2,300.0	2,097.5	2,289.9	2,212.8	15.2	10.0	-156.78	370.0	-416.1	270.0	259.1	10.96	24.645		
2,400.0	2,180.7	2,389.0	2,305.9	16.2	10.6	-162.50	403.9	-418.5	290.8	280.1	10.66	27.281		
2,500.0	2,263.9	2,481.5	2,392.6	17.3	11.2	-167.14	436.2	-420.9	313.3	302.6	10.62	29.492		
2,600.0	2,347.1	2,573.4	2,478.9	18.3	11.8	-171.14	467.7	-423.1	338.1	327.4	10.79	31.343		
2,700.0	2,430.3	2,665.1	2,565.2	19.3	12.3	-174.57	498.5	-425.3	365.2	354.0	11.16	32.726		
2,800.0	2,513.5	2,757.1	2,652.0	20.4	12.9	-177.52	529.0	-427.4	393.8	382.1	11.72	33.606		
2,900.0	2,596.7	2,851.9	2,741.5	21.4	13.4	-179.90	560.0	-429.8	423.4	411.0	12.45	34.013		
3,000.0	2,679.9	2,946.1	2,830.6	22.4	14.0	-177.74	590.6	-432.8	453.6	440.3	13.30	34.110		
3,100.0	2,763.1	3,039.7	2,919.1	23.5	14.5	-175.89	620.9	-436.0	484.3	470.1	14.23	34.044		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19E Pad - Shideler 19-10 (O19E) - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 154--MWD, 1240--MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	26.0	26.0	0.0	0.0	-110.29	-137.6	-372.2	396.8					
100.0	100.0	125.9	125.9	0.1	0.2	-110.26	-137.4	-372.2	396.8	396.5	0.34	1,181.165		
200.0	200.0	226.2	226.2	0.3	0.4	-110.20	-137.0	-372.4	396.8	396.1	0.68	582.348		
300.0	300.0	326.6	326.6	0.5	0.5	-110.10	-136.3	-372.5	396.7	395.7	1.03	384.529		
400.0	400.0	432.3	432.3	0.7	0.7	-72.34	-133.9	-372.4	395.6	394.2	1.40	283.146		
500.0	499.8	536.1	535.9	0.8	0.9	-72.35	-127.8	-372.3	391.9	390.1	1.79	218.785		
600.0	599.3	641.9	641.0	1.1	1.2	-72.44	-116.1	-373.0	385.6	383.3	2.27	169.827		
700.0	698.0	747.3	744.9	1.4	1.5	-72.60	-98.8	-373.5	375.7	372.9	2.87	130.781		
800.0	795.8	848.7	844.0	1.8	1.9	-72.85	-77.2	-374.9	363.5	359.9	3.61	100.727		
900.0	892.4	950.1	942.1	2.2	2.4	-73.35	-51.9	-377.0	349.1	344.7	4.48	77.864		
1,000.0	987.5	1,050.5	1,038.8	2.8	2.9	-74.44	-24.6	-379.2	332.7	327.2	5.48	60.714		
1,100.0	1,080.9	1,148.7	1,132.8	3.5	3.4	-76.31	3.4	-381.6	314.6	308.0	6.59	47.754		
1,200.0	1,172.2	1,246.1	1,225.8	4.2	3.9	-79.09	32.4	-384.4	295.7	287.9	7.80	37.930		
1,300.0	1,261.3	1,343.7	1,318.7	5.1	4.4	-83.10	62.2	-387.5	276.4	267.3	9.09	30.421		
1,400.0	1,347.9	1,439.2	1,409.5	6.0	4.9	-88.57	91.7	-390.4	257.7	247.3	10.39	24.803		
1,500.0	1,431.9	1,533.3	1,499.0	7.0	5.5	-95.53	120.7	-393.3	241.7	230.1	11.60	20.839		
1,600.0	1,515.1	1,627.0	1,588.1	8.0	6.0	-103.13	149.6	-396.1	229.8	217.3	12.55	18.309		
1,700.0	1,598.3	1,720.7	1,677.2	9.0	6.5	-111.30	178.5	-399.0	222.9	209.7	13.15	16.943		
1,778.8	1,663.8	1,794.5	1,747.3	9.8	6.9	-117.96	201.2	-401.2	221.2	207.8	13.34	16.577	CC, ES, SF	
1,800.0	1,681.5	1,814.4	1,766.2	10.1	7.0	-119.76	207.4	-401.8	221.3	207.9	13.35	16.579		
1,900.0	1,764.7	1,908.1	1,855.3	11.1	7.6	-128.13	236.2	-404.7	225.2	212.0	13.16	17.117		
2,000.0	1,847.9	2,001.8	1,944.4	12.1	8.1	-136.09	265.1	-407.5	234.3	221.6	12.69	18.466		
2,100.0	1,931.1	2,095.5	2,033.5	13.1	8.6	-143.39	294.0	-410.4	248.0	235.9	12.10	20.494		
2,200.0	2,014.3	2,189.2	2,122.6	14.2	9.1	-149.90	322.9	-413.3	265.6	254.1	11.55	22.996		
2,300.0	2,097.5	2,282.9	2,211.7	15.2	9.7	-155.61	351.8	-416.1	286.5	275.4	11.13	25.733		
2,400.0	2,180.7	2,376.6	2,300.8	16.2	10.2	-160.56	380.7	-419.0	309.9	299.0	10.88	28.488		
2,500.0	2,263.9	2,470.3	2,389.8	17.3	10.7	-164.83	409.6	-421.8	335.3	324.5	10.78	31.092		
2,600.0	2,347.1	2,564.0	2,478.9	18.3	11.3	-168.52	438.5	-424.7	362.3	351.4	10.84	33.411		
2,700.0	2,430.3	2,657.7	2,568.0	19.3	11.8	-171.71	467.4	-427.5	390.5	379.5	11.05	35.342		
2,800.0	2,513.5	2,751.4	2,657.1	20.4	12.3	-174.48	496.2	-430.4	419.8	408.4	11.40	36.827		
2,900.0	2,596.7	2,845.1	2,746.2	21.4	12.9	-176.89	525.1	-433.2	449.9	438.0	11.88	37.858		
3,000.0	2,679.9	2,938.8	2,835.3	22.4	13.4	-179.01	554.0	-436.1	480.6	468.1	12.49	38.483		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - (Existing Offset) Shideler 19-6D - Existing - Existing													Offset Site Error: 0.0 ft	
Survey Program: 1043-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		
4,800.0	4,198.3	4,177.9	4,151.8	40.2	9.8	20.41	2,161.6	-1,454.2	498.7	474.1	24.53	20.332		
4,900.0	4,290.3	4,272.6	4,245.9	40.9	10.0	20.87	2,166.4	-1,463.8	469.3	444.0	25.35	18.516		
5,000.0	4,383.7	4,372.8	4,345.7	41.6	10.3	21.63	2,171.7	-1,471.4	442.6	416.3	26.33	16.811		
5,100.0	4,478.2	4,480.9	4,453.5	42.1	10.4	22.85	2,176.8	-1,476.0	417.8	390.2	27.56	15.158		
5,200.0	4,573.9	4,585.7	4,558.3	42.6	10.6	24.29	2,179.1	-1,477.7	393.2	364.3	28.88	13.615		
5,300.0	4,670.4	4,684.3	4,656.9	43.1	10.7	25.77	2,180.7	-1,478.1	371.3	341.1	30.18	12.300		
5,400.0	4,767.9	4,783.4	4,755.9	43.5	10.8	27.37	2,182.2	-1,477.3	352.3	320.8	31.54	11.169		
5,500.0	4,866.0	4,882.8	4,855.3	43.8	10.9	29.08	2,183.5	-1,475.4	336.3	303.4	32.94	10.211		
5,600.0	4,964.8	4,982.5	4,955.0	44.1	11.0	30.85	2,184.5	-1,472.4	323.4	289.0	34.34	9.416		
5,700.0	5,064.0	5,080.8	5,053.2	44.3	11.1	32.61	2,185.6	-1,468.5	313.6	278.0	35.68	8.790		
5,800.0	5,163.6	5,179.0	5,151.3	44.5	11.2	34.26	2,187.1	-1,464.0	307.5	270.6	36.90	8.333		
5,900.0	5,263.5	5,277.4	5,249.5	44.5	11.3	35.76	2,189.0	-1,458.9	304.9	266.9	37.98	8.028		
5,925.9	5,289.4	5,302.9	5,275.0	44.6	11.3	36.12	2,189.5	-1,457.5	304.8	266.5	38.22	7.973 CC, ES		
6,000.0	5,363.5	5,375.8	5,347.8	44.6	11.4	37.05	2,191.3	-1,453.2	305.7	266.8	38.87	7.864		
6,100.0	5,463.5	5,474.3	5,446.0	44.6	11.5	0.66	2,194.0	-1,446.9	308.5	268.8	39.72	7.767		
6,200.0	5,563.5	5,571.7	5,543.1	44.7	11.6	1.91	2,197.3	-1,440.0	312.0	271.4	40.59	7.687		
6,300.0	5,663.5	5,668.9	5,640.0	44.7	11.7	3.23	2,201.2	-1,432.6	316.4	274.9	41.48	7.628		
6,400.0	5,763.5	5,766.0	5,736.6	44.8	11.8	4.61	2,205.9	-1,424.6	321.8	279.4	42.39	7.591		
6,500.0	5,863.5	5,862.9	5,833.0	44.8	11.9	6.02	2,211.2	-1,416.1	328.1	284.8	43.30	7.578 SF		
6,600.0	5,963.5	5,959.7	5,929.1	44.8	12.0	7.46	2,217.3	-1,407.0	335.5	291.3	44.21	7.588		
6,700.0	6,063.5	6,056.9	6,025.7	44.9	12.1	8.92	2,224.0	-1,397.3	343.8	298.7	45.12	7.620		
6,800.0	6,163.5	6,154.8	6,122.7	44.9	12.3	10.38	2,231.2	-1,387.1	352.8	306.8	46.01	7.667		
6,900.0	6,263.5	6,252.5	6,219.6	45.0	12.4	11.83	2,238.6	-1,376.5	362.3	315.5	46.87	7.730		
7,000.0	6,363.5	6,350.5	6,316.7	45.0	12.5	13.26	2,246.3	-1,365.5	372.5	324.8	47.71	7.808		
7,100.0	6,463.5	6,449.6	6,414.8	45.1	12.7	14.72	2,254.1	-1,353.7	383.1	334.5	48.54	7.891		
7,200.0	6,563.5	6,548.6	6,512.7	45.1	12.8	16.19	2,261.6	-1,341.2	393.8	344.4	49.36	7.978		
7,300.0	6,663.5	6,648.3	6,611.2	45.2	12.9	17.69	2,269.0	-1,328.1	404.8	354.6	50.18	8.067		
7,400.0	6,763.5	6,749.5	6,711.4	45.2	13.1	19.13	2,276.1	-1,315.0	415.5	364.6	50.96	8.155		
7,500.0	6,863.5	6,850.9	6,811.7	45.3	13.2	20.46	2,282.7	-1,302.3	426.0	374.3	51.67	8.244		
7,600.0	6,963.5	6,952.5	6,912.4	45.3	13.4	21.70	2,288.9	-1,290.0	436.1	383.7	52.34	8.332		
7,700.0	7,063.5	7,054.2	7,013.2	45.4	13.5	22.86	2,294.6	-1,278.0	445.7	392.8	52.95	8.418		
7,800.0	7,163.5	7,155.9	7,114.2	45.4	13.7	23.94	2,299.8	-1,266.5	455.0	401.5	53.53	8.500		
7,900.0	7,263.5	7,255.2	7,212.7	45.5	13.9	24.95	2,304.7	-1,255.5	464.2	410.1	54.07	8.584		
8,000.0	7,363.5	7,354.5	7,311.2	45.5	14.0	25.91	2,309.7	-1,244.4	473.4	418.9	54.59	8.673		
8,100.0	7,463.5	7,453.7	7,409.7	45.6	14.2	26.84	2,314.6	-1,233.4	482.9	427.8	55.09	8.766		
8,200.0	7,563.5	7,553.0	7,508.2	45.6	14.4	27.73	2,319.5	-1,222.3	492.4	436.8	55.56	8.862		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 19-14D - OH - FINAL												Offset Site Error:	0.0 ft
Survey Program: 172-MWD, 1613-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	-155.06	-197.4	-91.8	217.7				
100.0	100.0	100.1	100.1	0.1	0.2	-155.10	-197.5	-91.7	217.7	217.4	0.29	754.475	
200.0	200.0	200.0	200.0	0.3	0.3	-155.21	-197.6	-91.3	217.7	217.0	0.62	350.181	
202.8	202.8	202.8	202.8	0.3	0.3	-155.21	-197.6	-91.3	217.7	217.0	0.63	344.848	CC, ES
