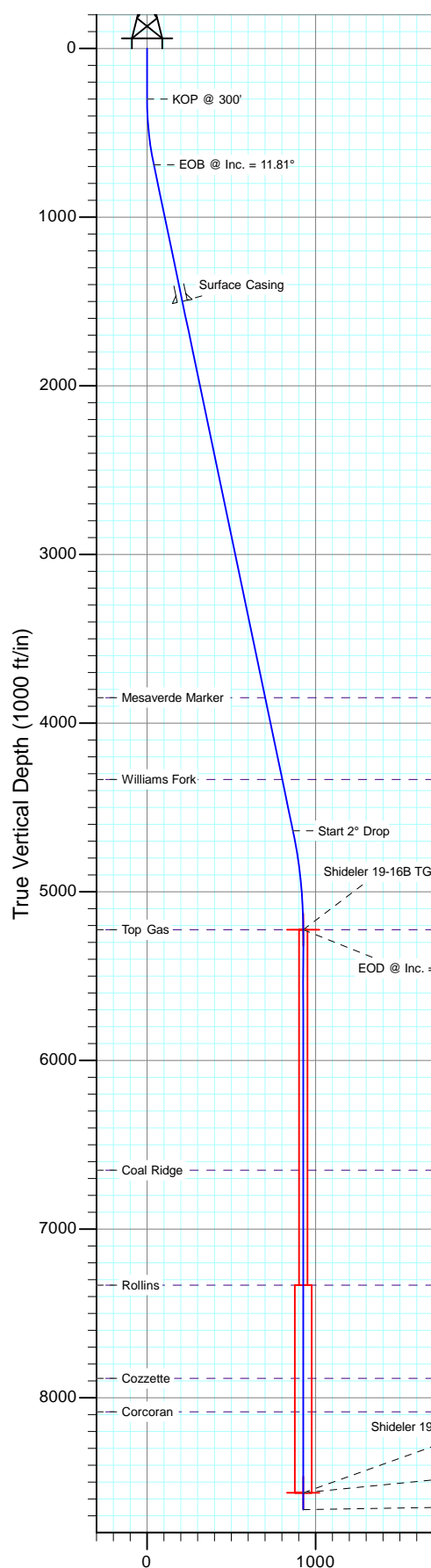
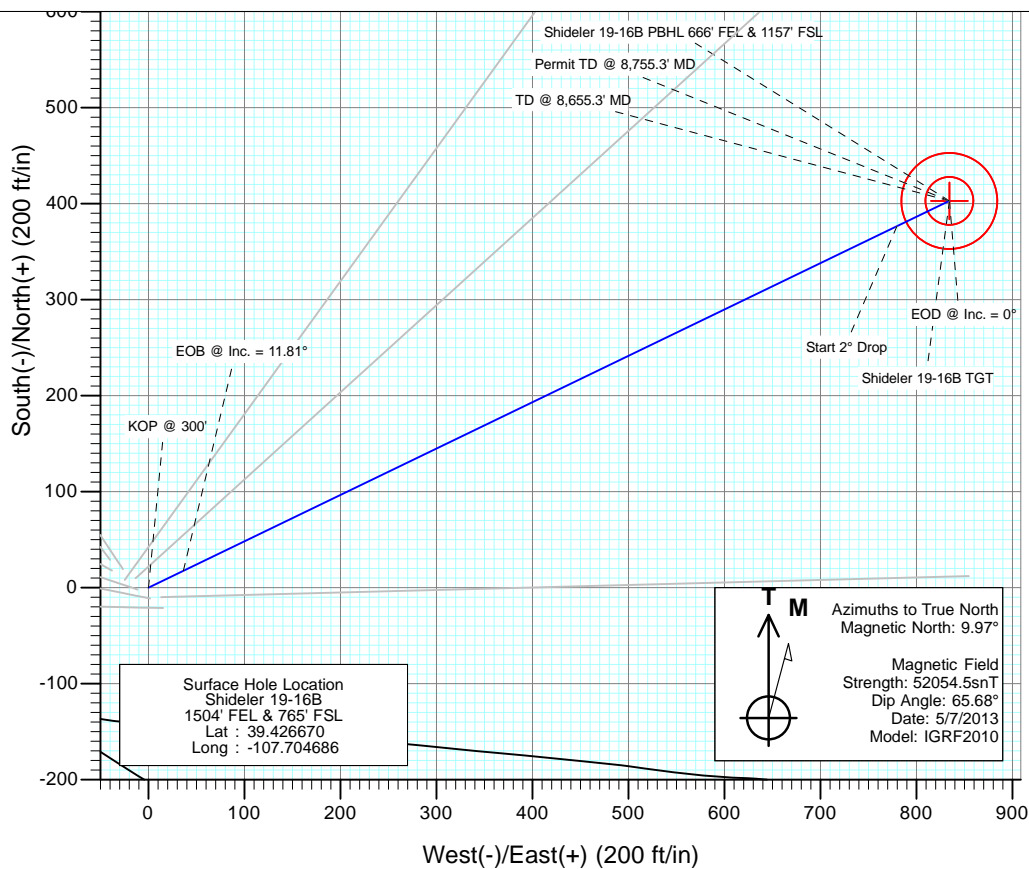




Project: Mamm Creek  
Site: O19EB Pad (2nd Occupation)  
Well: Shideler 19-16B  
Wellbore: OH  
Design: Plan #1



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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	693.7	11.81	64.23	690.9	17.6	36.4	3.00	64.23	40.4	
4	4726.8	11.81	64.23	4638.6	376.5	779.8	0.00	0.00	865.9	
5	5317.3	0.00	0.00	5225.0	402.9	834.4	2.00	180.00	926.6	Shideler 19-16B TGT
6	8655.3	0.00	0.00	8563.0	402.9	834.4	0.00	0.00	926.6	Shideler 19-16B PBHL 666' FEL & 1157' FSL
7	8755.3	0.00	0.00	8663.0	402.9	834.4	0.00	0.00	926.6	



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shideler 19-16B TGT	402.9	834.4	1588236.51	2378133.58	39.427776	-107.701732
Shideler 19-16B PBHL 666' FEL & 1157' FSL	402.9	834.4	1588236.51	2378133.58	39.427776	-107.701732

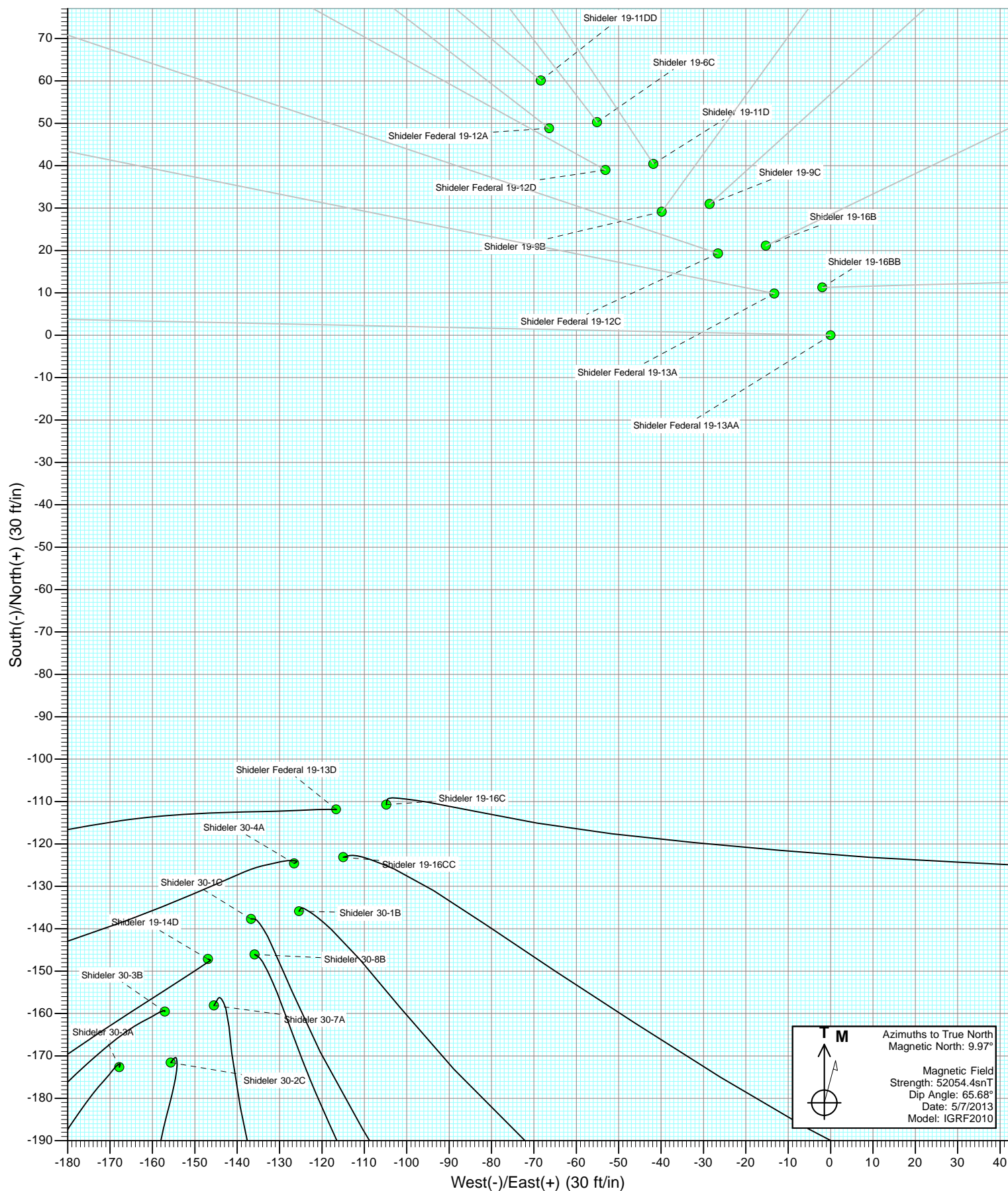
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3849.0	3920.1	Mesaverde Marker
4334.0	4415.6	Williams Fork
5225.0	5317.3	Top Gas
6651.0	6743.3	Coal Ridge
7332.0	7424.3	Rollins
7885.0	7977.3	Cozzette
8083.0	8175.3	Corcoran

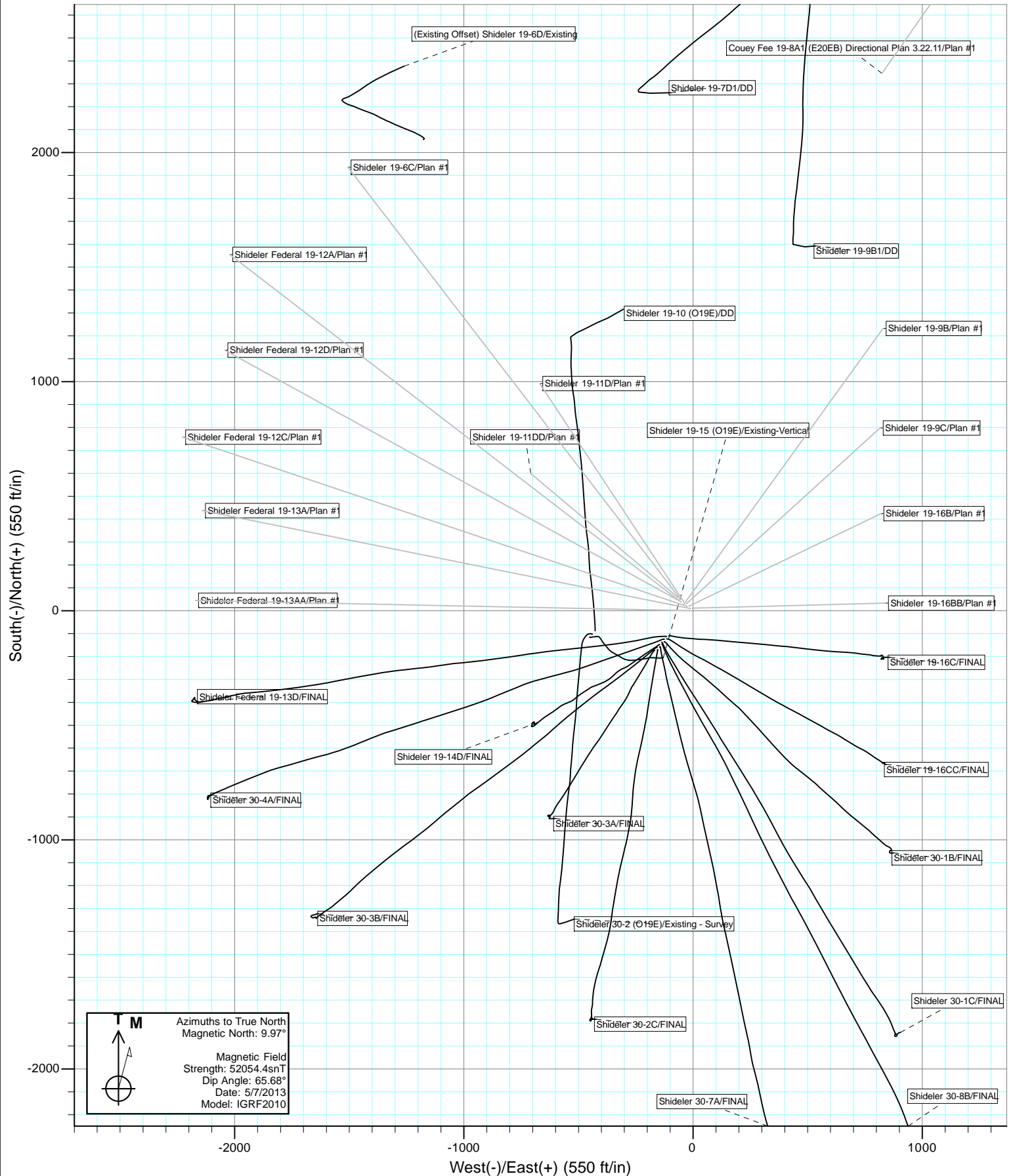
Plan #1  
Shideler 19-16B  
135XXX; SC  
KB=22' @ 6531.0ft (Nabors M-15)  
Ground Elevation @ 6509.0  
North American Datum 1983  
Well Shideler 19-16B, True North

Vertical Section at 64.23° (1000 ft/in)



