

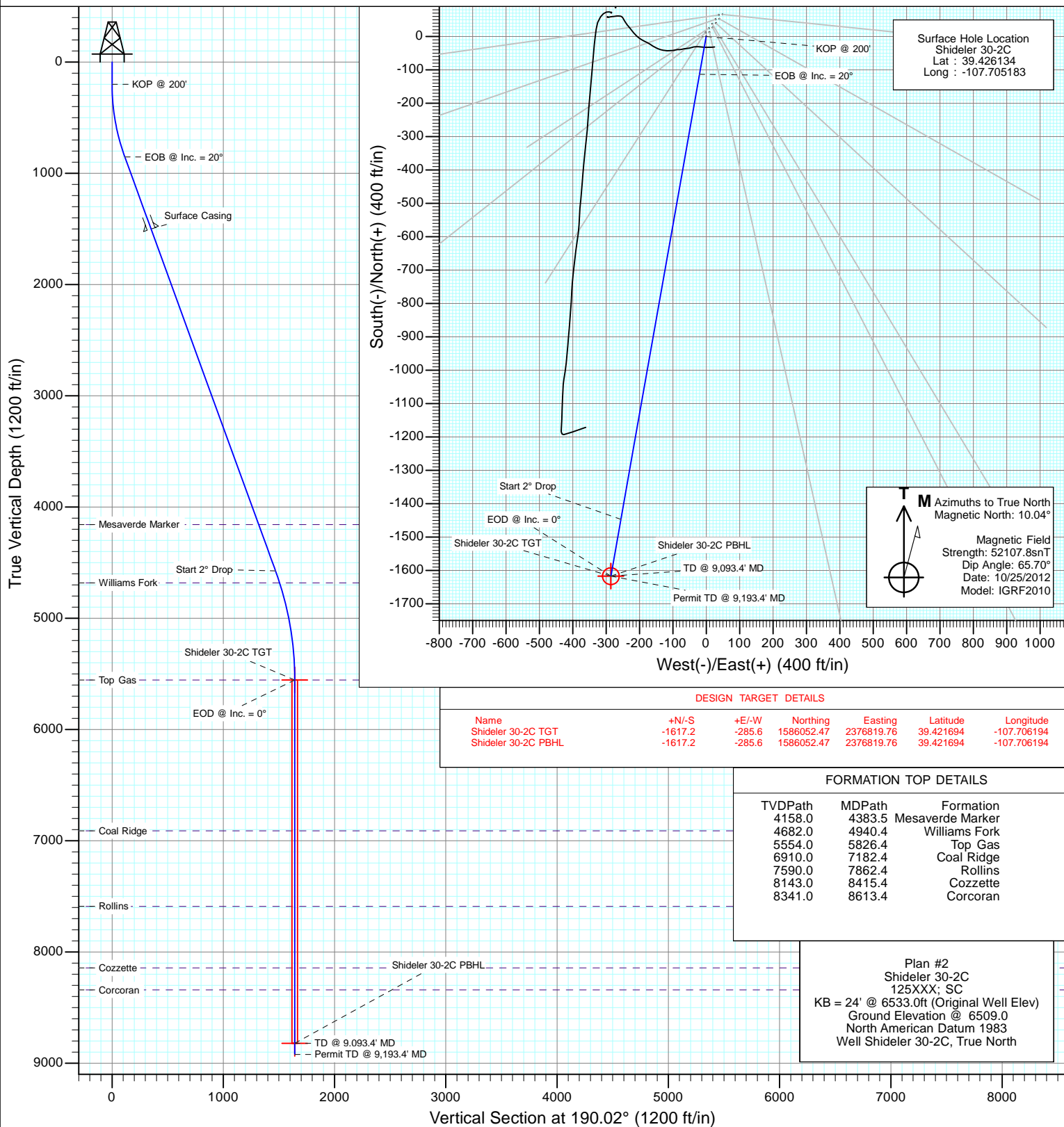


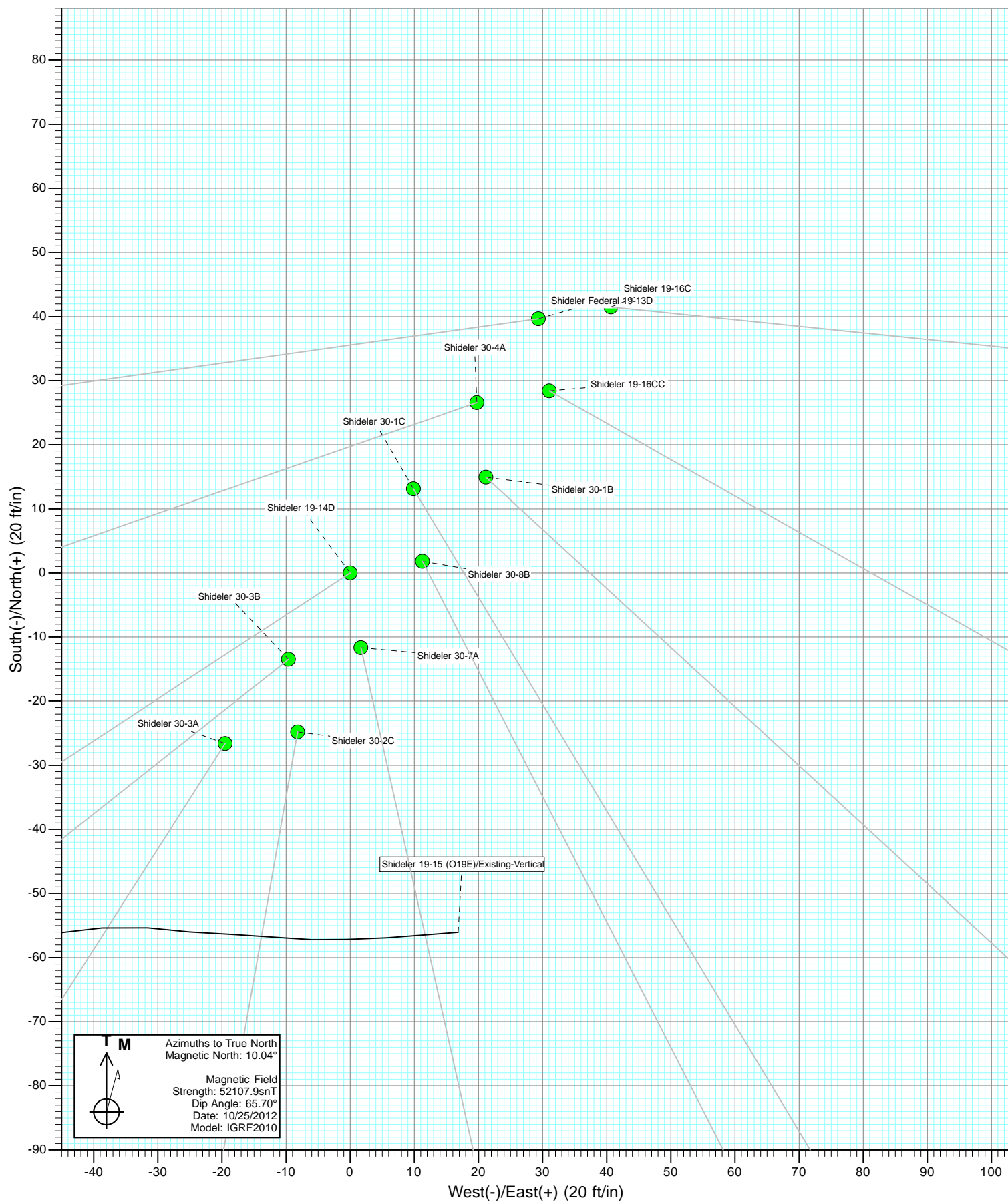
Project: Mamm Creek
Site: O19EB Pad
Well: Shideler 30-2C
Wellbore: OH
Design: Plan #2

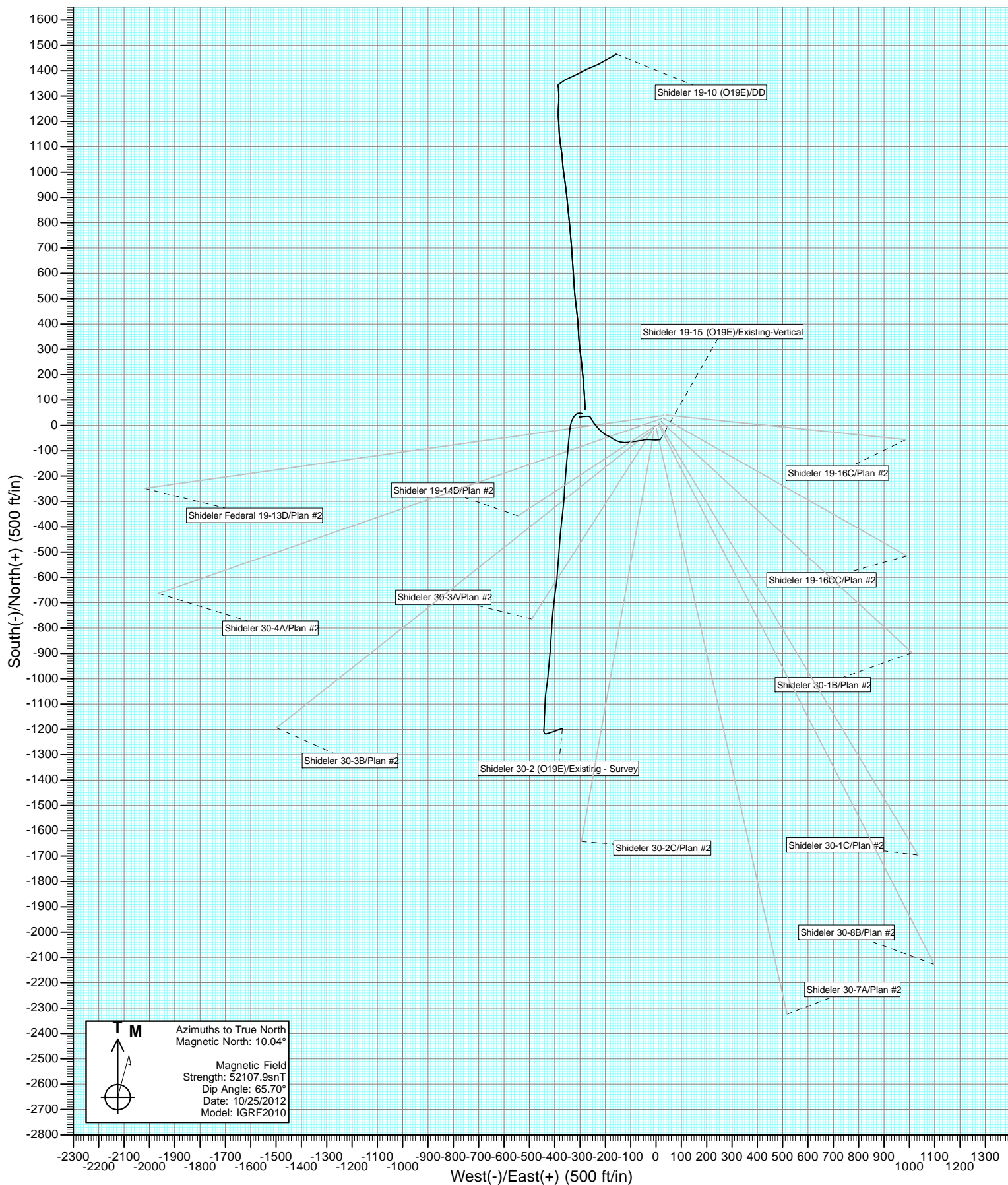


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	866.6	20.00	190.02	853.2	-113.4	-20.0	3.00	190.02	115.2	
4	4826.5	20.00	190.02	4574.2	-1447.1	-255.6	0.00	0.00	1469.5	
5	5826.4	0.00	0.00	5554.0	-1617.2	-285.6	2.00	180.00	1642.2	Shideler 30-2C TGT
6	9093.4	0.00	0.00	8821.0	-1617.2	-285.6	0.00	0.00	1642.2	Shideler 30-2C PBHL
7	9193.4	0.00	0.00	8921.0	-1617.2	-285.6	0.00	0.00	1642.2	