300.0	300.0	296.5	296.4	0.5	0.5	-155.14	-198.1	-91.8	218.4	217.4	0.96	226.410	
400.0	400.0	386.0	385.9	0.7	0.6	-117.16	-200.1	-94.7	222.1	220.8	1.30	171.383	
500.0	499.8	478.0	477.6	0.8	0.8	-116.90	-204.4	-101.4	231.9	230.2	1.65	140.404	
600.0	599.3	573.2	572.0	1.1	1.1	-117.13	-210.7	-111.2	247.0	245.0	2.05	120.215	
700.0	698.0	670.9	668.9	1.4	1.3	-118.17	-217.8	-121.9	265.4	262.9	2.52	105.300	
800.0	795.8	767.3	764.4	1.8	1.6	-119.83	-224.9	-132.5	286.7	283.7	3.05	94.045	
900.0	892.4	863.5	859.8	2.2	1.9	-121.94	-232.1	-143.1	311.1	307.5	3.64	85.453	
1,000.0	987.5	957.2	952.6	2.8	2.1	-124.24	-239.1	-153.5	339.1	334.8	4.29	79.129	
1,100.0	1,080.9	1,049.1	1,043.6	3.5	2.4	-126.61	-246.2	-163.9	371.1	366.1	4.97	74.626	
1,200.0	1,172.2	1,138.9	1,132.6	4.2	2.7	-128.92	-253.4	-174.2	407.3	401.7	5.69	71.563	
1,300.0	1,261.3	1,228.0	1,220.8	5.1	2.9	-131.16	-260.4	-184.5	447.8	441.4	6.44	69.592	
1,400.0	1,347.9	1,313.5	1,305.5	6.0	3.2	-133.19	-267.3	-194.2	492.7	485.5	7.19	68.523	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 19-14D - OH - Plan #5												Offset Site Error:	0.0 ft
Survey Program: 172-MWD, 1490-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	-155.06	-197.4	-91.8	217.7				
100.0	100.0	100.1	100.1	0.1	0.2	-155.10	-197.5	-91.7	217.7	217.4	0.29	754.475	
200.0	200.0	200.0	200.0	0.3	0.3	-155.21	-197.6	-91.3	217.7	217.0	0.62	350.181	
202.8	202.8	202.8	202.8	0.3	0.3	-155.21	-197.6	-91.3	217.7	217.0	0.63	344.848	CC, ES
300.0	300.0	296.5	296.4	0.5	0.5	-155.14	-198.1	-91.8	218.4	217.4	0.96	226.410	
400.0	400.0	386.0	385.9	0.7	0.6	-117.16	-200.1	-94.7	222.1	220.8	1.30	171.383	
500.0	499.8	478.0	477.6	0.8	0.8	-116.90	-204.4	-101.4	231.9	230.2	1.65	140.404	
600.0	599.3	573.2	572.0	1.1	1.1	-117.13	-210.7	-111.2	247.0	245.0	2.05	120.215	
700.0	698.0	670.9	668.9	1.4	1.3	-118.17	-217.8	-121.9	265.4	262.9	2.52	105.300	
800.0	795.8	767.3	764.4	1.8	1.6	-119.83	-224.9	-132.5	286.7	283.7	3.05	94.045	
900.0	892.4	863.5	859.8	2.2	1.9	-121.94	-232.1	-143.1	311.1	307.5	3.64	85.453	
1,000.0	987.5	957.2	952.6	2.8	2.1	-124.24	-239.1	-153.5	339.1	334.8	4.29	79.129	
1,100.0	1,080.9	1,049.1	1,043.6	3.5	2.4	-126.61	-246.2	-163.9	371.1	366.1	4.97	74.626	
1,200.0	1,172.2	1,138.9	1,132.6	4.2	2.7	-128.92	-253.4	-174.2	407.3	401.7	5.69	71.563	
1,300.0	1,261.3	1,228.0	1,220.8	5.1	2.9	-131.16	-260.4	-184.5	447.8	441.4	6.44	69.592	
1,400.0	1,347.9	1,313.5	1,305.5	6.0	3.2	-133.19	-267.3	-194.2	492.7	485.5	7.19	68.523	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 19-16C - OH - FINAL													Offset Site Error:	0.0 ft
Survey Program: 173-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-162.84	-161.0	-49.7	168.5					
100.0	100.0	100.8	100.8	0.1	0.2	-162.82	-160.7	-49.7	168.3	168.0	0.29	580.022		
200.0	200.0	201.5	201.5	0.3	0.3	-162.78	-160.0	-49.6	167.5	166.9	0.62	268.237		
300.0	300.0	301.5	301.5	0.5	0.5	-163.22	-159.4	-48.1	166.5	165.5	0.97	171.084		
384.2	384.2	386.2	386.0	0.6	0.7	-127.71	-160.0	-42.8	166.2	164.9	1.28	129.620		
400.0	400.0	401.8	401.6	0.7	0.7	-128.13	-160.2	-41.4	165.9	164.5	1.34	123.496	CC, ES	
500.0	499.8	499.6	498.6	0.8	0.9	-133.36	-162.3	-29.9	169.0	167.3	1.77	95.392		
600.0	599.3	597.0	594.7	1.1	1.2	-140.60	-165.3	-14.5	178.4	176.1	2.26	78.903		
700.0	698.0	692.4	688.4	1.4	1.6	-148.56	-167.9	3.6	194.8	192.0	2.78	70.030		
800.0	795.8	785.2	779.0	1.8	1.9	-156.08	-170.0	23.2	219.6	216.3	3.27	67.127	SF	
900.0	892.4	875.6	867.3	2.2	2.3	-162.50	-171.7	43.0	252.4	248.7	3.71	68.094		
1,000.0	987.5	962.7	952.0	2.8	2.7	-167.73	-173.3	62.8	292.8	288.7	4.09	71.575		
1,100.0	1,080.9	1,051.1	1,038.1	3.5	3.1	-172.13	-174.5	83.2	339.5	335.1	4.43	76.634		
1,200.0	1,172.2	1,134.9	1,119.8	4.2	3.4	-175.42	-175.3	101.9	391.5	386.8	4.72	82.924		
1,300.0	1,261.3	1,215.1	1,198.0	5.1	3.8	-177.92	-176.5	119.2	448.7	443.7	4.99	89.968		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 19-16C - OH - Plan #5													Offset Site Error: 0.0 ft	
Survey Program: 173-MWD, 1485-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-162.84	-161.0	-49.7	168.5					
100.0	100.0	100.8	100.8	0.1	0.2	-162.82	-160.7	-49.7	168.3	168.0	0.29	580.022		
200.0	200.0	201.5	201.5	0.3	0.3	-162.78	-160.0	-49.6	167.5	166.9	0.62	268.237		
300.0	300.0	301.5	301.5	0.5	0.5	-163.22	-159.4	-48.1	166.5	165.5	0.97	171.084		
384.2	384.2	386.2	386.0	0.6	0.7	-127.71	-160.0	-42.8	166.2	164.9	1.28	129.620		
400.0	400.0	401.8	401.6	0.7	0.7	-128.13	-160.2	-41.4	165.9	164.5	1.34	123.496	CC, ES	
500.0	499.8	499.6	498.6	0.8	0.9	-133.36	-162.3	-29.9	169.0	167.3	1.77	95.392		
600.0	599.3	597.0	594.7	1.1	1.2	-140.60	-165.3	-14.5	178.4	176.1	2.26	78.903		
700.0	698.0	692.4	688.4	1.4	1.6	-148.56	-167.9	3.6	194.8	192.0	2.78	70.030		
800.0	795.8	785.2	779.0	1.8	1.9	-156.08	-170.0	23.2	219.6	216.3	3.27	67.127	SF	
900.0	892.4	875.6	867.3	2.2	2.3	-162.50	-171.7	43.0	252.4	248.7	3.71	68.094		
1,000.0	987.5	962.7	952.0	2.8	2.7	-167.73	-173.3	62.8	292.8	288.7	4.09	71.575		
1,100.0	1,080.9	1,051.1	1,038.1	3.5	3.1	-172.13	-174.5	83.2	339.5	335.1	4.43	76.634		
1,200.0	1,172.2	1,134.9	1,119.8	4.2	3.4	-175.42	-175.3	101.9	391.5	386.8	4.72	82.924		
1,300.0	1,261.3	1,215.1	1,198.0	5.1	3.8	-177.92	-176.5	119.2	448.7	443.7	4.99	89.968		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 19-16CC - OH - FINAL													Offset Site Error: 0.0 ft	
Survey Program: 202-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-160.95	-173.4	-59.9	183.4					
100.0	100.0	100.4	100.4	0.1	0.2	-161.00	-173.3	-59.7	183.3	183.0	0.29	626.894		
200.0	200.0	200.9	200.9	0.3	0.3	-161.17	-173.2	-59.0	183.0	182.3	0.62	293.554		
300.0	300.0	301.2	301.2	0.5	0.5	-161.59	-173.0	-57.6	182.3	181.3	0.97	187.334		
352.4	352.4	353.1	353.1	0.6	0.6	-124.67	-173.2	-55.8	182.2	181.0	1.16	156.920 CC		
400.0	400.0	399.6	399.5	0.7	0.7	-125.48	-173.9	-53.5	182.3	181.0	1.33	136.851 ES		
500.0	499.8	495.9	495.5	0.8	0.9	-129.02	-176.9	-46.3	186.6	184.9	1.72	108.496		
600.0	599.3	588.1	586.9	1.1	1.1	-134.18	-182.7	-36.3	197.8	195.6	2.15	91.863		
700.0	698.0	677.3	674.8	1.4	1.4	-140.16	-191.1	-23.6	217.8	215.1	2.62	83.053		
800.0	795.8	763.0	758.5	1.8	1.8	-146.19	-201.4	-8.2	247.3	244.2	3.09	79.922 SF		
900.0	892.4	848.0	840.8	2.2	2.1	-151.77	-212.7	9.3	285.7	282.1	3.54	80.763		
1,000.0	987.5	929.8	919.9	2.8	2.5	-156.44	-224.1	27.3	331.8	327.9	3.94	84.315		
1,100.0	1,080.9	1,015.6	1,002.6	3.5	2.9	-160.62	-235.7	46.7	384.2	379.9	4.29	89.482		
1,200.0	1,172.2	1,095.0	1,079.2	4.2	3.3	-163.88	-245.5	65.1	441.6	437.0	4.61	95.863		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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													O19EB Pad (1st Occupation) - Shideler 19-16CC - OH - Plan #5		Offset Site Error:		0.0 ft
Survey Program:													202-MWD, 1090-MWD		Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)							
0.0	0.0	0.0	0.0	0.0	0.0	-160.95	-173.4	-59.9	183.4								
100.0	100.0	100.4	100.4	0.1	0.2	-161.00	-173.3	-59.7	183.3	183.0	0.29	626.894					
200.0	200.0	200.9	200.9	0.3	0.3	-161.17	-173.2	-59.0	183.0	182.3	0.62	293.554					
300.0	300.0	301.2	301.2	0.5	0.5	-161.59	-173.0	-57.6	182.3	181.3	0.97	187.334					
352.4	352.4	353.1	353.1	0.6	0.6	-124.67	-173.2	-55.8	182.2	181.0	1.16	156.920 CC					
400.0	400.0	399.6	399.5	0.7	0.7	-125.48	-173.9	-53.5	182.3	181.0	1.33	136.851 ES					
500.0	499.8	495.9	495.5	0.8	0.9	-129.02	-176.9	-46.3	186.6	184.9	1.72	108.496					
600.0	599.3	588.1	586.9	1.1	1.1	-134.18	-182.7	-36.3	197.8	195.6	2.15	91.863					
700.0	698.0	677.3	674.8	1.4	1.4	-140.16	-191.1	-23.6	217.8	215.1	2.62	83.053					
800.0	795.8	763.0	758.5	1.8	1.8	-146.19	-201.4	-8.2	247.3	244.2	3.09	79.922 SF					
900.0	892.4	848.0	840.8	2.2	2.1	-151.77	-212.7	9.3	285.7	282.1	3.54	80.763					
1,000.0	987.5	929.8	919.9	2.8	2.5	-156.44	-224.1	27.3	331.8	327.9	3.94	84.315					
