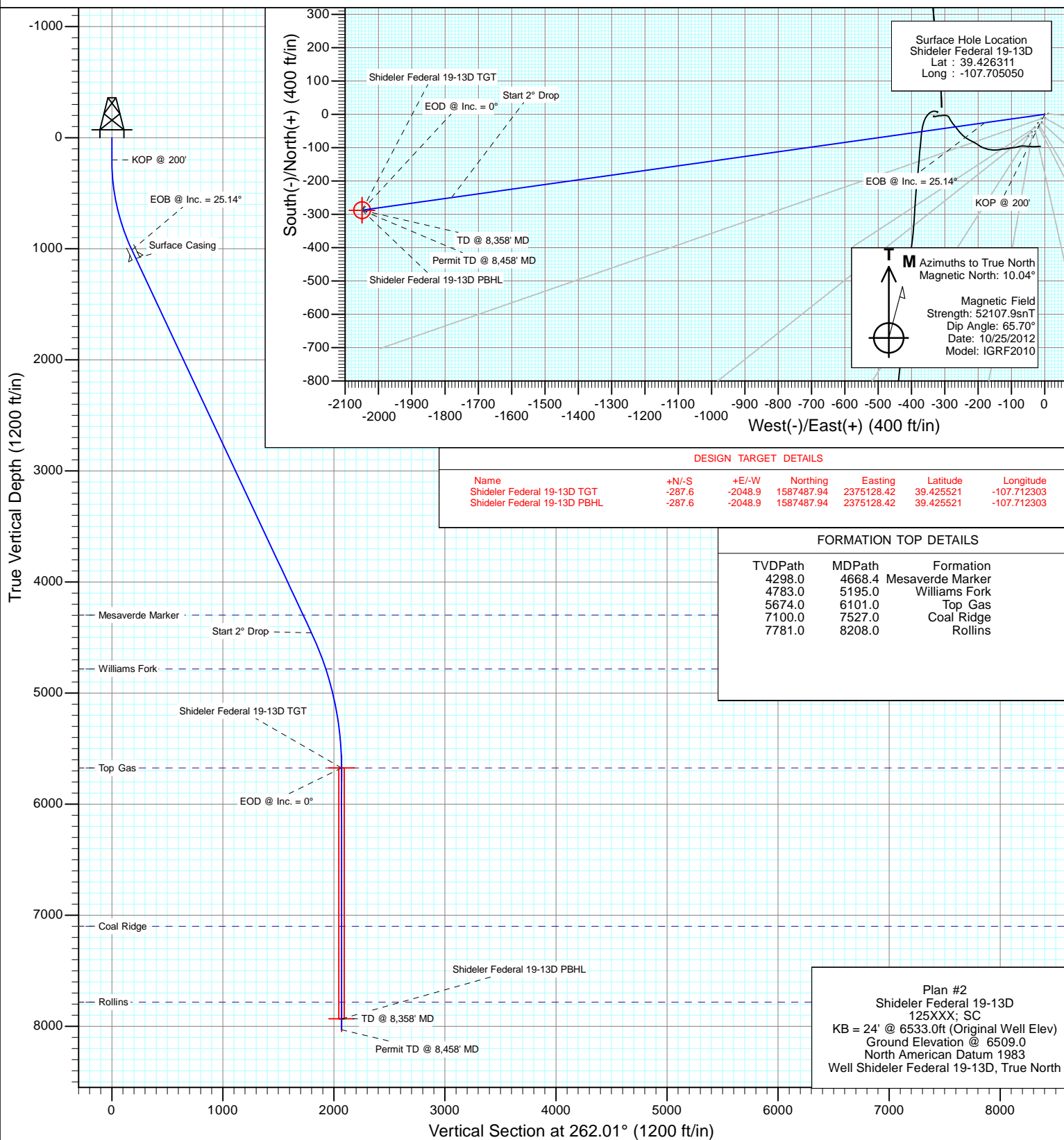
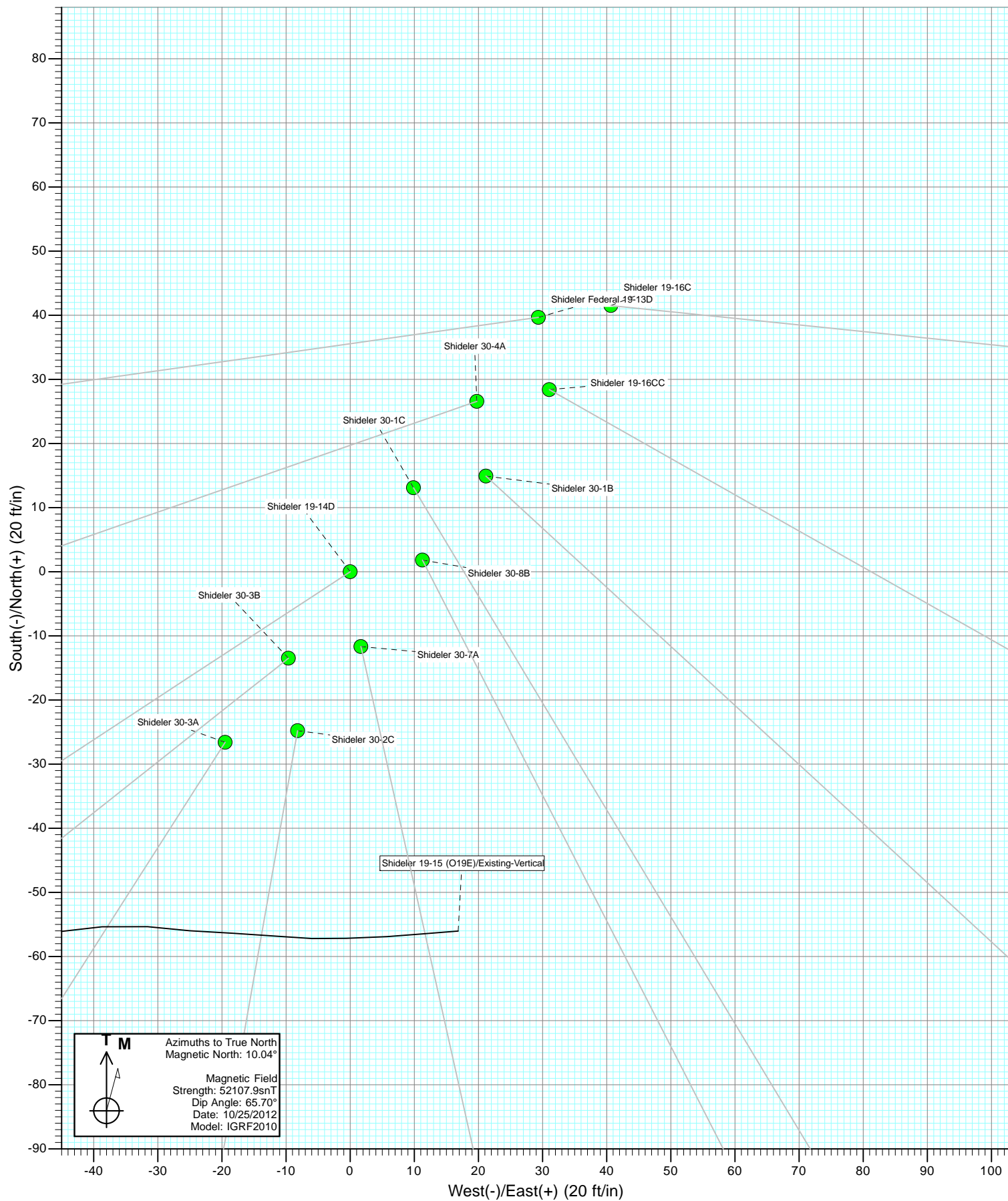
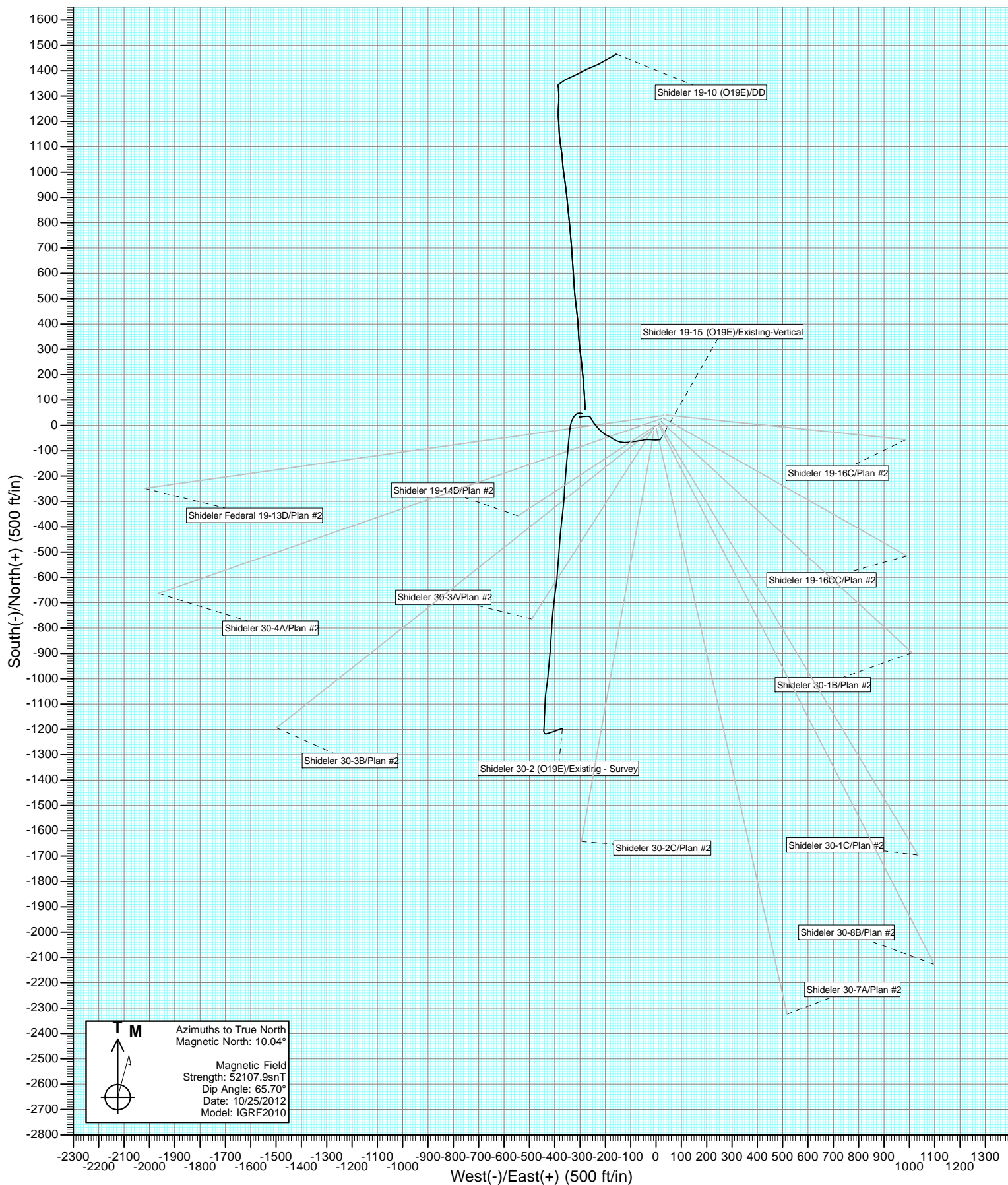