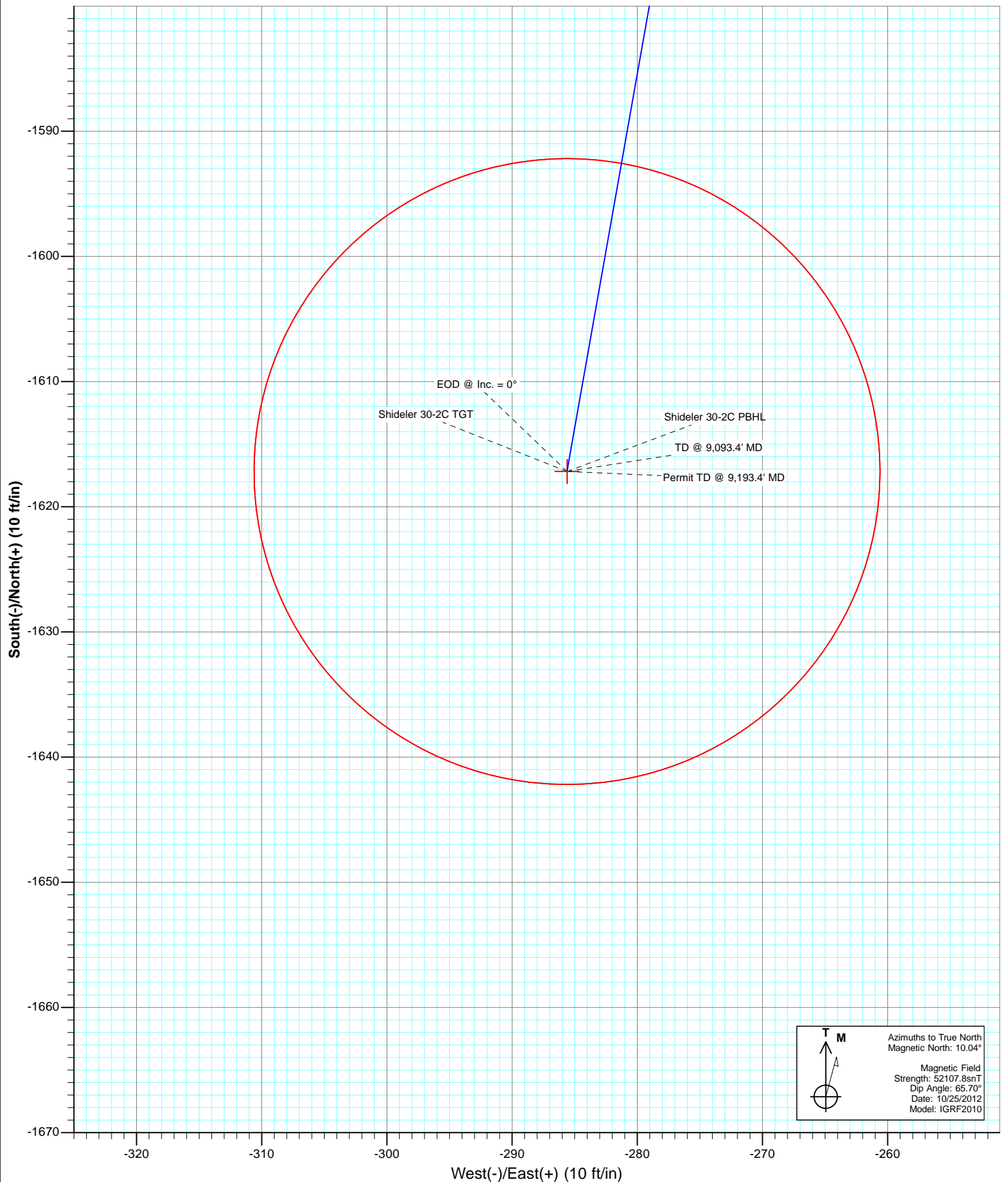









Project: Mamm Creek
Site: O19EB Pad
Well: Shideler 30-2C
Wellbore: OH
Plan: Plan #2





Azimuths to True North
Magnetic North: 10.04°

Magnetic Field
Strength: 52107.8snT
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 30-2C
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 30-2C	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 30-2C					
Well Position	+N/-S	0.0 ft	Northing:	1,587,662.25 ft	Latitude:	39.426134
	+E/-W	0.0 ft	Easting:	2,377,144.53 ft	Longitude:	-107.705183
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	190.02

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	
866.6	20.00	190.02	853.2	-113.4	-20.0	3.00	3.00	0.00	190.02	
4,826.5	20.00	190.02	4,574.2	-1,447.1	-255.6	0.00	0.00	0.00	0.00	
5,826.4	0.00	0.00	5,554.0	-1,617.2	-285.6	2.00	-2.00	0.00	180.00	Shideler 30-2C TGT
9,093.4	0.00	0.00	8,821.0	-1,617.2	-285.6	0.00	0.00	0.00	0.00	Shideler 30-2C PBHL
9,193.4	0.00	0.00	8,921.0	-1,617.2	-285.6	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 30-2C
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 30-2C	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	190.02	300.0	-2.6	-0.5	2.6	3.00	3.00	
400.0	6.00	190.02	399.6	-10.3	-1.8	10.5	3.00	3.00	
500.0	9.00	190.02	498.8	-23.2	-4.1	23.5	3.00	3.00	
600.0	12.00	190.02	597.1	-41.1	-7.3	41.7	3.00	3.00	
700.0	15.00	190.02	694.3	-64.1	-11.3	65.1	3.00	3.00	
800.0	18.00	190.02	790.2	-92.1	-16.3	93.5	3.00	3.00	
866.6	20.00	190.02	853.2	-113.4	-20.0	115.2	3.00	3.00	EOB @ Inc. = 20°
900.0	20.00	190.02	884.5	-124.6	-22.0	126.6	0.00	0.00	
1,000.0	20.00	190.02	978.5	-158.3	-28.0	160.8	0.00	0.00	
1,100.0	20.00	190.02	1,072.5	-192.0	-33.9	195.0	0.00	0.00	
1,200.0	20.00	190.02	1,166.4	-225.7	-39.9	229.2	0.00	0.00	
1,300.0	20.00	190.02	1,260.4	-259.4	-45.8	263.4	0.00	0.00	
1,400.0	20.00	190.02	1,354.4	-293.0	-51.8	297.6	0.00	0.00	
1,500.0	20.00	190.02	1,448.4	-326.7	-57.7	331.8	0.00	0.00	
1,555.0	20.00	190.02	1,500.0	-345.2	-61.0	350.6	0.00	0.00	Surface Casing
1,600.0	20.00	190.02	1,542.3	-360.4	-63.7	366.0	0.00	0.00	
1,700.0	20.00	190.02	1,636.3	-394.1	-69.6	400.2	0.00	0.00	
1,800.0	20.00	190.02	1,730.3	-427.8	-75.5	434.4	0.00	0.00	
1,900.0	20.00	190.02	1,824.2	-461.4	-81.5	468.6	0.00	0.00	
2,000.0	20.00	190.02	1,918.2	-495.1	-87.4	502.8	0.00	0.00	
2,100.0	20.00	190.02	2,012.2	-528.8	-93.4	537.0	0.00	0.00	
2,200.0	20.00	190.02	2,106.1	-562.5	-99.3	571.2	0.00	0.00	
2,300.0	20.00	190.02	2,200.1	-596.2	-105.3	605.4	0.00	0.00	
2,400.0	20.00	190.02	2,294.1	-629.8	-111.2	639.6	0.00	0.00	
2,500.0	20.00	190.02	2,388.0	-663.5	-117.2	673.8	0.00	0.00	
2,600.0	20.00	190.02	2,482.0	-697.2	-123.1	708.0	0.00	0.00	
2,700.0	20.00	190.02	2,576.0	-730.9	-129.1	742.2	0.00	0.00	
2,800.0	20.00	190.02	2,670.0	-764.6	-135.0	776.4	0.00	0.00	
2,900.0	20.00	190.02	2,763.9	-798.2	-141.0	810.6	0.00	0.00	
3,000.0	20.00	190.02	2,857.9	-831.9	-146.9	844.8	0.00	0.00	
3,100.0	20.00	190.02	2,951.9	-865.6	-152.9	879.0	0.00	0.00	
3,200.0	20.00	190.02	3,045.8	-899.3	-158.8	913.2	0.00	0.00	
3,300.0	20.00	190.02	3,139.8	-933.0	-164.8	947.4	0.00	0.00	
3,400.0	20.00	190.02	3,233.8	-966.6	-170.7	981.6	0.00	0.00	
3,500.0	20.00	190.02	3,327.7	-1,000.3	-176.7	1,015.8	0.00	0.00	
3,600.0	20.00	190.02	3,421.7	-1,034.0	-182.6	1,050.0	0.00	0.00	
3,700.0	20.00	190.02	3,515.7	-1,067.7	-188.6	1,084.2	0.00	0.00	
3,800.0	20.00	190.02	3,609.7	-1,101.4	-194.5	1,118.4	0.00	0.00	
3,900.0	20.00	190.02	3,703.6	-1,135.0	-200.5	1,152.6	0.00	0.00	
4,000.0	20.00	190.02	3,797.6	-1,168.7	-206.4	1,186.8	0.00	0.00	
4,100.0	20.00	190.02	3,891.6	-1,202.4	-212.4	1,221.0	0.00	0.00	
4,200.0	20.00	190.02	3,985.5	-1,236.1	-218.3	1,255.2	0.00	0.00	
4,300.0	20.00	190.02	4,079.5	-1,269.8	-224.2	1,289.4	0.00	0.00	
4,383.5	20.00	190.02	4,158.0	-1,297.9	-229.2	1,318.0	0.00	0.00	Mesaverde Marker
4,400.0	20.00	190.02	4,173.5	-1,303.4	-230.2	1,323.6	0.00	0.00	
4,500.0	20.00	190.02	4,267.4	-1,337.1	-236.1	1,357.8	0.00	0.00	
4,600.0	20.00	190.02	4,361.4	-1,370.8	-242.1	1,392.0	0.00	0.00	
4,700.0	20.00	190.02	4,455.4	-1,404.5	-248.0	1,426.2	0.00	0.00	
4,800.0	20.00	190.02	4,549.4	-1,438.1	-254.0	1,460.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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
4,826.5	20.00	190.02	4,574.2	-1,447.1	-255.6	1,469.5	0.00	0.00	Start 2° Drop
4,900.0	18.53	190.02	4,643.6	-1,471.0	-259.8	1,493.7	2.00	-2.00	
4,940.4	17.72	190.02	4,682.0	-1,483.3	-262.0	1,506.3	2.00	-2.00	Williams Fork
5,000.0	16.53	190.02	4,739.0	-1,500.6	-265.0	1,523.8	2.00	-2.00	
5,100.0	14.53	190.02	4,835.3	-1,527.0	-269.7	1,550.6	2.00	-2.00	
5,200.0	12.53	190.02	4,932.6	-1,550.0	-273.7	1,574.0	2.00	-2.00	
5,300.0	10.53	190.02	5,030.5	-1,569.7	-277.2	1,594.0	2.00	-2.00	
5,400.0	8.53	190.02	5,129.1	-1,586.0	-280.1	1,610.5	2.00	-2.00	
5,500.0	6.53	190.02	5,228.3	-1,598.9	-282.4	1,623.6	2.00	-2.00	
5,600.0	4.53	190.02	5,327.8	-1,608.4	-284.1	1,633.3	2.00	-2.00	
5,700.0	2.53	190.02	5,427.6	-1,614.4	-285.1	1,639.4	2.00	-2.00	
5,800.0	0.53	190.02	5,527.6	-1,617.1	-285.6	1,642.1	2.00	-2.00	
5,826.4	0.00	0.00	5,554.0	-1,617.2	-285.6	1,642.2	2.00	-2.00	EOD @ Inc. = 0° - Top Gas
5,900.0	0.00	0.00	5,627.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,000.0	0.00	0.00	5,727.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,100.0	0.00	0.00	5,827.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,200.0	0.00	0.00	5,927.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,300.0	0.00	0.00	6,027.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,400.0	0.00	0.00	6,127.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,500.0	0.00	0.00	6,227.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,600.0	0.00	0.00	6,327.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,700.0	0.00	0.00	6,427.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,800.0	0.00	0.00	6,527.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
6,900.0	0.00	0.00	6,627.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,000.0	0.00	0.00	6,727.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,100.0	0.00	0.00	6,827.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,182.4	0.00	0.00	6,910.0	-1,617.2	-285.6	1,642.2	0.00	0.00	Coal Ridge
7,200.0	0.00	0.00	6,927.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,300.0	0.00	0.00	7,027.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,400.0	0.00	0.00	7,127.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,500.0	0.00	0.00	7,227.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,600.0	0.00	0.00	7,327.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,700.0	0.00	0.00	7,427.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,800.0	0.00	0.00	7,527.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
7,862.4	0.00	0.00	7,590.0	-1,617.2	-285.6	1,642.2	0.00	0.00	Rollins
7,900.0	0.00	0.00	7,627.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,000.0	0.00	0.00	7,727.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,100.0	0.00	0.00	7,827.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,200.0	0.00	0.00	7,927.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,300.0	0.00	0.00	8,027.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,400.0	0.00	0.00	8,127.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,415.4	0.00	0.00	8,143.0	-1,617.2	-285.6	1,642.2	0.00	0.00	Cozzette
8,500.0	0.00	0.00	8,227.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,600.0	0.00	0.00	8,327.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,613.4	0.00	0.00	8,341.0	-1,617.2	-285.6	1,642.2	0.00	0.00	Corcoran
8,700.0	0.00	0.00	8,427.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,800.0	0.00	0.00	8,527.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
8,900.0	0.00	0.00	8,627.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
9,000.0	0.00	0.00	8,727.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
9,093.4	0.00	0.00	8,821.0	-1,617.2	-285.6	1,642.2	0.00	0.00	TD @ 9,093.4' MD
9,100.0	0.00	0.00	8,827.6	-1,617.2	-285.6	1,642.2	0.00	0.00	
9,193.4	0.00	0.00	8,921.0	-1,617.2	-285.6	1,642.2	0.00	0.00	Permit TD @ 9,193.4' MD