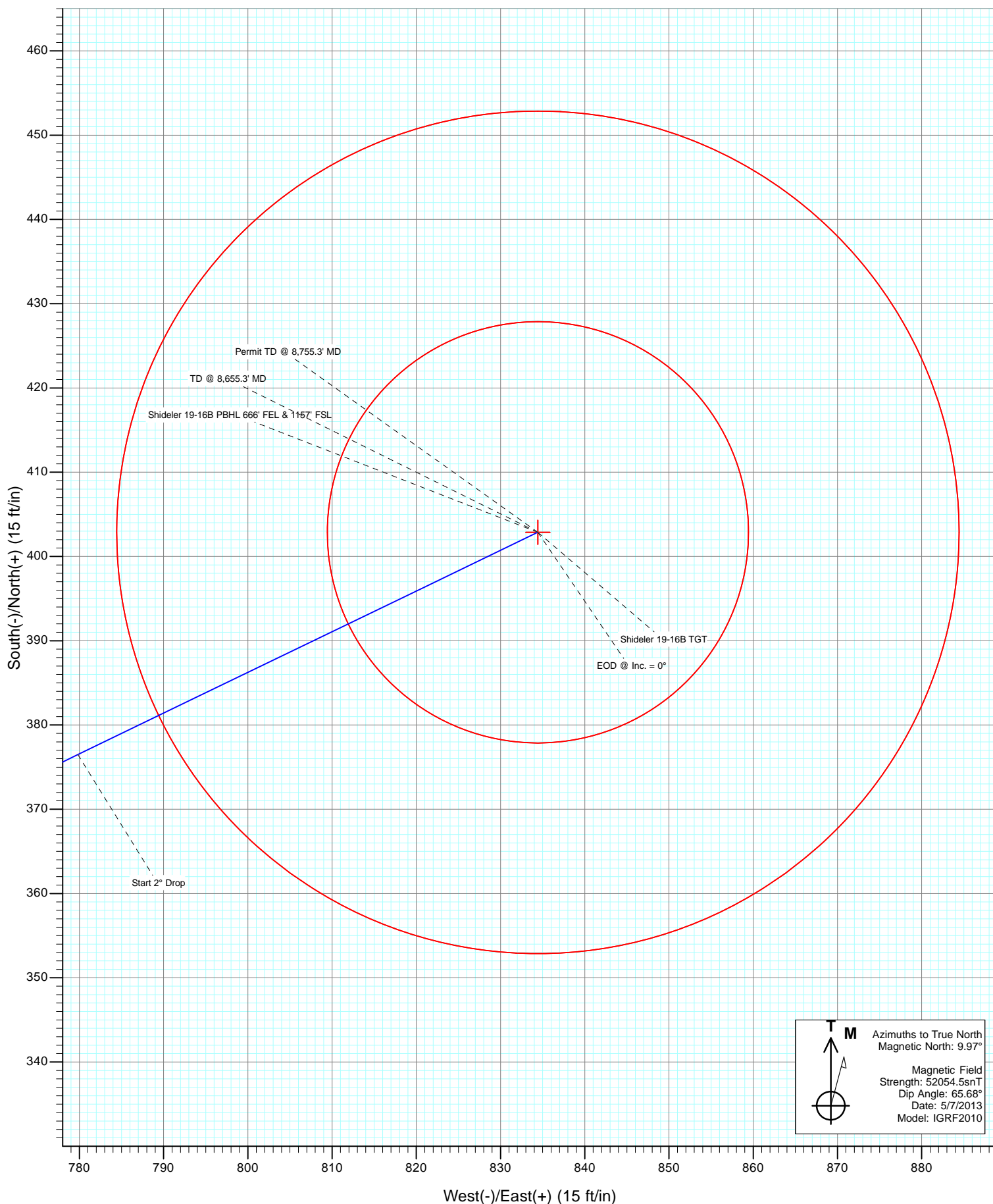
Project: Mamm Creek  
Site: O19EB Pad (2nd Occupation)







Project: Mamm Creek  
Site: O19EB Pad (2nd Occupation)  
Well: Shideler 19-16B  
Wellbore: OH  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site:</b>	O19EB Pad (2nd Occupation)	<b>North Reference:</b>	True
<b>Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

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

Site		O19EB Pad (2nd Occupation)			
Site Position:		Northing:	1,587,894.27 ft	Latitude:	39.426777
From:	Lat/Long	Easting:	2,377,237.48 ft	Longitude:	-107.704874
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.39 °

Well	Shideler 19-16B					
Well Position	+N/-S	0.0 ft	Northing:	1,587,854.01 ft	Latitude:	39.426670
	+E/-W	0.0 ft	Easting:	2,377,289.62 ft	Longitude:	-107.704686
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,509.0 ft

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

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	64.23

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
693.7	11.81	64.23	690.9	17.6	36.4	3.00	3.00	0.00	64.23	
4,726.8	11.81	64.23	4,638.6	376.5	779.8	0.00	0.00	0.00	0.00	
5,317.3	0.00	0.00	5,225.0	402.9	834.4	2.00	-2.00	0.00	180.00	Shideler 19-16B TGT
8,655.3	0.00	0.00	8,563.0	402.9	834.4	0.00	0.00	0.00	0.00	Shideler 19-16B PBH
8,755.3	0.00	0.00	8,663.0	402.9	834.4	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site:</b>	O19EB Pad (2nd Occupation)	<b>North Reference:</b>	True
<b>Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	3.00	64.23	400.0	1.1	2.4	2.6	3.00	3.00	
500.0	6.00	64.23	499.6	4.5	9.4	10.5	3.00	3.00	
600.0	9.00	64.23	598.8	10.2	21.2	23.5	3.00	3.00	
693.7	11.81	64.23	690.9	17.6	36.4	40.4	3.00	3.00	EOB @ Inc. = 11.81°
700.0	11.81	64.23	697.1	18.1	37.6	41.7	0.00	0.00	
800.0	11.81	64.23	795.0	27.0	56.0	62.2	0.00	0.00	
900.0	11.81	64.23	892.8	35.9	74.4	82.7	0.00	0.00	
1,000.0	11.81	64.23	990.7	44.8	92.9	103.1	0.00	0.00	
1,100.0	11.81	64.23	1,088.6	53.7	111.3	123.6	0.00	0.00	
1,200.0	11.81	64.23	1,186.5	62.6	129.7	144.1	0.00	0.00	
1,300.0	11.81	64.23	1,284.4	71.5	148.2	164.5	0.00	0.00	
1,400.0	11.81	64.23	1,382.3	80.4	166.6	185.0	0.00	0.00	
1,500.0	11.81	64.23	1,480.1	89.3	185.0	205.5	0.00	0.00	
1,520.3	11.81	64.23	1,500.0	91.1	188.8	209.6	0.00	0.00	Surface Casing
1,600.0	11.81	64.23	1,578.0	98.2	203.5	225.9	0.00	0.00	
1,700.0	11.81	64.23	1,675.9	107.1	221.9	246.4	0.00	0.00	
1,800.0	11.81	64.23	1,773.8	116.0	240.3	266.9	0.00	0.00	
1,900.0	11.81	64.23	1,871.7	124.9	258.8	287.3	0.00	0.00	
2,000.0	11.81	64.23	1,969.6	133.8	277.2	307.8	0.00	0.00	
2,100.0	11.81	64.23	2,067.4	142.7	295.6	328.3	0.00	0.00	
2,200.0	11.81	64.23	2,165.3	151.6	314.1	348.7	0.00	0.00	
2,300.0	11.81	64.23	2,263.2	160.5	332.5	369.2	0.00	0.00	
2,400.0	11.81	64.23	2,361.1	169.4	350.9	389.7	0.00	0.00	
2,500.0	11.81	64.23	2,459.0	178.3	369.4	410.2	0.00	0.00	
2,600.0	11.81	64.23	2,556.9	187.2	387.8	430.6	0.00	0.00	
2,700.0	11.81	64.23	2,654.7	196.1	406.2	451.1	0.00	0.00	
2,800.0	11.81	64.23	2,752.6	205.0	424.7	471.6	0.00	0.00	
2,900.0	11.81	64.23	2,850.5	213.9	443.1	492.0	0.00	0.00	
3,000.0	11.81	64.23	2,948.4	222.8	461.5	512.5	0.00	0.00	
3,100.0	11.81	64.23	3,046.3	231.7	480.0	533.0	0.00	0.00	
3,200.0	11.81	64.23	3,144.2	240.6	498.4	553.4	0.00	0.00	
3,300.0	11.81	64.23	3,242.0	249.5	516.8	573.9	0.00	0.00	
3,400.0	11.81	64.23	3,339.9	258.4	535.2	594.4	0.00	0.00	
3,500.0	11.81	64.23	3,437.8	267.3	553.7	614.8	0.00	0.00	
3,600.0	11.81	64.23	3,535.7	276.2	572.1	635.3	0.00	0.00	
3,700.0	11.81	64.23	3,633.6	285.1	590.5	655.8	0.00	0.00	
3,800.0	11.81	64.23	3,731.5	294.0	609.0	676.2	0.00	0.00	
3,900.0	11.81	64.23	3,829.3	302.9	627.4	696.7	0.00	0.00	
3,920.1	11.81	64.23	3,849.0	304.7	631.1	700.8	0.00	0.00	Mesaverde Marker
4,000.0	11.81	64.23	3,927.2	311.8	645.8	717.2	0.00	0.00	
4,100.0	11.81	64.23	4,025.1	320.7	664.3	737.6	0.00	0.00	
4,200.0	11.81	64.23	4,123.0	329.6	682.7	758.1	0.00	0.00	
4,300.0	11.81	64.23	4,220.9	338.5	701.1	778.6	0.00	0.00	
4,400.0	11.81	64.23	4,318.7	347.4	719.6	799.1	0.00	0.00	
4,415.6	11.81	64.23	4,334.0	348.8	722.4	802.2	0.00	0.00	Williams Fork
4,500.0	11.81	64.23	4,416.6	356.3	738.0	819.5	0.00	0.00	
4,600.0	11.81	64.23	4,514.5	365.2	756.4	840.0	0.00	0.00	
4,700.0	11.81	64.23	4,612.4	374.1	774.9	860.5	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site:</b>	O19EB Pad (2nd Occupation)	<b>North Reference:</b>	True
<b>Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,726.8	11.81	64.23	4,638.6	376.5	779.8	865.9	0.00	0.00	Start 2° Drop
4,800.0	10.35	64.23	4,710.5	382.6	792.5	880.0	2.00	-2.00	
4,900.0	8.35	64.23	4,809.1	389.7	807.1	896.2	2.00	-2.00	
5,000.0	6.35	64.23	4,908.3	395.2	818.6	909.0	2.00	-2.00	
5,100.0	4.35	64.23	5,007.9	399.3	827.0	918.4	2.00	-2.00	
5,200.0	2.35	64.23	5,107.7	401.8	832.3	924.2	2.00	-2.00	
5,300.0	0.35	64.23	5,207.7	402.8	834.4	926.5	2.00	-2.00	
5,317.3	0.00	0.00	5,225.0	402.9	834.4	926.6	2.00	-2.00	EOD @ Inc. = 0° - Top Gas
5,400.0	0.00	0.00	5,307.7	402.9	834.4	926.6	0.00	0.00	
5,500.0	0.00	0.00	5,407.7	402.9	834.4	926.6	0.00	0.00	
5,600.0	0.00	0.00	5,507.7	402.9	834.4	926.6	0.00	0.00	
5,700.0	0.00	0.00	5,607.7	402.9	834.4	926.6	0.00	0.00	
5,800.0	0.00	0.00	5,707.7	402.9	834.4	926.6	0.00	0.00	
5,900.0	0.00	0.00	5,807.7	402.9	834.4	926.6	0.00	0.00	
6,000.0	0.00	0.00	5,907.7	402.9	834.4	926.6	0.00	0.00	
6,100.0	0.00	0.00	6,007.7	402.9	834.4	926.6	0.00	0.00	
6,200.0	0.00	0.00	6,107.7	402.9	834.4	926.6	0.00	0.00	
6,300.0	0.00	0.00	6,207.7	402.9	834.4	926.6	0.00	0.00	
6,400.0	0.00	0.00	6,307.7	402.9	834.4	926.6	0.00	0.00	
6,500.0	0.00	0.00	6,407.7	402.9	834.4	926.6	0.00	0.00	
6,600.0	0.00	0.00	6,507.7	402.9	834.4	926.6	0.00	0.00	
6,700.0	0.00	0.00	6,607.7	402.9	834.4	926.6	0.00	0.00	
6,743.3	0.00	0.00	6,651.0	402.9	834.4	926.6	0.00	0.00	Coal Ridge
6,800.0	0.00	0.00	6,707.7	402.9	834.4	926.6	0.00	0.00	
6,900.0	0.00	0.00	6,807.7	402.9	834.4	926.6	0.00	0.00	
7,000.0	0.00	0.00	6,907.7	402.9	834.4	926.6	0.00	0.00	
7,100.0	0.00	0.00	7,007.7	402.9	834.4	926.6	0.00	0.00	
7,200.0	0.00	0.00	7,107.7	402.9	834.4	926.6	0.00	0.00	
7,300.0	0.00	0.00	7,207.7	402.9	834.4	926.6	0.00	0.00	
7,400.0	0.00	0.00	7,307.7	402.9	834.4	926.6	0.00	0.00	
7,424.3	0.00	0.00	7,332.0	402.9	834.4	926.6	0.00	0.00	Rollins
7,500.0	0.00	0.00	7,407.7	402.9	834.4	926.6	0.00	0.00	
7,600.0	0.00	0.00	7,507.7	402.9	834.4	926.6	0.00	0.00	
7,700.0	0.00	0.00	7,607.7	402.9	834.4	926.6	0.00	0.00	
7,800.0	0.00	0.00	7,707.7	402.9	834.4	926.6	0.00	0.00	
7,900.0	0.00	0.00	7,807.7	402.9	834.4	926.6	0.00	0.00	
7,977.3	0.00	0.00	7,885.0	402.9	834.4	926.6	0.00	0.00	Cozzette
8,000.0	0.00	0.00	7,907.7	402.9	834.4	926.6	0.00	0.00	
8,100.0	0.00	0.00	8,007.7	402.9	834.4	926.6	0.00	0.00	
8,175.3	0.00	0.00	8,083.0	402.9	834.4	926.6	0.00	0.00	Corcoran
8,200.0	0.00	0.00	8,107.7	402.9	834.4	926.6	0.00	0.00	
8,300.0	0.00	0.00	8,207.7	402.9	834.4	926.6	0.00	0.00	
8,400.0	0.00	0.00	8,307.7	402.9	834.4	926.6	0.00	0.00	
8,500.0	0.00	0.00	8,407.7	402.9	834.4	926.6	0.00	0.00	
8,600.0	0.00	0.00	8,507.7	402.9	834.4	926.6	0.00	0.00	
8,655.3	0.00	0.00	8,563.0	402.9	834.4	926.6	0.00	0.00	TD @ 8,655.3' MD
8,700.0	0.00	0.00	8,607.7	402.9	834.4	926.6	0.00	0.00	
8,755.3	0.00	0.00	8,663.0	402.9	834.4	926.6	0.00	0.00	Permit TD @ 8,755.3' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site:</b>	O19EB Pad (2nd Occupation)	<b>North Reference:</b>	True
<b>Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Shideler 19-16B PBHL 6	0.00	0.00	8,563.0	402.9	834.4	1,588,236.51	2,378,133.58	39.427776	-107.701732
- plan hits target center									
- Circle (radius 50.0)									
Shideler 19-16B TGT	0.00	0.00	5,225.0	402.9	834.4	1,588,236.51	2,378,133.58	39.427776	-107.701732
- plan hits target center									
- Circle (radius 25.0)									