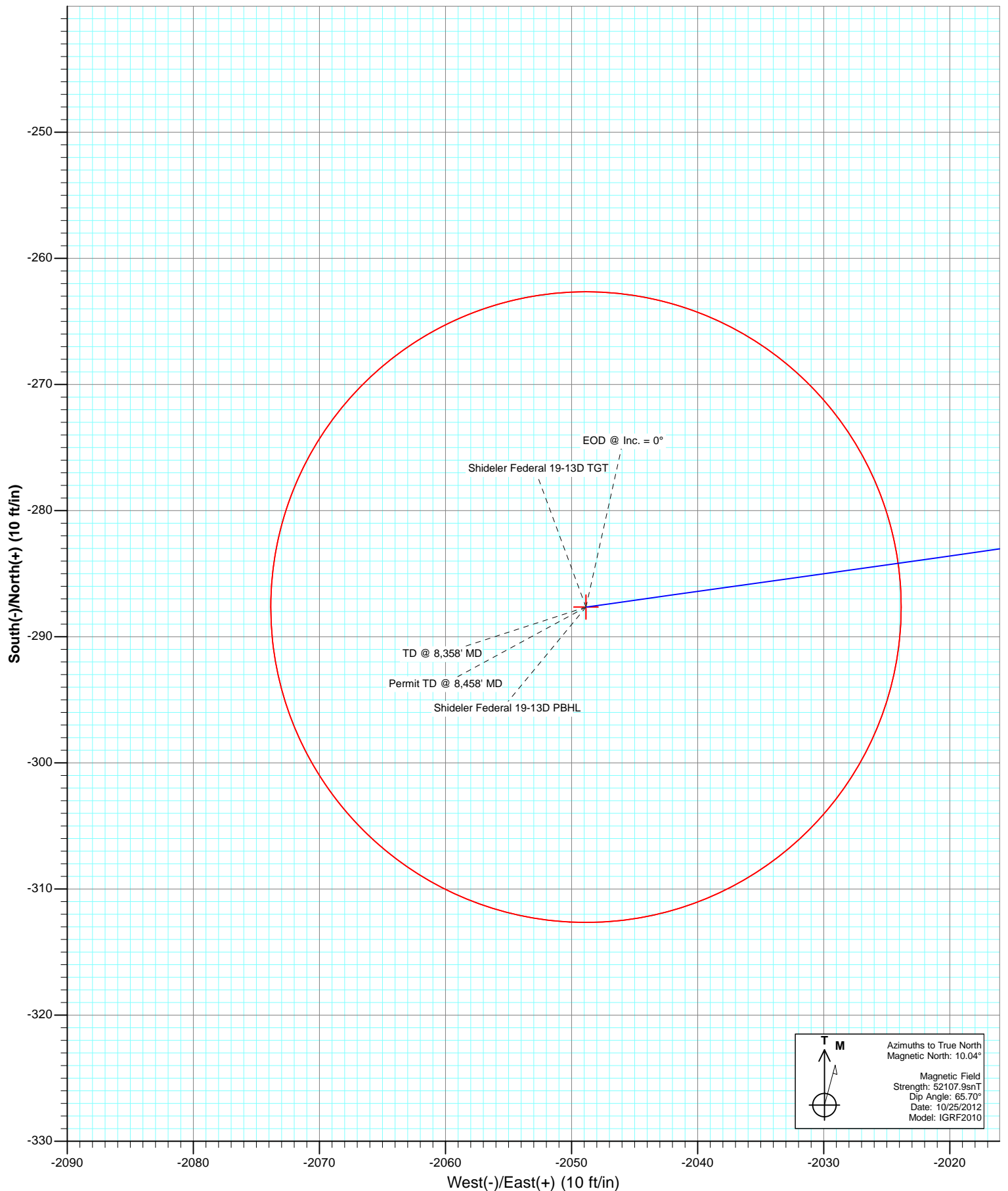
SECTION DETAILS


Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	200.0	0.0	0.0	200.0	0.0	0.0	0.0	0.0	0.0	
3	1037.9	25.14	262.01	1011.2	-25.1	-179.1	3.00	262.01	180.9	
4	4844.2	25.14	262.01	4457.1	-249.9	-1780.2	2.00	0.00	1797.7	
5	6101.0	0.00	0.00	5674.0	-287.6	-2048.9	0.00	180.00	2068.9	Shideler Federal 19-13D TGT
6	8358.0	0.00	0.00	7931.0	-287.6	-2048.9	0.00	0.00	2068.9	Shideler Federal 19-13D PBHL
7	8458.0	0.00	0.00	8031.0	-287.6	-2048.9	0.00	0.00	2068.9	










 Azimuths to True North
 Magnetic North: 10.04°
 Magnetic Field
 Strength: 52107.9snT
 Dip Angle: 65.70°
 Date: 10/25/2012
 Model: IGRF2010

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site:	O19EB Pad	North Reference:	True
Well:	Shideler Federal 19-13D	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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

Site		O19EB Pad			
Site Position:		Northing:	1,587,688.01 ft	Latitude:	39.426206
From:	Lat/Long	Easting:	2,377,164.37 ft	Longitude:	-107.705115
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.39 °

Well	Shideler Federal 19-13D					
Well Position	+N/-S	0.0 ft	Northing:	1,587,725.78 ft	Latitude:	39.426311
	+E/-W	0.0 ft	Easting:	2,377,183.65 ft	Longitude:	-107.705050
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	10/25/2012	10.04	65.70	52,108

Design	Plan #2			
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	262.01

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,037.9	25.14	262.01	1,011.2	-25.1	-179.1	3.00	3.00	0.00	262.01	
4,844.2	25.14	262.01	4,457.1	-249.9	-1,780.2	0.00	0.00	0.00	0.00	
6,101.0	0.00	0.00	5,674.0	-287.6	-2,048.9	2.00	-2.00	0.00	180.00	Shideler Federal 19-1
8,358.0	0.00	0.00	7,931.0	-287.6	-2,048.9	0.00	0.00	0.00	0.00	Shideler Federal 19-1
8,458.0	0.00	0.00	8,031.0	-287.6	-2,048.9	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 Federal 19-13D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site:	O19EB Pad	North Reference:	True
Well:	Shideler Federal 19-13D	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	3.00	262.01	300.0	-0.4	-2.6	2.6	3.00	3.00	
400.0	6.00	262.01	399.6	-1.5	-10.4	10.5	3.00	3.00	
500.0	9.00	262.01	498.8	-3.3	-23.3	23.5	3.00	3.00	
600.0	12.00	262.01	597.1	-5.8	-41.3	41.7	3.00	3.00	
700.0	15.00	262.01	694.3	-9.0	-64.4	65.1	3.00	3.00	
800.0	18.00	262.01	790.2	-13.0	-92.6	93.5	3.00	3.00	
900.0	21.00	262.01	884.4	-17.6	-125.6	126.9	3.00	3.00	
1,000.0	24.00	262.01	976.8	-23.0	-163.5	165.1	3.00	3.00	
1,037.9	25.14	262.01	1,011.2	-25.1	-179.1	180.9	3.00	3.00	EOB @ Inc. = 25.14°
1,100.0	25.14	262.01	1,067.5	-28.8	-205.2	207.3	0.00	0.00	
1,122.2	25.14	262.01	1,087.6	-30.1	-214.6	216.7	0.00	0.00	Surface Casing
1,200.0	25.14	262.01	1,158.0	-34.7	-247.3	249.7	0.00	0.00	
1,300.0	25.14	262.01	1,248.6	-40.6	-289.4	292.2	0.00	0.00	
1,400.0	25.14	262.01	1,339.1	-46.5	-331.4	334.7	0.00	0.00	
1,500.0	25.14	262.01	1,429.6	-52.4	-373.5	377.2	0.00	0.00	
1,600.0	25.14	262.01	1,520.1	-58.3	-415.6	419.6	0.00	0.00	
1,700.0	25.14	262.01	1,610.7	-64.2	-457.6	462.1	0.00	0.00	
1,800.0	25.14	262.01	1,701.2	-70.2	-499.7	504.6	0.00	0.00	
1,900.0	25.14	262.01	1,791.7	-76.1	-541.8	547.1	0.00	0.00	
2,000.0	25.14	262.01	1,882.3	-82.0	-583.8	589.5	0.00	0.00	
2,100.0	25.14	262.01	1,972.8	-87.9	-625.9	632.0	0.00	0.00	
2,200.0	25.14	262.01	2,063.3	-93.8	-667.9	674.5	0.00	0.00	
2,300.0	25.14	262.01	2,153.9	-99.7	-710.0	717.0	0.00	0.00	
2,400.0	25.14	262.01	2,244.4	-105.6	-752.1	759.4	0.00	0.00	
2,500.0	25.14	262.01	2,334.9	-111.5	-794.1	801.9	0.00	0.00	
2,600.0	25.14	262.01	2,425.5	-117.4	-836.2	844.4	0.00	0.00	
2,700.0	25.14	262.01	2,516.0	-123.3	-878.3	886.9	0.00	0.00	
2,800.0	25.14	262.01	2,606.5	-129.2	-920.3	929.4	0.00	0.00	
2,900.0	25.14	262.01	2,697.0	-135.1	-962.4	971.8	0.00	0.00	
3,000.0	25.14	262.01	2,787.6	-141.0	-1,004.5	1,014.3	0.00	0.00	
3,100.0	25.14	262.01	2,878.1	-146.9	-1,046.5	1,056.8	0.00	0.00	
3,200.0	25.14	262.01	2,968.6	-152.8	-1,088.6	1,099.3	0.00	0.00	
3,300.0	25.14	262.01	3,059.2	-158.7	-1,130.6	1,141.7	0.00	0.00	
3,400.0	25.14	262.01	3,149.7	-164.6	-1,172.7	1,184.2	0.00	0.00	
3,500.0	25.14	262.01	3,240.2	-170.5	-1,214.8	1,226.7	0.00	0.00	
3,600.0	25.14	262.01	3,330.8	-176.5	-1,256.8	1,269.2	0.00	0.00	
3,700.0	25.14	262.01	3,421.3	-182.4	-1,298.9	1,311.6	0.00	0.00	
3,800.0	25.14	262.01	3,511.8	-188.3	-1,341.0	1,354.1	0.00	0.00	
3,900.0	25.14	262.01	3,602.3	-194.2	-1,383.0	1,396.6	0.00	0.00	
4,000.0	25.14	262.01	3,692.9	-200.1	-1,425.1	1,439.1	0.00	0.00	
4,100.0	25.14	262.01	3,783.4	-206.0	-1,467.2	1,481.5	0.00	0.00	
4,200.0	25.14	262.01	3,873.9	-211.9	-1,509.2	1,524.0	0.00	0.00	
4,300.0	25.14	262.01	3,964.5	-217.8	-1,551.3	1,566.5	0.00	0.00	
4,400.0	25.14	262.01	4,055.0	-223.7	-1,593.4	1,609.0	0.00	0.00	
4,500.0	25.14	262.01	4,145.5	-229.6	-1,635.4	1,651.5	0.00	0.00	
4,600.0	25.14	262.01	4,236.1	-235.5	-1,677.5	1,693.9	0.00	0.00	
4,668.4	25.14	262.01	4,298.0	-239.6	-1,706.3	1,723.0	0.00	0.00	Mesaverde Marker
4,700.0	25.14	262.01	4,326.6	-241.4	-1,719.5	1,736.4	0.00	0.00	
4,800.0	25.14	262.01	4,417.1	-247.3	-1,761.6	1,778.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site:	O19EB Pad	North Reference:	True
Well:	Shideler Federal 19-13D	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,844.2	25.14	262.01	4,457.1	-249.9	-1,780.2	1,797.7	0.00	0.00	Start 2° Drop
4,900.0	24.02	262.01	4,507.9	-253.2	-1,803.2	1,820.9	2.00	-2.00	
5,000.0	22.02	262.01	4,599.9	-258.6	-1,841.9	1,860.0	2.00	-2.00	
5,100.0	20.02	262.01	4,693.3	-263.6	-1,877.4	1,895.8	2.00	-2.00	
5,195.0	18.12	262.01	4,783.0	-267.9	-1,908.2	1,926.9	2.00	-2.00	Williams Fork
5,200.0	18.02	262.01	4,787.8	-268.1	-1,909.7	1,928.4	2.00	-2.00	
5,300.0	16.02	262.01	4,883.4	-272.2	-1,938.7	1,957.7	2.00	-2.00	
5,400.0	14.02	262.01	4,980.0	-275.8	-1,964.3	1,983.6	2.00	-2.00	
5,500.0	12.02	262.01	5,077.4	-278.9	-1,986.7	2,006.1	2.00	-2.00	
5,600.0	10.02	262.01	5,175.6	-281.6	-2,005.6	2,025.3	2.00	-2.00	
5,700.0	8.02	262.01	5,274.3	-283.8	-2,021.1	2,040.9	2.00	-2.00	
5,800.0	6.02	262.01	5,373.6	-285.5	-2,033.2	2,053.1	2.00	-2.00	
5,900.0	4.02	262.01	5,473.2	-286.7	-2,041.9	2,061.9	2.00	-2.00	
6,000.0	2.02	262.01	5,573.0	-287.4	-2,047.1	2,067.2	2.00	-2.00	
6,101.0	0.00	0.00	5,674.0	-287.6	-2,048.9	2,068.9	2.00	-2.00	EOD @ Inc. = 0° - Top Gas
6,200.0	0.00	0.00	5,773.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,300.0	0.00	0.00	5,873.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,400.0	0.00	0.00	5,973.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,500.0	0.00	0.00	6,073.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,600.0	0.00	0.00	6,173.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,700.0	0.00	0.00	6,273.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,800.0	0.00	0.00	6,373.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
6,900.0	0.00	0.00	6,473.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,000.0	0.00	0.00	6,573.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,100.0	0.00	0.00	6,673.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,200.0	0.00	0.00	6,773.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,300.0	0.00	0.00	6,873.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,400.0	0.00	0.00	6,973.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,500.0	0.00	0.00	7,073.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,527.0	0.00	0.00	7,100.0	-287.6	-2,048.9	2,068.9	0.00	0.00	Coal Ridge
7,600.0	0.00	0.00	7,173.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,700.0	0.00	0.00	7,273.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,800.0	0.00	0.00	7,373.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
7,900.0	0.00	0.00	7,473.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,000.0	0.00	0.00	7,573.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,100.0	0.00	0.00	7,673.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,200.0	0.00	0.00	7,773.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,208.0	0.00	0.00	7,781.0	-287.6	-2,048.9	2,068.9	0.00	0.00	Rollins
8,300.0	0.00	0.00	7,873.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,358.0	0.00	0.00	7,931.0	-287.6	-2,048.9	2,068.9	0.00	0.00	TD @ 8,358' MD
8,400.0	0.00	0.00	7,973.0	-287.6	-2,048.9	2,068.9	0.00	0.00	
8,458.0	0.00	0.00	8,031.0	-287.6	-2,048.9	2,068.9	0.00	0.00	Permit TD @ 8,458' MD