Cathedral Energy Services

Planning Report

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Project:	Mamm Creek	MD Reference:	KB = 24' @ 6533.0ft (Original Well Elev)
Site:	O19EB Pad	North Reference:	True
Well:	Shideler 30-2C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Shideler 30-2C TGT	0.00	0.00	5,554.0	-1,617.2	-285.6	1,586,052.47	2,376,819.76	39.421694	-107.706194
- plan hits target center									
- Point									
Shideler 30-2C PBHL	0.00	0.00	8,821.0	-1,617.2	-285.6	1,586,052.47	2,376,819.76	39.421694	-107.706194
- plan hits target center									
- Circle (radius 25.0)									

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,555.0	1,500.0	Surface Casing		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,383.5	4,158.0	Mesaverde Marker			
4,940.4	4,682.0	Williams Fork			
5,826.4	5,554.0	Top Gas			
7,182.4	6,910.0	Coal Ridge			
7,862.4	7,590.0	Rollins			
8,415.4	8,143.0	Cozzette			
8,613.4	8,341.0	Corcoran			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
866.6	853.2	-113.4	-20.0	EOB @ Inc. = 20°
4,826.5	4,574.2	-1,447.1	-255.6	Start 2° Drop
5,826.4	5,554.0	-1,617.2	-285.6	EOD @ Inc. = 0°
9,093.4	8,821.0	-1,617.2	-285.6	TD @ 9,093.4' MD
9,193.4	8,921.0	-1,617.2	-285.6	Permit TD @ 9,193.4' MD

EnCana Oil & Gas (USA) Inc

Mamm Creek

O19EB Pad

Shideler 30-2C

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 30-2C
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 30-2C	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	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	11/13/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	9,193.4	Plan #2 (OH)	MWD	Geolink MWD

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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	0.0	23.9	285.1			
Shideler 19-10 (O19E) - DD - DD	200.0	223.1	285.5	284.8	424.457	ES
Shideler 19-10 (O19E) - DD - DD	1,000.0	918.6	416.8	412.0	86.033	SF
Shideler 19-10 (O19E) - Surveys - Surveys	0.0	23.9	285.1			
Shideler 19-10 (O19E) - Surveys - Surveys	200.0	223.1	285.5	284.8	424.457	ES
Shideler 19-10 (O19E) - Surveys - Surveys	1,000.0	918.6	416.8	412.0	86.033	SF
Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertic	594.8	626.5	295.2	292.8	122.918	CC
Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertic	600.0	631.6	295.2	292.7	121.539	ES
Shideler 19-15 (O19E) - Existing-Vertical - Existing-Vertic	1,500.0	1,500.9	418.2	411.1	58.594	SF
Shideler 30-2 (O19E) - Existing - Survey - Existing - Surv	0.0	23.9	293.0			
Shideler 30-2 (O19E) - Existing - Survey - Existing - Surv	100.0	123.3	293.2	292.8	889.508	ES
Shideler 30-2 (O19E) - Existing - Survey - Existing - Surv	6,000.0	5,924.4	447.0	416.1	14.464	SF
O19EB Pad						
(Existing Offset) Shideler 19-6D - Existing - Existing						Out of range
Shideler 19-14D - OH - Plan #2	200.0	200.0	26.1	25.5	42.463	CC, ES
Shideler 19-14D - OH - Plan #2	500.0	502.1	38.9	37.2	22.494	SF
Shideler 19-16C - OH - Plan #2	200.0	200.0	82.4	81.7	134.054	CC, ES
Shideler 19-16C - OH - Plan #2	700.0	677.8	166.4	163.7	60.729	SF
Shideler 19-16CC - OH - Plan #2	200.0	200.0	66.1	65.5	107.598	CC, ES
Shideler 19-16CC - OH - Plan #2	1,700.0	1,630.6	467.8	457.0	43.262	SF
Shideler 30-1B - OH - Plan #2	200.0	200.0	49.4	48.8	80.386	CC, ES
Shideler 30-1B - OH - Plan #2	2,000.0	1,935.8	491.0	475.5	31.864	SF
Shideler 30-1C - OH - Plan #2	100.0	100.0	42.0	41.7	158.216	CC
Shideler 30-1C - OH - Plan #2	200.0	200.0	42.0	41.4	68.321	ES
Shideler 30-1C - OH - Plan #2	1,200.0	1,183.1	193.5	184.1	20.713	SF
Shideler 30-3A - OH - Plan #2	246.3	246.2	11.3	10.6	14.548	CC, ES
Shideler 30-3A - OH - Plan #2	500.0	498.9	18.4	16.5	9.541	SF
Shideler 30-3B - OH - Plan #2	200.0	200.0	11.4	10.8	18.522	CC, ES
Shideler 30-3B - OH - Plan #2	400.0	400.3	17.0	15.6	12.262	SF
Shideler 30-4A - OH - Plan #2	200.0	200.0	58.5	57.9	95.185	CC, ES
Shideler 30-4A - OH - Plan #2	1,200.0	1,169.8	252.0	243.7	30.144	SF
Shideler 30-7A - OH - Plan #2	200.0	200.0	16.4	15.8	26.731	CC, ES
Shideler 30-7A - OH - Plan #2	1,200.0	1,200.0	101.1	91.7	10.685	SF
Shideler 30-8B - OH - Plan #2	200.0	200.0	33.0	32.4	53.663	CC, ES
Shideler 30-8B - OH - Plan #2	1,100.0	1,087.9	151.4	143.2	18.645	SF
Shideler Federal 19-13D - OH - Plan #2	200.0	200.0	74.6	74.0	121.450	CC, ES
Shideler Federal 19-13D - OH - Plan #2	1,200.0	1,151.2	303.0	295.0	37.946	SF

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 30-2C	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			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	23.9	23.9	0.0	0.0	-72.28	86.8	-271.6	285.1								
100.0	100.0	123.4	123.4	0.1	0.2	-72.26	86.9	-271.7	285.2	284.9	0.33	868.053					
200.0	200.0	223.1	223.1	0.3	0.4	-72.19	87.3	-271.8	285.5	284.8	0.67	424.457	ES				
300.0	300.0	322.8	322.8	0.5	0.5	98.41	88.0	-272.0	286.2	285.2	1.03	277.936					
400.0	399.6	419.0	419.0	0.7	0.7	100.20	89.9	-271.9	288.1	286.7	1.42	202.781					
500.0	498.8	511.0	510.8	1.0	0.9	103.23	94.7	-271.7	292.7	290.8	1.87	156.317					
600.0	597.1	602.5	602.0	1.4	1.1	107.47	103.2	-272.1	302.2	299.8	2.41	125.508					
700.0	694.3	689.3	687.8	1.8	1.3	112.40	115.4	-272.6	318.5	315.4	3.01	105.753					
800.0	790.2	768.8	766.0	2.3	1.6	117.28	129.8	-273.2	342.8	339.2	3.65	93.849					
900.0	884.5	844.0	839.5	2.9	1.9	122.14	146.1	-274.3	376.4	372.1	4.28	87.849					
1,000.0	978.5	918.6	911.8	3.5	2.2	127.10	164.3	-275.8	416.8	412.0	4.85	86.033	SF				
1,100.0	1,072.5	994.4	984.9	4.1	2.6	131.52	184.4	-277.4	462.0	456.6	5.35	86.390					