Casing Points				
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
(ft)	(ft)	Name	(in)	(in)
1,520.3	1,500.0	Surface Casing		

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
3,920.1	3,849.0	Mesaverde Marker				
4,415.6	4,334.0	Williams Fork				
5,317.3	5,225.0	Top Gas				
6,743.3	6,651.0	Coal Ridge				
7,424.3	7,332.0	Rollins				
7,977.3	7,885.0	Cozzette				
8,175.3	8,083.0	Corcoran				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300'
693.7	690.9	17.6	36.4	EOB @ Inc. = 11.81°
4,726.8	4,638.6	376.5	779.8	Start 2° Drop
5,317.3	5,225.0	402.9	834.4	EOD @ Inc. = 0°
8,655.3	8,563.0	402.9	834.4	TD @ 8,655.3' MD
8,755.3	8,663.0	402.9	834.4	Permit TD @ 8,755.3' MD



# **EnCana Oil & Gas (USA) Inc**

**Mamm Creek**

**O19EB Pad (2nd Occupation)**

**Shideler 19-16B**

**OH**

**Plan #1**

## **Anticollision Report**

**09 May, 2013**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	5/8/2013		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	8,755.3	Plan #1 (OH)	MWD	Geolink MWD

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
O19EB Pad (1st Occupation)						
(Existing Offset) Shideler 19-6D - Existing - Existing						Out of range
Shideler 19-14D - OH - FINAL	208.9	208.9	213.5	212.8	327.115	CC, ES
Shideler 19-14D - OH - FINAL	1,300.0	1,224.3	484.2	479.8	109.918	SF
Shideler 19-16C - OH - FINAL	382.7	388.7	156.3	155.0	121.989	CC
Shideler 19-16C - OH - FINAL	400.0	406.3	156.3	155.0	116.030	ES
Shideler 19-16C - OH - FINAL	3,800.0	3,800.7	492.6	465.4	18.088	SF
Shideler 19-16CC - OH - FINAL	333.1	335.7	173.5	172.4	158.419	CC, ES
Shideler 19-16CC - OH - FINAL	2,100.0	2,062.0	491.2	477.4	35.550	SF
Shideler 30-1B - OH - FINAL	308.8	309.6	190.6	189.6	190.057	CC, ES
Shideler 30-1B - OH - FINAL	1,700.0	1,642.2	495.5	485.0	47.355	SF
Shideler 30-1C - OH - FINAL	248.9	248.9	199.3	198.6	251.524	CC, ES
Shideler 30-1C - OH - FINAL	1,300.0	1,169.8	493.2	486.1	69.693	SF
Shideler 30-2C - OH - FINAL	240.2	240.2	236.8	236.0	310.031	CC, ES
Shideler 30-2C - OH - FINAL	1,100.0	944.8	493.1	489.0	120.269	SF
Shideler 30-3A - OH - FINAL	217.5	217.5	245.9	245.2	360.228	CC, ES
Shideler 30-3A - OH - FINAL	1,100.0	1,008.0	477.4	473.6	125.942	SF
Shideler 30-3B - OH - FINAL	210.5	210.5	229.5	228.8	348.667	CC, ES
Shideler 30-3B - OH - FINAL	800.0	709.9	357.7	355.1	136.880	SF
Shideler 30-4A - OH - FINAL	198.6	198.6	182.6	181.9	295.981	CC
Shideler 30-4A - OH - FINAL	200.0	200.0	182.6	181.9	293.664	ES
Shideler 30-4A - OH - FINAL	700.0	646.6	269.8	267.4	114.777	SF
Shideler 30-7A - OH - FINAL	267.4	267.4	219.2	218.3	255.022	CC, ES
Shideler 30-7A - OH - FINAL	1,200.0	1,047.8	493.1	487.8	92.955	SF
Shideler 30-8B - OH - FINAL	186.3	186.4	206.1	205.5	359.010	CC
Shideler 30-8B - OH - FINAL	200.0	199.7	206.1	205.5	331.806	ES
Shideler 30-8B - OH - FINAL	1,200.0	1,065.8	470.8	464.7	77.817	SF
Shideler Federal 19-13D - OH - FINAL	154.2	154.2	167.2	166.7	362.226	CC
Shideler Federal 19-13D - OH - FINAL	200.0	199.5	167.2	166.6	269.585	ES
Shideler Federal 19-13D - OH - FINAL	700.0	648.4	253.6	251.2	104.058	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
O19EB Pad (2nd Occupation)						
Shideler 19-11D - OH - Plan #1	300.0	300.0	32.8	31.9	33.830	CC, ES
Shideler 19-11D - OH - Plan #1	500.0	497.9	41.0	39.3	24.264	SF
Shideler 19-11DD - OH - Plan #1	200.0	200.0	65.9	65.2	106.012	CC, ES
Shideler 19-11DD - OH - Plan #1	500.0	488.2	90.0	88.4	53.584	SF
Shideler 19-16BB - OH - Plan #1	445.4	445.1	15.1	13.6	10.050	CC, ES
Shideler 19-16BB - OH - Plan #1	500.0	499.4	15.7	14.0	9.151	SF
Shideler 19-6C - OH - Plan #1	300.0	300.0	49.4	48.4	50.855	CC, ES
Shideler 19-6C - OH - Plan #1	500.0	495.6	60.2	58.5	35.616	SF
Shideler 19-9B - OH - Plan #1	300.0	300.0	25.8	24.9	26.637	CC, ES
Shideler 19-9B - OH - Plan #1	900.0	898.6	65.2	60.6	14.172	SF
Shideler 19-9C - OH - Plan #1	306.1	306.2	16.2	15.2	16.155	CC, ES
Shideler 19-9C - OH - Plan #1	7,654.5	7,700.8	374.1	334.0	9.329	SF
Shideler Federal 19-12A - OH - Plan #1	200.0	200.0	58.1	57.5	93.575	CC, ES
Shideler Federal 19-12A - OH - Plan #1	500.0	488.0	86.7	85.1	51.662	SF
Shideler Federal 19-12C - OH - Plan #1	300.0	300.0	11.4	10.5	11.795	CC, ES
Shideler Federal 19-12C - OH - Plan #1	400.0	399.6	14.5	13.2	11.026	SF
Shideler Federal 19-12D - OH - Plan #1	300.0	300.0	41.8	40.9	43.125	CC, ES
Shideler Federal 19-12D - OH - Plan #1	500.0	494.9	56.7	55.0	33.774	SF
Shideler Federal 19-13A - OH - Plan #1	334.7	334.9	11.1	10.0	10.050	CC, ES
Shideler Federal 19-13A - OH - Plan #1	400.0	399.8	12.8	11.5	9.596	SF
Shideler Federal 19-13AA - OH - Plan #1	396.3	396.9	22.2	20.8	16.236	CC
Shideler Federal 19-13AA - OH - Plan #1	400.0	400.6	22.2	20.8	16.060	ES, SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												O19EB Pad (1st Occupation) - Shideler 19-14D - OH - FINAL		Offset Site Error:		0.0 ft	
Survey Program:												172-MWD, 1613-MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis				Distance						Warning			
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
0.0	0.0	0.0	0.0	0.0	0.0	-141.97	-168.3	-131.6	213.6								
100.0	100.0	100.2	100.2	0.1	0.2	-142.00	-168.3	-131.5	213.6	213.3	0.29	739.707					
200.0	200.0	200.2	200.2	0.3	0.3	-142.11	-168.5	-131.1	213.5	212.8	0.62	343.271					
208.9	208.9	208.9	208.9	0.3	0.3	-142.12	-168.5	-131.1	213.5	212.8	0.65	327.115	CC, ES				
300.0	300.0	296.1	296.1	0.5	0.5	-142.08	-169.0	-131.6	214.2	213.2	0.96	222.291					
400.0	400.0	386.0	385.9	0.7	0.6	154.17	-170.9	-134.5	220.3	219.0	1.30	170.108					
500.0	499.6	478.0	477.6	0.9	0.8	155.38	-175.2	-141.2	235.6	233.9	1.64	144.039					
600.0	598.8	569.0	567.9	1.1	1.1	156.99	-181.3	-150.6	259.1	257.1	1.98	130.916					
700.0	697.1	662.2	660.3	1.5	1.3	158.70	-188.0	-160.8	288.4	286.1	2.33	123.846					
800.0	795.0	755.5	752.7	1.9	1.6	160.51	-194.9	-171.0	320.3	317.6	2.68	119.366					
900.0	892.8	850.3	846.7	2.2	1.8	162.02	-202.0	-181.4	352.4	349.4	3.04	116.106					
1,000.0	990.7	943.4	938.9	2.6	2.1	163.26	-208.9	-191.8	384.9	381.5	3.38	113.830					
1,100.0	1,088.6	1,036.8	1,031.5	3.0	2.4	164.31	-216.1	-202.4	417.7	414.0	3.72	112.159					
1,200.0	1,186.5	1,129.5	1,123.2	3.4	2.6	165.19	-223.5	-213.0	450.9	446.8	4.06	110.951					
1,300.0	1,284.4	1,224.3	1,217.2	3.8	2.9	165.97	-231.0	-223.9	484.2	479.8	4.41	109.918	SF				