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site:	O19EB Pad	North Reference:	True
Well:	Shideler Federal 19-13D	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Shideler Federal 19-13D	0.00	0.00	7,931.0	-287.6	-2,048.9	1,587,487.94	2,375,128.42	39.425521	-107.712303
- plan hits target center									
- Circle (radius 25.0)									
Shideler Federal 19-13D	0.00	0.00	5,674.0	-287.6	-2,048.9	1,587,487.94	2,375,128.42	39.425521	-107.712303
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(in)	(in)
1,122.2	1,087.6	Surface Casing		

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,668.4	4,298.0	Mesaverde Marker			
5,195.0	4,783.0	Williams Fork			
6,101.0	5,674.0	Top Gas			
7,527.0	7,100.0	Coal Ridge			
8,208.0	7,781.0	Rollins			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
1,037.9	1,011.2	-25.1	-179.1	EOB @ Inc. = 25.14°	
4,844.2	4,457.1	-249.9	-1,780.2	Start 2° Drop	
6,101.0	5,674.0	-287.6	-2,048.9	EOD @ Inc. = 0°	
8,358.0	7,931.0	-287.6	-2,048.9	TD @ 8,358' MD	
8,458.0	8,031.0	-287.6	-2,048.9	Permit TD @ 8,458' MD	