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Shideler 30-2C	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation				
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor				
0.0	0.0	23.9	23.9	0.0	0.0	-72.28	86.8	-271.6	285.1							
100.0	100.0	123.4	123.4	0.1	0.2	-72.26	86.9	-271.7	285.2	284.9	0.33	868.053				
200.0	200.0	223.1	223.1	0.3	0.4	-72.19	87.3	-271.8	285.5	284.8	0.67	424.457	ES			
300.0	300.0	322.8	322.8	0.5	0.5	98.41	88.0	-272.0	286.2	285.2	1.03	277.936				
400.0	399.6	419.0	419.0	0.7	0.7	100.20	89.9	-271.9	288.1	286.7	1.42	202.781				
500.0	498.8	511.0	510.8	1.0	0.9	103.23	94.7	-271.7	292.7	290.8	1.87	156.317				
600.0	597.1	602.5	602.0	1.4	1.1	107.47	103.2	-272.1	302.2	299.8	2.41	125.508				
700.0	694.3	689.3	687.8	1.8	1.3	112.40	115.4	-272.6	318.5	315.4	3.01	105.753				
800.0	790.2	768.8	766.0	2.3	1.6	117.28	129.8	-273.2	342.8	339.2	3.65	93.849				
900.0	884.5	844.0	839.5	2.9	1.9	122.14	146.1	-274.3	376.4	372.1	4.28	87.849				
1,000.0	978.5	918.6	911.8	3.5	2.2	127.10	164.3	-275.8	416.8	412.0	4.85	86.033	SF			
1,100.0	1,072.5	994.4	984.9	4.1	2.6	131.52	184.4	-277.4	462.0	456.6	5.35	86.390				

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Reference Well:	Shideler 30-2C	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 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	24.3	24.3	0.0	0.0	-78.82	58.3	-294.9	300.6					
100.0	100.0	125.5	125.5	0.1	0.2	-78.81	58.3	-294.6	300.3	300.0	0.33	917.472		
200.0	200.0	226.6	226.6	0.3	0.4	-78.85	58.0	-294.0	299.6	299.0	0.68	441.708		
300.0	300.0	328.5	328.5	0.5	0.6	91.71	57.8	-292.7	298.5	297.4	1.04	287.218		
400.0	399.6	429.6	429.6	0.7	0.7	93.40	58.1	-290.9	297.1	295.7	1.44	206.821		
500.0	498.8	531.1	531.0	1.0	0.9	96.21	58.6	-288.3	295.8	293.9	1.90	155.961		
594.8	592.0	626.5	626.4	1.3	1.1	99.84	59.2	-284.9	295.2	292.8	2.40	122.918 CC		
600.0	597.1	631.6	631.5	1.4	1.1	100.07	59.2	-284.7	295.2	292.7	2.43	121.539 ES		
700.0	694.3	729.8	729.5	1.8	1.3	104.82	60.1	-280.4	296.6	293.6	3.03	98.041		
800.0	790.2	826.7	826.4	2.3	1.5	110.16	60.4	-275.9	301.4	297.7	3.67	82.086		
900.0	884.5	920.5	920.0	2.9	1.6	115.89	60.8	-271.3	310.9	306.6	4.32	72.002		
1,000.0	978.5	1,014.9	1,014.3	3.5	1.8	121.65	61.3	-266.4	324.4	319.5	4.91	66.049		
1,100.0	1,072.5	1,111.1	1,110.4	4.1	2.0	127.05	61.4	-261.0	340.6	335.1	5.45	62.525		
1,200.0	1,166.4	1,207.2	1,206.4	4.8	2.2	131.89	60.7	-255.6	358.9	352.9	5.92	60.570		
1,300.0	1,260.4	1,309.2	1,308.2	5.4	2.4	136.18	57.3	-250.8	378.0	371.6	6.35	59.490		
1,400.0	1,354.4	1,406.4	1,405.1	6.0	2.6	139.55	51.9	-247.5	397.5	390.8	6.76	58.834		
1,500.0	1,448.4	1,500.9	1,499.5	6.6	2.8	142.48	46.4	-244.5	418.2	411.1	7.14	58.594 SF		
1,600.0	1,542.3	1,595.5	1,593.8	7.2	2.9	145.20	41.3	-241.2	440.1	432.6	7.49	58.751		
1,700.0	1,636.3	1,690.9	1,689.0	7.8	3.1	147.71	36.3	-237.8	463.0	455.2	7.82	59.192		
1,800.0	1,730.3	1,784.7	1,782.6	8.5	3.3	150.00	31.6	-234.2	486.8	478.7	8.14	59.824		

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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						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	-75.86	71.6	-284.1	293.0					
100.0	100.0	123.3	123.3	0.1	0.2	-75.84	71.7	-284.3	293.2	292.8	0.33	889.508 ES		
200.0	200.0	219.6	219.6	0.3	0.4	-75.80	72.0	-284.7	293.7	293.0	0.67	440.867		
300.0	300.0	309.4	309.3	0.5	0.5	94.55	72.8	-287.4	297.1	296.0	1.01	295.308		
400.0	399.6	399.7	399.4	0.7	0.7	95.57	73.8	-293.5	304.6	303.2	1.39	219.872		
500.0	498.8	500.4	499.8	1.0	0.9	96.93	72.0	-302.3	313.9	312.0	1.85	169.467		
600.0	597.1	604.7	603.3	1.4	1.2	98.22	64.3	-311.9	322.8	320.4	2.45	131.766		
700.0	694.3	714.7	711.9	1.8	1.5	99.56	50.1	-321.7	330.8	327.6	3.21	103.065		
800.0	790.2	832.9	827.8	2.3	1.9	101.23	28.3	-328.8	335.2	331.0	4.15	80.728		
900.0	884.5	941.4	933.1	2.9	2.3	102.89	2.1	-332.3	336.1	330.9	5.19	64.784		
1,000.0	978.5	1,042.6	1,030.5	3.5	2.8	104.28	-24.8	-335.3	336.2	330.0	6.22	54.091		
1,100.0	1,072.5	1,143.2	1,127.5	4.1	3.2	105.73	-51.3	-337.8	336.3	329.0	7.23	46.503		
1,185.1	1,152.4	1,228.8	1,210.3	4.7	3.6	107.06	-73.5	-339.4	336.3	328.2	8.08	41.627		
1,200.0	1,166.4	1,243.6	1,224.5	4.8	3.7	107.29	-77.3	-339.7	336.3	328.0	8.23	40.868		
1,300.0	1,260.4	1,342.4	1,319.7	5.4	4.2	108.62	-103.9	-342.3	336.6	327.3	9.24	36.429		
1,400.0	1,354.4	1,443.7	1,417.1	6.0	4.7	109.93	-131.5	-344.8	336.8	326.6	10.24	32.908		
1,500.0	1,448.4	1,543.2	1,512.8	6.6	5.1	111.24	-158.6	-347.1	337.1	325.9	11.21	30.061		
1,600.0	1,542.3	1,643.1	1,608.9	7.2	5.6	112.49	-186.1	-349.7	337.6	325.5	12.18	27.730		
1,700.0	1,636.3	1,744.0	1,705.8	7.8	6.1	113.78	-213.7	-351.9	338.1	325.0	13.11	25.793		
1,800.0	1,730.3	1,843.8	1,801.9	8.5	6.6	115.17	-240.8	-353.5	338.4	324.4	13.99	24.186		
1,900.0	1,824.2	1,940.3	1,895.1	9.1	7.1	116.71	-265.7	-354.7	339.3	324.5	14.81	22.909		
2,000.0	1,918.2	2,037.3	1,988.8	9.7	7.6	118.10	-290.8	-357.4	341.7	326.1	15.64	21.855		
2,100.0	2,012.2	2,139.2	2,087.0	10.3	8.1	119.45	-317.6	-360.4	344.2	327.7	16.46	20.905		
2,200.0	2,106.1	2,240.7	2,184.7	11.0	8.6	120.72	-345.0	-363.1	346.1	328.8	17.28	20.032		
2,300.0	2,200.1	2,342.0	2,282.0	11.6	9.1	121.85	-373.2	-365.9	347.8	329.7	18.10	19.218		
2,400.0	2,294.1	2,442.3	2,378.1	12.2	9.6	122.89	-401.7	-368.7	349.2	330.3	18.88	18.496		
2,500.0	2,388.0	2,541.8	2,473.7	12.8	10.1	124.07	-429.2	-370.8	350.8	331.2	19.60	17.900		
2,600.0	2,482.0	2,640.3	2,568.5	13.4	10.6	125.33	-455.9	-372.6	352.7	332.4	20.27	17.396		
2,700.0	2,576.0	2,738.6	2,663.1	14.1	11.1	126.50	-482.6	-375.0	355.1	334.2	20.94	16.958		
2,800.0	2,670.0	2,837.7	2,758.4	14.7	11.6	127.66	-509.3	-377.7	358.1	336.5	21.56	16.609		
2,900.0	2,763.9	2,936.7	2,854.1	15.3	12.1	129.00	-535.0	-379.5	361.3	339.2	22.09	16.356		
3,000.0	2,857.9	3,037.6	2,951.5	15.9	12.6	130.40	-561.0	-380.9	364.7	342.1	22.59	16.146		
3,100.0	2,951.9	3,135.6	3,045.9	16.6	13.0	131.57	-587.0	-383.2	368.2	345.1	23.13	15.920		
3,200.0	3,045.8	3,233.1	3,139.9	17.2	13.5	132.56	-613.0	-386.5	372.4	348.7	23.69	15.721		
3,300.0	3,139.8	3,335.5	3,238.5	17.8	14.1	133.53	-640.5	-390.3	376.8	352.5	24.24	15.540		
3,400.0	3,233.8	3,436.4	3,335.5	18.4	14.6	134.49	-668.0	-393.5	380.6	355.8	24.77	15.364		
3,500.0	3,327.7	3,537.0	3,432.1	19.0	15.1	135.40	-695.7	-396.7	384.3	359.0	25.29	15.195		
3,600.0	3,421.7	3,633.9	3,525.4	19.7	15.6	136.33	-721.9	-399.5	388.3	362.6	25.74	15.088		
3,700.0	3,515.7	3,733.0	3,621.1	20.3	16.0	137.42	-747.6	-401.8	393.1	367.0	26.09	15.064		
3,800.0	3,609.7	3,834.6	3,719.3	20.9	16.5	138.66	-773.9	-403.1	397.6	371.2	26.37	15.078		
3,900.0	3,703.6	3,936.5	3,817.4	21.5	17.0	139.79	-800.8	-404.7	401.9	375.2	26.67	15.070		
4,000.0	3,797.6	4,039.6	3,916.5	22.2	17.6	140.75	-829.4	-406.8	405.4	378.3	27.02	15.003		
4,100.0	3,891.6	4,137.7	4,010.7	22.8	18.1	141.61	-856.8	-408.9	408.8	381.4	27.36	14.939		
4,200.0	3,985.5	4,235.4	4,104.7	23.4	18.6	142.53	-883.4	-410.9	413.0	385.3	27.66	14.933		
4,300.0	4,079.5	4,335.8	4,201.2	24.0	19.1	143.35	-911.1	-413.5	417.1	389.2	27.98	14.907		
4,400.0	4,173.5	4,433.4	4,295.0	24.6	19.6	144.23	-937.4	-415.6	421.7	393.5	28.24	14.932		
4,500.0	4,267.4	4,532.0	4,390.1	25.3	20.1	145.06	-963.8	-418.1	426.8	398.3	28.51	14.971		
4,600.0	4,361.4	4,630.3	4,484.7	25.9	20.6	145.83	-990.1	-420.9	432.2	403.4	28.79	15.012		
4,700.0	4,455.4	4,730.5	4,581.2	26.5	21.1	146.50	-1,016.9	-424.7	437.9	408.8	29.12	15.039		
4,800.0	4,549.4	4,833.8	4,680.5	27.1	21.6	147.17	-1,045.1	-428.2	443.1	413.7	29.42	15.061		
4,900.0	4,643.6	4,935.4	4,778.3	27.7	22.1	148.04	-1,072.7	-429.6	446.9	417.3	29.56	15.117		
5,000.0	4,739.0	5,033.7	4,872.9	28.3	22.6	148.63	-1,099.4	-430.9	447.8	418.0	29.79	15.031		