1,100.0	1,080.9	1,015.6	1,002.6	3.5	2.9	-160.62	-235.7	46.7	384.2	379.9	4.29	89.482					
1,200.0	1,172.2	1,095.1	1,079.4	4.2	3.3	-163.89	-245.6	65.1	441.6	437.0	4.61	95.878					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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
O19EB Pad (1st Occupation) - Shideler 30-1B - OH - FINAL												Offset Well Error:	0.0 ft
Survey Program: 202-MWD													
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	-159.30	-186.1	-70.3	199.0				
100.0	100.0	100.5	100.5	0.1	0.2	-159.31	-186.0	-70.3	198.9	198.6	0.29	679.917	
200.0	200.0	201.0	201.0	0.3	0.3	-159.34	-185.7	-70.0	198.5	197.9	0.62	318.415	
300.0	300.0	300.4	300.4	0.5	0.5	-159.46	-185.4	-69.4	197.9	197.0	0.97	203.842	
308.2	308.2	308.3	308.2	0.5	0.5	-121.93	-185.4	-69.3	197.9	196.9	1.00	198.019 CC, ES	
400.0	400.0	397.5	397.4	0.7	0.7	-122.90	-186.9	-66.8	198.9	197.6	1.32	150.706	
500.0	499.8	491.6	491.3	0.8	0.8	-125.62	-191.2	-61.9	204.5	202.8	1.69	121.244	
600.0	599.3	581.6	580.7	1.1	1.1	-129.72	-198.8	-54.9	217.3	215.2	2.09	103.833	
700.0	698.0	668.8	666.7	1.4	1.3	-134.60	-209.7	-45.7	238.6	236.1	2.54	94.035	
800.0	795.8	754.0	750.0	1.8	1.7	-139.78	-223.4	-33.8	269.2	266.2	3.01	89.532	
900.0	892.4	833.9	827.2	2.2	2.0	-144.66	-238.0	-19.5	308.7	305.2	3.48	88.681 SF	
1,000.0	987.5	912.5	902.5	2.8	2.4	-149.18	-253.3	-2.8	356.4	352.5	3.93	90.788	
1,100.0	1,080.9	987.3	973.7	3.5	2.8	-152.91	-268.3	14.2	411.2	406.9	4.34	94.841	
1,200.0	1,172.2	1,058.3	1,041.1	4.2	3.3	-155.95	-282.8	31.2	472.5	467.8	4.71	100.251	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-1B - OH - Plan #5													Offset Site Error:	0.0 ft
Survey Program: 202-MWD, 1090-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-159.30	-186.1	-70.3	199.0					
100.0	100.0	100.5	100.5	0.1	0.2	-159.31	-186.0	-70.3	198.9	198.6	0.29	679.917		
200.0	200.0	201.0	201.0	0.3	0.3	-159.34	-185.7	-70.0	198.5	197.9	0.62	318.415		
300.0	300.0	300.4	300.4	0.5	0.5	-159.46	-185.4	-69.4	197.9	197.0	0.97	203.842		
308.2	308.2	308.3	308.2	0.5	0.5	-121.93	-185.4	-69.3	197.9	196.9	1.00	198.019 CC, ES		
400.0	400.0	397.5	397.4	0.7	0.7	-122.90	-186.9	-66.8	198.9	197.6	1.32	150.706		
500.0	499.8	491.6	491.3	0.8	0.8	-125.62	-191.2	-61.9	204.5	202.8	1.69	121.244		
600.0	599.3	581.6	580.7	1.1	1.1	-129.72	-198.8	-54.9	217.3	215.2	2.09	103.833		
700.0	698.0	668.8	666.7	1.4	1.3	-134.60	-209.7	-45.7	238.6	236.1	2.54	94.035		
800.0	795.8	754.0	750.0	1.8	1.7	-139.78	-223.4	-33.8	269.2	266.2	3.01	89.532		
900.0	892.4	833.9	827.2	2.2	2.0	-144.66	-238.0	-19.5	308.7	305.2	3.48	88.681 SF		
1,000.0	987.5	912.5	902.5	2.8	2.4	-149.18	-253.3	-2.8	356.4	352.5	3.93	90.788		
1,100.0	1,080.9	987.3	973.7	3.5	2.8	-152.91	-268.3	14.2	411.2	406.9	4.34	94.841		
1,200.0	1,172.2	1,058.3	1,041.1	4.2	3.3	-155.95	-282.8	31.2	472.5	467.8	4.71	100.251		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-1C - OH - FINAL													Offset Site Error:	0.0 ft
Survey Program: 111-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-156.52	-188.0	-81.6	204.9					
100.0	100.0	100.2	100.2	0.1	0.1	-156.54	-187.9	-81.6	204.9	204.6	0.28	741.395		
200.0	200.0	200.7	200.7	0.3	0.3	-156.70	-188.0	-81.0	204.7	204.0	0.62	328.701		
234.4	234.4	234.5	234.5	0.4	0.4	-156.80	-188.0	-80.6	204.6	203.8	0.74	275.803 CC, ES		
300.0	300.0	295.7	295.7	0.5	0.5	-157.18	-189.1	-79.6	205.2	204.3	0.97	212.635		
400.0	400.0	386.0	385.8	0.7	0.7	-120.98	-194.4	-76.6	209.8	208.5	1.31	160.100		
500.0	499.8	476.1	475.2	0.8	0.9	-123.77	-204.5	-72.2	221.5	219.8	1.68	131.668		
600.0	599.3	564.0	561.8	1.1	1.2	-127.69	-218.4	-65.8	240.9	238.8	2.10	114.545		
700.0	698.0	650.4	645.9	1.4	1.5	-132.31	-235.3	-56.6	268.4	265.9	2.57	104.629		
800.0	795.8	729.7	722.4	1.8	1.9	-136.69	-253.4	-45.8	304.6	301.5	3.04	100.333		
900.0	892.4	802.5	791.7	2.2	2.3	-140.43	-272.4	-34.2	349.9	346.4	3.50	99.937 SF		
1,000.0	987.5	868.2	853.4	2.8	2.8	-143.41	-291.7	-22.5	404.0	400.0	3.96	101.994		
1,100.0	1,080.9	926.8	907.7	3.5	3.2	-145.61	-310.6	-10.9	466.2	461.8	4.43	105.297		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-1C - OH - Plan #5													Offset Site Error: 0.0 ft	
Survey Program: 111-MWD, 1180-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-156.52	-188.0	-81.6	204.9					
100.0	100.0	100.2	100.2	0.1	0.1	-156.54	-187.9	-81.6	204.9	204.6	0.28	741.395		
200.0	200.0	200.7	200.7	0.3	0.3	-156.70	-188.0	-81.0	204.7	204.0	0.62	328.701		
234.4	234.4	234.5	234.5	0.4	0.4	-156.80	-188.0	-80.6	204.6	203.8	0.74	275.803	CC, ES	
300.0	300.0	295.7	295.7	0.5	0.5	-157.18	-189.1	-79.6	205.2	204.3	0.97	212.635		
400.0	400.0	386.0	385.8	0.7	0.7	-120.98	-194.4	-76.6	209.8	208.5	1.31	160.100		
500.0	499.8	476.1	475.2	0.8	0.9	-123.77	-204.5	-72.2	221.5	219.8	1.68	131.668		
600.0	599.3	564.0	561.8	1.1	1.2	-127.69	-218.4	-65.8	240.9	238.8	2.10	114.545		
700.0	698.0	650.4	645.9	1.4	1.5	-132.31	-235.3	-56.6	268.4	265.9	2.57	104.629		
800.0	795.8	729.7	722.4	1.8	1.9	-136.69	-253.4	-45.8	304.6	301.5	3.04	100.333		
900.0	892.4	802.5	791.7	2.2	2.3	-140.43	-272.4	-34.2	349.9	346.4	3.50	99.937	SF	
1,000.0	987.5	868.2	853.4	2.8	2.8	-143.41	-291.7	-22.5	404.0	400.0	3.96	101.994		
1,100.0	1,080.9	926.8	907.7	3.5	3.2	-145.61	-310.6	-10.9	466.2	461.8	4.43	105.297		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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
O19EB Pad (1st Occupation) - Shideler 30-2C - OH - FINAL												Offset Well Error:	0.0 ft
Survey Program: 172-MWD, 1616-MWD													
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	-155.61	-221.8	-100.6	243.5				
100.0	100.0	101.7	101.7	0.1	0.2	-155.63	-221.5	-100.3	243.2	242.9	0.29	835.272	
200.0	200.0	202.0	202.0	0.3	0.3	-155.70	-220.7	-99.7	242.2	241.6	0.63	387.409	
236.2	236.2	236.2	236.2	0.4	0.4	-155.75	-220.6	-99.4	242.0	241.3	0.75	323.596 CC, ES	
300.0	300.0	294.0	294.0	0.5	0.5	-155.88	-221.4	-99.1	242.7	241.7	0.96	252.806	
400.0	400.0	384.0	383.9	0.7	0.6	-118.67	-225.5	-99.5	247.3	246.0	1.29	191.155	
500.0	499.8	469.2	468.7	0.8	0.8	-119.56	-233.3	-101.3	259.1	257.5	1.63	159.049	
600.0	599.3	554.4	553.0	1.1	1.1	-121.17	-245.4	-103.8	278.8	276.8	2.00	139.662	
700.0	698.0	635.2	632.3	1.4	1.4	-123.19	-260.8	-106.2	306.1	303.7	2.40	127.732	
800.0	795.8	711.6	706.5	1.8	1.7	-125.13	-278.8	-109.3	341.7	338.8	2.84	120.428	
900.0	892.4	783.3	775.2	2.2	2.1	-126.83	-298.8	-112.7	385.2	381.9	3.32	116.019	
1,000.0	987.5	850.5	838.8	2.8	2.4	-128.18	-320.3	-116.3	436.3	432.4	3.85	113.317	
1,100.0	1,080.9	922.7	906.4	3.5	2.9	-129.51	-345.1	-120.6	493.3	488.8	4.44	111.214 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-2C - OH - Plan #4												Offset Site Error:	0.0 ft
Survey Program: 172-MWD, 1536-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	-155.61	-221.8	-100.6	243.5				
100.0	100.0	101.7	101.7	0.1	0.2	-155.63	-221.5	-100.3	243.2	242.9	0.29	835.272	
200.0	200.0	202.0	202.0	0.3	0.3	-155.70	-220.7	-99.7	242.2	241.6	0.63	387.409	
236.2	236.2	236.2	236.2	0.4	0.4	-155.75	-220.6	-99.4	242.0	241.3	0.75	323.596	CC, ES
300.0	300.0	294.0	294.0	0.5	0.5	-155.88	-221.4	-99.1	242.7	241.7	0.96	252.806	
400.0	400.0	384.0	383.9	0.7	0.6	-118.67	-225.5	-99.5	247.3	246.0	1.29	191.155	
500.0	499.8	469.2	468.7	0.8	0.8	-119.56	-233.3	-101.3	259.1	257.5	1.63	159.049	
600.0	599.3	554.4	553.0	1.1	1.1	-121.17	-245.4	-103.8	278.8	276.8	2.00	139.662	
700.0	698.0	635.2	632.3	1.4	1.4	-123.19	-260.8	-106.2	306.1	303.7	2.40	127.732	
800.0	795.8	711.6	706.5	1.8	1.7	-125.13	-278.8	-109.3	341.7	338.8	2.84	120.428	
900.0	892.4	783.3	775.2	2.2	2.1	-126.83	-298.8	-112.7	385.2	381.9	3.32	116.019	
1,000.0	987.5	850.5	838.8	2.8	2.4	-128.18	-320.3	-116.3	436.3	432.4	3.85	113.317	
1,100.0	1,080.9	922.7	906.4	3.5	2.9	-129.51	-345.1	-120.6	493.3	488.8	4.44	111.214	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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