EnCana Oil & Gas (USA) Inc

Mamm Creek

O19EB Pad

Shideler Federal 19-13D

OH

Plan #2

Anticollision Report

13 November, 2012

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 500.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program	Date	11/13/2012
From (ft)	To (ft)	Survey (Wellbore)
0.0	8,458.0	Plan #2 (OH)
		Tool Name
		MWD
		Description
		Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
O19E Pad						
Shideler 19-10 (O19E) - DD - DD	1,066.3	1,024.7	204.6	198.8	35.093	CC
Shideler 19-10 (O19E) - DD - DD	1,100.0	1,053.0	205.0	198.8	32.978	ES
Shideler 19-10 (O19E) - DD - DD	1,300.0	1,219.6	238.2	229.9	28.635	SF
Shideler 19-10 (O19E) - Surveys - Surveys	1,066.3	1,024.7	204.6	198.8	35.093	CC
Shideler 19-10 (O19E) - Surveys - Surveys	1,100.0	1,053.0	205.0	198.8	32.978	ES
Shideler 19-10 (O19E) - Surveys - Surveys	1,300.0	1,219.6	238.2	229.9	28.635	SF
Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertic	1,296.9	1,272.1	35.0	26.6	4.141	CC, ES
Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertic	1,300.0	1,274.9	35.1	26.6	4.140	SF
Shideler 30-2 (O19E) - Existing - Survey - Existing - Surv	1,369.8	1,321.9	137.3	129.4	17.473	CC, ES
Shideler 30-2 (O19E) - Existing - Survey - Existing - Surv	1,600.0	1,529.1	169.9	158.3	14.629	SF
O19EB Pad						
(Existing Offset) Shideler 19-6D - Existing - Existing						Out of range
Shideler 19-14D - OH - Plan #2	377.2	374.2	47.7	46.5	37.933	CC
Shideler 19-14D - OH - Plan #2	400.0	396.5	47.8	46.4	35.529	ES
Shideler 19-14D - OH - Plan #2	800.0	791.2	59.3	55.3	14.703	SF
Shideler 19-16C - OH - Plan #2	200.0	200.0	11.4	10.8	18.630	CC, ES
Shideler 19-16C - OH - Plan #2	300.0	299.6	14.7	13.7	15.272	SF
Shideler 19-16CC - OH - Plan #2	200.0	200.0	11.4	10.8	18.578	CC
Shideler 19-16CC - OH - Plan #2	223.9	223.9	11.4	10.7	16.311	ES
Shideler 19-16CC - OH - Plan #2	300.0	300.0	11.7	10.8	12.079	SF
Shideler 30-1B - OH - Plan #2	367.3	366.8	24.1	22.8	19.458	CC, ES
Shideler 30-1B - OH - Plan #2	400.0	398.9	24.5	23.1	17.932	SF
Shideler 30-1C - OH - Plan #2	320.1	318.9	32.4	31.3	30.670	CC, ES
Shideler 30-1C - OH - Plan #2	400.0	397.2	34.2	32.8	24.778	SF
Shideler 30-2C - OH - Plan #2	200.0	200.0	74.6	74.0	121.450	CC, ES
Shideler 30-2C - OH - Plan #2	1,100.0	1,026.6	253.7	246.8	36.839	SF
Shideler 30-3A - OH - Plan #2	288.3	285.7	81.9	81.0	88.872	CC
Shideler 30-3A - OH - Plan #2	300.0	296.9	82.0	81.0	85.162	ES
Shideler 30-3A - OH - Plan #2	1,100.0	1,065.4	166.0	159.1	24.050	SF
Shideler 30-3B - OH - Plan #2	200.0	200.0	65.9	65.3	107.319	CC, ES
Shideler 30-3B - OH - Plan #2	2,800.0	2,724.8	497.1	464.0	15.000	SF
Shideler 30-4A - OH - Plan #2	338.3	337.6	15.6	14.5	13.934	CC
Shideler 30-4A - OH - Plan #2	400.0	398.9	15.8	14.4	11.558	ES
Shideler 30-4A - OH - Plan #2	8,458.0	8,464.2	418.5	336.0	5.072	SF
Shideler 30-7A - OH - Plan #2	340.6	338.4	57.1	56.0	50.832	CC, ES
Shideler 30-7A - OH - Plan #2	600.0	585.2	78.0	75.7	33.353	SF
Shideler 30-8B - OH - Plan #2	200.0	200.0	42.0	41.4	68.314	CC
Shideler 30-8B - OH - Plan #2	207.3	207.2	42.0	41.3	65.533	ES
Shideler 30-8B - OH - Plan #2	500.0	491.4	57.1	55.3	31.401	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 Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	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		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	23.9	23.9	0.0	0.0	-85.87	22.3	-309.2	310.0					
100.0	100.0	123.6	123.6	0.1	0.2	-85.84	22.5	-309.2	310.1	309.7	0.33	943.150		
200.0	200.0	223.4	223.4	0.3	0.4	-85.78	22.8	-309.4	310.2	309.6	0.67	461.108		
300.0	300.0	323.3	323.3	0.5	0.5	12.46	23.5	-309.5	307.9	306.8	1.02	301.203		
400.0	399.6	423.8	423.7	0.7	0.7	13.24	25.6	-309.4	300.3	298.9	1.38	218.116		
500.0	498.8	520.0	519.8	1.0	0.9	14.95	30.9	-309.3	288.1	286.3	1.74	165.301		
600.0	597.1	614.0	613.3	1.4	1.1	17.97	40.2	-309.8	272.5	270.3	2.15	126.761		
700.0	694.3	707.9	706.2	1.8	1.4	22.80	54.0	-310.3	254.1	251.4	2.65	96.049		
800.0	790.2	796.2	792.9	2.4	1.7	29.43	71.0	-311.1	235.1	231.8	3.26	72.112		
900.0	884.4	882.4	876.8	3.0	2.1	38.09	90.8	-312.6	218.4	214.4	4.06	53.825		
1,000.0	976.8	968.2	959.6	3.8	2.5	48.81	112.8	-314.4	207.1	202.1	5.07	40.827		
1,066.3	1,037.2	1,024.7	1,014.0	4.3	2.7	56.59	128.2	-315.7	204.6	198.8	5.83	35.093 CC		
1,100.0	1,067.5	1,053.0	1,041.1	4.6	2.9	60.71	136.0	-316.3	205.0	198.8	6.22	32.978 ES		
1,200.0	1,158.0	1,136.5	1,121.2	5.4	3.3	72.21	159.7	-318.2	215.7	208.4	7.32	29.479		
1,300.0	1,248.6	1,219.6	1,200.5	6.2	3.7	82.40	184.3	-320.6	238.2	229.9	8.32	28.635 SF		
1,400.0	1,339.1	1,305.1	1,282.0	7.0	4.2	91.14	210.1	-323.4	269.3	260.0	9.24	29.127		
1,500.0	1,429.6	1,389.0	1,361.8	7.8	4.7	98.04	236.0	-326.5	306.3	296.2	10.13	30.232		
1,600.0	1,520.1	1,477.1	1,445.5	8.6	5.1	103.83	263.2	-329.8	347.1	336.1	11.02	31.507		
1,700.0	1,610.7	1,559.5	1,524.1	9.4	5.6	108.27	288.0	-332.6	389.8	377.9	11.89	32.798		
1,800.0	1,701.2	1,638.8	1,599.2	10.3	6.1	111.88	313.1	-334.1	436.1	423.3	12.74	34.232		
1,900.0	1,791.7	1,723.6	1,679.6	11.1	6.5	115.07	339.9	-335.6	483.8	470.2	13.60	35.579		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19E Pad - Shideler 19-10 (O19E) - Surveys - Surveys													Offset Site Error:	0.0 ft
Survey Program: 154-MWD2, 1295-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	23.9	23.9	0.0	0.0	-85.87	22.3	-309.2	310.0					
100.0	100.0	123.6	123.6	0.1	0.2	-85.84	22.5	-309.2	310.1	309.7	0.33	943.150		
200.0	200.0	223.4	223.4	0.3	0.4	-85.78	22.8	-309.4	310.2	309.6	0.67	461.108		
300.0	300.0	323.3	323.3	0.5	0.5	12.46	23.5	-309.5	307.9	306.8	1.02	301.203		
400.0	399.6	423.8	423.7	0.7	0.7	13.24	25.6	-309.4	300.3	298.9	1.38	218.116		
500.0	498.8	520.0	519.8	1.0	0.9	14.95	30.9	-309.3	288.1	286.3	1.74	165.301		
600.0	597.1	614.0	613.3	1.4	1.1	17.97	40.2	-309.8	272.5	270.3	2.15	126.761		
700.0	694.3	707.9	706.2	1.8	1.4	22.80	54.0	-310.3	254.1	251.4	2.65	96.049		
800.0	790.2	796.2	792.9	2.4	1.7	29.43	71.0	-311.1	235.1	231.8	3.26	72.112		
900.0	884.4	882.4	876.8	3.0	2.1	38.09	90.8	-312.6	218.4	214.4	4.06	53.825		
1,000.0	976.8	968.2	959.6	3.8	2.5	48.81	112.8	-314.4	207.1	202.1	5.07	40.827		
1,066.3	1,037.2	1,024.7	1,014.0	4.3	2.7	56.59	128.2	-315.7	204.6	198.8	5.83	35.093 CC		
1,100.0	1,067.5	1,053.0	1,041.1	4.6	2.9	60.71	136.0	-316.3	205.0	198.8	6.22	32.978 ES		
1,200.0	1,158.0	1,136.5	1,121.2	5.4	3.3	72.21	159.7	-318.2	215.7	208.4	7.32	29.479		
1,300.0	1,248.6	1,219.6	1,200.5	6.2	3.7	82.40	184.3	-320.6	238.2	229.9	8.32	28.635 SF		
1,400.0	1,339.1	1,305.1	1,282.0	7.0	4.2	91.14	210.1	-323.4	269.3	260.0	9.24	29.127		
1,500.0	1,429.6	1,389.0	1,361.8	7.8	4.7	98.04	236.0	-326.5	306.3	296.2	10.13	30.232		
1,600.0	1,520.1	1,477.1	1,445.5	8.6	5.1	103.83	263.2	-329.8	347.1	336.1	11.02	31.507		
1,700.0	1,610.7	1,559.5	1,524.1	9.4	5.6	108.27	288.0	-332.6	389.8	377.9	11.89	32.798		
1,800.0	1,701.2	1,638.8	1,599.2	10.3	6.1	111.88	313.1	-334.1	436.1	423.3	12.74	34.232		
1,900.0	1,791.7	1,723.6	1,679.6	11.1	6.5	115.07	339.9	-335.6	483.8	470.2	13.60	35.579		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19E Pad - Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertical													Offset Site Error:	0.0 ft
Survey Program: 100-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	24.4	24.4	0.0	0.0	-91.07	-6.2	-332.5	332.5					
100.0	100.0	125.6	125.6	0.1	0.2	-91.06	-6.2	-332.1	332.2	331.9	0.33	1,013.655		
200.0	200.0	226.7	226.7	0.3	0.4	-91.12	-6.5	-331.5	331.6	330.9	0.68	488.187		
300.0	300.0	329.1	329.1	0.5	0.6	6.91	-6.6	-330.3	327.8	326.8	1.03	317.955		
400.0	399.6	430.5	430.5	0.7	0.7	7.17	-6.3	-328.4	318.2	316.8	1.38	230.607		
500.0	498.8	532.1	532.1	1.0	0.9	7.63	-5.9	-325.8	302.7	301.0	1.73	175.276		
600.0	597.1	632.5	632.4	1.4	1.1	8.35	-5.3	-322.2	281.1	279.0	2.07	135.753		
700.0	694.3	730.0	729.8	1.8	1.3	9.48	-4.4	-318.0	253.8	251.4	2.41	105.280		
800.0	790.2	825.1	824.8	2.4	1.5	11.00	-4.0	-313.6	221.4	218.7	2.76	80.316		
900.0	884.4	918.0	917.6	3.0	1.6	13.44	-3.7	-309.0	184.2	181.0	3.13	58.795		
1,000.0	976.8	1,008.8	1,008.2	3.8	1.8	17.82	-3.2	-304.3	142.4	138.8	3.61	39.440		
1,100.0	1,067.5	1,097.7	1,097.0	4.6	2.0	26.10	-3.0	-299.4	97.8	93.4	4.41	22.173		
1,200.0	1,158.0	1,185.9	1,185.0	5.4	2.2	45.32	-3.6	-294.4	56.5	50.4	6.11	9.252		
1,296.9	1,245.7	1,272.1	1,271.1	6.2	2.3	95.46	-5.5	-289.9	35.0	26.6	8.46	4.141 CC, ES		
1,300.0	1,248.6	1,274.9	1,273.9	6.2	2.3	97.59	-5.6	-289.8	35.1	26.6	8.47	4.140 SF		
1,400.0	1,339.1	1,364.8	1,363.6	7.0	2.5	146.61	-10.1	-286.3	58.0	51.3	6.66	8.700		
1,500.0	1,429.6	1,454.3	1,452.9	7.8	2.7	164.10	-15.4	-283.6	97.3	91.6	5.68	17.133		
1,600.0	1,520.1	1,543.2	1,541.6	8.6	2.8	171.39	-20.4	-280.6	140.2	134.6	5.55	25.271		
1,700.0	1,610.7	1,632.0	1,630.3	9.4	3.0	175.22	-25.1	-277.5	184.4	178.7	5.70	32.322		
1,800.0	1,701.2	1,720.7	1,718.8	10.3	3.2	177.56	-29.7	-274.3	229.1	223.1	5.97	38.398		
1,900.0	1,791.7	1,808.0	1,805.9	11.1	3.4	179.05	-33.9	-270.7	274.5	268.2	6.27	43.776		
2,000.0	1,882.3	1,898.7	1,896.4	11.9	3.5	-179.82	-38.4	-267.0	319.9	313.3	6.60	48.470		
2,100.0	1,972.8	1,987.4	1,984.9	12.7	3.7	-178.99	-42.8	-263.6	365.2	358.3	6.94	52.644		
2,200.0	2,063.3	2,076.0	2,073.4	13.5	3.9	-178.38	-46.9	-260.2	410.7	403.4	7.28	56.400		
2,300.0	2,153.9	2,165.5	2,162.7	14.4	4.1	-177.88	-51.2	-256.7	456.2	448.6	7.63	59.777		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19E Pad - Shideler 30-2 (O19E) - Existing - Survey - Existing - Survey													Offset Site Error:	0.0 ft
Survey Program: 164-MWD2													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	23.9	23.9	0.0	0.0	-88.73	7.1	-321.7	321.8					
100.0	100.0	123.4	123.4	0.1	0.2	-88.71	7.2	-321.8	321.9	321.6	0.33	976.412		
200.0	200.0	219.5	219.5	0.3	0.4	-88.65	7.6	-322.3	322.4	321.7	0.67	483.127		
300.0	300.0	308.5	308.5	0.5	0.5	9.53	8.3	-324.9	322.8	321.8	1.00	324.109		
400.0	399.6	397.7	397.4	0.7	0.7	9.90	9.4	-330.9	321.8	320.5	1.33	242.739		