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 30-2C
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 30-2C	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							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,835.3	5,121.9	4,958.1	28.7	23.0	149.02	-1,122.2	-431.8	447.1	417.0	30.06	14.875		
5,174.6	4,907.8	5,183.9	5,018.5	29.0	23.2	149.31	-1,136.2	-432.2	446.8	416.6	30.20	14.793		
5,200.0	4,932.6	5,204.6	5,038.8	29.1	23.3	149.41	-1,140.4	-432.4	446.9	416.6	30.25	14.770		
5,300.0	5,030.5	5,288.7	5,121.4	29.5	23.6	149.75	-1,155.4	-433.0	447.6	417.2	30.43	14.710		
5,400.0	5,129.1	5,376.4	5,208.2	29.8	23.8	150.02	-1,168.6	-433.8	448.2	417.6	30.61	14.642		
5,500.0	5,228.3	5,460.9	5,292.1	30.0	24.0	150.25	-1,178.3	-434.3	448.9	418.2	30.76	14.595		
5,600.0	5,327.8	5,541.3	5,372.4	30.2	24.1	150.52	-1,183.8	-434.3	450.8	420.0	30.83	14.624		
5,700.0	5,427.6	5,637.5	5,468.5	30.4	24.2	150.80	-1,187.7	-433.8	452.2	421.3	30.85	14.657		
5,800.0	5,527.6	5,735.3	5,566.1	30.4	24.3	151.02	-1,190.8	-432.2	451.0	420.2	30.88	14.607		
5,900.0	5,627.6	5,830.2	5,661.0	30.5	24.4	-18.75	-1,192.6	-429.7	448.4	417.5	30.92	14.503		
6,000.0	5,727.6	5,924.4	5,755.1	30.5	24.5	-18.40	-1,193.1	-426.7	447.0	416.1	30.90	14.464 SF		
6,100.0	5,827.6	6,023.0	5,853.7	30.6	24.5	-17.93	-1,192.5	-423.0	446.4	415.6	30.78	14.501		
6,200.0	5,927.6	6,121.9	5,952.5	30.7	24.5	-17.36	-1,191.5	-418.7	446.0	415.4	30.62	14.569		
6,271.1	5,998.6	6,192.1	6,022.6	30.7	24.5	-16.90	-1,190.5	-415.2	446.0	415.5	30.47	14.635		
6,300.0	6,027.6	6,220.7	6,051.2	30.7	24.5	-16.69	-1,190.0	-413.7	446.0	415.6	30.41	14.666		
6,400.0	6,127.6	6,319.5	6,149.8	30.8	24.6	-15.94	-1,188.1	-408.1	446.2	416.0	30.16	14.792		
6,500.0	6,227.6	6,418.1	6,248.2	30.9	24.6	-15.09	-1,185.8	-401.9	446.8	416.9	29.89	14.948		
6,600.0	6,327.6	6,517.8	6,347.6	30.9	24.6	-14.15	-1,183.1	-395.0	447.7	418.1	29.58	15.133		
6,700.0	6,427.6	6,617.8	6,447.3	31.0	24.6	-13.16	-1,180.4	-387.7	448.6	419.3	29.27	15.325		
6,800.0	6,527.6	6,717.8	6,547.0	31.0	24.7	-12.12	-1,177.7	-380.0	449.6	420.6	28.97	15.519		
6,900.0	6,627.6	6,817.7	6,646.5	31.1	24.7	-11.05	-1,174.9	-371.9	450.6	421.9	28.68	15.711		
7,000.0	6,727.6	6,917.6	6,745.9	31.2	24.7	-9.92	-1,172.2	-363.5	451.8	423.4	28.41	15.901		
7,100.0	6,827.6	6,945.0	6,773.3	31.3	24.8	-9.61	-1,171.4	-361.1	458.9	430.4	28.45	16.131		
7,200.0	6,927.6	6,945.0	6,773.3	31.3	24.8	-9.61	-1,171.4	-361.1	486.0	457.4	28.58	17.002		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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				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	18.30	24.8	8.2	26.1					
100.0	100.0	100.0	100.0	0.1	0.1	18.30	24.8	8.2	26.1	25.8	0.27	98.335		
200.0	200.0	200.0	200.0	0.3	0.3	18.30	24.8	8.2	26.1	25.5	0.61	42.463 CC, ES		
300.0	300.0	300.5	300.5	0.5	0.5	-173.33	24.4	7.6	28.2	27.2	0.96	29.223		
400.0	399.6	401.5	401.3	0.7	0.7	178.90	21.5	3.2	32.2	30.9	1.32	24.352		
500.0	498.8	502.1	501.4	1.0	0.9	167.57	15.7	-5.7	38.9	37.2	1.73	22.494 SF		
600.0	597.1	601.3	599.7	1.4	1.2	159.04	8.5	-16.7	50.5	48.3	2.20	22.971		
700.0	694.3	699.7	697.3	1.8	1.5	155.58	1.4	-27.6	67.5	64.8	2.70	24.966		
800.0	790.2	797.3	794.0	2.3	1.7	154.88	-5.7	-38.3	89.2	86.0	3.22	27.732		
900.0	884.5	893.9	889.7	2.9	2.0	155.48	-12.7	-49.0	115.3	111.6	3.73	30.932		
1,000.0	978.5	990.1	985.1	3.5	2.3	156.19	-19.6	-59.7	142.4	138.2	4.25	33.536		
1,100.0	1,072.5	1,086.3	1,080.5	4.1	2.6	156.68	-26.6	-70.3	169.6	164.8	4.77	35.554		
1,200.0	1,166.4	1,182.6	1,175.9	4.8	2.8	157.04	-33.6	-80.9	196.7	191.4	5.29	37.160		
1,300.0	1,260.4	1,278.8	1,271.3	5.4	3.1	157.30	-40.5	-91.6	223.9	218.0	5.82	38.468		
1,400.0	1,354.4	1,375.1	1,366.7	6.0	3.4	157.51	-47.5	-102.2	251.0	244.7	6.35	39.553		
1,500.0	1,448.4	1,471.3	1,462.1	6.6	3.7	157.68	-54.4	-112.8	278.2	271.3	6.87	40.466		
1,600.0	1,542.3	1,567.5	1,557.5	7.2	3.9	157.82	-61.4	-123.5	305.3	297.9	7.40	41.246		
1,700.0	1,636.3	1,663.8	1,652.9	7.8	4.2	157.94	-68.4	-134.1	332.5	324.5	7.93	41.920		
1,800.0	1,730.3	1,760.0	1,748.3	8.5	4.5	158.04	-75.3	-144.8	359.6	351.2	8.46	42.507		
1,900.0	1,824.2	1,856.3	1,843.7	9.1	4.8	158.12	-82.3	-155.4	386.8	377.8	8.99	43.024		
2,000.0	1,918.2	1,952.5	1,939.1	9.7	5.0	158.19	-89.2	-166.0	413.9	404.4	9.52	43.481		
2,100.0	2,012.2	2,048.7	2,034.5	10.3	5.3	158.26	-96.2	-176.7	441.1	431.1	10.05	43.890		
2,200.0	2,106.1	2,145.0	2,129.8	11.0	5.6	158.32	-103.2	-187.3	468.3	457.7	10.58	44.256		
2,300.0	2,200.1	2,241.2	2,225.2	11.6	5.9	158.37	-110.1	-198.0	495.4	484.3	11.11	44.587		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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						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	36.40	66.3	48.9	82.4				
100.0	100.0	100.0	100.0	0.1	0.1	36.40	66.3	48.9	82.4	82.1	0.27	310.440	
200.0	200.0	200.0	200.0	0.3	0.3	36.40	66.3	48.9	82.4	81.7	0.61	134.054 CC, ES	
300.0	300.0	298.9	298.9	0.5	0.5	-153.99	66.2	49.5	85.0	84.1	0.96	88.307	
400.0	399.6	396.1	395.9	0.7	0.7	-153.29	65.7	54.4	94.6	93.3	1.33	71.292	
500.0	498.8	491.9	491.3	1.0	0.9	-151.63	64.7	64.1	111.5	109.7	1.74	64.214	
600.0	597.1	585.6	583.9	1.4	1.2	-149.59	63.3	78.1	135.5	133.3	2.21	61.364	
700.0	694.3	677.8	674.3	1.8	1.5	-147.58	61.4	96.1	166.4	163.7	2.74	60.729 SF	
800.0	790.2	771.2	765.6	2.3	1.9	-146.48	59.4	115.5	202.3	198.9	3.32	60.841	
900.0	884.5	862.9	855.4	2.9	2.2	-146.38	57.5	134.5	241.9	238.0	3.94	61.470	
1,000.0	978.5	954.3	944.7	3.5	2.6	-146.78	55.5	153.4	282.5	277.9	4.57	61.853	
1,100.0	1,072.5	1,045.7	1,034.1	4.1	3.0	-147.09	53.6	172.4	323.0	317.8	5.20	62.073	
1,200.0	1,166.4	1,137.1	1,123.5	4.8	3.3	-147.33	51.6	191.3	363.6	357.7	5.84	62.204	
1,300.0	1,260.4	1,228.5	1,212.9	5.4	3.7	-147.52	49.7	210.2	404.1	397.6	6.49	62.284	
1,400.0	1,354.4	1,319.9	1,302.3	6.0	4.1	-147.67	47.7	229.2	444.7	437.6	7.13	62.333	
1,500.0	1,448.4	1,411.3	1,391.7	6.6	4.4	-147.80	45.8	248.1	485.3	477.5	7.78	62.362	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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							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	36.44	53.2	39.3	66.1					
100.0	100.0	100.0	100.0	0.1	0.1	36.44	53.2	39.3	66.1	65.8	0.27	249.173		
200.0	200.0	200.0	200.0	0.3	0.3	36.44	53.2	39.3	66.1	65.5	0.61	107.598 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-154.52	53.2	39.3	68.5	67.5	0.96	70.991		
400.0	399.6	399.3	399.3	0.7	0.7	-155.02	51.9	41.5	75.8	74.5	1.32	57.241		
500.0	498.8	498.0	497.7	1.0	0.9	-153.42	48.1	48.2	88.4	86.7	1.73	51.176		
600.0	597.1	595.6	594.4	1.4	1.1	-150.69	41.9	59.1	106.3	104.1	2.21	48.108		
700.0	694.3	691.6	688.8	1.8	1.5	-147.59	33.5	74.1	129.8	127.0	2.80	46.314		
800.0	790.2	785.6	780.4	2.3	1.9	-144.57	22.9	92.7	158.7	155.2	3.50	45.292		
900.0	884.5	879.7	871.6	2.9	2.3	-142.70	11.4	113.1	192.2	187.9	4.27	45.004		
1,000.0	978.5	973.6	962.5	3.5	2.7	-141.87	-0.1	133.4	226.6	221.5	5.06	44.752		
1,100.0	1,072.5	1,067.4	1,053.4	4.1	3.1	-141.26	-11.6	153.7	261.0	255.1	5.87	44.474		
1,200.0	1,166.4	1,161.3	1,144.3	4.8	3.6	-140.79	-23.1	174.0	295.4	288.7	6.68	44.210		
1,300.0	1,260.4	1,255.2	1,235.2	5.4	4.0	-140.41	-34.5	194.3	329.9	322.4	7.50	43.971		
1,400.0	1,354.4	1,349.0	1,326.1	6.0	4.4	-140.11	-46.0	214.6	364.4	356.0	8.33	43.760		
1,500.0	1,448.4	1,442.9	1,417.0	6.6	4.9	-139.86	-57.5	234.9	398.8	389.7	9.15	43.573		
1,600.0	1,542.3	1,536.7	1,507.9	7.2	5.3	-139.65	-69.0	255.2	433.3	423.3	9.98	43.408		
1,700.0	1,636.3	1,630.6	1,598.8	7.8	5.8	-139.47	-80.5	275.5	467.8	457.0	10.81	43.262 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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				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	36.50	39.7	29.4	49.4					
100.0	100.0	100.0	100.0	0.1	0.1	36.50	39.7	29.4	49.4	49.1	0.27	186.156		
200.0	200.0	200.0	200.0	0.3	0.3	36.50	39.7	29.4	49.4	48.8	0.61	80.386 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-154.77	39.7	29.4	51.7	50.8	0.96	53.658		
400.0	399.6	400.0	400.0	0.7	0.7	-156.54	38.7	30.5	58.7	57.4	1.32	44.444		