O19EB Pad (1st Occupation) - Shideler 30-3A - OH - FINAL												Offset Well Error:	0.0 ft
Survey Program: 172-MWD													
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	-153.18	-222.9	-112.7	249.8				
100.0	100.0	101.0	101.0	0.1	0.2	-153.17	-222.7	-112.6	249.6	249.3	0.29	860.402	
200.0	200.0	200.9	200.9	0.3	0.3	-153.14	-222.2	-112.5	249.0	248.4	0.62	399.523	
222.0	222.0	222.0	222.0	0.3	0.3	-153.12	-222.1	-112.6	249.0	248.3	0.70	356.517	CC, ES
300.0	300.0	294.0	294.0	0.5	0.5	-153.01	-222.7	-113.4	249.9	249.0	0.96	260.335	
400.0	400.0	382.5	382.4	0.7	0.6	-115.24	-226.1	-116.3	255.1	253.8	1.29	197.725	
500.0	499.8	468.1	467.5	0.8	0.8	-115.45	-232.5	-121.5	266.8	265.2	1.63	163.967	
600.0	599.3	555.0	553.6	1.1	1.1	-116.35	-243.0	-128.2	285.6	283.6	2.00	142.903	
700.0	698.0	646.1	643.4	1.4	1.4	-117.90	-256.5	-136.0	309.8	307.4	2.43	127.638	
800.0	795.8	737.2	732.9	1.8	1.7	-119.74	-270.9	-144.5	338.2	335.3	2.91	116.019	
900.0	892.4	827.0	821.0	2.2	2.0	-121.79	-286.0	-152.9	370.8	367.3	3.46	107.191	
1,000.0	987.5	919.8	912.0	2.8	2.3	-124.02	-302.0	-161.6	407.3	403.2	4.07	100.171	
1,100.0	1,080.9	1,009.9	1,000.4	3.5	2.7	-126.08	-316.7	-170.7	447.0	442.3	4.72	94.698	
1,200.0	1,172.2	1,094.7	1,083.6	4.2	3.0	-127.90	-330.7	-179.4	490.8	485.4	5.41	90.656	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-3A - OH - Plan #3													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-153.18	-222.9	-112.7	249.8						
100.0	100.0	100.0	100.0	0.1	0.1	-153.18	-222.9	-112.7	249.8	249.5	0.27	917.426			
200.0	200.0	200.0	200.0	0.3	0.3	-153.18	-222.9	-112.7	249.8	249.2	0.62	402.018	CC, ES		
300.0	300.0	291.3	291.3	0.5	0.5	-153.15	-223.9	-113.3	251.1	250.1	0.96	262.632			
400.0	400.0	379.5	379.3	0.7	0.7	-115.49	-228.2	-116.1	257.1	255.8	1.28	200.117			
500.0	499.8	466.7	466.0	0.8	0.9	-115.85	-235.8	-120.9	269.7	268.1	1.62	166.058			
600.0	599.3	552.1	550.5	1.1	1.1	-116.68	-246.5	-127.7	289.1	287.1	1.99	145.145			
700.0	698.0	646.5	643.5	1.4	1.4	-118.11	-260.6	-136.6	313.7	311.3	2.43	129.269			
800.0	795.8	741.6	737.0	1.8	1.7	-119.95	-274.7	-145.6	341.4	338.5	2.92	116.800			
900.0	892.4	835.1	829.0	2.2	2.1	-122.00	-288.7	-154.4	372.2	368.8	3.48	107.066			
1,000.0	987.5	926.8	919.3	2.8	2.4	-124.14	-302.3	-163.1	406.7	402.6	4.08	99.570			
1,100.0	1,080.9	1,016.5	1,007.6	3.5	2.7	-126.24	-315.7	-171.6	444.9	440.2	4.74	93.904			
1,200.0	1,172.2	1,103.9	1,093.7	4.2	3.0	-128.24	-328.8	-179.9	487.2	481.8	5.43	89.708	SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-3B - OH - FINAL													Offset Site Error:	0.0 ft
Survey Program: 160-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-154.08	-209.8	-102.0	233.3					
100.0	100.0	100.2	100.2	0.1	0.2	-154.07	-209.7	-102.0	233.2	232.9	0.29	812.580		
200.0	200.0	200.7	200.7	0.3	0.3	-154.05	-209.6	-102.0	233.1	232.4	0.62	374.344		
213.0	213.0	213.0	213.0	0.3	0.3	-154.05	-209.5	-102.0	233.0	232.4	0.67	349.548	CC, ES	
300.0	300.0	294.0	294.0	0.5	0.5	-153.82	-210.0	-103.2	234.0	233.1	0.96	243.777		
400.0	400.0	386.0	385.8	0.7	0.6	-115.63	-212.3	-107.5	238.7	237.4	1.30	183.582		
500.0	499.8	471.9	471.3	0.8	0.8	-115.30	-217.3	-114.7	249.8	248.2	1.65	151.703		
600.0	599.3	557.2	555.6	1.1	1.1	-115.54	-225.7	-124.2	268.2	266.2	2.03	132.047		
700.0	698.0	643.8	640.5	1.4	1.4	-116.05	-237.1	-136.9	293.2	290.7	2.49	117.800		
800.0	795.8	726.3	720.6	1.8	1.8	-116.46	-249.5	-152.3	324.0	320.9	3.02	107.224		
900.0	892.4	804.2	795.2	2.2	2.2	-116.78	-263.4	-169.6	361.1	357.4	3.64	99.266		
1,000.0	987.5	877.7	864.6	2.8	2.7	-116.86	-278.6	-188.9	404.4	400.1	4.34	93.223		
1,100.0	1,080.9	948.3	929.8	3.5	3.2	-116.69	-295.0	-210.1	453.7	448.6	5.12	88.582	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-3B - OH - Plan #4													Offset Site Error:	0.0 ft
Survey Program: 160-MWD, 1124-													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-154.08	-209.8	-102.0	233.3					
100.0	100.0	100.2	100.2	0.1	0.2	-154.07	-209.7	-102.0	233.2	232.9	0.29	812.580		
200.0	200.0	200.7	200.7	0.3	0.3	-154.05	-209.6	-102.0	233.1	232.4	0.62	374.344		
213.0	213.0	213.0	213.0	0.3	0.3	-154.05	-209.5	-102.0	233.0	232.4	0.67	349.548	CC, ES	
300.0	300.0	294.0	294.0	0.5	0.5	-153.82	-210.0	-103.2	234.0	233.1	0.96	243.777		
400.0	400.0	386.0	385.8	0.7	0.6	-115.63	-212.3	-107.5	238.7	237.4	1.30	183.582		
500.0	499.8	471.9	471.3	0.8	0.8	-115.30	-217.3	-114.7	249.8	248.2	1.65	151.703		
600.0	599.3	557.2	555.6	1.1	1.1	-115.54	-225.7	-124.2	268.2	266.2	2.03	132.047		
700.0	698.0	643.8	640.5	1.4	1.4	-116.05	-237.1	-136.9	293.2	290.7	2.49	117.800		
800.0	795.8	726.3	720.6	1.8	1.8	-116.46	-249.5	-152.3	324.0	320.9	3.02	107.224		
900.0	892.4	804.2	795.2	2.2	2.2	-116.78	-263.4	-169.6	361.1	357.4	3.64	99.266		
1,000.0	987.5	877.7	864.6	2.8	2.7	-116.86	-278.6	-188.9	404.4	400.1	4.34	93.223		
1,100.0	1,080.9	948.3	929.8	3.5	3.2	-116.69	-295.0	-210.1	453.7	448.6	5.12	88.582	SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-4A - OH - FINAL												Offset Site Error:	0.0 ft
Survey Program: 111-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-157.77	-174.8	-71.5	188.9				
100.0	100.0	100.9	100.9	0.1	0.1	-157.83	-174.7	-71.2	188.6	188.4	0.28	680.307	
200.0	200.0	200.3	200.3	0.3	0.3	-157.89	-174.3	-70.8	188.2	187.6	0.62	302.619	
209.2	209.2	209.2	209.2	0.3	0.3	-157.87	-174.3	-70.9	188.2	187.5	0.65	287.963	CC, ES
300.0	300.0	295.9	295.9	0.5	0.5	-157.24	-174.2	-73.1	188.9	188.0	0.96	195.972	
400.0	400.0	389.5	389.3	0.7	0.7	-118.19	-175.5	-79.4	193.2	191.9	1.32	146.822	
500.0	499.8	478.0	477.2	0.8	0.9	-117.07	-179.2	-88.7	203.9	202.2	1.68	121.134	
600.0	599.3	571.5	569.4	1.1	1.2	-116.24	-185.1	-102.6	220.7	218.5	2.13	103.719	
700.0	698.0	661.0	657.0	1.4	1.5	-115.59	-191.4	-119.8	242.3	239.6	2.66	91.245	
800.0	795.8	754.0	747.1	1.8	1.9	-115.06	-198.9	-141.7	269.0	265.7	3.31	81.361	
900.0	892.4	835.1	824.5	2.2	2.4	-114.54	-206.9	-164.6	301.2	297.2	4.04	74.526	
1,000.0	987.5	917.9	902.2	2.8	3.0	-113.98	-216.3	-191.7	338.7	333.8	4.90	69.122	
1,100.0	1,080.9	1,002.5	980.4	3.5	3.6	-113.55	-226.8	-222.0	380.6	374.7	5.87	64.880	
1,200.0	1,172.2	1,088.1	1,059.1	4.2	4.2	-113.41	-238.0	-253.7	425.5	418.6	6.93	61.416	
1,300.0	1,261.3	1,174.2	1,138.0	5.1	4.8	-113.51	-249.5	-286.4	473.0	464.9	8.08	58.540	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-4A - OH - Plan #5												Offset Site Error:	0.0 ft
Survey Program: 111-MWD, 1570-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	-157.77	-174.8	-71.5	188.9				
100.0	100.0	100.9	100.9	0.1	0.1	-157.83	-174.7	-71.2	188.6	188.4	0.28	680.307	
200.0	200.0	200.3	200.3	0.3	0.3	-157.89	-174.3	-70.8	188.2	187.6	0.62	302.619	
209.2	209.2	209.2	209.2	0.3	0.3	-157.87	-174.3	-70.9	188.2	187.5	0.65	287.963	CC, ES
300.0	300.0	295.9	295.9	0.5	0.5	-157.24	-174.2	-73.1	188.9	188.0	0.96	195.972	
400.0	400.0	389.5	389.3	0.7	0.7	-118.19	-175.5	-79.4	193.2	191.9	1.32	146.822	
500.0	499.8	478.0	477.2	0.8	0.9	-117.07	-179.2	-88.7	203.9	202.2	1.68	121.134	
600.0	599.3	571.5	569.4	1.1	1.2	-116.24	-185.1	-102.6	220.7	218.5	2.13	103.719	
700.0	698.0	661.0	657.0	1.4	1.5	-115.59	-191.4	-119.8	242.3	239.6	2.66	91.245	
800.0	795.8	754.0	747.1	1.8	1.9	-115.06	-198.9	-141.7	269.0	265.7	3.31	81.361	
900.0	892.4	835.1	824.5	2.2	2.4	-114.54	-206.9	-164.6	301.2	297.2	4.04	74.526	
1,000.0	987.5	917.9	902.2	2.8	3.0	-113.98	-216.3	-191.7	338.7	333.8	4.90	69.122	
1,100.0	1,080.9	1,002.5	980.4	3.5	3.6	-113.55	-226.8	-222.0	380.6	374.7	5.87	64.880	
1,200.0	1,172.2	1,088.1	1,059.1	4.2	4.2	-113.41	-238.0	-253.7	425.5	418.6	6.93	61.416	
1,300.0	1,261.3	1,174.2	1,138.0	5.1	4.8	-113.51	-249.5	-286.4	473.0	464.9	8.08	58.540	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-7A - OH - FINAL												Offset Site Error:	0.0 ft