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (1st Occupation) - Shideler 19-16C - OH - FINAL													Offset Site Error: 0.0 ft	
Survey Program: 173-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-145.82	-131.9	-89.5	159.4					
100.0	100.0	100.7	100.7	0.1	0.2	-145.78	-131.6	-89.5	159.2	158.9	0.29	549.237		
200.0	200.0	201.3	201.3	0.3	0.3	-145.66	-130.9	-89.4	158.5	157.9	0.62	253.994		
300.0	300.0	303.0	303.0	0.5	0.5	-146.01	-130.3	-87.8	157.1	156.2	0.98	160.567		
382.7	382.7	388.7	388.5	0.6	0.7	148.34	-130.9	-82.4	156.3	155.0	1.28	121.989	CC	
400.0	400.0	406.3	406.0	0.7	0.7	147.96	-131.1	-80.8	156.3	155.0	1.35	116.030	ES	
500.0	499.6	507.8	506.7	0.9	1.0	145.26	-133.4	-68.6	158.6	156.9	1.78	89.044		
600.0	598.8	610.2	607.7	1.1	1.3	142.24	-136.5	-52.0	164.2	161.9	2.31	71.173		
700.0	697.1	712.6	708.1	1.5	1.7	139.52	-139.2	-32.0	172.4	169.5	2.93	58.750		
800.0	795.0	813.1	806.3	1.9	2.1	137.23	-141.4	-10.6	181.5	177.9	3.62	50.148		
900.0	892.8	913.5	904.2	2.2	2.5	134.96	-143.3	11.7	190.2	185.9	4.35	43.715		
1,000.0	990.7	1,014.0	1,002.0	2.6	2.9	132.66	-144.9	34.8	198.8	193.6	5.12	38.817		
1,100.0	1,088.6	1,113.1	1,098.5	3.0	3.3	130.75	-145.9	57.2	207.1	201.2	5.89	35.179		
1,200.0	1,186.5	1,211.7	1,194.7	3.4	3.8	129.20	-147.3	78.7	216.2	209.5	6.65	32.491		
1,300.0	1,284.4	1,311.1	1,291.7	3.8	4.2	127.71	-148.8	100.4	225.5	218.1	7.45	30.293		
1,400.0	1,382.3	1,410.0	1,388.1	4.2	4.6	126.25	-150.4	122.5	235.1	226.9	8.24	28.519		
1,500.0	1,480.1	1,509.3	1,485.0	4.6	5.0	124.97	-152.1	144.2	244.9	235.9	9.05	27.074		
1,600.0	1,578.0	1,608.3	1,581.5	5.0	5.5	123.72	-154.0	166.3	255.0	245.1	9.87	25.847		
1,700.0	1,675.9	1,707.0	1,677.7	5.4	5.9	122.61	-156.1	188.0	265.4	254.8	10.67	24.885		
1,800.0	1,773.8	1,805.5	1,773.9	5.8	6.3	121.71	-158.4	209.1	276.2	264.8	11.46	24.101		
1,900.0	1,871.7	1,908.0	1,874.2	6.2	6.7	121.07	-160.1	230.1	286.5	274.3	12.24	23.405		
2,000.0	1,969.6	2,007.0	1,971.1	6.6	7.1	120.51	-161.3	250.2	296.4	283.3	13.02	22.761		
2,100.0	2,067.4	2,104.5	2,066.5	7.0	7.5	119.90	-163.0	270.5	306.8	293.0	13.80	22.224		
2,200.0	2,165.3	2,203.6	2,163.3	7.4	7.9	119.25	-165.1	291.5	317.5	302.9	14.61	21.740		
2,300.0	2,263.2	2,302.9	2,260.2	7.8	8.3	118.55	-167.3	313.1	328.4	313.0	15.42	21.296		
2,400.0	2,361.1	2,401.9	2,356.8	8.2	8.8	117.88	-169.5	334.6	339.3	323.1	16.23	20.904		
2,500.0	2,459.0	2,502.5	2,455.0	8.6	9.2	117.21	-171.7	356.7	350.3	333.2	17.06	20.531		
2,600.0	2,556.9	2,601.2	2,551.1	9.0	9.6	116.51	-173.5	379.0	360.9	343.0	17.89	20.173		
2,700.0	2,654.7	2,700.8	2,648.0	9.4	10.1	115.76	-175.7	401.9	371.9	353.2	18.74	19.849		
2,800.0	2,752.6	2,800.0	2,744.7	9.8	10.5	115.19	-177.7	423.9	382.8	363.3	19.54	19.592		
2,900.0	2,850.5	2,897.7	2,840.2	10.2	10.9	114.87	-179.9	444.1	394.0	373.7	20.32	19.390		
3,000.0	2,948.4	2,998.5	2,938.8	10.6	11.3	114.50	-182.2	465.4	405.2	384.0	21.13	19.176		
3,100.0	3,046.3	3,097.4	3,035.4	11.0	11.7	114.11	-184.3	486.6	416.2	394.3	21.92	18.986		
3,200.0	3,144.2	3,195.3	3,131.3	11.4	12.1	113.98	-186.8	505.9	427.7	405.0	22.67	18.863		
3,300.0	3,242.0	3,295.1	3,229.1	11.8	12.5	113.90	-189.2	525.2	439.0	415.5	23.43	18.733		
3,400.0	3,339.9	3,393.4	3,325.6	12.2	12.9	113.84	-192.0	544.1	450.8	426.6	24.18	18.639		
3,500.0	3,437.8	3,497.1	3,427.4	12.6	13.3	113.80	-194.3	563.9	461.9	436.9	24.95	18.511		
3,600.0	3,535.7	3,597.3	3,525.7	13.0	13.7	113.76	-195.9	583.0	472.4	446.7	25.71	18.374		
3,700.0	3,633.6	3,698.9	3,625.4	13.4	14.1	113.70	-197.5	602.6	482.8	456.3	26.48	18.236		
3,800.0	3,731.5	3,800.7	3,725.3	13.8	14.4	113.66	-198.4	622.1	492.6	465.4	27.24	18.088	SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (1st Occupation) - Shideler 19-16CC - OH - FINAL												Offset Site Error:	0.0 ft
Survey Program: 202-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-145.34	-144.2	-99.7	175.4				
100.0	100.0	100.6	100.6	0.1	0.2	-145.39	-144.2	-99.5	175.2	174.9	0.29	597.677	
200.0	200.0	201.2	201.2	0.3	0.3	-145.53	-144.0	-98.9	174.7	174.1	0.62	279.678	
300.0	300.0	302.2	302.2	0.5	0.5	-145.90	-143.8	-97.4	173.7	172.7	0.98	177.722	
333.1	333.1	335.7	335.7	0.5	0.6	149.61	-144.0	-96.3	173.5	172.4	1.10	158.419 CC, ES	
400.0	400.0	402.5	402.4	0.7	0.7	148.97	-144.8	-93.2	174.5	173.2	1.34	130.565	
500.0	499.6	501.8	501.3	0.9	0.9	147.58	-148.0	-85.6	179.8	178.0	1.73	103.794	
600.0	598.8	598.8	597.5	1.1	1.2	145.64	-154.4	-74.8	190.6	188.4	2.20	86.700	
700.0	697.1	695.7	692.9	1.5	1.5	143.30	-164.0	-60.3	206.9	204.1	2.77	74.742	
800.0	795.0	793.1	787.7	1.9	1.9	140.67	-176.2	-42.0	225.8	222.3	3.44	65.624	
900.0	892.8	890.7	882.1	2.2	2.3	137.82	-189.5	-21.3	245.2	241.0	4.18	58.676	
1,000.0	990.7	990.5	978.4	2.6	2.8	135.04	-203.4	1.2	264.9	259.9	4.96	53.392	
1,100.0	1,088.6	1,091.4	1,075.8	3.0	3.3	132.62	-216.0	24.4	283.6	277.9	5.77	49.195	
1,200.0	1,186.5	1,188.6	1,169.4	3.4	3.8	130.43	-228.0	47.6	302.5	295.9	6.59	45.896	
1,300.0	1,284.4	1,284.5	1,261.6	3.8	4.3	128.39	-240.2	71.2	321.9	314.5	7.40	43.473	
1,400.0	1,382.3	1,380.4	1,353.9	4.2	4.8	126.74	-252.9	93.6	342.4	334.2	8.20	41.744	
1,500.0	1,480.1	1,479.1	1,449.1	4.6	5.3	125.31	-265.8	116.3	363.0	354.0	9.01	40.273	
1,600.0	1,578.0	1,576.4	1,542.9	5.0	5.7	124.02	-278.3	138.9	383.6	373.8	9.82	39.055	
1,700.0	1,675.9	1,673.2	1,636.2	5.4	6.2	122.85	-291.0	161.5	404.6	394.0	10.62	38.087	
1,800.0	1,773.8	1,769.1	1,728.7	5.8	6.7	121.87	-303.7	183.4	425.9	414.5	11.42	37.307	
1,900.0	1,871.7	1,866.1	1,822.1	6.2	7.2	120.93	-316.8	205.8	447.7	435.5	12.22	36.636	
2,000.0	1,969.6	1,964.1	1,916.4	6.6	7.7	120.01	-330.1	228.9	469.5	456.4	13.04	36.016	
2,100.0	2,067.4	2,062.0	2,010.8	7.0	8.2	119.22	-343.2	251.5	491.2	477.4	13.82	35.550 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (1st Occupation) - Shideler 30-1B - OH - FINAL												Offset Site Error:	0.0 ft	
Survey Program: 202-MWD												Offset Well Error:	0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-144.94	-157.0	-110.2	191.8					
100.0	100.0	100.5	100.5	0.1	0.2	-144.94	-156.9	-110.1	191.7	191.4	0.29	654.994		
200.0	200.0	201.0	201.0	0.3	0.3	-144.95	-156.6	-109.9	191.3	190.6	0.62	306.707		
300.0	300.0	301.0	301.0	0.5	0.5	-145.03	-156.2	-109.3	190.6	189.7	0.97	195.943		
308.8	308.8	309.6	309.6	0.5	0.5	150.70	-156.3	-109.1	190.6	189.6	1.00	190.057	CC, ES	
400.0	400.0	399.9	399.8	0.7	0.7	150.15	-157.9	-106.6	192.7	191.4	1.32	145.542		
500.0	499.6	496.5	496.2	0.9	0.9	149.16	-162.4	-101.4	200.4	198.7	1.70	117.956		
600.0	598.8	590.5	589.5	1.1	1.1	147.71	-170.6	-93.9	214.6	212.4	2.13	100.856		
700.0	697.1	684.5	682.1	1.5	1.4	145.85	-182.9	-83.6	235.2	232.6	2.64	88.951		
800.0	795.0	779.9	775.1	1.9	1.8	143.67	-198.9	-69.3	259.1	255.9	3.27	79.208		
900.0	892.8	877.7	869.1	2.2	2.3	140.74	-217.3	-50.2	283.2	279.2	4.00	70.762		
1,000.0	990.7	973.5	960.6	2.6	2.8	137.79	-236.3	-28.9	307.9	303.1	4.78	64.408		
1,100.0	1,088.6	1,069.4	1,051.7	3.0	3.3	134.95	-256.0	-5.9	333.2	327.6	5.59	59.568		
1,200.0	1,186.5	1,165.6	1,142.6	3.4	3.9	132.31	-275.8	18.3	359.1	352.6	6.43	55.800		
1,300.0	1,284.4	1,261.1	1,232.7	3.8	4.5	129.93	-295.6	42.9	385.4	378.1	7.28	52.956		
1,400.0	1,382.3	1,353.9	1,320.2	4.2	5.0	127.87	-315.2	67.1	412.6	404.5	8.10	50.919		
1,500.0	1,480.1	1,451.6	1,412.6	4.6	5.6	126.14	-335.5	91.3	440.3	431.3	8.92	49.373		
1,600.0	1,578.0	1,548.5	1,505.1	5.0	6.1	124.95	-354.7	112.9	467.6	457.9	9.69	48.245		
1,700.0	1,675.9	1,642.2	1,594.5	5.4	6.7	123.98	-373.5	133.5	495.5	485.0	10.46	47.355	SF	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (1st Occupation) - Shideler 30-1C - OH - FINAL												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 111-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-142.59	-158.8	-121.5	199.9				
100.0	100.0	100.2	100.2	0.1	0.1	-142.61	-158.8	-121.4	199.9	199.6	0.28	723.093	
200.0	200.0	201.1	201.1	0.3	0.3	-142.75	-158.8	-120.8	199.5	198.9	0.62	319.981	
248.9	248.9	248.9	248.9	0.4	0.4	-142.91	-159.0	-120.2	199.3	198.6	0.79	251.524 CC, ES	
300.0	300.0	297.5	297.4	0.5	0.5	-143.29	-160.1	-119.4	199.7	198.7	0.97	206.562	
400.0	400.0	389.8	389.5	0.7	0.7	151.10	-165.6	-116.3	205.0	203.6	1.32	154.919	
500.0	499.6	482.6	481.6	0.9	0.9	149.19	-176.2	-111.7	218.3	216.6	1.72	127.147	
600.0	598.8	575.2	572.7	1.1	1.2	146.88	-191.3	-104.6	239.0	236.8	2.19	109.150	
700.0	697.1	668.3	663.2	1.5	1.6	144.30	-210.0	-94.2	265.6	262.9	2.75	96.502	
800.0	795.0	754.0	745.6	1.9	2.0	142.14	-230.4	-81.9	296.2	292.8	3.37	87.873	
900.0	892.8	846.0	832.6	2.2	2.6	139.51	-255.8	-66.4	329.5	325.4	4.08	80.688	
1,000.0	990.7	923.4	904.5	2.6	3.1	137.15	-280.3	-51.5	366.0	361.2	4.78	76.555	
1,100.0	1,088.6	1,002.3	976.4	3.0	3.8	134.68	-308.1	-34.5	405.9	400.4	5.52	73.510	
1,200.0	1,186.5	1,084.7	1,050.0	3.4	4.4	132.16	-339.6	-15.1	448.8	442.6	6.29	71.329	
1,300.0	1,284.4	1,169.8	1,125.4	3.8	5.1	129.82	-373.1	5.8	493.2	486.1	7.08	69.693 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													O19EB Pad (1st Occupation) - Shideler 30-2C - OH - FINAL		Offset Site Error:		0.0 ft
Survey Program:													172-MWD, 1616-MWD		Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning				
(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	-143.92	-192.7	-140.4	238.4								
100.0	100.0	101.7	101.7	0.1	0.2	-143.92	-192.4	-140.2	238.0	237.7	0.29	815.437					
200.0	200.0	202.0	202.0	0.3	0.3	-143.94	-191.6	-139.5	237.0	236.4	0.63	378.101					
240.2	240.2	240.2	240.2	0.4	0.4	-143.99	-191.5	-139.2	236.8	236.0	0.76	310.031	CC, ES				
300.0	300.0	295.6	295.6	0.5	0.5	-144.15	-192.3	-139.0	237.3	236.4	0.96	246.251					
400.0	400.0	386.0	385.9	0.7	0.6	151.29	-196.5	-139.3	243.6	242.3	1.30	187.587					
500.0	499.6	470.6	470.1	0.9	0.8	151.09	-204.3	-141.2	259.2	257.5	1.63	158.658					
600.0	598.8	557.0	555.6	1.1	1.1	150.79	-216.7	-143.7	283.8	281.8	2.00	142.226					
700.0	697.1	638.1	635.1	1.5	1.4	150.35	-232.3	-146.1	316.7	314.3	2.38	133.192					
800.0	795.0	715.7	710.4	1.9	1.7	150.28	-250.7	-149.3	355.6	352.8	2.79	127.677					
900.0	892.8	790.5	782.1	2.2	2.1	149.98	-271.9	-152.9	398.4	395.2	3.21	124.234					
1,000.0	990.7	864.9	852.3	2.6	2.5	149.52	-296.0	-157.0	444.7	441.1	3.64	122.109					
1,100.0	1,088.6	944.8	927.1	3.0	3.0	149.02	-323.7	-161.8	493.1	489.0	4.10	120.269	SF				