500.0	498.8	499.9	499.7	1.0	0.9	-155.37	34.3	35.3	69.6	67.9	1.71	40.724		
600.0	597.1	599.2	598.3	1.4	1.1	-152.45	26.4	43.8	84.6	82.5	2.18	38.896		
700.0	694.3	697.5	695.1	1.8	1.4	-148.85	15.2	56.0	104.0	101.2	2.76	37.652		
800.0	790.2	794.5	789.8	2.3	1.8	-145.23	0.8	71.6	127.8	124.3	3.49	36.605		
900.0	884.5	889.9	881.7	2.9	2.3	-141.98	-16.5	90.4	156.0	151.6	4.37	35.717		
1,000.0	978.5	984.8	972.1	3.5	2.8	-139.03	-36.1	111.6	185.7	180.3	5.33	34.842		
1,100.0	1,072.5	1,079.9	1,062.6	4.1	3.3	-136.82	-55.8	133.1	215.7	209.4	6.32	34.155		
1,200.0	1,166.4	1,175.0	1,153.2	4.8	3.8	-135.15	-75.6	154.5	245.9	238.6	7.31	33.633		
1,300.0	1,260.4	1,270.1	1,243.7	5.4	4.4	-133.84	-95.3	175.9	276.3	268.0	8.32	33.228		
1,400.0	1,354.4	1,365.2	1,334.2	6.0	4.9	-132.79	-115.1	197.4	306.8	297.5	9.32	32.907		
1,500.0	1,448.4	1,460.3	1,424.7	6.6	5.5	-131.94	-134.8	218.8	337.4	327.1	10.34	32.647		
1,600.0	1,542.3	1,555.4	1,515.2	7.2	6.0	-131.22	-154.6	240.3	368.1	356.7	11.35	32.434		
1,700.0	1,636.3	1,650.5	1,605.8	7.8	6.5	-130.62	-174.4	261.7	398.7	386.4	12.36	32.256		
1,800.0	1,730.3	1,745.6	1,696.3	8.5	7.1	-130.10	-194.1	283.2	429.4	416.1	13.38	32.105		
1,900.0	1,824.2	1,840.7	1,786.8	9.1	7.6	-129.65	-213.9	304.6	460.2	445.8	14.39	31.976		
2,000.0	1,918.2	1,935.8	1,877.3	9.7	8.2	-129.25	-233.6	326.1	491.0	475.5	15.41	31.864 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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					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	25.51	37.9	18.1	42.0					
100.0	100.0	100.0	100.0	0.1	0.1	25.51	37.9	18.1	42.0	41.7	0.27	158.216 CC		
200.0	200.0	200.0	200.0	0.3	0.3	25.51	37.9	18.1	42.0	41.4	0.61	68.321 ES		
300.0	300.0	301.2	301.1	0.5	0.5	-162.46	35.6	19.5	43.1	42.1	0.97	44.289		
400.0	399.6	402.2	401.8	0.7	0.7	-156.95	28.7	23.6	46.6	45.2	1.37	34.053		
500.0	498.8	502.8	501.5	1.0	1.0	-149.53	17.3	30.4	53.3	51.4	1.86	28.678		
600.0	597.1	602.7	599.7	1.4	1.4	-141.91	1.6	39.8	63.6	61.1	2.49	25.512		
700.0	694.3	701.9	696.1	1.8	1.8	-135.20	-18.3	51.8	78.0	74.7	3.31	23.584		
800.0	790.2	800.1	790.3	2.3	2.3	-129.72	-42.3	66.2	96.3	92.0	4.29	22.434		
900.0	884.5	897.2	881.8	2.9	3.0	-125.45	-70.1	82.8	118.2	112.8	5.43	21.789		
1,000.0	978.5	993.3	970.7	3.5	3.6	-121.17	-101.4	101.6	141.7	135.1	6.68	21.223		
1,100.0	1,072.5	1,087.9	1,056.3	4.1	4.4	-116.50	-136.0	122.3	166.8	158.8	8.01	20.813		
1,200.0	1,166.4	1,183.1	1,141.0	4.8	5.2	-112.13	-173.1	144.6	193.5	184.1	9.34	20.713 SF		
1,300.0	1,260.4	1,278.5	1,226.0	5.4	6.0	-108.80	-210.3	166.9	221.0	210.4	10.64	20.769		
1,400.0	1,354.4	1,373.9	1,311.0	6.0	6.7	-106.20	-247.6	189.3	249.1	237.2	11.92	20.897		
1,500.0	1,448.4	1,469.3	1,395.9	6.6	7.5	-104.12	-284.8	211.6	277.5	264.4	13.18	21.055		
1,600.0	1,542.3	1,564.8	1,480.9	7.2	8.3	-102.43	-322.1	233.9	306.3	291.8	14.43	21.222		
1,700.0	1,636.3	1,660.2	1,565.9	7.8	9.1	-101.03	-359.3	256.3	335.2	319.5	15.67	21.386		
1,800.0	1,730.3	1,755.6	1,650.8	8.5	9.9	-99.85	-396.5	278.6	364.3	347.4	16.91	21.545		
1,900.0	1,824.2	1,851.0	1,735.8	9.1	10.7	-98.84	-433.8	301.0	393.5	375.4	18.14	21.694		
2,000.0	1,918.2	1,946.5	1,820.8	9.7	11.5	-97.98	-471.0	323.3	422.8	403.5	19.36	21.835		
2,100.0	2,012.2	2,041.9	1,905.7	10.3	12.3	-97.22	-508.3	345.6	452.2	431.6	20.59	21.965		
2,200.0	2,106.1	2,137.3	1,990.7	11.0	13.1	-96.56	-545.5	368.0	481.7	459.8	21.81	22.087		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-99.16	-1.8	-11.3	11.4					
100.0	100.0	100.0	100.0	0.1	0.1	-99.16	-1.8	-11.3	11.4	11.2	0.27	43.142		
200.0	200.0	200.0	200.0	0.3	0.3	-99.16	-1.8	-11.3	11.4	10.8	0.61	18.629		
246.3	246.3	246.2	246.2	0.4	0.4	73.06	-1.9	-11.4	11.3	10.6	0.78	14.548 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	77.60	-3.1	-12.1	11.6	10.7	0.97	11.967		
400.0	399.6	399.3	399.1	0.7	0.7	87.14	-8.5	-15.6	13.9	12.5	1.39	9.967		
500.0	498.8	498.9	498.0	1.0	0.9	94.68	-18.3	-21.9	18.4	16.5	1.93	9.541 SF		
600.0	597.1	598.5	596.2	1.4	1.3	100.04	-32.2	-30.7	25.1	22.5	2.60	9.667		
700.0	694.3	698.0	694.1	1.8	1.6	109.91	-47.0	-40.2	33.5	30.2	3.33	10.076		
800.0	790.2	797.0	791.6	2.3	1.9	121.54	-61.7	-49.5	45.1	41.1	4.01	11.238		
900.0	884.5	895.2	888.3	2.9	2.3	131.85	-76.3	-58.9	60.9	56.3	4.57	13.328		
1,000.0	978.5	993.3	984.8	3.5	2.6	138.52	-90.8	-68.2	78.8	73.7	5.08	15.517		
1,100.0	1,072.5	1,091.4	1,081.3	4.1	3.0	142.71	-105.4	-77.4	97.4	91.8	5.59	17.429		
1,200.0	1,166.4	1,189.4	1,177.9	4.8	3.3	145.55	-119.9	-86.7	116.2	110.1	6.10	19.067		
1,300.0	1,260.4	1,287.5	1,274.4	5.4	3.6	147.59	-134.5	-96.0	135.3	128.7	6.61	20.470		
1,400.0	1,354.4	1,385.6	1,370.9	6.0	4.0	149.13	-149.1	-105.3	154.5	147.4	7.13	21.678		
1,500.0	1,448.4	1,483.6	1,467.5	6.6	4.3	150.32	-163.6	-114.6	173.8	166.2	7.65	22.725		
1,600.0	1,542.3	1,581.7	1,564.0	7.2	4.7	151.28	-178.2	-123.9	193.2	185.0	8.17	23.641		
1,700.0	1,636.3	1,679.7	1,660.5	7.8	5.0	152.07	-192.7	-133.2	212.6	203.9	8.70	24.446		
1,800.0	1,730.3	1,777.8	1,757.1	8.5	5.4	152.72	-207.3	-142.5	232.0	222.8	9.22	25.161		
1,900.0	1,824.2	1,875.9	1,853.6	9.1	5.7	153.27	-221.8	-151.8	251.4	241.7	9.75	25.798		
2,000.0	1,918.2	1,973.9	1,950.1	9.7	6.1	153.74	-236.4	-161.1	270.9	260.6	10.27	26.369		
2,100.0	2,012.2	2,072.0	2,046.6	10.3	6.4	154.15	-250.9	-170.4	290.4	279.6	10.80	26.884		
2,200.0	2,106.1	2,170.1	2,143.2	11.0	6.8	154.51	-265.5	-179.7	309.9	298.6	11.33	27.351		
2,300.0	2,200.1	2,268.1	2,239.7	11.6	7.1	154.83	-280.1	-189.0	329.4	317.5	11.86	27.777		
2,400.0	2,294.1	2,366.2	2,336.2	12.2	7.4	155.11	-294.6	-198.3	348.9	336.5	12.39	28.165		
2,500.0	2,388.0	2,464.3	2,432.8	12.8	7.8	155.36	-309.2	-207.6	368.4	355.5	12.92	28.522		
2,600.0	2,482.0	2,562.3	2,529.3	13.4	8.1	155.58	-323.7	-216.9	388.0	374.5	13.45	28.850		
2,700.0	2,576.0	2,660.4	2,625.8	14.1	8.5	155.78	-338.3	-226.2	407.5	393.5	13.98	29.154		
2,800.0	2,670.0	2,758.4	2,722.4	14.7	8.8	155.97	-352.8	-235.5	427.0	412.5	14.51	29.435		
2,900.0	2,763.9	2,856.5	2,818.9	15.3	9.2	156.14	-367.4	-244.8	446.6	431.5	15.04	29.696		
3,000.0	2,857.9	2,954.6	2,915.4	15.9	9.5	156.29	-381.9	-254.1	466.1	450.6	15.57	29.939		
3,100.0	2,951.9	3,052.6	3,012.0	16.6	9.9	156.44	-396.5	-263.4	485.7	469.6	16.10	30.166		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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				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	-7.13	11.3	-1.4	11.4					
100.0	100.0	100.0	100.0	0.1	0.1	-7.13	11.3	-1.4	11.4	11.1	0.27	42.893		
200.0	200.0	200.0	200.0	0.3	0.3	-7.13	11.3	-1.4	11.4	10.8	0.61	18.522 CC, ES		
300.0	300.0	300.3	300.2	0.5	0.5	156.12	9.7	-3.5	12.6	11.6	0.97	12.968		
400.0	399.6	400.3	400.0	0.7	0.7	142.49	4.8	-9.6	17.0	15.6	1.39	12.262 SF		
500.0	498.8	500.0	498.8	1.0	1.0	131.19	-3.3	-19.8	25.3	23.4	1.92	13.209		
600.0	597.1	599.0	596.1	1.4	1.4	124.02	-14.5	-34.0	37.7	35.1	2.60	14.509		
700.0	694.3	697.3	691.7	1.8	1.8	119.59	-28.7	-51.9	53.9	50.4	3.43	15.701		
800.0	790.2	794.6	785.0	2.3	2.3	116.70	-45.7	-73.4	73.7	69.3	4.42	16.683		
900.0	884.5	890.8	875.8	2.9	2.9	114.73	-65.5	-98.3	96.9	91.4	5.54	17.501		
1,000.0	978.5	986.6	964.7	3.5	3.6	112.19	-87.7	-126.3	121.9	115.1	6.72	18.127		
1,100.0	1,072.5	1,083.2	1,053.9	4.1	4.3	110.12	-110.8	-155.4	147.3	139.4	7.92	18.589		
1,200.0	1,166.4	1,179.8	1,143.1	4.8	5.0	108.66	-133.8	-184.4	172.9	163.7	9.13	18.940		
1,300.0	1,260.4	1,276.4	1,232.3	5.4	5.6	107.58	-156.8	-213.4	198.5	188.2	10.33	19.215		
1,400.0	1,354.4	1,373.0	1,321.6	6.0	6.3	106.75	-179.8	-242.4	224.2	212.7	11.54	19.435		
1,500.0	1,448.4	1,469.6	1,410.8	6.6	7.0	106.08	-202.8	-271.5	249.9	237.2	12.74	19.615		
1,600.0	1,542.3	1,566.2	1,500.0	7.2	7.7	105.54	-225.8	-300.5	275.7	261.7	13.95	19.766		
1,700.0	1,636.3	1,662.8	1,589.2	7.8	8.4	105.10	-248.8	-329.5	301.5	286.3	15.15	19.892		
1,800.0	1,730.3	1,759.4	1,678.4	8.5	9.1	104.72	-271.8	-358.5	327.3	310.9	16.36	20.001		
1,900.0	1,824.2	1,856.0	1,767.6	9.1	9.8	104.40	-294.8	-387.6	353.1	335.5	17.57	20.095		
2,000.0	1,918.2	1,952.6	1,856.8	9.7	10.5	104.12	-317.8	-416.6	378.9	360.1	18.78	20.177		