Survey Program: 172-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	-156.55	-208.3	-90.4	227.1				
100.0	100.0	102.1	102.1	0.1	0.2	-156.56	-207.9	-90.1	226.6	226.4	0.29	776.222	
200.0	200.0	203.1	203.1	0.3	0.3	-156.61	-206.8	-89.5	225.3	224.7	0.63	358.987	
259.0	259.0	259.0	259.0	0.4	0.4	-156.69	-206.5	-89.0	224.9	224.0	0.83	271.627	CC, ES
300.0	300.0	296.9	296.8	0.5	0.5	-156.84	-207.0	-88.5	225.1	224.2	0.97	233.307	
400.0	400.0	386.2	386.1	0.7	0.6	-120.05	-211.0	-87.1	229.1	227.8	1.30	176.055	
500.0	499.8	478.0	477.4	0.8	0.8	-121.78	-219.6	-86.2	240.1	238.4	1.66	145.009	
600.0	599.3	563.2	561.8	1.1	1.1	-124.36	-231.4	-84.4	258.2	256.2	2.04	126.741	
700.0	698.0	645.8	642.9	1.4	1.4	-127.52	-246.7	-81.3	284.3	281.9	2.46	115.731	
800.0	795.8	723.5	718.4	1.8	1.7	-130.67	-264.5	-77.3	319.2	316.3	2.91	109.847	
900.0	892.4	795.7	787.7	2.2	2.1	-133.47	-284.3	-72.9	362.9	359.6	3.37	107.593	
1,000.0	987.5	862.8	851.3	2.8	2.4	-135.68	-305.1	-68.7	414.9	411.0	3.86	107.405	SF
1,100.0	1,080.9	924.7	909.3	3.5	2.8	-137.32	-326.3	-64.6	474.3	469.9	4.39	108.130	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-7A - OH - Plan #4												Offset Site Error:	0.0 ft
Survey Program: 172-MWD, 1399-												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	-156.55	-208.3	-90.4	227.1				
100.0	100.0	102.1	102.1	0.1	0.2	-156.56	-207.9	-90.1	226.6	226.4	0.29	776.222	
200.0	200.0	203.1	203.1	0.3	0.3	-156.61	-206.8	-89.5	225.3	224.7	0.63	358.987	
259.0	259.0	259.0	259.0	0.4	0.4	-156.69	-206.5	-89.0	224.9	224.0	0.83	271.627	CC, ES
300.0	300.0	296.9	296.8	0.5	0.5	-156.84	-207.0	-88.5	225.1	224.2	0.97	233.307	
400.0	400.0	386.2	386.1	0.7	0.6	-120.05	-211.0	-87.1	229.1	227.8	1.30	176.055	
500.0	499.8	478.0	477.4	0.8	0.8	-121.78	-219.6	-86.2	240.1	238.4	1.66	145.009	
600.0	599.3	563.2	561.8	1.1	1.1	-124.36	-231.4	-84.4	258.2	256.2	2.04	126.741	
700.0	698.0	645.8	642.9	1.4	1.4	-127.52	-246.7	-81.3	284.3	281.9	2.46	115.731	
800.0	795.8	723.5	718.4	1.8	1.7	-130.67	-264.5	-77.3	319.2	316.3	2.91	109.847	
900.0	892.4	795.7	787.7	2.2	2.1	-133.47	-284.3	-72.9	362.9	359.6	3.37	107.593	
1,000.0	987.5	862.8	851.3	2.8	2.4	-135.68	-305.1	-68.7	414.9	411.0	3.86	107.405	SF
1,100.0	1,080.9	924.7	909.3	3.5	2.8	-137.32	-326.3	-64.6	474.3	469.9	4.39	108.130	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler 30-8B - OH - FINAL													Offset Site Error: 0.0 ft	
Survey Program: 142-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-157.63	-196.3	-80.8	212.3					
100.0	100.0	99.8	99.8	0.1	0.1	-157.70	-196.5	-80.6	212.3	212.1	0.28	748.668		
200.0	200.0	198.9	198.9	0.3	0.3	-157.93	-196.9	-79.8	212.5	211.9	0.62	342.476 ES		
300.0	300.0	294.0	293.9	0.5	0.5	-158.60	-199.4	-78.2	214.3	213.3	0.97	221.417		
400.0	400.0	386.0	385.7	0.7	0.7	-122.31	-205.4	-75.5	219.7	218.4	1.32	166.966		
500.0	499.8	474.2	473.2	0.8	0.9	-124.71	-215.4	-71.8	231.9	230.2	1.68	138.022		
600.0	599.3	562.0	559.8	1.1	1.2	-128.16	-229.2	-66.3	251.7	249.6	2.08	120.911		
700.0	698.0	644.4	640.2	1.4	1.5	-132.00	-245.7	-59.0	279.9	277.4	2.51	111.338		
800.0	795.8	721.5	714.5	1.8	1.9	-135.74	-264.3	-50.3	317.3	314.3	2.97	106.776		
900.0	892.4	792.3	781.8	2.2	2.3	-138.96	-284.1	-40.8	363.8	360.4	3.43	105.962 SF		
1,000.0	987.5	857.2	842.6	2.8	2.7	-141.55	-304.6	-30.9	418.9	415.0	3.90	107.357		
1,100.0	1,080.9	918.4	899.1	3.5	3.1	-143.66	-325.4	-20.3	481.5	477.1	4.39	109.556		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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												O19EB Pad (1st Occupation) - Shideler 30-8B - OH - Plan #5		Offset Site Error:		0.0 ft	
Survey Program:												142-MWD, 1399-MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)							
0.0	0.0	0.0	0.0	0.0	0.0	-157.63	-196.3	-80.8	212.3								
100.0	100.0	99.8	99.8	0.1	0.1	-157.70	-196.5	-80.6	212.3	212.1	0.28	748.668					
200.0	200.0	198.9	198.9	0.3	0.3	-157.93	-196.9	-79.8	212.5	211.9	0.62	342.476	ES				
300.0	300.0	294.0	293.9	0.5	0.5	-158.60	-199.4	-78.2	214.3	213.3	0.97	221.417					
400.0	400.0	386.0	385.7	0.7	0.7	-122.31	-205.4	-75.5	219.7	218.4	1.32	166.966					
500.0	499.8	474.2	473.2	0.8	0.9	-124.71	-215.4	-71.8	231.9	230.2	1.68	138.022					
600.0	599.3	562.0	559.8	1.1	1.2	-128.16	-229.2	-66.3	251.7	249.6	2.08	120.911					
700.0	698.0	644.4	640.2	1.4	1.5	-132.00	-245.7	-59.0	279.9	277.4	2.51	111.338					
800.0	795.8	721.5	714.5	1.8	1.9	-135.74	-264.3	-50.3	317.3	314.3	2.97	106.776					
900.0	892.4	792.3	781.8	2.2	2.3	-138.96	-284.1	-40.8	363.8	360.4	3.43	105.962	SF				
1,000.0	987.5	857.2	842.6	2.8	2.7	-141.55	-304.6	-30.9	418.9	415.0	3.90	107.357					
1,100.0	1,080.9	918.4	899.1	3.5	3.1	-143.66	-325.4	-20.3	481.5	477.1	4.39	109.556					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler Federal 19-13D - OH - FINAL												Offset Site Error: 0.0 ft	
Survey Program: 111-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-159.20	-162.1	-61.6	173.4				
100.0	100.0	99.9	99.9	0.1	0.1	-159.22	-162.1	-61.5	173.4	173.1	0.28	628.244	
150.6	150.6	150.6	150.6	0.2	0.2	-159.24	-162.2	-61.5	173.4	173.0	0.45	386.287	
200.0	200.0	199.7	199.7	0.3	0.3	-159.21	-162.1	-61.6	173.4	172.8	0.62	279.355 ES	
300.0	300.0	297.0	297.0	0.5	0.5	-158.46	-162.1	-64.0	174.3	173.3	0.97	180.414	
400.0	400.0	392.2	391.9	0.7	0.7	-118.92	-162.4	-71.1	177.7	176.4	1.33	133.461	
500.0	499.8	486.9	485.7	0.8	0.9	-116.43	-162.7	-83.9	186.2	184.4	1.76	105.718	
600.0	599.3	579.7	576.9	1.1	1.3	-114.12	-163.6	-101.3	200.0	197.7	2.27	88.189	
700.0	698.0	668.9	663.6	1.4	1.7	-112.51	-166.2	-121.5	219.8	216.9	2.85	77.108	
800.0	795.8	754.0	745.6	1.8	2.1	-111.43	-170.7	-144.1	245.4	241.9	3.53	69.591	
900.0	892.4	846.0	832.7	2.2	2.7	-110.55	-176.8	-172.9	276.4	272.0	4.36	63.322	
1,000.0	987.5	929.9	910.7	2.8	3.3	-109.65	-182.8	-203.3	311.8	306.5	5.31	58.691	
1,100.0	1,080.9	1,014.1	987.4	3.5	4.0	-108.70	-188.3	-237.7	350.9	344.5	6.40	54.822	
1,200.0	1,172.2	1,099.8	1,064.0	4.2	4.7	-107.85	-194.0	-275.7	393.3	385.7	7.60	51.732	
1,300.0	1,261.3	1,192.6	1,146.2	5.1	5.5	-107.41	-199.8	-318.1	437.6	428.6	8.95	48.862	
1,400.0	1,347.9	1,283.5	1,226.7	6.0	6.3	-107.28	-204.4	-360.1	482.7	472.3	10.39	46.449 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (1st Occupation) - Shideler Federal 19-13D - OH - Plan #4												Offset Site Error: 0.0 ft		
Survey Program: 111-MWD, 1124-MWD												Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-159.20	-162.1	-61.6	173.4					
100.0	100.0	99.9	99.9	0.1	0.1	-159.22	-162.1	-61.5	173.4	173.1	0.28	628.244		
150.6	150.6	150.6	150.6	0.2	0.2	-159.24	-162.2	-61.5	173.4	173.0	0.45	386.287		
200.0	200.0	199.7	199.7	0.3	0.3	-159.21	-162.1	-61.6	173.4	172.8	0.62	279.355 ES		
300.0	300.0	297.0	297.0	0.5	0.5	-158.46	-162.1	-64.0	174.3	173.3	0.97	180.414		
400.0	400.0	392.2	391.9	0.7	0.7	-118.92	-162.4	-71.1	177.7	176.4	1.33	133.461		
500.0	499.8	486.9	485.7	0.8	0.9	-116.43	-162.7	-83.9	186.2	184.4	1.76	105.718		
600.0	599.3	579.7	576.9	1.1	1.3	-114.12	-163.6	-101.3	200.0	197.7	2.27	88.189		
700.0	698.0	668.9	663.6	1.4	1.7	-112.51	-166.2	-121.5	219.8	216.9	2.85	77.108		
800.0	795.8	754.0	745.6	1.8	2.1	-111.43	-170.7	-144.1	245.4	241.9	3.53	69.591		
900.0	892.4	846.0	832.7	2.2	2.7	-110.55	-176.8	-172.9	276.4	272.0	4.36	63.322		
1,000.0	987.5	929.9	910.7	2.8	3.3	-109.65	-182.8	-203.3	311.8	306.5	5.31	58.691		
1,100.0	1,080.9	1,014.1	987.4	3.5	4.0	-108.70	-188.3	-237.7	350.9	344.5	6.40	54.822		
1,200.0	1,172.2	1,099.8	1,064.0	4.2	4.7	-107.85	-194.0	-275.7	393.3	385.7	7.60	51.732		
1,300.0	1,261.3	1,187.9	1,142.1	5.1	5.5	-107.39	-200.0	-315.9	437.9	429.0	8.91	49.138		
1,400.0	1,347.9	1,279.0	1,223.0	6.0	6.3	-107.42	-206.0	-357.2	483.9	473.6	10.32	46.886 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-11D - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	126.53	-9.8	13.3	16.5					