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (1st Occupation) - Shideler 30-3A - OH - FINAL													Offset Site Error:	0.0 ft
Survey Program:		172-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	-141.79	-193.8	-152.5	246.6					
100.0	100.0	100.9	100.9	0.1	0.2	-141.77	-193.6	-152.5	246.4	246.1	0.29	849.799		
200.0	200.0	200.7	200.7	0.3	0.3	-141.72	-193.0	-152.3	245.9	245.3	0.62	394.806		
217.5	217.5	217.5	217.5	0.3	0.3	-141.70	-193.0	-152.4	245.9	245.2	0.68	360.228	CC, ES	
300.0	300.0	294.0	294.0	0.5	0.5	-141.63	-193.5	-153.2	246.9	246.0	0.96	257.173		
400.0	400.0	382.0	381.8	0.7	0.6	154.31	-196.9	-156.1	254.3	253.0	1.29	197.367		
500.0	499.6	467.1	466.6	0.9	0.8	154.72	-203.3	-161.2	270.9	269.3	1.61	167.793		
600.0	598.8	553.4	551.9	1.1	1.1	155.08	-213.6	-167.8	296.7	294.7	1.95	152.149		
700.0	697.1	642.2	639.4	1.5	1.3	155.47	-226.7	-175.4	329.6	327.3	2.30	143.288		
800.0	795.0	731.7	727.5	1.9	1.7	156.26	-240.9	-183.8	365.8	363.1	2.67	137.206		
900.0	892.8	822.2	816.3	2.2	2.0	156.84	-256.1	-192.2	402.8	399.8	3.04	132.572		
1,000.0	990.7	915.1	907.4	2.6	2.3	157.31	-272.0	-201.0	440.1	436.7	3.41	128.881		
1,100.0	1,088.6	1,008.0	998.5	3.0	2.7	157.82	-287.3	-210.3	477.4	473.6	3.79	125.942	SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (1st Occupation) - Shideler 30-3B - OH - FINAL													Offset Site Error:	0.0 ft
Survey Program: 160-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-141.87	-180.7	-141.8	229.7					
100.0	100.0	100.2	100.2	0.1	0.2	-141.86	-180.6	-141.8	229.6	229.3	0.29	800.257		
200.0	200.0	200.6	200.6	0.3	0.3	-141.84	-180.4	-141.8	229.5	228.9	0.62	368.732		
210.5	210.5	210.5	210.5	0.3	0.3	-141.83	-180.4	-141.8	229.5	228.8	0.66	348.667	CC, ES	
300.0	300.0	294.0	294.0	0.5	0.5	-141.65	-180.8	-143.0	230.6	229.7	0.96	240.048		
400.0	400.0	383.2	383.1	0.7	0.6	154.71	-183.1	-147.2	237.9	236.6	1.29	184.008		
500.0	499.6	469.3	468.7	0.9	0.8	155.73	-187.9	-154.3	254.6	252.9	1.62	156.854		
600.0	598.8	552.4	550.9	1.1	1.1	156.74	-196.0	-163.5	280.9	279.0	1.95	143.970		
700.0	697.1	633.2	630.2	1.5	1.4	157.80	-206.5	-175.0	316.4	314.1	2.28	138.553		
800.0	795.0	709.9	704.8	1.9	1.7	159.30	-217.7	-188.8	357.7	355.1	2.61	136.880	SF	
900.0	892.8	782.0	774.1	2.2	2.1	160.50	-230.1	-204.2	403.1	400.2	2.93	137.509		
1,000.0	990.7	846.0	834.8	2.6	2.5	161.45	-242.7	-220.0	452.6	449.4	3.23	140.099		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:		0.0 ft
Survey Program: 111-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						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	-142.62	-145.7	-111.3	183.3					
100.0	100.0	101.0	101.0	0.1	0.1	-142.67	-145.6	-111.0	183.1	182.8	0.28	658.847		
198.6	198.6	198.6	198.6	0.3	0.3	-142.69	-145.2	-110.6	182.6	181.9	0.62	295.981	CC	
200.0	200.0	200.0	200.0	0.3	0.3	-142.69	-145.2	-110.6	182.6	181.9	0.62	293.664	ES	
300.0	300.0	294.0	294.0	0.5	0.5	-142.12	-145.0	-112.8	183.9	182.9	0.96	191.370		
400.0	400.0	386.0	385.7	0.7	0.7	155.08	-146.3	-118.9	191.4	190.1	1.30	146.778		
500.0	499.6	474.4	473.6	0.9	0.9	157.05	-149.9	-128.1	208.4	206.8	1.65	126.549		
600.0	598.8	562.0	560.1	1.1	1.1	159.40	-155.3	-140.8	234.8	232.8	2.00	117.504		
700.0	697.1	646.6	643.0	1.5	1.4	161.93	-161.2	-156.6	269.8	267.4	2.35	114.777	SF	
800.0	795.0	725.4	719.5	1.9	1.8	164.52	-167.3	-174.3	310.7	308.0	2.69	115.294		
900.0	892.8	799.5	790.7	2.2	2.2	166.63	-174.1	-193.9	355.8	352.7	3.02	117.630		
1,000.0	990.7	870.1	857.5	2.6	2.6	168.42	-181.6	-215.5	405.1	401.8	3.34	121.228		
1,100.0	1,088.6	938.0	920.8	3.0	3.1	169.94	-189.5	-238.5	458.0	454.3	3.65	125.555		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (1st Occupation) - Shideler 30-7A - OH - FINAL												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 172-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-144.00	-179.2	-130.2	221.5				
100.0	100.0	102.1	102.1	0.1	0.2	-143.99	-178.8	-130.0	221.1	220.8	0.29	754.699	
200.0	200.0	203.0	203.0	0.3	0.3	-143.96	-177.7	-129.3	219.7	219.1	0.63	349.159	
267.4	267.4	267.4	267.4	0.4	0.4	-144.04	-177.4	-128.7	219.2	218.3	0.86	255.022	CC, ES
300.0	300.0	298.0	298.0	0.5	0.5	-144.19	-177.9	-128.3	219.3	218.4	0.97	226.209	
400.0	400.0	388.5	388.3	0.7	0.6	150.88	-182.0	-126.9	224.5	223.2	1.31	171.856	
500.0	499.6	478.0	477.4	0.9	0.8	150.13	-190.5	-126.0	238.5	236.8	1.66	143.573	
600.0	598.8	569.0	567.5	1.1	1.1	149.12	-203.2	-124.0	260.0	258.0	2.06	126.055	
700.0	697.1	655.5	652.4	1.5	1.4	147.89	-219.6	-120.7	289.0	286.5	2.51	114.986	
800.0	795.0	739.0	733.4	1.9	1.8	146.85	-239.4	-116.3	323.2	320.2	3.02	106.997	
900.0	892.8	818.4	809.4	2.2	2.2	145.56	-261.9	-111.3	360.8	357.3	3.55	101.618	
1,000.0	990.7	896.4	883.0	2.6	2.7	144.23	-287.3	-106.4	402.0	397.9	4.11	97.863	
1,100.0	1,088.6	973.3	954.4	3.0	3.2	142.82	-315.2	-100.7	446.2	441.5	4.70	95.008	
1,200.0	1,186.5	1,047.8	1,022.2	3.4	3.7	141.29	-345.1	-93.8	493.1	487.8	5.30	92.955	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												O19EB Pad (1st Occupation) - Shideler 30-8B - OH - FINAL		Offset Site Error:		0.0 ft	
Survey Program:		142-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning				
(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	-144.19	-167.2	-120.6	206.2								
100.0	100.0	100.0	100.0	0.1	0.1	-144.26	-167.3	-120.4	206.1	205.9	0.28	726.414					
186.3	186.3	186.4	186.4	0.3	0.3	-144.45	-167.7	-119.8	206.1	205.5	0.57	359.010	CC				
200.0	200.0	199.7	199.7	0.3	0.3	-144.50	-167.8	-119.7	206.1	205.5	0.62	331.806	ES				
300.0	300.0	295.2	295.1	0.5	0.5	-145.30	-170.3	-118.0	207.3	206.3	0.96	215.403					
400.0	400.0	388.7	388.4	0.7	0.7	149.14	-176.5	-115.2	213.4	212.0	1.33	160.517					
500.0	499.6	480.1	479.1	0.9	0.9	147.55	-187.1	-111.3	227.4	225.7	1.72	132.386					
600.0	598.8	572.0	569.6	1.1	1.2	145.66	-201.8	-105.3	248.6	246.5	2.16	114.959					
700.0	697.1	661.0	656.2	1.5	1.6	143.60	-220.3	-97.1	276.9	274.2	2.68	103.221					
800.0	795.0	745.5	737.4	1.9	2.0	141.83	-241.6	-87.0	309.8	306.5	3.28	94.481					
900.0	892.8	827.8	815.2	2.2	2.5	139.80	-265.9	-75.3	345.8	341.9	3.92	88.207					
1,000.0	990.7	911.8	893.1	2.6	3.1	137.55	-293.9	-61.4	384.8	380.2	4.62	83.263					
1,100.0	1,088.6	991.3	965.5	3.0	3.7	135.30	-322.8	-45.9	426.2	420.9	5.34	79.837					
1,200.0	1,186.5	1,065.8	1,032.0	3.4	4.3	133.21	-352.4	-30.0	470.8	464.7	6.05	77.817	SF				