2,100.0	2,012.2	2,049.2	1,946.1	10.3	11.2	103.88	-340.8	-445.6	404.7	384.7	19.98	20.250		
2,200.0	2,106.1	2,145.8	2,035.3	11.0	11.9	103.66	-363.8	-474.6	430.5	409.3	21.19	20.314		
2,300.0	2,200.1	2,242.4	2,124.5	11.6	12.6	103.47	-386.9	-503.7	456.3	433.9	22.40	20.372		
2,400.0	2,294.1	2,339.0	2,213.7	12.2	13.3	103.31	-409.9	-532.7	482.2	458.6	23.61	20.423		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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	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	28.57	51.4	28.0	58.5					
100.0	100.0	100.0	100.0	0.1	0.1	28.57	51.4	28.0	58.5	58.2	0.27	220.428		
200.0	200.0	200.0	200.0	0.3	0.3	28.57	51.4	28.0	58.5	57.9	0.61	95.185 CC, ES		
300.0	300.0	301.7	301.7	0.5	0.5	-163.24	50.9	26.5	59.9	58.9	0.97	61.848		
400.0	399.6	403.6	403.4	0.7	0.7	-169.64	48.6	20.1	63.0	61.6	1.34	47.013		
500.0	498.8	504.8	503.8	1.0	1.0	-179.38	44.6	8.6	69.2	67.4	1.76	39.332		
600.0	597.1	604.8	602.3	1.4	1.3	169.66	39.0	-7.6	80.3	78.0	2.28	35.244		
700.0	694.3	703.2	698.3	1.8	1.7	159.51	31.8	-28.3	97.5	94.5	2.95	33.047		
800.0	790.2	799.7	791.1	2.3	2.2	151.12	23.2	-53.1	121.0	117.2	3.79	31.896		
900.0	884.5	894.1	880.5	2.9	2.8	144.64	13.3	-81.6	150.3	145.5	4.80	31.321		
1,000.0	978.5	986.6	966.6	3.5	3.5	139.29	2.2	-113.6	182.3	176.4	5.94	30.700		
1,100.0	1,072.5	1,077.6	1,049.6	4.1	4.2	134.40	-10.0	-148.8	216.4	209.3	7.14	30.296		
1,200.0	1,166.4	1,169.8	1,133.1	4.8	4.9	130.44	-22.9	-185.7	252.0	243.7	8.36	30.144 SF		
1,300.0	1,260.4	1,262.0	1,216.6	5.4	5.7	127.44	-35.7	-222.6	288.5	278.9	9.56	30.165		
1,400.0	1,354.4	1,354.2	1,300.1	6.0	6.4	125.11	-48.5	-259.5	325.4	314.7	10.75	30.266		
1,500.0	1,448.4	1,446.4	1,383.6	6.6	7.1	123.25	-61.3	-296.4	362.8	350.9	11.93	30.402		
1,600.0	1,542.3	1,538.5	1,467.1	7.2	7.9	121.74	-74.2	-333.3	400.4	387.3	13.11	30.550		
1,700.0	1,636.3	1,630.7	1,550.6	7.8	8.6	120.49	-87.0	-370.2	438.2	424.0	14.27	30.700		
1,800.0	1,730.3	1,722.9	1,634.0	8.5	9.4	119.43	-99.8	-407.1	476.2	460.8	15.44	30.846		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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				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	37.02	13.1	9.9	16.4					
100.0	100.0	100.0	100.0	0.1	0.1	37.02	13.1	9.9	16.4	16.2	0.27	61.902		
200.0	200.0	200.0	200.0	0.3	0.3	37.02	13.1	9.9	16.4	15.8	0.61	26.731 CC, ES		
300.0	300.0	300.3	300.3	0.5	0.5	-155.13	12.5	10.0	18.3	17.4	0.97	19.003		
400.0	399.6	400.9	400.8	0.7	0.7	-153.56	7.3	11.2	21.9	20.6	1.33	16.426		
500.0	498.8	501.6	500.9	1.0	0.9	-148.92	-3.0	13.5	26.8	25.0	1.76	15.202		
600.0	597.1	602.2	600.2	1.4	1.2	-143.14	-18.5	16.9	33.3	30.9	2.31	14.370		
700.0	694.3	702.7	698.5	1.8	1.6	-137.42	-39.0	21.5	41.5	38.5	3.04	13.645		
800.0	790.2	803.1	795.4	2.3	2.1	-132.30	-64.5	27.2	51.7	47.8	3.97	13.021		
900.0	884.5	903.2	890.5	2.9	2.7	-127.82	-94.8	34.0	63.7	58.6	5.09	12.519		
1,000.0	978.5	1,003.1	983.7	3.5	3.4	-121.75	-129.9	41.8	75.5	69.1	6.42	11.761		
1,100.0	1,072.5	1,102.2	1,074.2	4.1	4.1	-114.01	-169.4	50.6	87.5	79.6	7.92	11.051		
1,200.0	1,166.4	1,200.0	1,161.3	4.8	4.9	-105.41	-212.8	60.3	101.1	91.7	9.47	10.685 SF		
1,300.0	1,260.4	1,296.3	1,244.7	5.4	5.8	-96.66	-259.7	70.8	117.6	106.7	10.92	10.771		
1,400.0	1,354.4	1,392.6	1,326.6	6.0	6.7	-88.90	-309.2	81.8	137.4	125.2	12.18	11.285		
1,500.0	1,448.4	1,489.1	1,408.6	6.6	7.6	-83.08	-358.8	92.9	159.1	145.8	13.29	11.966		
1,600.0	1,542.3	1,585.6	1,490.6	7.2	8.5	-78.67	-408.5	104.0	181.9	167.6	14.33	12.694		
1,700.0	1,636.3	1,682.1	1,572.6	7.8	9.4	-75.24	-458.1	115.1	205.6	190.3	15.33	13.414		
1,800.0	1,730.3	1,778.5	1,654.6	8.5	10.3	-72.52	-507.7	126.2	229.8	213.5	16.30	14.100		
1,900.0	1,824.2	1,875.0	1,736.6	9.1	11.2	-70.32	-557.4	137.3	254.4	237.2	17.26	14.743		
2,000.0	1,918.2	1,971.5	1,818.6	9.7	12.1	-68.51	-607.0	148.3	279.4	261.2	18.21	15.341		
2,100.0	2,012.2	2,068.0	1,900.6	10.3	13.0	-66.99	-656.7	159.4	304.5	285.4	19.16	15.895		
2,200.0	2,106.1	2,164.5	1,982.6	11.0	13.9	-65.70	-706.3	170.5	329.8	309.7	20.10	16.406		
2,300.0	2,200.1	2,261.0	2,064.6	11.6	14.8	-64.60	-756.0	181.6	355.3	334.2	21.05	16.879		
2,400.0	2,294.1	2,357.5	2,146.6	12.2	15.7	-63.64	-805.6	192.7	380.8	358.8	21.99	17.316		
2,500.0	2,388.0	2,454.0	2,228.6	12.8	16.6	-62.81	-855.3	203.8	406.5	383.5	22.94	17.721		
2,600.0	2,482.0	2,550.5	2,310.6	13.4	17.5	-62.07	-904.9	214.9	432.2	408.3	23.88	18.096		
2,700.0	2,576.0	2,647.0	2,392.6	14.1	18.4	-61.41	-954.6	225.9	457.9	433.1	24.83	18.445		
2,800.0	2,670.0	2,743.5	2,474.6	14.7	19.3	-60.83	-1,004.2	237.0	483.8	458.0	25.77	18.770		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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					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	36.24	26.6	19.5	33.0					
100.0	100.0	100.0	100.0	0.1	0.1	36.24	26.6	19.5	33.0	32.7	0.27	124.271		
200.0	200.0	200.0	200.0	0.3	0.3	36.24	26.6	19.5	33.0	32.4	0.61	53.663 CC, ES		
300.0	300.0	300.8	300.7	0.5	0.5	-151.73	24.2	20.7	34.2	33.2	0.97	35.083		
400.0	399.6	401.3	401.0	0.7	0.7	-146.39	17.1	24.3	37.9	36.5	1.38	27.482		
500.0	498.8	501.6	500.3	1.0	1.0	-139.60	5.4	30.3	44.7	42.9	1.89	23.668		
600.0	597.1	601.3	598.4	1.4	1.4	-133.02	-10.8	38.6	55.0	52.4	2.55	21.529		
700.0	694.3	700.4	694.7	1.8	1.8	-127.47	-31.5	49.1	68.7	65.3	3.39	20.289		
800.0	790.2	798.7	789.0	2.3	2.3	-123.07	-56.3	61.8	85.9	81.5	4.39	19.576		
900.0	884.5	896.2	880.8	2.9	2.9	-119.67	-85.2	76.6	106.3	100.7	5.53	19.209		
1,000.0	978.5	992.7	970.1	3.5	3.6	-115.85	-117.8	93.2	128.1	121.3	6.79	18.867		
1,100.0	1,072.5	1,087.9	1,056.3	4.1	4.4	-111.36	-153.9	111.7	151.4	143.2	8.12	18.645 SF		
1,200.0	1,166.4	1,181.4	1,138.8	4.8	5.2	-106.63	-193.1	131.7	176.8	167.3	9.47	18.658		
1,300.0	1,260.4	1,272.8	1,217.3	5.4	6.1	-101.94	-234.8	153.0	204.9	194.1	10.82	18.935		
1,400.0	1,354.4	1,364.8	1,294.4	6.0	7.0	-97.51	-279.5	175.8	235.7	223.6	12.10	19.476		
1,500.0	1,448.4	1,458.3	1,372.5	6.6	7.9	-93.95	-325.2	199.1	267.8	254.5	13.34	20.071		
1,600.0	1,542.3	1,551.8	1,450.7	7.2	8.8	-91.15	-370.9	222.5	300.6	286.1	14.55	20.667		
1,700.0	1,636.3	1,645.4	1,528.9	7.8	9.8	-88.89	-416.6	245.8	334.0	318.3	15.73	21.237		
1,800.0	1,730.3	1,738.9	1,607.0	8.5	10.7	-87.05	-462.4	269.2	367.7	350.8	16.89	21.772		
1,900.0	1,824.2	1,832.4	1,685.2	9.1	11.6	-85.51	-508.1	292.5	401.8	383.7	18.04	22.267		
2,000.0	1,918.2	1,925.9	1,763.4	9.7	12.6	-84.20	-553.8	315.9	436.0	416.8	19.19	22.724		
2,100.0	2,012.2	2,019.5	1,841.6	10.3	13.5	-83.09	-599.5	339.2	470.4	450.1	20.32	23.145		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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 Federal 19-13D - 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	30.23	64.5	37.6	74.6					
100.0	100.0	100.0	100.0	0.1	0.1	30.23	64.5	37.6	74.6	74.3	0.27	281.253		
200.0	200.0	200.0	200.0	0.3	0.3	30.23	64.5	37.6	74.6	74.0	0.61	121.450 CC, ES		
300.0	300.0	302.4	302.3	0.5	0.5	-162.11	64.1	34.9	75.5	74.5	0.97	77.474		
400.0	399.6	404.2	403.8	0.7	0.7	-168.69	62.9	26.8	78.7	77.4	1.36	57.713		
500.0	498.8	504.8	503.5	1.0	1.0	-178.19	61.1	13.5	86.2	84.4	1.82	47.491		
600.0	597.1	603.6	600.6	1.4	1.4	171.44	58.6	-4.5	99.8	97.4	2.36	42.322		
700.0	694.3	700.3	694.6	1.8	1.8	161.96	55.4	-27.0	120.5	117.5	3.02	39.933		
800.0	790.2	794.4	784.8	2.3	2.3	154.15	51.7	-53.3	148.5	144.7	3.82	38.930		
900.0	884.5	885.5	870.9	2.9	2.9	148.13	47.5	-83.0	183.2	178.4	4.74	38.611		
1,000.0	978.5	974.2	953.2	3.5	3.6	143.36	42.9	-115.7	221.0	215.2	5.79	38.201		
1,100.0	1,072.5	1,061.7	1,032.8	4.1	4.3	139.11	37.9	-151.6	261.3	254.4	6.87	38.019		
1,200.0	1,166.4	1,151.2	1,113.9	4.8	5.0	135.68	32.6	-189.2	303.0	295.0	7.98	37.946 SF		
1,300.0	1,260.4	1,240.8	1,195.0	5.4	5.7	133.07	27.3	-226.9	345.4	336.3	9.09	38.002		
1,400.0	1,354.4	1,330.4	1,276.1	6.0	6.4	131.02	22.0	-264.6	388.2	378.0	10.18	38.116		
1,500.0	1,448.4	1,419.9	1,357.1	6.6	7.2	129.38	16.8	-302.2	431.4	420.1	11.28	38.256		
1,600.0	1,542.3	1,509.5	1,438.2	7.2	7.9	128.03	11.5	-339.9	474.8	462.5	12.36	38.405		