100.0	100.0	100.0	100.0	0.1	0.1	126.53	-9.8	13.3	16.5	16.2	0.27	60.682		
200.0	200.0	200.0	200.0	0.3	0.3	126.53	-9.8	13.3	16.5	15.9	0.62	26.591		
300.0	300.0	300.0	300.0	0.5	0.5	126.53	-9.8	13.3	16.5	15.6	0.97	17.026 CC, ES		
327.9	327.9	327.9	327.9	0.5	0.5	164.19	-9.8	13.3	16.6	15.6	1.07	15.565		
400.0	400.0	400.0	400.0	0.7	0.7	164.69	-9.8	13.3	17.2	15.8	1.32	13.002		
500.0	499.8	500.9	500.8	0.8	0.8	166.14	-7.6	11.8	19.7	18.1	1.67	11.817		
600.0	599.3	601.9	601.5	1.1	1.1	166.28	-0.9	7.4	22.3	20.3	2.02	11.057		
700.0	698.0	703.1	701.8	1.4	1.3	165.49	10.2	0.1	25.0	22.6	2.38	10.500		
800.0	795.8	804.3	801.3	1.8	1.7	164.07	25.8	-10.2	27.8	25.0	2.77	10.024		
900.0	892.4	905.5	899.6	2.2	2.1	162.25	45.6	-23.3	30.7	27.5	3.20	9.586 SF		
1,000.0	987.5	1,005.3	996.2	2.8	2.5	162.34	66.6	-37.1	36.9	33.3	3.62	10.188		
1,100.0	1,080.9	1,104.6	1,092.3	3.5	2.9	164.23	87.5	-50.9	48.2	44.2	4.00	12.045		
1,200.0	1,172.2	1,203.2	1,187.7	4.2	3.4	166.52	108.2	-64.6	64.5	60.2	4.33	14.890		
1,300.0	1,261.3	1,300.8	1,282.2	5.1	3.8	168.56	128.8	-78.1	86.0	81.3	4.64	18.532		
1,400.0	1,347.9	1,397.2	1,375.5	6.0	4.3	170.20	149.0	-91.5	112.5	107.6	4.93	22.825		
1,500.0	1,431.9	1,492.1	1,467.3	7.0	4.7	171.52	169.0	-104.7	143.8	138.6	5.22	27.555		
1,600.0	1,515.1	1,586.6	1,558.7	8.0	5.2	172.50	188.9	-117.8	176.6	171.0	5.56	31.770		
1,700.0	1,598.3	1,681.0	1,650.1	9.0	5.6	173.18	208.7	-130.9	209.3	203.4	5.90	35.461		
1,800.0	1,681.5	1,775.5	1,741.5	10.1	6.1	173.67	228.6	-144.0	242.1	235.8	6.25	38.720		
1,900.0	1,764.7	1,869.9	1,833.0	11.1	6.5	174.04	248.5	-157.1	274.9	268.3	6.60	41.621		
2,000.0	1,847.9	1,964.4	1,924.4	12.1	7.0	174.34	268.3	-170.2	307.7	300.7	6.96	44.219		
2,100.0	1,931.1	2,058.9	2,015.8	13.1	7.4	174.58	288.2	-183.3	340.5	333.2	7.31	46.561		
2,200.0	2,014.3	2,153.3	2,107.2	14.2	7.9	174.77	308.1	-196.4	373.3	365.6	7.67	48.681		
2,300.0	2,097.5	2,247.8	2,198.6	15.2	8.3	174.94	327.9	-209.5	406.1	398.0	8.02	50.612		
2,400.0	2,180.7	2,342.2	2,290.0	16.2	8.8	175.08	347.8	-222.6	438.9	430.5	8.38	52.376		
2,500.0	2,263.9	2,436.7	2,381.4	17.3	9.2	175.20	367.7	-235.8	471.7	463.0	8.74	53.995		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-11DD - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-53.48	9.8	-13.3	16.5					
100.0	100.0	100.0	100.0	0.1	0.1	-53.48	9.8	-13.3	16.5	16.2	0.27	60.673		
200.0	200.0	200.0	200.0	0.3	0.3	-53.48	9.8	-13.3	16.5	15.9	0.62	26.587	CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	-53.20	10.8	-14.4	18.0	17.0	0.97	18.531		
400.0	400.0	398.1	397.8	0.7	0.7	-15.14	14.9	-19.3	23.8	22.5	1.32	18.090		
500.0	499.8	496.5	495.6	0.8	0.9	-16.56	22.2	-28.0	30.4	28.7	1.66	18.270		
600.0	599.3	595.2	593.0	1.1	1.3	-19.23	32.6	-40.4	36.8	34.7	2.02	18.217		
700.0	698.0	695.1	691.4	1.4	1.6	-23.67	43.8	-53.6	39.3	36.9	2.40	16.362		
800.0	795.8	795.0	789.7	1.8	1.9	-31.29	54.9	-66.8	37.5	34.6	2.89	12.997		
900.0	892.4	894.5	887.7	2.2	2.3	-45.39	66.0	-80.0	32.6	28.9	3.68	8.838		
1,000.0	987.5	993.4	985.1	2.8	2.6	-72.27	77.0	-93.1	28.1	23.0	5.12	5.497		
1,016.8	1,003.4	1,009.9	1,001.4	2.9	2.7	-78.28	78.9	-95.2	28.0	22.6	5.39	5.190	SF	
1,100.0	1,080.9	1,091.4	1,081.6	3.5	2.9	-109.01	87.9	-106.0	32.4	26.1	6.23	5.195		
1,200.0	1,172.2	1,188.2	1,177.0	4.2	3.3	-134.96	98.7	-118.8	49.3	43.1	6.21	7.935		
1,300.0	1,261.3	1,283.6	1,271.0	5.1	3.6	-148.56	109.4	-131.5	75.3	69.2	6.08	12.398		
1,400.0	1,347.9	1,377.4	1,363.3	6.0	3.9	-156.04	119.8	-143.9	108.0	101.9	6.09	17.742		
1,500.0	1,431.9	1,469.2	1,453.8	7.0	4.2	-160.68	130.1	-156.0	146.1	139.9	6.20	23.566		
1,600.0	1,515.1	1,560.6	1,543.7	8.0	4.6	-163.73	140.3	-168.1	186.1	179.7	6.42	29.003		
1,700.0	1,598.3	1,651.9	1,633.7	9.0	4.9	-165.70	150.4	-180.2	226.3	219.6	6.69	33.833		
1,800.0	1,681.5	1,743.2	1,723.6	10.1	5.2	-167.09	160.6	-192.3	266.7	259.7	6.99	38.131		
1,900.0	1,764.7	1,834.5	1,813.6	11.1	5.5	-168.10	170.8	-204.4	307.1	299.8	7.32	41.975		
2,000.0	1,847.9	1,925.9	1,903.5	12.1	5.8	-168.89	181.0	-216.5	347.7	340.0	7.65	45.429		
2,100.0	1,931.1	2,017.2	1,993.5	13.1	6.2	-169.50	191.2	-228.6	388.2	380.2	8.00	48.549		
2,200.0	2,014.3	2,108.5	2,083.4	14.2	6.5	-170.01	201.3	-240.7	428.8	420.5	8.35	51.380		
2,300.0	2,097.5	2,199.8	2,173.4	15.2	6.8	-170.42	211.5	-252.8	469.5	460.8	8.70	53.961		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-16B - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	126.19	-29.1	39.8	49.4					
100.0	100.0	100.0	100.0	0.1	0.1	126.19	-29.1	39.8	49.4	49.1	0.27	181.254		
200.0	200.0	200.0	200.0	0.3	0.3	126.19	-29.1	39.8	49.4	48.7	0.62	79.426		
300.0	300.0	300.0	300.0	0.5	0.5	126.19	-29.1	39.8	49.4	48.4	0.97	50.855 CC, ES		
400.0	400.0	398.7	398.7	0.7	0.7	161.42	-28.0	42.1	51.2	49.9	1.32	38.769		
500.0	499.8	496.6	496.3	0.8	0.9	156.64	-24.7	48.9	60.3	58.6	1.69	35.667 SF		
600.0	599.3	592.9	591.7	1.1	1.1	151.82	-19.4	60.0	77.5	75.4	2.09	37.029		
700.0	698.0	686.6	683.9	1.4	1.4	148.04	-12.2	74.9	102.6	100.1	2.54	40.459		
800.0	795.8	781.2	776.5	1.8	1.8	145.83	-3.8	92.4	134.0	131.0	3.02	44.360		
900.0	892.4	874.6	868.0	2.2	2.1	145.22	4.5	109.6	169.6	166.0	3.54	47.851		
1,000.0	987.5	966.4	957.9	2.8	2.5	145.40	12.7	126.5	209.1	205.0	4.10	51.028		
1,100.0	1,080.9	1,056.3	1,045.8	3.5	2.9	145.93	20.7	143.1	252.7	248.0	4.68	54.012		
1,200.0	1,172.2	1,144.0	1,131.7	4.2	3.2	146.59	28.5	159.2	300.2	295.0	5.28	56.890		
1,300.0	1,261.3	1,229.3	1,215.2	5.1	3.5	147.27	36.1	175.0	351.8	345.9	5.89	59.714		
1,400.0	1,347.9	1,312.0	1,296.1	6.0	3.9	147.88	43.5	190.2	407.2	400.7	6.52	62.499		
1,500.0	1,431.9	1,391.9	1,374.3	7.0	4.2	148.71	50.6	204.9	466.4	459.3	7.15	65.227		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-16BB - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	126.27	-39.0	53.1	65.9					
100.0	100.0	100.0	100.0	0.1	0.1	126.27	-39.0	53.1	65.9	65.6	0.27	241.935		
200.0	200.0	200.0	200.0	0.3	0.3	126.27	-39.0	53.1	65.9	65.3	0.62	106.017		
300.0	300.0	300.0	300.0	0.5	0.5	126.27	-39.0	53.1	65.9	64.9	0.97	67.881	CC, ES	
327.8	327.8	327.8	327.8	0.5	0.5	163.86	-39.0	53.1	66.0	64.9	1.07	61.797		
400.0	400.0	400.0	400.0	0.7	0.7	163.99	-39.0	53.1	66.5	65.2	1.32	50.409		
500.0	499.8	496.9	496.9	0.8	0.8	163.85	-38.9	55.6	73.5	71.9	1.66	44.207	SF	
600.0	599.3	592.4	592.1	1.1	1.0	162.63	-38.7	62.8	89.5	87.5	2.01	44.457		
700.0	698.0	685.2	684.2	1.4	1.3	161.05	-38.4	74.4	114.3	111.9	2.38	48.075		
800.0	795.8	775.1	772.7	1.8	1.5	159.51	-38.0	89.8	147.6	144.8	2.76	53.521		
900.0	892.4	867.1	863.0	2.2	1.8	158.59	-37.6	107.2	186.9	183.7	3.16	59.102		
1,000.0	987.5	957.0	951.3	2.8	2.2	158.27	-37.1	124.2	230.6	227.0	3.58	64.455		
1,100.0	1,080.9	1,044.7	1,037.4	3.5	2.5	158.26	-36.7	140.8	278.6	274.6	4.00	69.607		
1,200.0	1,172.2	1,129.8	1,121.0	4.2	2.8	158.39	-36.3	157.0	330.9	326.5	4.44	74.594		
1,300.0	1,261.3	1,212.2	1,201.9	5.1	3.1	158.55	-35.9	172.6	387.3	382.5	4.88	79.436		
1,400.0	1,347.9	1,291.7	1,279.9	6.0	3.4	158.70	-35.5	187.6	447.8	442.5	5.32	84.127		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-9B - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	144.17	-21.1	15.3	26.1					
100.0	100.0	100.0	100.0	0.1	0.1	144.17	-21.1	15.3	26.1	25.8	0.27	95.702		
200.0	200.0	200.0	200.0	0.3	0.3	144.17	-21.1	15.3	26.1	25.4	0.62	41.937		
300.0	300.0	300.0	300.0	0.5	0.5	144.17	-21.1	15.3	26.1	25.1	0.97	26.852		
368.8	368.8	369.1	369.1	0.6	0.6	179.11	-20.1	16.0	26.3	25.1	1.21	21.664		
400.0	400.0	400.3	400.3	0.7	0.7	176.17	-19.0	16.8	26.0	24.7	1.33	19.615 CC, ES		
500.0	499.8	500.1	499.8	0.8	0.9	162.22	-12.6	21.4	30.4	28.7	1.71	17.754 SF		
600.0	599.3	598.9	597.6	1.1	1.1	148.50	-2.2	28.9	41.8	39.6	2.16	19.364		
700.0	698.0	695.9	693.1	1.4	1.5	139.32	12.0	39.2	60.4	57.7	2.69	22.481		
800.0	795.8	790.9	785.5	1.8	1.9	133.75	29.7	52.0	85.7	82.3	3.32	25.820		