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (1st Occupation) - Shideler Federal 19-13D - OH - FINAL													<b>Offset Site Error:</b> 0.0 ft
Survey Program: 111-MWD													<b>Offset Well Error:</b> 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	-142.66	-132.9	-101.4	167.2				
100.0	100.0	100.0	100.0	0.1	0.1	-142.69	-133.0	-101.3	167.2	166.9	0.28	605.558	
154.2	154.2	154.2	154.2	0.2	0.2	-142.71	-133.0	-101.3	167.2	166.7	0.46	362.226 CC	
200.0	200.0	199.5	199.5	0.3	0.3	-142.68	-133.0	-101.4	167.2	166.6	0.62	269.585 ES	
300.0	300.0	295.3	295.2	0.5	0.5	-142.04	-132.9	-103.7	168.7	167.7	0.96	174.900	
400.0	400.0	386.0	385.7	0.7	0.7	155.61	-133.2	-110.3	175.9	174.6	1.31	134.346	
500.0	499.6	478.0	476.9	0.9	0.9	159.05	-133.6	-122.3	192.2	190.5	1.69	113.694	
600.0	598.8	569.0	566.4	1.1	1.2	163.11	-134.3	-138.9	218.1	216.0	2.08	104.682	
700.0	697.1	648.4	643.8	1.5	1.6	166.38	-136.3	-156.4	253.6	251.2	2.44	104.058 SF	
800.0	795.0	726.7	719.4	1.9	2.0	169.26	-139.9	-176.3	295.9	293.1	2.79	106.153	
900.0	892.8	800.7	790.0	2.2	2.4	171.53	-144.5	-197.9	342.5	339.4	3.12	109.647	
1,000.0	990.7	871.6	856.7	2.6	2.9	173.42	-149.6	-221.6	393.2	389.8	3.45	113.911	
1,100.0	1,088.6	938.0	918.1	3.0	3.3	175.08	-154.2	-246.3	447.4	443.6	3.77	118.617	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-11D - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							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	-53.98	19.3	-26.6	32.8					
100.0	100.0	100.0	100.0	0.1	0.1	-53.98	19.3	-26.6	32.8	32.6	0.27	120.573		
200.0	200.0	200.0	200.0	0.3	0.3	-53.98	19.3	-26.6	32.8	32.2	0.62	52.835		
300.0	300.0	300.0	300.0	0.5	0.5	-53.98	19.3	-26.6	32.8	31.9	0.97	33.830 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	-122.05	19.3	-26.6	34.1	32.8	1.32	25.796		
500.0	499.6	497.9	497.9	0.9	0.8	-129.60	21.4	-27.9	41.0	39.3	1.69	24.264 SF		
600.0	598.8	594.6	594.3	1.1	1.0	-135.30	27.6	-32.0	56.1	54.0	2.09	26.907		
700.0	697.1	689.3	688.2	1.5	1.3	-138.43	37.6	-38.6	79.1	76.6	2.53	31.320		
800.0	795.0	781.9	779.4	1.9	1.6	-139.42	51.1	-47.5	107.4	104.4	3.01	35.659		
900.0	892.8	872.4	867.6	2.2	1.9	-138.70	67.8	-58.6	139.1	135.5	3.54	39.289		
1,000.0	990.7	965.7	957.9	2.6	2.3	-137.55	87.4	-71.5	172.9	168.8	4.10	42.165		
1,100.0	1,088.6	1,059.8	1,048.9	3.0	2.7	-136.76	107.2	-84.5	206.8	202.2	4.67	44.262		
1,200.0	1,186.5	1,153.8	1,139.9	3.4	3.2	-136.20	127.0	-97.6	240.8	235.5	5.25	45.846		
1,300.0	1,284.4	1,247.8	1,230.9	3.8	3.6	-135.77	146.7	-110.6	274.8	268.9	5.84	47.080		
1,400.0	1,382.3	1,341.9	1,321.9	4.2	4.0	-135.44	166.5	-123.7	308.7	302.3	6.42	48.066		
1,500.0	1,480.1	1,435.9	1,412.9	4.6	4.5	-135.17	186.3	-136.7	342.7	335.7	7.01	48.870		
1,600.0	1,578.0	1,529.9	1,503.9	5.0	4.9	-134.95	206.1	-149.8	376.7	369.1	7.60	49.538		
1,700.0	1,675.9	1,624.0	1,594.9	5.4	5.4	-134.77	225.9	-162.8	410.7	402.5	8.20	50.101		
1,800.0	1,773.8	1,718.0	1,686.0	5.8	5.8	-134.62	245.6	-175.9	444.7	435.9	8.79	50.581		
1,900.0	1,871.7	1,812.1	1,777.0	6.2	6.2	-134.48	265.4	-188.9	478.7	469.3	9.39	50.995		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-11DD - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-53.73	39.0	-53.1	65.9					
100.0	100.0	100.0	100.0	0.1	0.1	-53.73	39.0	-53.1	65.9	65.6	0.27	241.926		
200.0	200.0	200.0	200.0	0.3	0.3	-53.73	39.0	-53.1	65.9	65.2	0.62	106.012 CC, ES		
300.0	300.0	297.5	297.5	0.5	0.5	-53.65	39.9	-54.2	67.3	66.3	0.97	69.498		
400.0	400.0	393.6	393.4	0.7	0.7	-119.09	43.8	-58.8	74.8	73.5	1.31	56.978		
500.0	499.6	488.2	487.4	0.9	0.9	-122.28	50.6	-67.0	90.0	88.4	1.68	53.584 SF		
600.0	598.8	581.8	579.7	1.1	1.2	-125.96	60.3	-78.4	113.1	111.0	2.08	54.288		
700.0	697.1	677.3	673.8	1.5	1.5	-129.79	70.9	-91.0	141.0	138.4	2.53	55.668		
800.0	795.0	772.3	767.3	1.9	1.8	-133.36	81.5	-103.6	170.9	167.9	3.00	57.057		
900.0	892.8	867.2	860.9	2.2	2.2	-135.87	92.1	-116.2	201.3	197.8	3.46	58.093		
1,000.0	990.7	962.2	954.4	2.6	2.5	-137.73	102.7	-128.8	231.9	228.0	3.94	58.893		
1,100.0	1,088.6	1,057.1	1,047.9	3.0	2.8	-139.15	113.3	-141.3	262.7	258.3	4.41	59.528		
1,200.0	1,186.5	1,152.1	1,141.5	3.4	3.1	-140.27	123.9	-153.9	293.6	288.7	4.89	60.043		
1,300.0	1,284.4	1,247.1	1,235.0	3.8	3.5	-141.18	134.4	-166.5	324.6	319.3	5.37	60.470		
1,400.0	1,382.3	1,342.0	1,328.5	4.2	3.8	-141.94	145.0	-179.0	355.7	349.9	5.85	60.828		
1,500.0	1,480.1	1,437.0	1,422.0	4.6	4.1	-142.57	155.6	-191.6	386.8	380.5	6.33	61.134		
1,600.0	1,578.0	1,531.9	1,515.6	5.0	4.5	-143.10	166.2	-204.2	418.0	411.2	6.81	61.397		
1,700.0	1,675.9	1,626.9	1,609.1	5.4	4.8	-143.57	176.8	-216.7	449.1	441.8	7.29	61.627		
1,800.0	1,773.8	1,721.8	1,702.6	5.8	5.1	-143.97	187.4	-229.3	480.3	472.6	7.77	61.829		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-16BB - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	126.53	-9.8	13.3	16.5					
100.0	100.0	100.0	100.0	0.1	0.1	126.53	-9.8	13.3	16.5	16.2	0.27	60.682		
200.0	200.0	200.0	200.0	0.3	0.3	126.53	-9.8	13.3	16.5	15.9	0.62	26.591		
300.0	300.0	300.0	300.0	0.5	0.5	126.53	-9.8	13.3	16.5	15.6	0.97	17.026		
400.0	400.0	400.0	400.0	0.7	0.7	70.93	-9.8	13.3	15.5	14.2	1.32	11.684		
445.4	445.3	445.1	445.1	0.8	0.7	79.92	-9.8	13.8	15.1	13.6	1.50	10.050 CC, ES		
500.0	499.6	499.4	499.3	0.9	0.8	91.43	-9.8	15.9	15.7	14.0	1.72	9.151 SF		
600.0	598.8	598.9	598.6	1.1	1.0	108.42	-9.6	23.6	19.9	17.8	2.18	9.158		
700.0	697.1	698.6	697.4	1.5	1.3	117.50	-9.2	36.6	27.4	24.7	2.73	10.035		
800.0	795.0	798.3	795.5	1.9	1.6	118.07	-8.8	54.3	35.8	32.5	3.37	10.629		
900.0	892.8	897.9	893.3	2.2	2.0	116.97	-8.3	73.2	44.2	40.2	4.06	10.887		
1,000.0	990.7	997.6	991.1	2.6	2.3	116.22	-7.8	92.1	52.6	47.9	4.77	11.027		
1,100.0	1,088.6	1,097.2	1,089.0	3.0	2.7	115.68	-7.3	111.0	61.0	55.5	5.50	11.106		
1,200.0	1,186.5	1,196.9	1,186.8	3.4	3.0	115.27	-6.8	129.8	69.4	63.2	6.23	11.154		
1,300.0	1,284.4	1,296.5	1,284.7	3.8	3.4	114.95	-6.3	148.7	77.9	70.9	6.96	11.184		
1,400.0	1,382.3	1,396.2	1,382.5	4.2	3.8	114.69	-5.8	167.6	86.3	78.6	7.70	11.202		
1,500.0	1,480.1	1,495.8	1,480.3	4.6	4.1	114.47	-5.3	186.4	94.7	86.2	8.44	11.214		
1,600.0	1,578.0	1,595.4	1,578.2	5.0	4.5	114.29	-4.8	205.3	103.1	93.9	9.19	11.221		
1,700.0	1,675.9	1,695.1	1,676.0	5.4	4.9	114.14	-4.4	224.2	111.5	101.6	9.93	11.226		
1,800.0	1,773.8	1,794.7	1,773.9	5.8	5.2	114.01	-3.9	243.1	119.9	109.2	10.68	11.228		
1,900.0	1,871.7	1,894.4	1,871.7	6.2	5.6	113.90	-3.4	261.9	128.3	116.9	11.43	11.229		
2,000.0	1,969.6	1,994.0	1,969.5	6.6	6.0	113.80	-2.9	280.8	136.8	124.6	12.18	11.230		
2,100.0	2,067.4	2,093.7	2,067.4	7.0	6.4	113.71	-2.4	299.7	145.2	132.2	12.93	11.229		
2,200.0	2,165.3	2,193.3	2,165.2	7.4	6.7	113.63	-1.9	318.6	153.6	139.9	13.68	11.229		
2,300.0	2,263.2	2,293.0	2,263.1	7.8	7.1	113.56	-1.4	337.4	162.0	147.6	14.43	11.228		
2,400.0	2,361.1	2,392.6	2,360.9	8.2	7.5	113.50	-0.9	356.3	170.4	155.2	15.18	11.226		
2,500.0	2,459.0	2,492.3	2,458.7	8.6	7.9	113.44	-0.4	375.2	178.8	162.9	15.93	11.225		
2,600.0	2,556.9	2,591.9	2,556.6	9.0	8.2	113.39	0.1	394.0	187.3	170.6	16.68	11.224		
2,700.0	2,654.7	2,691.5	2,654.4	9.4	8.6	113.34	0.6	412.9	195.7	178.2	17.44	11.222		
2,800.0	2,752.6	2,791.2	2,752.3	9.8	9.0	113.30	1.0	431.8	204.1	185.9	18.19	11.221		
2,900.0	2,850.5	2,890.8	2,850.1	10.2	9.4	113.26	1.5	450.7	212.5	193.6	18.94	11.219		
3,000.0	2,948.4	2,990.5	2,947.9	10.6	9.7	113.22	2.0	469.5	220.9	201.2	19.70	11.218		
3,100.0	3,046.3	3,090.1	3,045.8	11.0	10.1	113.19	2.5	488.4	229.4	208.9	20.45	11.216		
3,200.0	3,144.2	3,189.8	3,143.6	11.4	10.5	113.16	3.0	507.3	237.8	216.6	21.20	11.215		
3,300.0	3,242.0	3,289.4	3,241.5	11.8	10.9	113.13	3.5	526.2	246.2	224.2	21.96	11.213		
3,400.0	3,339.9	3,389.1	3,339.3	12.2	11.3	113.10	4.0	545.0	254.6	231.9	22.71	11.212		
3,500.0	3,437.8	3,488.7	3,437.2	12.6	11.6	113.07	4.5	563.9	263.0	239.6	23.46	11.211		
3,600.0	3,535.7	3,588.3	3,535.0	13.0	12.0	113.05	5.0	582.8	271.5	247.2	24.22	11.210		
3,700.0	3,633.6	3,688.0	3,632.8	13.4	12.4	113.02	5.5	601.6	279.9	254.9	24.97	11.208		
3,800.0	3,731.5	3,787.6	3,730.7	13.8	12.8	113.00	6.0	620.5	288.3	262.6	25.72	11.207		
3,900.0	3,829.3	3,887.3	3,828.5	14.2	13.1	112.98	6.4	639.4	296.7	270.2	26.48	11.206		
4,000.0	3,927.2	3,986.9	3,926.4	14.6	13.5	112.96	6.9	658.3	305.1	277.9	27.23	11.205		
4,100.0	4,025.1	4,086.6	4,024.2	15.1	13.9	112.95	7.4	677.1	313.6	285.6	27.99	11.204		
4,200.0	4,123.0	4,186.2	4,122.0	15.5	14.3	112.93	7.9	696.0	322.0	293.2	28.74	11.203		
4,300.0	4,220.9	4,285.9	4,219.9	15.9	14.6	112.91	8.4	714.9	330.4	300.9	29.50	11.202		
4,400.0	4,318.7	4,385.5	4,317.7	16.3	15.0	112.90	8.9	733.8	338.8	308.6	30.25	11.201		
4,500.0	4,416.6	4,485.1	4,415.6	16.7	15.4	112.88	9.4	752.6	347.2	316.2	31.00	11.200		
4,600.0	4,514.5	4,584.8	4,513.4	17.1	15.8	112.87	9.9	771.5	355.7	323.9	31.76	11.199		
4,700.0	4,612.4	4,684.4	4,611.2	17.5	16.2	112.85	10.4	790.4	364.1	331.6	32.51	11.198		
4,800.0	4,710.5	4,784.2	4,709.2	17.8	16.5	112.84	10.9	809.1	372.1	338.9	33.24	11.194		
4,900.0	4,809.1	4,884.2	4,807.9	18.1	16.8	112.80	11.3	825.1	378.8	345.0	33.86	11.189		
5,000.0	4,908.3	4,984.4	4,907.3	18.4	17.1	112.77	11.6	837.8	384.1	349.7	34.36	11.177		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-16BB - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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	5,007.9	5,084.6	5,007.1	18.6	17.3	112.76	11.8	846.9	388.0	353.2	34.77	11.159		
5,200.0	5,107.7	5,185.0	5,107.3	18.7	17.4	112.77	12.0	852.6	390.4	355.3	35.06	11.134		
5,300.0	5,207.7	5,285.3	5,207.6	18.8	17.5	112.79	12.0	854.8	391.3	356.1	35.26	11.100		
5,400.0	5,307.7	5,385.4	5,307.7	18.9	17.6	177.02	12.0	854.8	391.4	355.9	35.44	11.043		
5,500.0	5,407.7	5,485.4	5,407.7	19.0	17.7	177.02	12.0	854.8	391.4	355.7	35.62	10.985		
5,600.0	5,507.7	5,585.4	5,507.7	19.1	17.8	177.02	12.0	854.8	391.4	355.5	35.81	10.928		
5,700.0	5,607.7	5,685.4	5,607.7	19.2	17.9	177.02	12.0	854.8	391.4	355.3	36.00	10.870		
5,800.0	5,707.7	5,785.4	5,707.7	19.3	18.0	177.02	12.0	854.8	391.4	355.2	36.20	10.812		
5,900.0	5,807.7	5,885.4	5,807.7	19.4	18.1	177.02	12.0	854.8	391.4	355.0	36.39	10.754		
6,000.0	5,907.7	5,985.4	5,907.7	19.5	18.2	177.02	12.0	854.8	391.4	354.8	36.59	10.696		