500.0	498.8	495.1	494.4	1.0	0.9	9.97	7.7	-339.4	317.6	315.9	1.67	190.035		
600.0	597.1	594.3	593.0	1.4	1.2	9.26	0.9	-348.5	308.5	306.5	2.04	151.368		
700.0	694.3	695.9	693.4	1.8	1.4	7.60	-11.5	-357.8	294.4	291.9	2.44	120.462		
800.0	790.2	800.8	796.5	2.4	1.8	4.66	-29.5	-364.9	273.4	270.5	2.89	94.686		
900.0	884.4	898.9	892.0	3.0	2.2	0.05	-51.5	-368.5	245.8	242.5	3.33	73.716		
1,000.0	976.8	990.1	979.9	3.8	2.5	-6.45	-75.3	-371.3	215.3	211.5	3.79	56.864		
1,100.0	1,067.5	1,081.1	1,067.7	4.6	2.9	-15.30	-99.5	-373.8	184.4	180.0	4.42	41.758		
1,200.0	1,158.0	1,172.1	1,155.5	5.4	3.4	-26.90	-123.3	-375.9	158.4	153.1	5.40	29.364		
1,300.0	1,248.6	1,261.5	1,241.8	6.2	3.8	-41.25	-146.4	-377.6	141.2	134.4	6.76	20.887		
1,369.8	1,311.7	1,321.9	1,300.0	6.8	4.1	-52.15	-162.7	-379.2	137.3	129.4	7.86	17.473 CC, ES		
1,400.0	1,339.1	1,349.1	1,326.1	7.0	4.2	-57.11	-170.2	-380.0	138.0	129.6	8.37	16.487		
1,500.0	1,429.6	1,439.9	1,413.4	7.8	4.6	-72.96	-194.9	-382.3	148.3	138.3	10.07	14.734		
1,600.0	1,520.1	1,529.1	1,499.2	8.6	5.1	-86.04	-219.2	-384.3	169.9	158.3	11.61	14.629 SF		
1,700.0	1,610.7	1,618.4	1,585.1	9.4	5.5	-96.09	-243.7	-386.6	199.3	186.3	12.94	15.402		
1,800.0	1,701.2	1,708.0	1,671.2	10.3	6.0	-103.70	-268.4	-388.7	233.5	219.4	14.07	16.591		
1,900.0	1,791.7	1,797.3	1,757.1	11.1	6.4	-109.51	-292.7	-390.4	270.7	255.6	15.09	17.944		
2,000.0	1,882.3	1,889.0	1,845.5	11.9	6.8	-114.25	-317.0	-391.6	309.7	293.6	16.01	19.337		
2,100.0	1,972.8	1,982.7	1,936.0	12.7	7.3	-118.06	-341.1	-393.2	349.2	332.3	16.92	20.636		
2,200.0	2,063.3	2,071.8	2,022.0	13.5	7.7	-120.77	-364.3	-396.0	389.1	371.3	17.81	21.847		
2,300.0	2,153.9	2,159.5	2,106.5	14.4	8.2	-122.94	-387.5	-398.5	430.1	411.4	18.69	23.018		
2,400.0	2,244.4	2,247.2	2,191.0	15.2	8.6	-124.71	-411.3	-400.8	472.1	452.5	19.57	24.121		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 19-14D - OH - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		
0.0	0.0	0.0	0.0	0.0	0.0	-143.50	-39.7	-29.4	49.4				
100.0	100.0	100.0	100.0	0.1	0.1	-143.50	-39.7	-29.4	49.4	49.1	0.27	186.156	
200.0	200.0	200.0	200.0	0.3	0.3	-143.50	-39.7	-29.4	49.4	48.8	0.61	80.386	
300.0	300.0	298.8	298.8	0.5	0.5	-47.46	-40.0	-29.9	48.2	47.2	0.97	49.884	
377.2	376.9	374.2	374.2	0.7	0.6	-50.76	-41.9	-32.8	47.7	46.5	1.26	37.933 CC	
400.0	399.6	396.5	396.4	0.7	0.7	-51.98	-42.8	-34.1	47.8	46.4	1.34	35.529 ES	
500.0	498.8	494.2	493.5	1.0	0.9	-58.44	-48.2	-42.4	49.1	47.3	1.80	27.301	
600.0	597.1	593.6	592.1	1.4	1.2	-67.69	-55.4	-53.4	51.3	48.9	2.39	21.434	
700.0	694.3	692.8	690.4	1.8	1.4	-81.29	-62.6	-64.4	53.7	50.5	3.17	16.946	
800.0	790.2	791.2	788.0	2.4	1.7	-97.91	-69.7	-75.2	59.3	55.3	4.04	14.703 SF	
900.0	884.4	888.7	884.5	3.0	2.0	-114.35	-76.8	-86.0	71.2	66.4	4.79	14.851	
1,000.0	976.8	984.8	979.8	3.8	2.3	-127.87	-83.7	-96.6	90.4	85.1	5.34	16.925	
1,100.0	1,067.5	1,079.7	1,073.9	4.6	2.5	-137.94	-90.6	-107.1	116.1	110.4	5.72	20.284	
1,200.0	1,158.0	1,174.5	1,167.9	5.4	2.8	-144.55	-97.4	-117.6	144.4	138.3	6.07	23.776	
1,300.0	1,248.6	1,269.4	1,261.9	6.2	3.1	-149.00	-104.3	-128.1	173.9	167.5	6.43	27.047	
1,400.0	1,339.1	1,364.2	1,355.9	7.0	3.3	-152.15	-111.2	-138.6	204.1	197.3	6.80	30.022	
1,500.0	1,429.6	1,459.0	1,449.9	7.8	3.6	-154.50	-118.0	-149.1	234.7	227.5	7.18	32.701	
1,600.0	1,520.1	1,553.8	1,543.8	8.6	3.9	-156.30	-124.9	-159.5	265.6	258.0	7.56	35.107	
1,700.0	1,610.7	1,648.6	1,637.8	9.4	4.2	-157.73	-131.7	-170.0	296.7	288.7	7.96	37.271	
1,800.0	1,701.2	1,743.4	1,731.8	10.3	4.4	-158.89	-138.6	-180.5	327.9	319.5	8.36	39.221	
1,900.0	1,791.7	1,838.2	1,825.8	11.1	4.7	-159.85	-145.4	-191.0	359.2	350.4	8.76	40.985	
2,000.0	1,882.3	1,933.1	1,919.8	11.9	5.0	-160.66	-152.3	-201.5	390.6	381.4	9.17	42.587	
2,100.0	1,972.8	2,027.9	2,013.8	12.7	5.3	-161.34	-159.2	-211.9	422.0	412.4	9.58	44.046	
2,200.0	2,063.3	2,122.7	2,107.7	13.5	5.5	-161.93	-166.0	-222.4	453.5	443.5	9.99	45.381	
2,300.0	2,153.9	2,217.5	2,201.7	14.4	5.8	-162.45	-172.9	-232.9	485.1	474.6	10.41	46.605	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 19-16C - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	80.82	1.8	11.3	11.4					
100.0	100.0	100.0	100.0	0.1	0.1	80.82	1.8	11.3	11.4	11.2	0.27	43.144		
200.0	200.0	200.0	200.0	0.3	0.3	80.82	1.8	11.3	11.4	10.8	0.61	18.630 CC, ES		
300.0	300.0	299.6	299.6	0.5	0.5	179.68	1.8	11.9	14.7	13.7	0.96	15.272 SF		
400.0	399.6	397.7	397.5	0.7	0.7	-177.61	1.2	17.0	27.5	26.2	1.31	21.110		
500.0	498.8	493.1	492.5	1.0	0.9	-175.90	0.2	26.7	50.5	48.8	1.64	30.764		
600.0	597.1	584.5	582.8	1.4	1.2	-174.97	-1.2	40.4	83.1	81.1	1.97	42.258		
700.0	694.3	672.0	668.6	1.8	1.5	-174.39	-2.9	57.4	124.7	122.4	2.28	54.701		
800.0	790.2	760.1	754.7	2.4	1.8	-174.13	-4.8	75.6	172.1	169.5	2.59	66.516		
900.0	884.4	845.5	838.3	3.0	2.2	-174.05	-6.6	93.3	224.0	221.1	2.88	77.651		
1,000.0	976.8	928.1	919.1	3.8	2.5	-174.03	-8.4	110.4	280.3	277.2	3.17	88.376		
1,100.0	1,067.5	1,008.3	997.5	4.6	2.8	-174.16	-10.1	127.0	340.1	336.6	3.48	97.836		
1,200.0	1,158.0	1,088.3	1,075.7	5.4	3.1	-174.33	-11.8	143.6	400.1	396.3	3.80	105.432		
1,300.0	1,248.6	1,168.2	1,153.9	6.2	3.5	-174.44	-13.5	160.2	460.2	456.1	4.11	111.851		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 19-16CC - OH - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	171.46	-11.3	1.7	11.4				
100.0	100.0	100.0	100.0	0.1	0.1	171.46	-11.3	1.7	11.4	11.1	0.27	43.022	
200.0	200.0	200.0	200.0	0.3	0.3	171.46	-11.3	1.7	11.4	10.8	0.61	18.578 CC	
223.9	223.9	223.9	223.9	0.4	0.3	-91.30	-11.3	1.7	11.4	10.7	0.70	16.311 ES	
300.0	300.0	300.0	300.0	0.5	0.5	-103.42	-11.3	1.7	11.7	10.8	0.97	12.079 SF	
400.0	399.6	398.8	398.7	0.7	0.7	-133.79	-12.5	3.9	18.1	16.8	1.34	13.529	
500.0	498.8	495.4	495.1	1.0	0.9	-150.23	-16.2	10.4	36.3	34.6	1.69	21.459	
600.0	597.1	588.7	587.6	1.4	1.1	-156.17	-22.0	20.7	64.8	62.7	2.04	31.678	
700.0	694.3	677.6	675.1	1.8	1.4	-158.51	-29.6	34.1	102.5	100.0	2.41	42.555	
800.0	790.2	761.0	756.6	2.4	1.8	-159.46	-38.6	49.9	148.6	145.8	2.78	53.475	
900.0	884.4	844.3	837.3	3.0	2.1	-159.94	-48.7	67.8	201.5	198.4	3.17	63.658	
1,000.0	976.8	926.3	916.6	3.8	2.5	-160.36	-58.7	85.6	258.7	255.2	3.56	72.638	
1,100.0	1,067.5	1,005.8	993.7	4.6	2.8	-161.10	-68.5	102.8	319.2	315.2	3.97	80.367	
1,200.0	1,158.0	1,085.1	1,070.5	5.4	3.2	-161.82	-78.2	119.9	380.0	375.6	4.39	86.480	
1,300.0	1,248.6	1,164.4	1,147.3	6.2	3.6	-162.34	-87.9	137.1	440.8	436.0	4.82	91.478	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-1B - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					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)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-161.70	-24.8	-8.2	26.1					
100.0	100.0	100.0	100.0	0.1	0.1	-161.70	-24.8	-8.2	26.1	25.8	0.27	98.335		
200.0	200.0	200.0	200.0	0.3	0.3	-161.70	-24.8	-8.2	26.1	25.5	0.61	42.463		
300.0	300.0	300.0	300.0	0.5	0.5	-69.11	-24.8	-8.2	25.0	24.1	0.97	25.792		
367.3	367.1	366.8	366.8	0.6	0.6	-80.54	-25.1	-7.9	24.1	22.8	1.24	19.458 CC, ES		
400.0	399.6	398.9	398.9	0.7	0.7	-89.39	-25.7	-7.1	24.5	23.1	1.37	17.932 SF		
500.0	498.8	496.0	495.8	1.0	0.8	-118.84	-30.0	-2.6	33.9	32.1	1.78	19.022		
600.0	597.1	590.2	589.3	1.4	1.1	-136.27	-37.2	5.3	56.8	54.6	2.17	26.203		
700.0	694.3	680.4	678.3	1.8	1.4	-144.19	-47.1	16.1	90.5	87.9	2.56	35.302		
800.0	790.2	765.7	761.8	2.4	1.7	-147.90	-59.1	29.0	133.1	130.1	2.99	44.547		
900.0	884.4	845.6	839.2	3.0	2.1	-149.67	-72.6	43.7	183.6	180.2	3.45	53.298		
1,000.0	976.8	920.2	910.6	3.8	2.4	-150.44	-87.1	59.5	241.3	237.3	3.93	61.344		
1,100.0	1,067.5	997.7	984.4	4.6	2.9	-151.54	-103.2	77.0	303.4	299.0	4.45	68.203		
1,200.0	1,158.0	1,075.6	1,058.6	5.4	3.3	-152.61	-119.4	94.5	365.9	361.0	4.98	73.528		
1,300.0	1,248.6	1,153.6	1,132.7	6.2	3.7	-153.36	-135.6	112.1	428.5	423.0	5.51	77.750		
1,400.0	1,339.1	1,231.5	1,206.9	7.0	4.2	-153.93	-151.8	129.7	491.1	485.0	6.05	81.164		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-1C - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-143.75	-26.6	-19.5	33.0					
100.0	100.0	100.0	100.0	0.1	0.1	-143.75	-26.6	-19.5	33.0	32.7	0.27	124.258		
200.0	200.0	200.0	200.0	0.3	0.3	-143.75	-26.6	-19.5	33.0	32.3	0.61	53.657		
300.0	300.0	299.1	299.1	0.5	0.5	-53.26	-28.8	-18.2	32.4	31.5	0.97	33.306		
320.1	320.0	318.9	318.9	0.5	0.5	-56.61	-29.8	-17.6	32.4	31.3	1.06	30.670 CC, ES		
400.0	399.6	397.2	396.8	0.7	0.7	-75.04	-35.3	-14.3	34.2	32.8	1.38	24.778 SF		
500.0	498.8	493.1	491.9	1.0	1.0	-100.34	-45.8	-8.0	45.8	43.9	1.82	25.165		
600.0	597.1	585.8	583.2	1.4	1.3	-117.00	-59.9	0.5	69.8	67.5	2.27	30.699		
700.0	694.3	674.6	669.7	1.8	1.7	-125.99	-76.9	10.7	104.2	101.4	2.77	37.563		
800.0	790.2	758.8	750.9	2.4	2.1	-130.83	-96.2	22.3	147.1	143.8	3.33	44.176		
900.0	884.4	838.0	826.2	3.0	2.6	-133.47	-117.1	34.8	197.6	193.6	3.94	50.087		
1,000.0	976.8	911.7	895.4	3.8	3.1	-134.82	-139.0	47.9	254.6	250.0	4.61	55.213		
1,100.0	1,067.5	980.4	958.9	4.6	3.5	-136.30	-161.4	61.4	317.0	311.7	5.31	59.709		
1,200.0	1,158.0	1,045.8	1,018.4	5.4	4.1	-137.52	-184.6	75.3	382.1	376.1	6.02	63.422		
1,300.0	1,248.6	1,109.2	1,075.2	6.2	4.6	-138.20	-208.7	89.7	449.4	442.7	6.75	66.581		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-2C - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-149.77	-64.5	-37.6	74.6					
100.0	100.0	100.0	100.0	0.1	0.1	-149.77	-64.5	-37.6	74.6	74.3	0.27	281.253		
200.0	200.0	200.0	200.0	0.3	0.3	-149.77	-64.5	-37.6	74.6	74.0	0.61	121.450	CC, ES	
300.0	300.0	296.4	296.3	0.5	0.5	-53.90	-66.9	-38.0	75.4	74.5	0.96	78.286		
400.0	399.6	392.2	391.9	0.7	0.7	-59.91	-74.0	-39.3	78.5	77.1	1.34	58.431		
500.0	498.8	487.1	486.0	1.0	1.0	-68.63	-85.7	-41.3	85.3	83.5	1.79	47.789		
600.0	597.1	580.4	577.9	1.4	1.3	-78.21	-101.7	-44.1	97.8	95.5	2.33	42.032		
700.0	694.3	671.9	667.1	1.8	1.7	-86.93	-121.6	-47.7	117.0	114.0	2.99	39.078		
800.0	790.2	761.0	753.0	2.4	2.1	-93.96	-145.0	-51.8	143.1	139.3	3.80	37.695		
900.0	884.4	847.6	835.2	3.0	2.6	-99.22	-171.5	-56.5	175.8	171.0	4.72	37.210		