900.0	892.4	883.3	874.2	2.2	2.4	130.24	50.5	67.0	117.0	112.9	4.06	28.837		
1,000.0	987.5	973.0	959.2	2.8	2.9	127.84	74.0	84.0	153.9	149.0	4.89	31.484		
1,100.0	1,080.9	1,064.2	1,044.9	3.5	3.4	126.67	99.3	102.2	194.9	189.1	5.81	33.541		
1,200.0	1,172.2	1,154.1	1,129.3	4.2	4.0	126.55	124.2	120.2	238.7	231.9	6.79	35.162		
1,300.0	1,261.3	1,242.2	1,212.1	5.1	4.5	126.93	148.6	137.9	285.4	277.6	7.81	36.526		
1,400.0	1,347.9	1,328.5	1,293.2	6.0	5.1	127.55	172.5	155.1	335.1	326.2	8.88	37.756		
1,500.0	1,431.9	1,412.7	1,372.3	7.0	5.6	128.63	195.9	172.0	387.8	377.8	9.96	38.927		
1,600.0	1,515.1	1,496.3	1,450.9	8.0	6.1	130.42	219.1	188.7	441.5	430.4	11.06	39.912		
1,700.0	1,598.3	1,579.9	1,529.5	9.0	6.6	131.83	242.2	205.5	495.5	483.3	12.16	40.762		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler 19-9C - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	126.02	-19.3	26.6	32.8					
100.0	100.0	100.0	100.0	0.1	0.1	126.02	-19.3	26.6	32.8	32.6	0.27	120.583		
200.0	200.0	200.0	200.0	0.3	0.3	126.02	-19.3	26.6	32.8	32.2	0.62	52.840 CC, ES		
300.0	300.0	299.6	299.5	0.5	0.5	121.67	-17.6	28.5	33.5	32.5	0.98	34.247		
400.0	400.0	398.6	398.2	0.7	0.7	147.96	-12.4	34.2	37.0	35.6	1.36	27.179 SF		
500.0	499.8	496.5	495.3	0.8	1.0	137.46	-3.9	43.6	48.1	46.4	1.77	27.196		
600.0	599.3	592.5	589.8	1.1	1.3	131.03	7.7	56.3	67.2	64.9	2.22	30.199		
700.0	698.0	686.3	681.1	1.4	1.7	127.60	22.1	72.2	93.3	90.5	2.74	34.011		
800.0	795.8	781.4	773.2	1.8	2.2	126.53	38.1	89.8	124.1	120.8	3.34	37.196		
900.0	892.4	875.5	864.2	2.2	2.6	127.10	53.9	107.2	157.9	153.9	4.00	39.466		
1,000.0	987.5	968.2	954.0	2.8	3.0	128.38	69.5	124.4	194.9	190.1	4.73	41.218		
1,100.0	1,080.9	1,059.3	1,042.2	3.5	3.5	129.93	84.8	141.2	235.1	229.6	5.50	42.738		
1,200.0	1,172.2	1,148.5	1,128.6	4.2	3.9	131.52	99.8	157.8	278.8	272.5	6.31	44.195		
1,300.0	1,261.3	1,235.7	1,213.0	5.1	4.3	133.03	114.5	173.9	326.1	319.0	7.14	45.673		
1,400.0	1,347.9	1,320.6	1,295.2	6.0	4.7	134.39	128.7	189.6	377.1	369.1	7.99	47.204		
1,500.0	1,431.9	1,403.0	1,374.9	7.0	5.1	135.94	142.6	204.9	431.6	422.8	8.85	48.791		
1,600.0	1,515.1	1,484.7	1,454.0	8.0	5.5	138.06	156.3	220.0	487.5	477.8	9.71	50.214		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler Federal 19-12A - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-97.35	-1.5	-11.3	11.4					
100.0	100.0	100.0	100.0	0.1	0.1	-97.35	-1.5	-11.3	11.4	11.1	0.27	41.843		
200.0	200.0	200.0	200.0	0.3	0.3	-97.35	-1.5	-11.3	11.4	10.8	0.62	18.336 CC, ES		
300.0	300.0	299.5	299.4	0.5	0.5	-89.47	0.1	-13.4	13.4	12.4	0.97	13.783		
400.0	400.0	398.5	398.1	0.7	0.7	-39.60	4.8	-19.5	19.6	18.3	1.33	14.797		
500.0	499.8	497.1	495.9	0.8	1.0	-35.13	12.6	-29.6	27.5	25.8	1.69	16.253		
600.0	599.3	595.2	592.4	1.1	1.3	-34.55	23.4	-43.6	35.9	33.8	2.08	17.276		
700.0	698.0	692.8	687.4	1.4	1.8	-35.68	37.1	-61.4	44.8	42.3	2.52	17.811		
800.0	795.8	790.0	780.7	1.8	2.3	-37.62	53.7	-82.9	54.3	51.2	3.04	17.841		
900.0	892.4	886.8	872.1	2.2	2.9	-39.93	73.1	-108.1	64.4	60.7	3.70	17.409		
1,000.0	987.5	983.0	961.3	2.8	3.6	-42.40	95.1	-136.7	75.1	70.6	4.52	16.637		
1,100.0	1,080.9	1,078.8	1,048.1	3.5	4.4	-44.87	119.8	-168.7	86.6	81.1	5.52	15.679		
1,200.0	1,172.2	1,174.0	1,132.4	4.2	5.2	-47.30	146.9	-203.8	98.8	92.1	6.73	14.673		
1,300.0	1,261.3	1,268.8	1,213.9	5.1	6.2	-49.61	176.3	-242.1	111.8	103.6	8.15	13.716		
1,400.0	1,347.9	1,367.2	1,296.9	6.0	7.2	-52.46	208.6	-283.9	124.2	114.4	9.86	12.602		
1,500.0	1,431.9	1,466.2	1,380.4	7.0	8.2	-56.60	241.0	-326.0	134.2	122.2	11.94	11.238		
1,600.0	1,515.1	1,565.2	1,463.9	8.0	9.2	-60.79	273.4	-368.1	144.1	129.9	14.16	10.176		
1,700.0	1,598.3	1,664.2	1,547.4	9.0	10.2	-64.42	305.9	-410.3	154.7	138.3	16.41	9.427		
1,800.0	1,681.5	1,763.2	1,630.9	10.1	11.2	-67.59	338.3	-452.4	165.8	147.2	18.66	8.885		
1,900.0	1,764.7	1,862.1	1,714.4	11.1	12.2	-70.35	370.8	-494.5	177.4	156.5	20.91	8.483		
2,000.0	1,847.9	1,961.1	1,797.9	12.1	13.3	-72.76	403.2	-536.6	189.3	166.2	23.15	8.179		
2,100.0	1,931.1	2,060.1	1,881.5	13.1	14.3	-74.90	435.6	-578.7	201.6	176.2	25.37	7.945		
2,200.0	2,014.3	2,159.1	1,965.0	14.2	15.3	-76.78	468.1	-620.8	214.0	186.4	27.57	7.762		
2,300.0	2,097.5	2,258.1	2,048.5	15.2	16.3	-78.46	500.5	-662.9	226.7	196.9	29.76	7.617		
2,400.0	2,180.7	2,357.1	2,132.0	16.2	17.3	-79.96	532.9	-705.0	239.5	207.6	31.94	7.500		
2,500.0	2,263.9	2,456.1	2,215.5	17.3	18.4	-81.31	565.4	-747.1	252.5	218.4	34.10	7.405		
2,600.0	2,347.1	2,555.0	2,299.0	18.3	19.4	-82.52	597.8	-789.2	265.7	229.4	36.25	7.328		
2,700.0	2,430.3	2,654.0	2,382.5	19.3	20.4	-83.62	630.3	-831.3	278.9	240.5	38.39	7.264		
2,800.0	2,513.5	2,753.0	2,466.0	20.4	21.4	-84.62	662.7	-873.4	292.2	251.7	40.52	7.211		
2,900.0	2,596.7	2,852.0	2,549.5	21.4	22.4	-85.53	695.1	-915.6	305.6	262.9	42.64	7.166		
3,000.0	2,679.9	2,951.0	2,633.0	22.4	23.5	-86.37	727.6	-957.7	319.1	274.3	44.76	7.129		
3,100.0	2,763.1	3,050.0	2,716.5	23.5	24.5	-87.14	760.0	-999.8	332.6	285.7	46.86	7.097		
3,200.0	2,846.3	3,149.0	2,800.0	24.5	25.5	-87.85	792.5	-1,041.9	346.2	297.2	48.96	7.070		
3,300.0	2,929.5	3,247.9	2,883.5	25.5	26.5	-88.50	824.9	-1,084.0	359.8	308.7	51.05	7.048		
3,400.0	3,012.7	3,346.9	2,967.0	26.6	27.5	-89.11	857.3	-1,126.1	373.5	320.3	53.14	7.028		
3,500.0	3,095.9	3,445.9	3,050.5	27.6	28.6	-89.67	889.8	-1,168.2	387.2	331.9	55.22	7.011		
3,600.0	3,179.1	3,544.9	3,134.0	28.6	29.6	-90.20	922.2	-1,210.3	400.9	343.6	57.30	6.997		
3,700.0	3,262.3	3,643.9	3,217.5	29.7	30.6	-90.69	954.6	-1,252.4	414.7	355.3	59.37	6.984		
3,800.0	3,345.5	3,742.9	3,301.0	30.7	31.6	-91.15	987.1	-1,294.5	428.5	367.1	61.44	6.974		
3,900.0	3,428.8	3,841.9	3,384.5	31.7	32.6	-91.58	1,019.5	-1,336.6	442.3	378.8	63.51	6.965		
4,000.0	3,512.0	3,940.9	3,468.0	32.8	33.7	-91.99	1,052.0	-1,378.8	456.2	390.6	65.58	6.957		
4,100.0	3,595.2	4,039.8	3,551.5	33.8	34.7	-92.37	1,084.4	-1,420.9	470.0	402.4	67.64	6.950		
4,200.0	3,678.4	4,138.8	3,635.0	34.9	35.7	-92.73	1,116.8	-1,463.0	483.9	414.2	69.70	6.944		
4,300.0	3,761.6	4,237.8	3,718.5	35.9	36.7	-93.06	1,149.3	-1,505.1	497.9	426.1	71.75	6.939 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 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler Federal 19-12C - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	137.34	-31.0	28.5	42.1					
100.0	100.0	100.0	100.0	0.1	0.1	137.34	-31.0	28.5	42.1	41.8	0.27	154.640		
200.0	200.0	200.0	200.0	0.3	0.3	137.34	-31.0	28.5	42.1	41.5	0.62	67.764		
300.0	300.0	300.0	300.0	0.5	0.5	137.34	-31.0	28.5	42.1	41.1	0.97	43.388 CC		
334.9	334.9	334.9	334.9	0.5	0.5	174.93	-31.0	28.5	42.3	41.2	1.09	38.690		
400.0	400.0	401.0	401.0	0.7	0.7	175.43	-30.7	27.9	42.2	40.9	1.32	31.924 ES		
500.0	499.8	502.9	502.7	0.8	0.9	179.56	-29.0	22.7	42.8	41.2	1.68	25.562		
600.0	599.3	604.5	603.8	1.1	1.1	-172.68	-25.6	12.5	44.8	42.8	2.05	21.821		
700.0	698.0	705.8	703.8	1.4	1.4	-162.55	-20.5	-2.8	49.1	46.6	2.51	19.549		
800.0	795.8	806.6	802.3	1.8	1.8	-151.91	-13.7	-23.0	56.6	53.5	3.14	18.044		
900.0	892.4	906.8	898.9	2.2	2.3	-142.31	-5.3	-47.9	68.0	64.0	4.00	16.997		
1,000.0	987.5	1,006.2	993.3	2.8	2.9	-134.46	4.5	-77.3	83.2	78.1	5.09	16.328		
1,100.0	1,080.9	1,104.7	1,085.2	3.5	3.5	-128.29	15.9	-111.0	102.0	95.6	6.39	15.953		
1,200.0	1,172.2	1,202.3	1,174.3	4.2	4.3	-123.49	28.5	-148.8	124.1	116.2	7.87	15.772		
1,300.0	1,261.3	1,298.9	1,260.3	5.1	5.2	-119.71	42.5	-190.4	149.3	139.8	9.51	15.701 SF		
1,400.0	1,347.9	1,394.4	1,343.2	6.0	6.1	-116.69	57.6	-235.4	177.4	166.1	11.29	15.715		
1,500.0	1,431.9	1,489.6	1,425.0	7.0	7.0	-115.32	73.1	-281.6	207.9	194.8	13.10	15.870		
1,600.0	1,515.1	1,584.7	1,506.7	8.0	8.0	-115.09	88.5	-327.6	238.9	224.0	14.92	16.020		
1,700.0	1,598.3	1,679.7	1,588.5	9.0	8.9	-114.90	104.0	-373.7	270.0	253.3	16.74	16.129		
1,800.0	1,681.5	1,774.8	1,670.2	10.1	9.8	-114.76	119.4	-419.7	301.1	282.5	18.57	16.210		