6,100.0	6,007.7	6,085.4	6,007.7	19.6	18.3	177.02	12.0	854.8	391.4	354.6	36.79	10.637		
6,200.0	6,107.7	6,185.4	6,107.7	19.7	18.4	177.02	12.0	854.8	391.4	354.4	36.99	10.579		
6,300.0	6,207.7	6,285.4	6,207.7	19.8	18.5	177.02	12.0	854.8	391.4	354.2	37.20	10.521		
6,400.0	6,307.7	6,385.4	6,307.7	19.8	18.6	177.02	12.0	854.8	391.4	353.9	37.40	10.463		
6,500.0	6,407.7	6,485.4	6,407.7	19.9	18.7	177.02	12.0	854.8	391.4	353.7	37.61	10.405		
6,600.0	6,507.7	6,585.4	6,507.7	20.0	18.8	177.02	12.0	854.8	391.4	353.5	37.82	10.347		
6,700.0	6,607.7	6,685.4	6,607.7	20.1	18.9	177.02	12.0	854.8	391.4	353.3	38.04	10.289		
6,800.0	6,707.7	6,785.4	6,707.7	20.2	19.0	177.02	12.0	854.8	391.4	353.1	38.25	10.231		
6,900.0	6,807.7	6,885.4	6,807.7	20.4	19.1	177.02	12.0	854.8	391.4	352.9	38.47	10.174		
7,000.0	6,907.7	6,985.4	6,907.7	20.5	19.3	177.02	12.0	854.8	391.4	352.7	38.69	10.116		
7,100.0	7,007.7	7,085.4	7,007.7	20.6	19.4	177.02	12.0	854.8	391.4	352.4	38.91	10.059		
7,200.0	7,107.7	7,185.4	7,107.7	20.7	19.5	177.02	12.0	854.8	391.4	352.2	39.13	10.002		
7,300.0	7,207.7	7,285.4	7,207.7	20.8	19.6	177.02	12.0	854.8	391.4	352.0	39.35	9.945		
7,400.0	7,307.7	7,385.4	7,307.7	20.9	19.7	177.02	12.0	854.8	391.4	351.8	39.58	9.888		
7,500.0	7,407.7	7,485.4	7,407.7	21.0	19.8	177.02	12.0	854.8	391.4	351.5	39.81	9.831		
7,600.0	7,507.7	7,585.4	7,507.7	21.1	19.9	177.02	12.0	854.8	391.4	351.3	40.04	9.775		
7,651.2	7,558.9	7,636.6	7,558.9	21.2	20.0	177.02	12.0	854.8	391.4	351.2	40.15	9.746		
7,700.0	7,607.7	7,653.7	7,576.0	21.2	20.0	177.02	12.0	854.8	392.6	352.4	40.23	9.760		
7,800.0	7,707.7	7,653.7	7,576.0	21.3	20.0	177.02	12.0	854.8	412.9	372.6	40.35	10.234		
7,900.0	7,807.7	7,653.7	7,576.0	21.4	20.0	177.02	12.0	854.8	454.8	414.3	40.46	11.239		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-6C - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-53.81	29.1	-39.8	49.4					
100.0	100.0	100.0	100.0	0.1	0.1	-53.81	29.1	-39.8	49.4	49.1	0.27	181.254		
200.0	200.0	200.0	200.0	0.3	0.3	-53.81	29.1	-39.8	49.4	48.7	0.62	79.426		
300.0	300.0	300.0	300.0	0.5	0.5	-53.81	29.1	-39.8	49.4	48.4	0.97	50.855	CC, ES	
400.0	400.0	398.7	398.7	0.7	0.7	-120.33	29.6	-40.2	51.2	49.9	1.32	38.766		
500.0	499.6	495.6	495.4	0.9	0.8	-124.89	33.5	-43.2	60.2	58.5	1.69	35.616	SF	
600.0	598.8	590.9	590.2	1.1	1.1	-129.33	41.2	-49.1	77.2	75.1	2.10	36.847		
700.0	697.1	683.8	682.1	1.5	1.3	-132.63	52.2	-57.6	102.2	99.6	2.55	40.082		
800.0	795.0	774.3	770.8	1.9	1.7	-134.52	66.3	-68.4	132.7	129.7	3.04	43.701		
900.0	892.8	862.5	856.4	2.2	2.1	-134.83	83.3	-81.5	167.0	163.5	3.56	46.923		
1,000.0	990.7	948.2	938.5	2.6	2.5	-134.36	102.8	-96.5	204.8	200.7	4.11	49.843		
1,100.0	1,088.6	1,031.1	1,016.8	3.0	3.0	-133.51	124.4	-113.1	246.0	241.3	4.68	52.579		
1,200.0	1,186.5	1,111.1	1,091.1	3.4	3.5	-132.50	147.8	-131.1	290.5	285.2	5.26	55.222		
1,300.0	1,284.4	1,188.1	1,161.4	3.8	4.1	-131.43	172.6	-150.1	338.1	332.3	5.85	57.776		
1,400.0	1,382.3	1,261.9	1,227.7	4.2	4.7	-130.38	198.5	-170.1	388.8	382.4	6.45	60.283		
1,500.0	1,480.1	1,332.6	1,289.8	4.6	5.4	-129.37	225.1	-190.6	442.4	435.4	7.04	62.818		
1,600.0	1,578.0	1,400.0	1,347.9	5.0	6.0	-128.42	252.2	-211.4	498.8	491.2	7.63	65.399		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-9B - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-71.94	8.0	-24.6	25.8					
100.0	100.0	100.0	100.0	0.1	0.1	-71.94	8.0	-24.6	25.8	25.6	0.27	94.938		
200.0	200.0	200.0	200.0	0.3	0.3	-71.94	8.0	-24.6	25.8	25.2	0.62	41.602		
300.0	300.0	300.0	300.0	0.5	0.5	-71.94	8.0	-24.6	25.8	24.9	0.97	26.637 CC, ES		
400.0	400.0	400.4	400.4	0.7	0.7	-134.67	10.2	-23.0	26.9	25.6	1.33	20.277		
500.0	499.6	500.7	500.3	0.9	0.9	-130.84	16.6	-18.4	30.3	28.6	1.74	17.467		
600.0	598.8	600.8	599.6	1.1	1.2	-126.07	27.2	-10.7	36.1	33.9	2.25	16.090		
700.0	697.1	700.6	697.7	1.5	1.5	-121.50	41.9	-0.1	44.5	41.6	2.90	15.335		
800.0	795.0	800.0	794.3	1.9	1.9	-115.17	60.8	13.5	54.2	50.5	3.70	14.654		
900.0	892.8	898.6	888.8	2.2	2.4	-106.35	83.4	29.9	65.2	60.6	4.60	14.172 SF		
1,000.0	990.7	996.3	981.0	2.6	3.0	-96.86	109.6	48.8	78.9	73.4	5.50	14.356		
1,100.0	1,088.6	1,094.4	1,073.2	3.0	3.6	-89.57	136.8	68.4	94.7	88.4	6.32	14.990		
1,200.0	1,186.5	1,192.5	1,165.5	3.4	4.2	-84.40	164.0	88.1	111.6	104.5	7.09	15.736		
1,300.0	1,284.4	1,290.7	1,257.7	3.8	4.8	-80.60	191.2	107.7	129.1	121.3	7.84	16.477		
1,400.0	1,382.3	1,388.8	1,349.9	4.2	5.4	-77.72	218.4	127.4	147.0	138.5	8.56	17.172		
1,500.0	1,480.1	1,487.0	1,442.1	4.6	6.1	-75.46	245.6	147.0	165.3	156.0	9.28	17.807		
1,600.0	1,578.0	1,585.1	1,534.4	5.0	6.7	-73.65	272.8	166.7	183.7	173.7	9.99	18.383		
1,700.0	1,675.9	1,683.2	1,626.6	5.4	7.3	-72.18	300.0	186.3	202.3	191.6	10.70	18.903		
1,800.0	1,773.8	1,781.4	1,718.8	5.8	7.9	-70.95	327.2	206.0	220.9	209.5	11.40	19.373		
1,900.0	1,871.7	1,879.5	1,811.0	6.2	8.5	-69.91	354.4	225.6	239.7	227.6	12.11	19.798		
2,000.0	1,969.6	1,977.7	1,903.3	6.6	9.1	-69.02	381.6	245.3	258.5	245.7	12.81	20.184		
2,100.0	2,067.4	2,075.8	1,995.5	7.0	9.8	-68.26	408.9	264.9	277.4	263.9	13.51	20.536		
2,200.0	2,165.3	2,173.9	2,087.7	7.4	10.4	-67.59	436.1	284.6	296.3	282.1	14.21	20.856		
2,300.0	2,263.2	2,272.1	2,179.9	7.8	11.0	-67.00	463.3	304.2	315.3	300.4	14.91	21.150		
2,400.0	2,361.1	2,370.2	2,272.2	8.2	11.6	-66.48	490.5	323.9	334.2	318.6	15.60	21.420		
2,500.0	2,459.0	2,468.4	2,364.4	8.6	12.2	-66.01	517.7	343.5	353.2	336.9	16.30	21.669		
2,600.0	2,556.9	2,566.5	2,456.6	9.0	12.8	-65.59	544.9	363.2	372.3	355.3	17.00	21.898		
2,700.0	2,654.7	2,664.6	2,548.8	9.4	13.5	-65.22	572.1	382.8	391.3	373.6	17.70	22.111		
2,800.0	2,752.6	2,762.8	2,641.0	9.8	14.1	-64.87	599.3	402.4	410.4	392.0	18.39	22.309		
2,900.0	2,850.5	2,860.9	2,733.3	10.2	14.7	-64.56	626.5	422.1	429.4	410.3	19.09	22.493		
3,000.0	2,948.4	2,959.1	2,825.5	10.6	15.3	-64.28	653.7	441.7	448.5	428.7	19.79	22.665		
3,100.0	3,046.3	3,057.2	2,917.7	11.0	15.9	-64.01	680.9	461.4	467.6	447.1	20.49	22.825		
3,200.0	3,144.2	3,155.3	3,009.9	11.4	16.6	-63.77	708.1	481.0	486.7	465.5	21.18	22.976		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-9C - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-53.48	9.8	-13.3	16.5					
100.0	100.0	100.0	100.0	0.1	0.1	-53.48	9.8	-13.3	16.5	16.2	0.27	60.673		
200.0	200.0	200.0	200.0	0.3	0.3	-53.48	9.8	-13.3	16.5	15.9	0.62	26.587		
300.0	300.0	300.1	300.0	0.5	0.5	-44.36	11.6	-11.3	16.2	15.2	0.97	16.681		
306.1	306.1	306.2	306.2	0.5	0.5	-107.45	11.8	-11.1	16.2	15.2	1.00	16.155 CC, ES		
400.0	400.0	399.8	399.5	0.7	0.7	-90.84	16.8	-5.5	17.6	16.2	1.38	12.782		
500.0	499.6	499.3	498.0	0.9	1.0	-78.20	25.6	4.0	21.7	19.9	1.84	11.823		
600.0	598.8	598.3	595.5	1.1	1.4	-71.31	37.6	17.4	27.9	25.5	2.39	11.681		
700.0	697.1	697.2	691.6	1.5	1.8	-68.22	53.1	34.3	35.5	32.4	3.04	11.668		
800.0	795.0	796.9	788.2	1.9	2.2	-67.20	69.8	52.8	43.4	39.7	3.74	11.626		
900.0	892.8	896.6	884.7	2.2	2.7	-66.49	86.6	71.3	51.4	46.9	4.44	11.565		
1,000.0	990.7	996.3	981.2	2.6	3.2	-65.97	103.3	89.7	59.4	54.2	5.16	11.506		
1,100.0	1,088.6	1,095.9	1,077.7	3.0	3.6	-65.58	120.1	108.2	67.3	61.4	5.88	11.453		
1,200.0	1,186.5	1,195.6	1,174.2	3.4	4.1	-65.27	136.9	126.7	75.3	68.7	6.60	11.407		
1,300.0	1,284.4	1,295.3	1,270.7	3.8	4.6	-65.01	153.6	145.1	83.3	75.9	7.33	11.367		
1,400.0	1,382.3	1,395.0	1,367.2	4.2	5.0	-64.81	170.4	163.6	91.2	83.2	8.05	11.333		
1,500.0	1,480.1	1,494.7	1,463.7	4.6	5.5	-64.63	187.1	182.1	99.2	90.4	8.78	11.303		
1,600.0	1,578.0	1,594.4	1,560.2	5.0	6.0	-64.48	203.9	200.5	107.2	97.7	9.51	11.276		
1,700.0	1,675.9	1,694.0	1,656.8	5.4	6.5	-64.36	220.7	219.0	115.2	104.9	10.23	11.253		
1,800.0	1,773.8	1,793.7	1,753.3	5.8	6.9	-64.24	237.4	237.5	123.1	112.2	10.96	11.233		
1,900.0	1,871.7	1,893.4	1,849.8	6.2	7.4	-64.15	254.2	255.9	131.1	119.4	11.69	11.214		
2,000.0	1,969.6	1,993.1	1,946.3	6.6	7.9	-64.06	270.9	274.4	139.1	126.7	12.42	11.198		
2,100.0	2,067.4	2,092.8	2,042.8	7.0	8.4	-63.98	287.7	292.9	147.1	133.9	13.15	11.183		
2,200.0	2,165.3	2,192.4	2,139.3	7.4	8.8	-63.91	304.5	311.3	155.1	141.2	13.88	11.170		
2,300.0	2,263.2	2,292.1	2,235.8	7.8	9.3	-63.85	321.2	329.8	163.0	148.4	14.61	11.158		
2,400.0	2,361.1	2,391.8	2,332.3	8.2	9.8	-63.79	338.0	348.3	171.0	155.7	15.34	11.146		
2,500.0	2,459.0	2,491.5	2,428.8	8.6	10.3	-63.74	354.7	366.7	179.0	162.9	16.07	11.136		
2,600.0	2,556.9	2,591.2	2,525.4	9.0	10.7	-63.70	371.5	385.2	187.0	170.2	16.80	11.127		
2,700.0	2,654.7	2,690.8	2,621.9	9.4	11.2	-63.65	388.3	403.7	195.0	177.4	17.53	11.118		
2,800.0	2,752.6	2,790.5	2,718.4	9.8	11.7	-63.61	405.0	422.1	202.9	184.7	18.27	11.110		
2,900.0	2,850.5	2,890.2	2,814.9	10.2	12.2	-63.58	421.8	440.6	210.9	191.9	19.00	11.103		
3,000.0	2,948.4	2,989.9	2,911.4	10.6	12.6	-63.54	438.5	459.1	218.9	199.2	19.73	11.096		
3,100.0	3,046.3	3,089.6	3,007.9	11.0	13.1	-63.51	455.3	477.5	226.9	206.4	20.46	11.089		
3,200.0	3,144.2	3,189.3	3,104.4	11.4	13.6	-63.48	472.1	496.0	234.8	213.7	21.19	11.083		
3,300.0	3,242.0	3,288.9	3,200.9	11.8	14.1	-63.45	488.8	514.5	242.8	220.9	21.92	11.078		
3,400.0	3,339.9	3,388.6	3,297.4	12.2	14.5	-63.43	505.6	532.9	250.8	228.2	22.65	11.072		
3,500.0	3,437.8	3,488.3	3,394.0	12.6	15.0	-63.40	522.4	551.4	258.8	235.4	23.38	11.067		
3,600.0	3,535.7	3,588.0	3,490.5	13.0	15.5	-63.38	539.1	569.9	266.8	242.7	24.11	11.063		
3,700.0	3,633.6	3,687.7	3,587.0	13.4	16.0	-63.36	555.9	588.3	274.7	249.9	24.85	11.058		
3,800.0	3,731.5	3,787.3	3,683.5	13.8	16.4	-63.34	572.6	606.8	282.7	257.2	25.58	11.054		
3,900.0	3,829.3	3,887.0	3,780.0	14.2	16.9	-63.32	589.4	625.3	290.7	264.4	26.31	11.050		
4,000.0	3,927.2	3,986.7	3,876.5	14.6	17.4	-63.30	606.2	643.7	298.7	271.6	27.04	11.046		
4,100.0	4,025.1	4,086.4	3,973.0	15.1	17.9	-63.28	622.9	662.2	306.7	278.9	27.77	11.043		
4,200.0	4,123.0	4,186.1	4,069.5	15.5	18.3	-63.27	639.7	680.7	314.6	286.1	28.50	11.039		
4,300.0	4,220.9	4,285.7	4,166.0	15.9	18.8	-63.25	656.4	699.1	322.6	293.4	29.23	11.036		
4,400.0	4,318.7	4,385.4	4,262.6	16.3	19.3	-63.24	673.2	717.6	330.6	300.6	29.96	11.033		
4,500.0	4,416.6	4,485.1	4,359.1	16.7	19.8	-63.22	690.0	736.1	338.6	307.9	30.70	11.030		
4,600.0	4,514.5	4,584.8	4,455.6	17.1	20.2	-63.21	706.7	754.5	346.6	315.1	31.43	11.027		
4,700.0	4,612.4	4,688.7	4,556.3	17.5	20.7	-63.25	723.9	773.5	354.3	322.1	32.18	11.010		