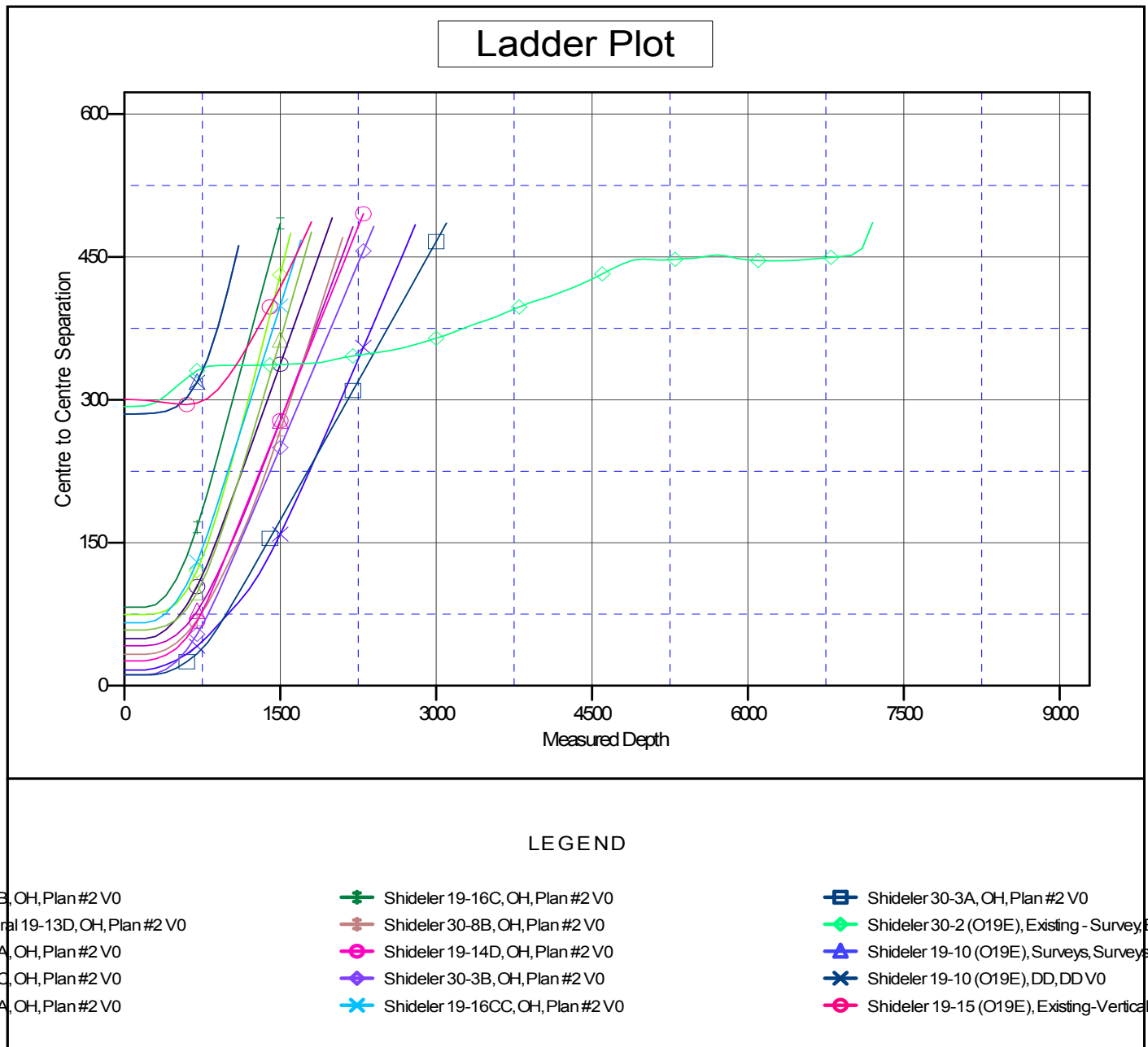
Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 30-2C
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 30-2C	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 30-2C
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