1,000.0	976.8	936.9	919.2	3.8	3.2	-103.52	-201.6	-61.8	213.4	207.7	5.78	36.959		
1,100.0	1,067.5	1,026.6	1,003.5	4.6	3.7	-107.90	-231.8	-67.1	253.7	246.8	6.89	36.839	SF	
1,200.0	1,158.0	1,116.2	1,087.7	5.4	4.2	-111.52	-261.9	-72.4	295.2	287.2	8.00	36.889		
1,300.0	1,248.6	1,205.7	1,171.8	6.2	4.8	-114.26	-292.1	-77.8	337.5	328.4	9.11	37.037		
1,400.0	1,339.1	1,295.3	1,256.0	7.0	5.3	-116.39	-322.2	-83.1	380.3	370.0	10.22	37.223		
1,500.0	1,429.6	1,384.9	1,340.1	7.8	5.9	-118.10	-352.4	-88.4	423.4	412.1	11.31	37.421		
1,600.0	1,520.1	1,474.4	1,424.3	8.6	6.5	-119.50	-382.6	-93.8	466.8	454.4	12.41	37.617		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-3A - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-143.60	-66.3	-48.9	82.4					
100.0	100.0	100.0	100.0	0.1	0.1	-143.60	-66.3	-48.9	82.4	82.1	0.27	310.426		
200.0	200.0	200.0	200.0	0.3	0.3	-143.60	-66.3	-48.9	82.4	81.7	0.61	134.048		
288.3	288.3	285.7	285.7	0.5	0.5	-46.64	-67.1	-49.4	81.9	81.0	0.92	88.872 CC		
300.0	300.0	296.9	296.9	0.5	0.5	-46.94	-67.4	-49.6	82.0	81.0	0.96	85.162 ES		
400.0	399.6	392.6	392.4	0.7	0.7	-50.88	-72.5	-52.8	83.1	81.7	1.33	62.334		
500.0	498.8	487.8	487.0	1.0	0.9	-57.01	-81.5	-58.6	86.6	84.9	1.76	49.178		
600.0	597.1	583.3	581.3	1.4	1.2	-64.56	-94.4	-66.9	93.6	91.3	2.30	40.710		
700.0	694.3	681.7	678.1	1.8	1.5	-73.50	-109.0	-76.2	102.0	99.0	3.00	33.979		
800.0	790.2	779.3	774.2	2.4	1.9	-83.37	-123.5	-85.4	111.9	108.0	3.88	28.875		
900.0	884.4	875.9	869.3	3.0	2.2	-93.55	-137.9	-94.6	125.1	120.2	4.88	25.636		
1,000.0	976.8	971.3	963.1	3.8	2.5	-103.31	-152.0	-103.6	142.9	137.0	5.93	24.110		
1,100.0	1,067.5	1,065.4	1,055.7	4.6	2.9	-112.25	-166.0	-112.6	166.0	159.1	6.90	24.050 SF		
1,200.0	1,158.0	1,159.3	1,148.2	5.4	3.2	-119.26	-179.9	-121.5	192.4	184.6	7.77	24.765		
1,300.0	1,248.6	1,253.3	1,240.8	6.2	3.5	-124.60	-193.9	-130.4	221.0	212.4	8.57	25.798		
1,400.0	1,339.1	1,347.3	1,333.3	7.0	3.8	-128.72	-207.8	-139.3	250.9	241.6	9.32	26.937		
1,500.0	1,429.6	1,441.3	1,425.8	7.8	4.2	-131.97	-221.8	-148.2	281.9	271.8	10.04	28.083		
1,600.0	1,520.1	1,535.3	1,518.3	8.6	4.5	-134.59	-235.7	-157.1	313.5	302.7	10.74	29.187		
1,700.0	1,610.7	1,629.2	1,610.8	9.4	4.8	-136.73	-249.7	-166.0	345.6	334.1	11.43	30.231		
1,800.0	1,701.2	1,723.2	1,703.3	10.3	5.2	-138.51	-263.6	-174.9	378.0	365.9	12.11	31.207		
1,900.0	1,791.7	1,817.2	1,795.8	11.1	5.5	-140.01	-277.6	-183.8	410.8	398.0	12.79	32.115		
2,000.0	1,882.3	1,911.2	1,888.3	11.9	5.8	-141.29	-291.5	-192.7	443.7	430.3	13.46	32.956		
2,100.0	1,972.8	2,005.2	1,980.8	12.7	6.2	-142.39	-305.5	-201.7	476.9	462.7	14.13	33.737		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-3B - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					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)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-143.75	-53.2	-39.0	65.9					
100.0	100.0	100.0	100.0	0.1	0.1	-143.75	-53.2	-39.0	65.9	65.7	0.27	248.529		
200.0	200.0	200.0	200.0	0.3	0.3	-143.75	-53.2	-39.0	65.9	65.3	0.61	107.319 CC, ES		
300.0	300.0	296.8	296.7	0.5	0.5	-46.75	-54.7	-40.9	66.6	65.6	0.96	69.130		
400.0	399.6	393.4	393.1	0.7	0.7	-49.60	-59.3	-46.7	68.6	67.2	1.34	51.207		
500.0	498.8	489.9	488.8	1.0	1.0	-53.95	-66.8	-56.2	72.3	70.5	1.78	40.549		
600.0	597.1	586.1	583.5	1.4	1.3	-59.26	-77.3	-69.5	78.1	75.7	2.35	33.257		
700.0	694.3	681.9	676.8	1.8	1.7	-64.89	-90.7	-86.4	86.4	83.3	3.09	27.956		
800.0	790.2	777.2	768.5	2.4	2.2	-70.33	-107.0	-106.8	97.5	93.4	4.04	24.112		
900.0	884.4	872.1	858.3	3.0	2.8	-75.21	-125.9	-130.7	111.5	106.3	5.21	21.390		
1,000.0	976.8	966.9	946.5	3.8	3.5	-79.43	-147.5	-158.0	128.3	121.7	6.57	19.532		
1,100.0	1,067.5	1,064.6	1,036.7	4.6	4.1	-84.05	-170.8	-187.3	146.4	138.3	8.07	18.131		
1,200.0	1,158.0	1,162.3	1,126.9	5.4	4.8	-87.94	-194.0	-216.7	165.2	155.6	9.59	17.222		
1,300.0	1,248.6	1,259.9	1,217.1	6.2	5.5	-91.03	-217.3	-246.0	184.6	173.5	11.11	16.621		
1,400.0	1,339.1	1,357.6	1,307.3	7.0	6.2	-93.53	-240.6	-275.4	204.5	191.8	12.61	16.209		
1,500.0	1,429.6	1,455.2	1,397.5	7.8	6.9	-95.59	-263.8	-304.7	224.6	210.5	14.11	15.917		
1,600.0	1,520.1	1,552.9	1,487.7	8.6	7.6	-97.30	-287.1	-334.1	245.0	229.4	15.60	15.703		
1,700.0	1,610.7	1,650.5	1,577.9	9.4	8.3	-98.76	-310.3	-363.4	265.6	248.5	17.08	15.544		
1,800.0	1,701.2	1,748.2	1,668.1	10.3	9.0	-100.00	-333.6	-392.7	286.3	267.7	18.56	15.422		
1,900.0	1,791.7	1,845.8	1,758.3	11.1	9.7	-101.08	-356.9	-422.1	307.1	287.0	20.03	15.329		
2,000.0	1,882.3	1,943.5	1,848.4	11.9	10.4	-102.02	-380.1	-451.4	328.0	306.5	21.50	15.255		
2,100.0	1,972.8	2,041.2	1,938.6	12.7	11.1	-102.85	-403.4	-480.8	349.0	326.0	22.96	15.196		
2,200.0	2,063.3	2,138.8	2,028.8	13.5	11.8	-103.58	-426.6	-510.1	370.0	345.6	24.42	15.149		
2,300.0	2,153.9	2,236.5	2,119.0	14.4	12.5	-104.24	-449.9	-539.5	391.1	365.2	25.88	15.111		
2,400.0	2,244.4	2,334.1	2,209.2	15.2	13.2	-104.83	-473.2	-568.8	412.2	384.9	27.34	15.080		
2,500.0	2,334.9	2,431.8	2,299.4	16.0	13.9	-105.36	-496.4	-598.1	433.4	404.6	28.79	15.054		
2,600.0	2,425.5	2,529.4	2,389.6	16.8	14.6	-105.84	-519.7	-627.5	454.6	424.4	30.24	15.033		
2,700.0	2,516.0	2,627.1	2,479.8	17.6	15.3	-106.28	-542.9	-656.8	475.9	444.2	31.69	15.015		
2,800.0	2,606.5	2,724.8	2,570.0	18.5	16.0	-106.68	-566.2	-686.2	497.1	464.0	33.14	15.000 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-4A - OH - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: O-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	-143.77	-13.1	-9.6	16.2					
100.0	100.0	100.0	100.0	0.1	0.1	-143.77	-13.1	-9.6	16.2	16.0	0.27	61.254		
200.0	200.0	200.0	200.0	0.3	0.3	-143.77	-13.1	-9.6	16.2	15.6	0.61	26.450		
300.0	300.0	299.5	299.5	0.5	0.5	-49.59	-13.6	-11.0	15.7	14.7	0.97	16.175		
338.3	338.2	337.6	337.5	0.6	0.6	-51.98	-14.2	-12.7	15.6	14.5	1.12	13.934 CC		
400.0	399.6	398.9	398.6	0.7	0.7	-56.60	-15.7	-17.1	15.8	14.4	1.37	11.558 ES		
500.0	498.8	498.3	497.4	1.0	0.9	-65.27	-19.5	-28.0	17.0	15.1	1.88	9.049		
600.0	597.1	597.7	595.4	1.4	1.3	-73.83	-25.0	-43.9	19.4	16.9	2.57	7.572		
700.0	694.3	697.2	692.4	1.8	1.7	-81.02	-32.2	-64.5	23.2	19.7	3.46	6.704		
800.0	790.2	796.6	788.1	2.4	2.2	-86.46	-41.0	-89.8	28.2	23.6	4.55	6.198		
900.0	884.4	896.1	882.4	3.0	2.8	-90.37	-51.4	-119.8	34.3	28.5	5.82	5.894		
1,000.0	976.8	995.5	974.8	3.8	3.5	-93.10	-63.4	-154.4	41.5	34.2	7.29	5.698		
1,100.0	1,067.5	1,095.0	1,065.4	4.6	4.3	-94.32	-76.9	-193.3	49.6	40.8	8.86	5.603		
1,200.0	1,158.0	1,194.7	1,155.6	5.4	5.1	-94.52	-90.8	-233.2	57.9	47.4	10.44	5.541		
1,300.0	1,248.6	1,294.3	1,245.9	6.2	5.9	-94.67	-104.7	-273.1	66.1	54.1	12.04	5.490		
1,400.0	1,339.1	1,394.0	1,336.2	7.0	6.7	-94.79	-118.5	-313.0	74.4	60.7	13.65	5.449		
1,500.0	1,429.6	1,493.7	1,426.4	7.8	7.5	-94.89	-132.4	-352.9	82.6	67.4	15.26	5.414		
1,600.0	1,520.1	1,593.3	1,516.7	8.6	8.3	-94.97	-146.2	-392.8	90.9	74.0	16.87	5.386		
1,700.0	1,610.7	1,693.0	1,607.0	9.4	9.1	-95.03	-160.1	-432.7	99.1	80.6	18.49	5.361		
1,800.0	1,701.2	1,792.6	1,697.2	10.3	9.9	-95.08	-174.0	-472.6	107.4	87.2	20.10	5.340		
1,900.0	1,791.7	1,892.3	1,787.5	11.1	10.8	-95.13	-187.8	-512.5	115.6	93.9	21.72	5.322		
2,000.0	1,882.3	1,992.0	1,877.7	11.9	11.6	-95.17	-201.7	-552.5	123.9	100.5	23.34	5.306		
2,100.0	1,972.8	2,091.6	1,968.0	12.7	12.4	-95.21	-215.6	-592.4	132.1	107.1	24.96	5.292		
2,200.0	2,063.3	2,191.3	2,058.3	13.5	13.2	-95.24	-229.4	-632.3	140.3	113.8	26.58	5.279		
2,300.0	2,153.9	2,290.9	2,148.5	14.4	14.0	-95.27	-243.3	-672.2	148.6	120.4	28.21	5.268		
2,400.0	2,244.4	2,390.6	2,238.8	15.2	14.8	-95.29	-257.1	-712.1	156.8	127.0	29.83	5.258		
2,500.0	2,334.9	2,490.3	2,329.1	16.0	15.6	-95.31	-271.0	-752.0	165.1	133.6	31.45	5.249		
2,600.0	2,425.5	2,589.9	2,419.3	16.8	16.4	-95.33	-284.9	-791.9	173.3	140.3	33.08	5.241		
2,700.0	2,516.0	2,689.6	2,509.6	17.6	17.2	-95.35	-298.7	-831.8	181.6	146.9	34.70	5.233		
2,800.0	2,606.5	2,789.2	2,599.9	18.5	18.0	-95.37	-312.6	-871.7	189.8	153.5	36.33	5.226		
2,900.0	2,697.0	2,888.9	2,690.1	19.3	18.9	-95.39	-326.5	-911.6	198.1	160.1	37.95	5.220		
3,000.0	2,787.6	2,988.5	2,780.4	20.1	19.7	-95.40	-340.3	-951.5	206.3	166.8	39.57	5.214		
3,100.0	2,878.1	3,088.2	2,870.6	20.9	20.5	-95.41	-354.2	-991.4	214.6	173.4	41.20	5.209		
3,200.0	2,968.6	3,187.9	2,960.9	21.8	21.3	-95.43	-368.0	-1,031.3	222.8	180.0	42.82	5.204		
3,300.0	3,059.2	3,287.5	3,051.2	22.6	22.1	-95.44	-381.9	-1,071.2	231.1	186.6	44.45	5.199		
3,400.0	3,149.7	3,387.2	3,141.4	23.4	22.9	-95.45	-395.8	-1,111.1	239.3	193.3	46.07	5.195		
3,500.0	3,240.2	3,486.8	3,231.7	24.2	23.7	-95.46	-409.6	-1,151.0	247.6	199.9	47.70	5.190		
3,600.0	3,330.8	3,586.5	3,322.0	25.0	24.5	-95.47	-423.5	-1,190.9	255.8	206.5	49.33	5.187		
3,700.0	3,421.3	3,686.2	3,412.2	25.9	25.4	-95.47	-437.4	-1,230.8	264.1	213.1	50.95	5.183		
3,800.0	3,511.8	3,785.8	3,502.5	26.7	26.2	-95.48	-451.2	-1,270.7	272.3	219.8	52.58	5.180		
3,900.0	3,602.3	3,885.5	3,592.8	27.5	27.0	-95.49	-465.1	-1,310.6	280.6	226.4	54.20	5.177		
4,000.0	3,692.9	3,985.1	3,683.0	28.3	27.8	-95.50	-478.9	-1,350.5	288.8	233.0	55.83	5.174		
4,100.0	3,783.4	4,084.8	3,773.3	29.2	28.6	-95.50	-492.8	-1,390.4	297.1	239.6	57.46	5.171		
4,200.0	3,873.9	4,184.5	3,863.5	30.0	29.4	-95.51	-506.7	-1,430.3	305.3	246.2	59.08	5.168		
4,300.0	3,964.5	4,284.1	3,953.8	30.8	30.2	-95.52	-520.5	-1,470.2	313.6	252.9	60.71	5.165		
4,400.0	4,055.0	4,383.8	4,044.1	31.6	31.0	-95.52	-534.4	-1,510.1	321.8	259.5	62.33	5.163		
4,500.0	4,145.5	4,483.4	4,134.3	32.4	31.9	-95.53	-548.3	-1,550.0	330.1	266.1	63.96	5.161		
4,600.0	4,236.1	4,583.1	4,224.6	33.3	32.7	-95.53	-562.1	-1,589.9	338.3	272.7	65.59	5.159		
4,700.0	4,326.6	4,682.8	4,314.9	34.1	33.5	-95.54	-576.0	-1,629.8	346.6	279.4	67.21	5.156		
4,800.0	4,417.1	4,782.4	4,405.1	34.9	34.3	-95.54	-589.8	-1,669.7	354.8	286.0	68.84	5.154		
4,900.0	4,507.9	4,882.1	4,495.4	35.7	35.1	-95.55	-603.7	-1,709.6	363.0	292.6	70.45	5.153		
5,000.0	4,599.9	4,982.0	4,586.0	36.4	35.9	-95.16	-617.6	-1,749.5	370.9	298.9	71.98	5.153		