1,900.0	1,764.7	1,869.8	1,751.9	11.1	10.8	-114.64	134.9	-465.8	332.1	311.7	20.41	16.273		
2,000.0	1,847.9	1,964.9	1,833.6	12.1	11.7	-114.54	150.3	-511.8	363.2	340.9	22.25	16.323		
2,100.0	1,931.1	2,059.9	1,915.3	13.1	12.7	-114.46	165.8	-557.9	394.2	370.2	24.09	16.363		
2,200.0	2,014.3	2,155.0	1,997.0	14.2	13.6	-114.39	181.2	-603.9	425.3	399.4	25.94	16.396		
2,300.0	2,097.5	2,250.1	2,078.7	15.2	14.6	-114.33	196.7	-649.9	456.4	428.6	27.79	16.424		
2,400.0	2,180.7	2,345.1	2,160.4	16.2	15.5	-114.28	212.1	-696.0	487.4	457.8	29.64	16.448		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler Federal 19-12D - OH - Plan #1													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	170.07	-11.3	2.0	11.5					
100.0	100.0	100.0	100.0	0.1	0.1	170.07	-11.3	2.0	11.5	11.2	0.27	42.102		
200.0	200.0	200.0	200.0	0.3	0.3	170.07	-11.3	2.0	11.5	10.8	0.62	18.449		
300.0	300.0	300.0	300.0	0.5	0.5	170.07	-11.3	2.0	11.5	10.5	0.97	11.813		
400.0	400.0	400.3	400.2	0.7	0.7	-147.99	-10.6	0.7	11.1	9.8	1.32	8.438		
400.6	400.6	400.8	400.8	0.7	0.7	-147.94	-10.6	0.7	11.1	9.8	1.32	8.424 CC, ES		
500.0	499.8	500.5	500.3	0.8	0.9	-135.42	-7.4	-5.1	12.2	10.5	1.70	7.160 SF		
600.0	599.3	600.6	599.6	1.1	1.1	-121.99	-1.7	-15.4	15.6	13.5	2.17	7.207		
700.0	698.0	700.4	698.0	1.4	1.4	-112.46	6.5	-30.2	21.7	18.9	2.78	7.796		
800.0	795.8	800.0	795.1	1.8	1.8	-106.69	17.1	-49.5	30.2	26.6	3.56	8.470		
900.0	892.4	899.1	890.5	2.2	2.3	-103.26	30.1	-73.0	40.9	36.4	4.51	9.053		
1,000.0	987.5	997.8	984.0	2.8	2.9	-101.16	45.4	-100.7	53.7	48.0	5.65	9.506		
1,100.0	1,080.9	1,096.1	1,075.3	3.5	3.6	-99.79	62.9	-132.4	68.5	61.5	6.96	9.843		
1,200.0	1,172.2	1,193.8	1,164.2	4.2	4.4	-98.84	82.6	-168.1	85.2	76.8	8.44	10.092		
1,300.0	1,261.3	1,291.0	1,250.4	5.1	5.3	-98.13	104.3	-207.4	103.8	93.7	10.11	10.272		
1,400.0	1,347.9	1,388.4	1,334.7	6.0	6.2	-97.91	127.8	-250.0	124.1	112.2	11.90	10.425		
1,500.0	1,431.9	1,486.0	1,419.0	7.0	7.1	-99.55	151.6	-293.1	145.2	131.4	13.79	10.534		
1,600.0	1,515.1	1,583.5	1,503.2	8.0	8.1	-101.59	175.4	-336.2	166.8	151.1	15.68	10.639		
1,700.0	1,598.3	1,681.0	1,587.4	9.0	9.0	-103.16	199.1	-379.2	188.5	171.0	17.56	10.734		
1,800.0	1,681.5	1,778.5	1,671.5	10.1	9.9	-104.41	222.9	-422.2	210.3	190.9	19.44	10.818		
1,900.0	1,764.7	1,876.0	1,755.7	11.1	10.9	-105.43	246.7	-465.3	232.2	210.9	21.32	10.892		
2,000.0	1,847.9	1,973.5	1,839.9	12.1	11.8	-106.27	270.4	-508.3	254.2	231.0	23.20	10.958		
2,100.0	1,931.1	2,071.0	1,924.1	13.1	12.8	-106.98	294.2	-551.4	276.2	251.1	25.07	11.016		
2,200.0	2,014.3	2,168.5	2,008.3	14.2	13.7	-107.58	318.0	-594.4	298.2	271.3	26.95	11.068		
2,300.0	2,097.5	2,266.0	2,092.5	15.2	14.7	-108.10	341.7	-637.5	320.3	291.5	28.82	11.114		
2,400.0	2,180.7	2,363.5	2,176.7	16.2	15.6	-108.55	365.5	-680.5	342.4	311.7	30.69	11.155		
2,500.0	2,263.9	2,461.0	2,260.9	17.3	16.6	-108.95	389.3	-723.6	364.5	331.9	32.57	11.193		
2,600.0	2,347.1	2,558.5	2,345.1	18.3	17.5	-109.30	413.0	-766.6	386.6	352.2	34.44	11.227		
2,700.0	2,430.3	2,656.0	2,429.2	19.3	18.5	-109.61	436.8	-809.7	408.7	372.4	36.31	11.258		
2,800.0	2,513.5	2,753.5	2,513.4	20.4	19.4	-109.89	460.6	-852.7	430.9	392.7	38.18	11.286		
2,900.0	2,596.7	2,851.0	2,597.6	21.4	20.4	-110.15	484.3	-895.8	453.0	413.0	40.05	11.312		
3,000.0	2,679.9	2,948.5	2,681.8	22.4	21.3	-110.38	508.1	-938.8	475.2	433.3	41.92	11.336		
3,100.0	2,763.1	3,046.0	2,766.0	23.5	22.3	-110.59	531.9	-981.9	497.4	453.6	43.79	11.358		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler Federal 19-13A - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	134.04	-40.4	41.8	58.2					
100.0	100.0	100.0	100.0	0.1	0.1	134.04	-40.4	41.8	58.2	57.9	0.27	213.604		
200.0	200.0	200.0	200.0	0.3	0.3	134.04	-40.4	41.8	58.2	57.5	0.62	93.602		
300.0	300.0	301.3	301.3	0.5	0.5	134.41	-40.3	41.1	57.6	56.6	0.97	59.169		
400.0	400.0	403.6	403.5	0.7	0.7	175.28	-39.2	35.8	53.8	52.5	1.33	40.368		
500.0	499.8	505.5	504.7	0.8	0.9	-176.93	-37.1	25.1	50.9	49.1	1.72	29.523		
551.2	550.8	557.4	556.0	1.0	1.1	-171.18	-35.6	17.6	50.4	48.4	1.96	25.743	CC, ES	
600.0	599.3	606.7	604.6	1.1	1.3	-164.82	-33.9	9.3	50.9	48.7	2.20	23.157		
700.0	698.0	706.9	702.6	1.4	1.7	-150.67	-29.7	-11.5	55.8	53.0	2.84	19.667		
800.0	795.8	806.2	798.3	1.8	2.2	-137.79	-24.6	-37.0	66.6	63.0	3.68	18.114		
900.0	892.4	904.2	891.5	2.2	2.8	-127.88	-18.6	-67.0	83.1	78.4	4.70	17.688	SF	
1,000.0	987.5	1,000.8	981.6	2.8	3.4	-120.80	-11.7	-101.0	104.5	98.6	5.87	17.793		
1,100.0	1,080.9	1,096.0	1,068.6	3.5	4.2	-115.78	-4.1	-138.9	130.1	122.9	7.19	18.087		
1,200.0	1,172.2	1,190.2	1,152.7	4.2	5.0	-112.18	4.2	-180.4	159.4	150.7	8.63	18.462		
1,300.0	1,261.3	1,285.0	1,236.8	5.1	5.8	-110.45	12.8	-223.4	191.0	180.8	10.16	18.807		
1,400.0	1,347.9	1,379.2	1,320.3	6.0	6.7	-110.21	21.4	-266.0	224.4	212.6	11.75	19.093		
1,500.0	1,431.9	1,472.6	1,403.2	7.0	7.5	-111.11	29.9	-308.3	259.6	246.2	13.40	19.366		
1,600.0	1,515.1	1,565.7	1,485.7	8.0	8.3	-112.64	38.4	-350.5	295.4	280.3	15.07	19.600		
1,700.0	1,598.3	1,658.8	1,568.3	9.0	9.2	-113.84	46.8	-392.7	331.3	314.6	16.73	19.800		
1,800.0	1,681.5	1,751.9	1,650.9	10.1	10.0	-114.81	55.3	-434.9	367.4	349.0	18.39	19.972		
1,900.0	1,764.7	1,845.0	1,733.5	11.1	10.8	-115.61	63.8	-477.1	403.5	383.5	20.05	20.122		
2,000.0	1,847.9	1,938.1	1,816.0	12.1	11.7	-116.27	72.2	-519.2	439.7	418.0	21.71	20.252		
2,100.0	1,931.1	2,031.2	1,898.6	13.1	12.5	-116.84	80.7	-561.4	475.9	452.6	23.37	20.367		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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 O19EB Pad (2nd Occupation) - Shideler Federal 19-13AA - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total 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	132.38	-50.3	55.1	74.6					
100.0	100.0	100.0	100.0	0.1	0.1	132.38	-50.3	55.1	74.6	74.3	0.27	273.880		
200.0	200.0	200.0	200.0	0.3	0.3	132.38	-50.3	55.1	74.6	73.9	0.62	120.015		
300.0	300.0	302.9	302.9	0.5	0.5	133.82	-50.2	52.3	72.6	71.6	0.99	73.658		
400.0	400.0	405.3	404.9	0.7	0.7	176.24	-50.0	44.1	67.5	66.1	1.36	49.550		
500.0	499.8	506.9	505.6	0.8	1.0	-174.51	-49.8	30.5	64.5	62.7	1.81	35.686		
520.7	520.5	527.8	526.2	0.9	1.1	-172.08	-49.7	27.0	64.4	62.4	1.92	33.572 CC, ES		
600.0	599.3	607.4	604.3	1.1	1.4	-161.72	-49.4	11.8	66.2	63.8	2.37	27.992		
700.0	698.0	706.5	700.6	1.4	1.9	-148.21	-48.9	-11.7	74.7	71.6	3.07	24.341		
800.0	795.8	804.0	794.0	1.8	2.4	-136.72	-48.3	-39.6	90.5	86.5	3.92	23.101		
900.0	892.4	900.0	884.4	2.2	3.0	-128.12	-47.6	-71.7	112.8	107.9	4.90	23.024 SF		
1,000.0	987.5	993.5	970.9	2.8	3.7	-122.00	-46.9	-107.4	140.7	134.7	6.01	23.405		
1,100.0	1,080.9	1,085.1	1,053.7	3.5	4.5	-117.58	-46.1	-146.3	173.5	166.2	7.25	23.924		
1,200.0	1,172.2	1,177.7	1,136.4	4.2	5.3	-114.72	-45.2	-188.1	209.8	201.2	8.58	24.455		
1,300.0	1,261.3	1,270.0	1,218.8	5.1	6.1	-113.47	-44.4	-229.8	248.2	238.2	9.98	24.856		
1,400.0	1,347.9	1,361.4	1,300.3	6.0	6.9	-113.22	-43.5	-271.1	288.5	277.1	11.46	25.170		
1,500.0	1,431.9	1,451.7	1,380.8	7.0	7.7	-113.88	-42.7	-311.9	330.8	317.8	13.00	25.449		
1,600.0	1,515.1	1,541.6	1,461.0	8.0	8.5	-115.32	-41.8	-352.5	373.9	359.3	14.57	25.654		
1,700.0	1,598.3	1,631.5	1,541.2	9.0	9.2	-116.47	-41.0	-393.1	417.0	400.9	16.14	25.836		
1,800.0	1,681.5	1,721.4	1,621.5	10.1	10.0	-117.41	-40.2	-433.8	460.3	442.6	17.71	25.998		

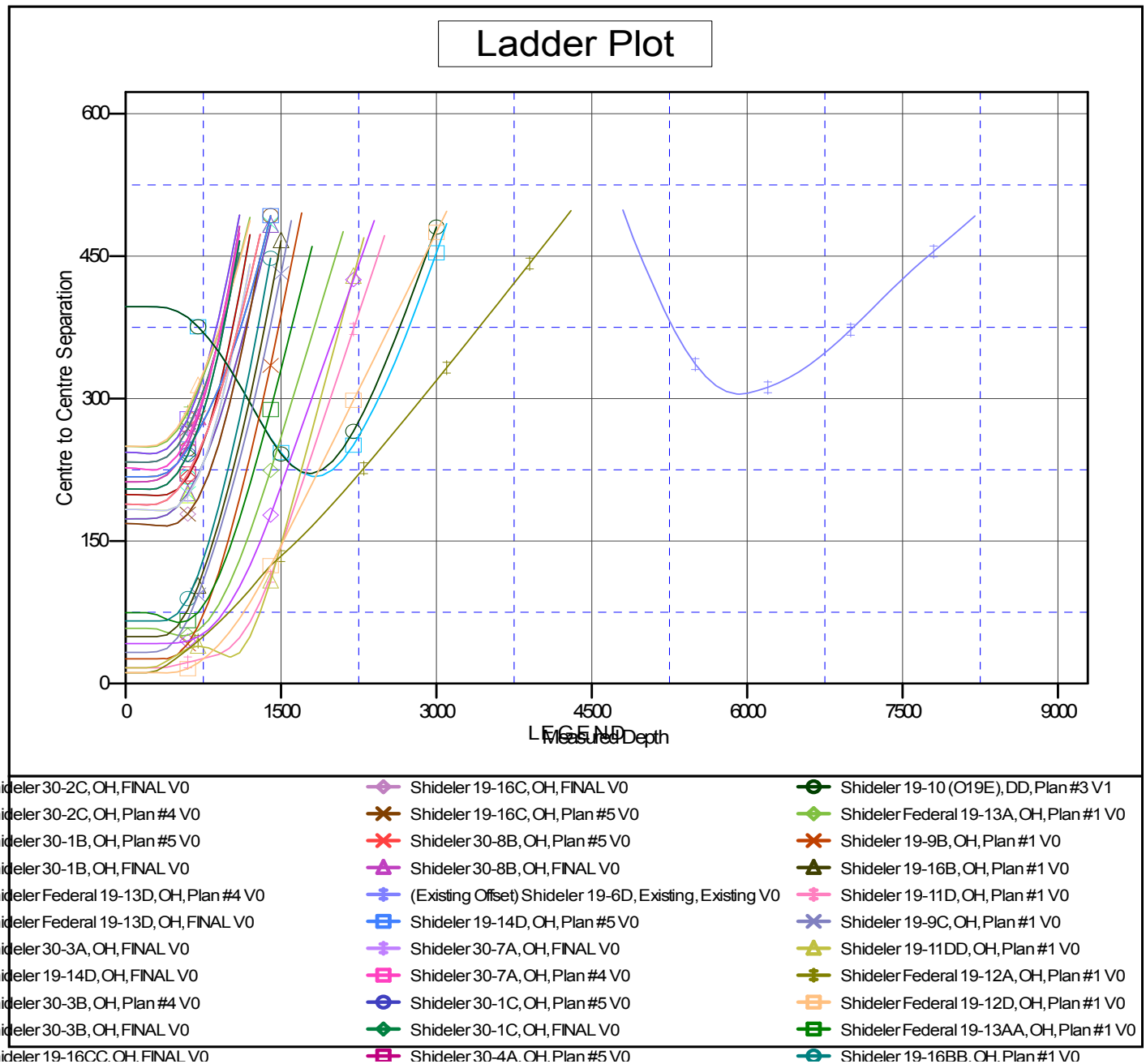
Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 19-6C
Project:	Mamm Creek	TVD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Reference Site:	O19EB Pad (2nd Occupation)	MD Reference:	KB=22' @ 6531.0ft (Nabors M-15)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 19-6C	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' @ 6531.0ft (Nabors M-15)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Shideler 19-6C
 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