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 Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-4A - OH - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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		
5,100.0	4,693.3	5,082.9	4,678.5	37.1	36.6	-94.64	-630.8	-1,787.6	378.3	305.0	73.37	5.156		
5,200.0	4,787.8	5,184.0	4,772.5	37.7	37.3	-94.13	-643.0	-1,822.6	385.1	310.5	74.62	5.161		
5,300.0	4,883.4	5,285.4	4,868.1	38.2	37.9	-93.64	-654.1	-1,854.6	391.3	315.6	75.74	5.167		
5,400.0	4,980.0	5,386.9	4,964.9	38.7	38.5	-93.15	-664.1	-1,883.4	396.9	320.2	76.72	5.174		
5,500.0	5,077.4	5,488.7	5,063.0	39.1	39.0	-92.67	-672.9	-1,908.9	401.9	324.3	77.57	5.181		
5,600.0	5,175.6	5,590.7	5,162.2	39.4	39.4	-92.19	-680.7	-1,931.2	406.2	327.9	78.29	5.189		
5,700.0	5,274.3	5,692.8	5,262.4	39.7	39.7	-91.72	-687.3	-1,950.2	409.9	331.0	78.87	5.197		
5,800.0	5,373.6	5,795.2	5,363.4	39.9	40.0	-91.24	-692.7	-1,965.9	412.9	333.6	79.33	5.205		
5,900.0	5,473.2	5,897.7	5,465.0	40.0	40.3	-90.76	-697.0	-1,978.1	415.3	335.6	79.67	5.213		
6,000.0	5,573.0	6,000.3	5,567.3	40.1	40.4	-90.28	-700.0	-1,986.9	417.0	337.1	79.88	5.221		
6,100.0	5,673.0	6,103.2	5,670.0	40.2	40.5	-89.79	-701.9	-1,992.2	418.1	338.1	79.97	5.228		
6,200.0	5,773.0	6,206.2	5,772.9	40.2	40.6	172.48	-702.5	-1,994.1	418.5	338.4	80.03	5.229		
6,300.0	5,873.0	6,306.2	5,873.0	40.3	40.6	172.48	-702.5	-1,994.1	418.5	338.3	80.13	5.223		
6,400.0	5,973.0	6,406.2	5,973.0	40.3	40.7	172.48	-702.5	-1,994.1	418.5	338.2	80.22	5.216		
6,500.0	6,073.0	6,506.2	6,073.0	40.4	40.7	172.48	-702.5	-1,994.1	418.5	338.1	80.32	5.210		
6,600.0	6,173.0	6,606.2	6,173.0	40.4	40.8	172.48	-702.5	-1,994.1	418.5	338.0	80.42	5.204		
6,700.0	6,273.0	6,706.2	6,273.0	40.5	40.8	172.48	-702.5	-1,994.1	418.5	337.9	80.52	5.197		
6,800.0	6,373.0	6,806.2	6,373.0	40.5	40.9	172.48	-702.5	-1,994.1	418.5	337.8	80.62	5.191		
6,900.0	6,473.0	6,906.2	6,473.0	40.6	40.9	172.48	-702.5	-1,994.1	418.5	337.7	80.72	5.184		
7,000.0	6,573.0	7,006.2	6,573.0	40.6	41.0	172.48	-702.5	-1,994.1	418.5	337.6	80.83	5.177		
7,100.0	6,673.0	7,106.2	6,673.0	40.7	41.0	172.48	-702.5	-1,994.1	418.5	337.5	80.93	5.170		
7,200.0	6,773.0	7,206.2	6,773.0	40.7	41.1	172.48	-702.5	-1,994.1	418.5	337.4	81.04	5.164		
7,300.0	6,873.0	7,306.2	6,873.0	40.8	41.1	172.48	-702.5	-1,994.1	418.5	337.3	81.15	5.157		
7,400.0	6,973.0	7,406.2	6,973.0	40.8	41.2	172.48	-702.5	-1,994.1	418.5	337.2	81.26	5.150		
7,500.0	7,073.0	7,506.2	7,073.0	40.9	41.2	172.48	-702.5	-1,994.1	418.5	337.1	81.37	5.143		
7,600.0	7,173.0	7,606.2	7,173.0	41.0	41.3	172.48	-702.5	-1,994.1	418.5	337.0	81.48	5.136		
7,700.0	7,273.0	7,706.2	7,273.0	41.0	41.3	172.48	-702.5	-1,994.1	418.5	336.9	81.60	5.128		
7,800.0	7,373.0	7,806.2	7,373.0	41.1	41.4	172.48	-702.5	-1,994.1	418.5	336.8	81.71	5.121		
7,900.0	7,473.0	7,906.2	7,473.0	41.1	41.5	172.48	-702.5	-1,994.1	418.5	336.6	81.83	5.114		
8,000.0	7,573.0	8,006.2	7,573.0	41.2	41.5	172.48	-702.5	-1,994.1	418.5	336.5	81.95	5.106		
8,100.0	7,673.0	8,106.2	7,673.0	41.2	41.6	172.48	-702.5	-1,994.1	418.5	336.4	82.07	5.099		
8,200.0	7,773.0	8,206.2	7,773.0	41.3	41.6	172.48	-702.5	-1,994.1	418.5	336.3	82.19	5.092		
8,300.0	7,873.0	8,306.2	7,873.0	41.4	41.7	172.48	-702.5	-1,994.1	418.5	336.2	82.31	5.084		
8,400.0	7,973.0	8,406.2	7,973.0	41.4	41.8	172.48	-702.5	-1,994.1	418.5	336.0	82.43	5.076		
8,458.0	8,031.0	8,464.2	8,031.0	41.5	41.8	172.48	-702.5	-1,994.1	418.5	336.0	82.51	5.072 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-7A - OH - Plan #2													Offset Site Error: 0.0 ft
Survey Program: 0-MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-151.67	-51.4	-27.7	58.3				
100.0	100.0	100.0	100.0	0.1	0.1	-151.67	-51.4	-27.7	58.3	58.1	0.27	219.906	
200.0	200.0	200.0	200.0	0.3	0.3	-151.67	-51.4	-27.7	58.3	57.7	0.61	94.959	
300.0	300.0	298.8	298.8	0.5	0.5	-56.18	-52.0	-27.5	57.3	56.4	0.97	59.266	
340.6	340.5	338.4	338.3	0.6	0.6	-59.15	-53.3	-27.2	57.1	56.0	1.12	50.832 CC, ES	
400.0	399.6	395.9	395.8	0.7	0.7	-65.53	-56.8	-26.5	57.8	56.4	1.36	42.619	
500.0	498.8	491.6	491.0	1.0	0.9	-80.05	-66.2	-24.4	63.5	61.7	1.81	34.994	
600.0	597.1	585.2	583.5	1.4	1.2	-94.87	-80.0	-21.3	78.0	75.7	2.34	33.353 SF	
700.0	694.3	675.9	672.4	1.8	1.5	-106.27	-97.5	-17.4	102.6	99.6	2.93	35.048	
800.0	790.2	763.3	757.1	2.4	1.9	-113.87	-118.3	-12.7	136.2	132.6	3.59	37.983	
900.0	884.4	846.7	837.0	3.0	2.4	-118.67	-141.6	-7.5	177.6	173.3	4.32	41.096	
1,000.0	976.8	925.9	911.9	3.8	2.8	-121.61	-166.9	-1.9	225.9	220.8	5.14	43.984	
1,100.0	1,067.5	1,000.0	980.9	4.6	3.3	-124.13	-193.2	4.0	279.9	273.9	5.99	46.751	
1,200.0	1,158.0	1,073.4	1,048.1	5.4	3.9	-126.01	-221.9	10.4	336.9	330.1	6.87	49.026	
1,300.0	1,248.6	1,143.1	1,110.9	6.2	4.4	-127.03	-251.5	17.0	396.6	388.8	7.78	51.004	
1,400.0	1,339.1	1,210.1	1,170.2	7.0	5.0	-127.54	-282.0	23.8	458.4	449.7	8.69	52.751	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Offset Design O19EB Pad - Shideler 30-8B - OH - Plan #2													Offset Site Error: 0.0 ft
Survey Program: 0-MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-154.48	-37.9	-18.1	42.0				
100.0	100.0	100.0	100.0	0.1	0.1	-154.48	-37.9	-18.1	42.0	41.7	0.27	158.201	
200.0	200.0	200.0	200.0	0.3	0.3	-154.48	-37.9	-18.1	42.0	41.4	0.61	68.314 CC	
207.3	207.3	207.2	207.2	0.3	0.3	-56.52	-37.9	-18.1	42.0	41.3	0.64	65.533 ES	
300.0	300.0	298.5	298.5	0.5	0.5	-62.13	-40.1	-16.9	42.3	41.3	0.97	43.525	
400.0	399.6	396.0	395.6	0.7	0.7	-77.58	-46.8	-13.5	45.7	44.3	1.37	33.249	
500.0	498.8	491.4	490.3	1.0	1.0	-96.29	-57.6	-8.0	57.1	55.3	1.82	31.401 SF	
600.0	597.1	583.9	581.3	1.4	1.3	-110.84	-72.1	-0.6	79.4	77.1	2.30	34.590	
700.0	694.3	672.6	667.8	1.8	1.7	-120.01	-89.7	8.4	111.8	109.0	2.82	39.656	
800.0	790.2	757.0	749.1	2.4	2.1	-125.47	-109.7	18.6	153.0	149.5	3.40	44.922	
900.0	884.4	836.6	824.9	3.0	2.6	-128.66	-131.5	29.7	201.6	197.6	4.05	49.772	
1,000.0	976.8	911.0	894.7	3.8	3.0	-130.46	-154.4	41.4	256.9	252.2	4.76	54.033	
1,100.0	1,067.5	980.6	959.0	4.6	3.5	-132.29	-178.0	53.5	317.7	312.2	5.49	57.854	
1,200.0	1,158.0	1,046.9	1,019.4	5.4	4.1	-133.78	-202.4	65.9	381.4	375.1	6.25	61.063	
1,300.0	1,248.6	1,110.3	1,076.2	6.2	4.6	-134.65	-227.4	78.7	447.3	440.3	7.01	63.829	

Cathedral Energy Services

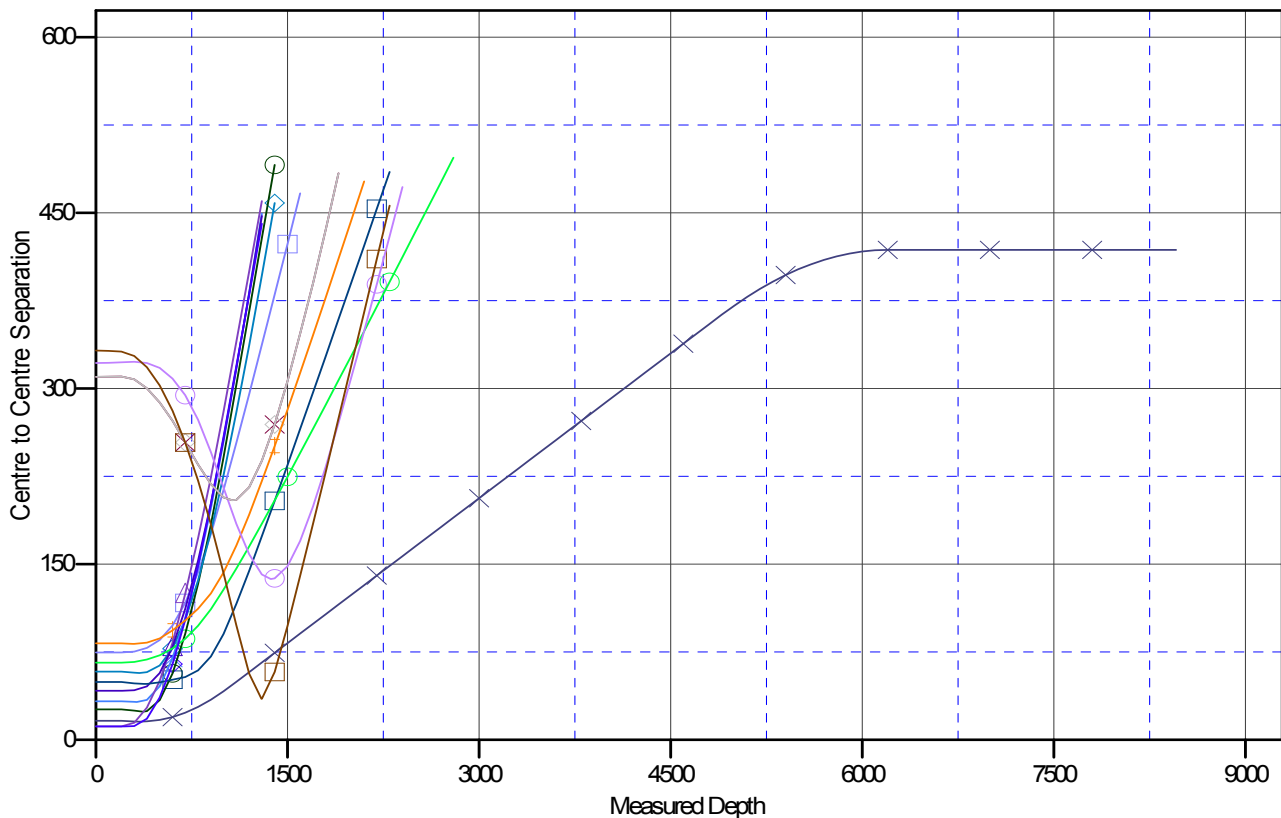
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler Federal 19-13D
Project:	Mamm Creek	TVD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Reference Site:	O19EB Pad	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler Federal 19-13D	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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB = 24' @ 6533.0ft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Shideler Federal 19-13D
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.39°

Ladder Plot



LEGEND

2C, OH, Plan #2 V0
1B, OH, Plan #2 V0
7A, OH, Plan #2 V0
1C, OH, Plan #2 V0
4A, OH, Plan #2 V0

Shideler 19-16C, OH, Plan #2 V0
Shideler 30-8B, OH, Plan #2 V0
Shideler 19-14D, OH, Plan #2 V0
Shideler 30-3B, OH, Plan #2 V0
Shideler 19-16CC, OH, Plan #2 V0

Shideler 30-3A, OH, Plan #2 V0
Shideler 30-2 (O19E), Existing - Survey, ES
Shideler 19-10 (O19E), Surveys, Surveys V
Shideler 19-10 (O19E), DD, DD V0
Shideler 19-15 (O19E), Existing-Vertical, E