4,800.0	4,710.5	4,797.7	4,662.8	17.8	21.1	-63.63	739.6	790.8	360.2	327.2	32.96	10.928		
4,900.0	4,809.1	4,906.9	4,770.2	18.1	21.5	-63.98	752.6	805.1	365.0	331.4	33.63	10.855		
5,000.0	4,908.3	5,016.2	4,878.5	18.4	21.8	-64.25	762.9	816.4	368.9	334.7	34.18	10.792		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler 19-9C - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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	5,007.9	5,125.7	4,987.3	18.6	22.0	-64.44	770.4	824.6	371.6	337.0	34.61	10.737		
5,200.0	5,107.7	5,235.2	5,096.6	18.7	22.2	-64.57	775.0	829.8	373.4	338.4	34.94	10.687		
5,300.0	5,207.7	5,344.7	5,206.1	18.8	22.3	-64.62	776.9	831.8	374.1	338.9	35.16	10.640		
5,400.0	5,307.7	5,446.3	5,307.7	18.9	22.3	-0.39	776.9	831.9	374.1	338.7	35.34	10.584		
5,500.0	5,407.7	5,546.3	5,407.7	19.0	22.4	-0.39	776.9	831.9	374.1	338.5	35.53	10.528		
5,600.0	5,507.7	5,646.3	5,507.7	19.1	22.5	-0.39	776.9	831.9	374.1	338.4	35.72	10.473		
5,700.0	5,607.7	5,746.3	5,607.7	19.2	22.6	-0.39	776.9	831.9	374.1	338.2	35.91	10.416		
5,800.0	5,707.7	5,846.3	5,707.7	19.3	22.6	-0.39	776.9	831.9	374.1	338.0	36.11	10.360		
5,900.0	5,807.7	5,946.3	5,807.7	19.4	22.7	-0.39	776.9	831.9	374.1	337.8	36.30	10.304		
6,000.0	5,907.7	6,046.3	5,907.7	19.5	22.8	-0.39	776.9	831.9	374.1	337.6	36.50	10.248		
6,100.0	6,007.7	6,146.3	6,007.7	19.6	22.9	-0.39	776.9	831.9	374.1	337.4	36.70	10.192		
6,200.0	6,107.7	6,246.3	6,107.7	19.7	23.0	-0.39	776.9	831.9	374.1	337.2	36.91	10.135		
6,300.0	6,207.7	6,346.3	6,207.7	19.8	23.1	-0.39	776.9	831.9	374.1	337.0	37.11	10.079		
6,400.0	6,307.7	6,446.3	6,307.7	19.8	23.1	-0.39	776.9	831.9	374.1	336.8	37.32	10.023		
6,500.0	6,407.7	6,546.3	6,407.7	19.9	23.2	-0.39	776.9	831.9	374.1	336.5	37.53	9.967		
6,600.0	6,507.7	6,646.3	6,507.7	20.0	23.3	-0.39	776.9	831.9	374.1	336.3	37.74	9.911		
6,700.0	6,607.7	6,746.3	6,607.7	20.1	23.4	-0.39	776.9	831.9	374.1	336.1	37.96	9.855		
6,800.0	6,707.7	6,846.3	6,707.7	20.2	23.5	-0.39	776.9	831.9	374.1	335.9	38.17	9.799		
6,900.0	6,807.7	6,946.3	6,807.7	20.4	23.6	-0.39	776.9	831.9	374.1	335.7	38.39	9.744		
7,000.0	6,907.7	7,046.3	6,907.7	20.5	23.7	-0.39	776.9	831.9	374.1	335.5	38.61	9.688		
7,100.0	7,007.7	7,146.3	7,007.7	20.6	23.8	-0.39	776.9	831.9	374.1	335.2	38.83	9.633		
7,200.0	7,107.7	7,246.3	7,107.7	20.7	23.8	-0.39	776.9	831.9	374.1	335.0	39.06	9.578		
7,300.0	7,207.7	7,346.3	7,207.7	20.8	23.9	-0.39	776.9	831.9	374.1	334.8	39.28	9.523		
7,400.0	7,307.7	7,446.3	7,307.7	20.9	24.0	-0.39	776.9	831.9	374.1	334.6	39.51	9.468		
7,500.0	7,407.7	7,546.3	7,407.7	21.0	24.1	-0.39	776.9	831.9	374.1	334.3	39.74	9.413		
7,600.0	7,507.7	7,646.3	7,507.7	21.1	24.2	-0.39	776.9	831.9	374.1	334.1	39.97	9.359		
7,654.5	7,562.2	7,700.8	7,562.2	21.2	24.3	-0.39	776.9	831.9	374.1	334.0	40.10	9.329 SF		
7,700.0	7,607.7	7,719.6	7,581.0	21.2	24.3	-0.39	776.9	831.9	375.0	334.9	40.17	9.335		
7,800.0	7,707.7	7,719.6	7,581.0	21.3	24.3	-0.39	776.9	831.9	394.9	354.6	40.29	9.803		
7,900.0	7,807.7	7,719.6	7,581.0	21.4	24.3	-0.39	776.9	831.9	437.4	397.0	40.41	10.824		
8,000.0	7,907.7	7,719.6	7,581.0	21.5	24.3	-0.39	776.9	831.9	496.6	456.1	40.53	12.254		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (2nd Occupation) - Shideler Federal 19-12A - OH - Plan #1													<b>Offset Site Error:</b> 0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b> 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	-61.57	27.7	-51.1	58.1				
100.0	100.0	100.0	100.0	0.1	0.1	-61.57	27.7	-51.1	58.1	57.9	0.27	213.542	
200.0	200.0	200.0	200.0	0.3	0.3	-61.57	27.7	-51.1	58.1	57.5	0.62	93.575 CC, ES	
300.0	300.0	297.0	297.0	0.5	0.5	-61.20	29.2	-53.1	60.7	59.7	0.97	62.354	
400.0	400.0	393.3	393.0	0.7	0.7	-125.98	33.6	-58.9	69.7	68.4	1.31	53.060	
500.0	499.6	488.0	486.9	0.9	1.0	-128.30	40.9	-68.3	86.7	85.1	1.68	51.662 SF	
600.0	598.8	580.0	577.5	1.1	1.3	-130.95	50.7	-81.0	111.9	109.8	2.08	53.858	
700.0	697.1	668.4	663.7	1.5	1.7	-133.23	62.6	-96.4	145.0	142.5	2.52	57.608	
800.0	795.0	753.5	745.8	1.9	2.1	-135.16	76.3	-114.2	183.9	180.9	2.98	61.665	
900.0	892.8	835.6	824.0	2.2	2.6	-136.04	91.6	-134.2	226.6	223.2	3.46	65.475	
1,000.0	990.7	914.7	898.1	2.6	3.1	-136.34	108.3	-155.8	272.9	268.9	3.95	69.093	
1,100.0	1,088.6	990.6	968.2	3.0	3.7	-136.32	126.1	-178.9	322.4	318.0	4.45	72.530	
1,200.0	1,186.5	1,063.3	1,034.2	3.4	4.3	-136.11	144.7	-203.1	375.1	370.2	4.95	75.803	
1,300.0	1,284.4	1,132.7	1,096.1	3.8	4.9	-135.80	163.9	-228.0	430.7	425.2	5.45	79.028	
1,400.0	1,382.3	1,200.0	1,154.9	4.2	5.5	-135.43	183.8	-253.8	489.0	483.1	5.95	82.189	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (2nd Occupation) - Shideler Federal 19-12C - OH - Plan #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-99.18	-1.8	-11.3	11.4				
100.0	100.0	100.0	100.0	0.1	0.1	-99.18	-1.8	-11.3	11.4	11.2	0.27	42.038	
200.0	200.0	200.0	200.0	0.3	0.3	-99.18	-1.8	-11.3	11.4	10.8	0.62	18.421	
300.0	300.0	300.0	300.0	0.5	0.5	-99.18	-1.8	-11.3	11.4	10.5	0.97	11.795 CC, ES	
400.0	400.0	399.6	399.6	0.7	0.7	-165.13	-1.6	-11.9	14.5	13.2	1.32	11.026 SF	
500.0	499.6	498.0	497.8	0.9	0.8	-163.91	0.0	-16.7	26.6	24.9	1.67	15.965	
600.0	598.8	594.0	593.3	1.1	1.1	-162.26	3.1	-26.1	48.1	46.0	2.02	23.784	
700.0	697.1	686.4	684.7	1.5	1.3	-161.07	7.6	-39.3	78.6	76.2	2.39	32.943	
800.0	795.0	775.4	771.9	1.9	1.7	-160.07	13.2	-56.0	115.2	112.5	2.77	41.538	
900.0	892.8	861.3	855.2	2.2	2.1	-158.89	19.8	-75.8	155.7	152.5	3.17	49.066	
1,000.0	990.7	943.9	934.3	2.6	2.5	-157.74	27.3	-98.1	199.9	196.3	3.58	55.819	
1,100.0	1,088.6	1,023.0	1,009.2	3.0	3.0	-156.66	35.5	-122.6	247.7	243.7	3.99	62.004	
1,200.0	1,186.5	1,100.0	1,080.9	3.4	3.5	-155.68	44.4	-149.1	298.8	294.3	4.41	67.719	
1,300.0	1,284.4	1,171.1	1,146.1	3.8	4.1	-154.82	53.5	-176.1	353.0	348.2	4.83	73.112	
1,400.0	1,382.3	1,240.0	1,208.2	4.2	4.6	-154.03	63.0	-204.4	410.2	404.9	5.24	78.210	
1,500.0	1,480.1	1,300.0	1,261.3	4.6	5.2	-153.38	71.8	-230.7	470.2	464.5	5.64	83.364	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design O19EB Pad (2nd Occupation) - Shideler Federal 19-12D - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						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	-64.76	17.8	-37.9	41.8					
100.0	100.0	100.0	100.0	0.1	0.1	-64.76	17.8	-37.9	41.8	41.6	0.27	153.702		
200.0	200.0	200.0	200.0	0.3	0.3	-64.76	17.8	-37.9	41.8	41.2	0.62	67.353		
300.0	300.0	300.0	300.0	0.5	0.5	-64.76	17.8	-37.9	41.8	40.9	0.97	43.125 CC, ES		
400.0	400.0	398.3	398.2	0.7	0.7	-131.34	18.5	-39.1	45.0	43.7	1.32	34.082		
500.0	499.6	494.9	494.7	0.9	0.9	-136.25	21.5	-44.5	56.7	55.0	1.68	33.774 SF		
600.0	598.8	589.4	588.5	1.1	1.1	-140.75	26.7	-53.8	77.5	75.4	2.05	37.711		
700.0	697.1	680.5	678.5	1.5	1.4	-143.88	33.8	-66.7	107.1	104.7	2.45	43.691		
800.0	795.0	768.4	764.5	1.9	1.7	-145.80	42.6	-82.7	142.9	140.0	2.87	49.834		
900.0	892.8	853.5	846.8	2.2	2.1	-146.44	53.0	-101.5	182.6	179.3	3.30	55.371		
1,000.0	990.7	935.5	925.1	2.6	2.6	-146.45	64.6	-122.5	226.0	222.3	3.74	60.420		
1,100.0	1,088.6	1,014.3	999.4	3.0	3.1	-146.15	77.3	-145.6	272.9	268.7	4.19	65.105		
1,200.0	1,186.5	1,089.9	1,069.6	3.4	3.6	-145.70	90.9	-170.1	323.1	318.5	4.65	69.481		
1,300.0	1,284.4	1,162.1	1,135.6	3.8	4.2	-145.18	105.1	-195.9	376.4	371.3	5.11	73.592		
1,400.0	1,382.3	1,231.1	1,197.5	4.2	4.7	-144.65	119.8	-222.5	432.6	427.0	5.58	77.565		
1,500.0	1,480.1	1,300.0	1,258.2	4.6	5.4	-144.09	135.5	-251.0	491.5	485.4	6.04	81.320		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (2nd Occupation) - Shideler Federal 19-13A - OH - Plan #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.0	0.0	0.0	0.0	0.0	0.0	170.07	-11.3	2.0	11.5				
100.0	100.0	100.0	100.0	0.1	0.1	170.07	-11.3	2.0	11.5	11.2	0.27	42.102	
200.0	200.0	200.0	200.0	0.3	0.3	170.07	-11.3	2.0	11.5	10.8	0.62	18.449	
300.0	300.0	300.1	300.1	0.5	0.5	173.19	-11.2	1.3	11.2	10.3	0.97	11.582	
334.7	334.7	334.9	334.8	0.5	0.6	116.58	-10.9	0.1	11.1	10.0	1.10	10.050 CC, ES	
400.0	400.0	399.8	399.7	0.7	0.7	144.26	-10.1	-3.8	12.8	11.5	1.34	9.596 SF	
500.0	499.6	497.7	497.0	0.9	0.9	177.03	-8.1	-13.7	26.5	24.9	1.69	15.666	
600.0	598.8	592.4	590.6	1.1	1.2	-171.38	-5.3	-28.0	52.2	50.2	2.04	25.572	
700.0	697.1	682.8	679.1	1.5	1.6	-166.75	-1.7	-45.9	87.7	85.3	2.40	36.578	
800.0	795.0	769.1	762.8	1.9	2.0	-164.40	2.5	-66.8	129.3	126.5	2.77	46.640	
900.0	892.8	852.0	842.0	2.2	2.4	-162.71	7.2	-90.3	174.7	171.6	3.15	55.429	
1,000.0	990.7	931.2	916.9	2.6	2.9	-161.39	12.4	-115.9	223.8	220.3	3.54	63.309	
1,100.0	1,088.6	1,006.8	987.2	3.0	3.5	-160.31	17.9	-143.1	276.3	272.3	3.92	70.522	
1,200.0	1,186.5	1,078.9	1,053.1	3.4	4.0	-159.40	23.6	-171.6	331.9	327.6	4.30	77.173	
1,300.0	1,284.4	1,147.4	1,114.8	3.8	4.6	-158.62	29.5	-201.0	390.4	385.8	4.68	83.452	
1,400.0	1,382.3	1,222.8	1,181.6	4.2	5.3	-157.87	36.3	-235.0	451.1	446.0	5.07	88.898	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> O19EB Pad (2nd Occupation) - Shideler Federal 19-13AA - OH - Plan #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	144.17	-21.1	15.3	26.1				
100.0	100.0	100.0	100.0	0.1	0.1	144.17	-21.1	15.3	26.1	25.8	0.27	95.702	
200.0	200.0	200.0	200.0	0.3	0.3	144.17	-21.1	15.3	26.1	25.4	0.62	41.937	
300.0	300.0	300.7	300.7	0.5	0.5	149.12	-21.1	12.6	24.6	23.6	0.97	25.272	
396.3	396.2	396.9	396.6	0.7	0.7	108.20	-20.9	5.1	22.2	20.8	1.37	16.236 CC	
400.0	400.0	400.6	400.3	0.7	0.7	109.64	-20.9	4.7	22.2	20.8	1.38	16.060 ES, SF	
500.0	499.6	498.2	497.0	0.9	1.0	150.00	-20.6	-8.0	30.7	28.9	1.79	17.174	
600.0	598.8	592.1	589.3	1.1	1.3	171.90	-20.3	-24.8	56.0	53.9	2.11	26.520	
700.0	697.1	681.1	676.0	1.5	1.7	-178.87	-19.9	-45.0	93.3	90.9	2.43	38.461	
800.0	795.0	765.7	757.5	1.9	2.2	-174.33	-19.4	-67.9	137.5	134.8	2.76	49.768	
900.0	892.8	846.5	834.3	2.2	2.7	-171.60	-18.9	-93.1	185.8	182.7	3.10	59.834	
1,000.0	990.7	923.6	906.4	2.6	3.2	-169.74	-18.3	-120.2	237.7	234.2	3.45	68.964	
1,100.0	1,088.6	1,000.0	976.8	3.0	3.8	-168.31	-17.7	-149.8	292.9	289.1	3.79	77.252	
1,200.0	1,186.5	1,066.7	1,037.2	3.4	4.3	-167.29	-17.1	-178.0	351.2	347.1	4.12	85.174	
1,300.0	1,284.4	1,140.6	1,103.3	3.8	5.0	-166.35	-16.4	-211.2	411.9	407.5	4.47	92.167	
1,400.0	1,382.3	1,219.7	1,173.9	4.2	5.7	-165.59	-15.7	-246.9	473.0	468.1	4.83	97.995	

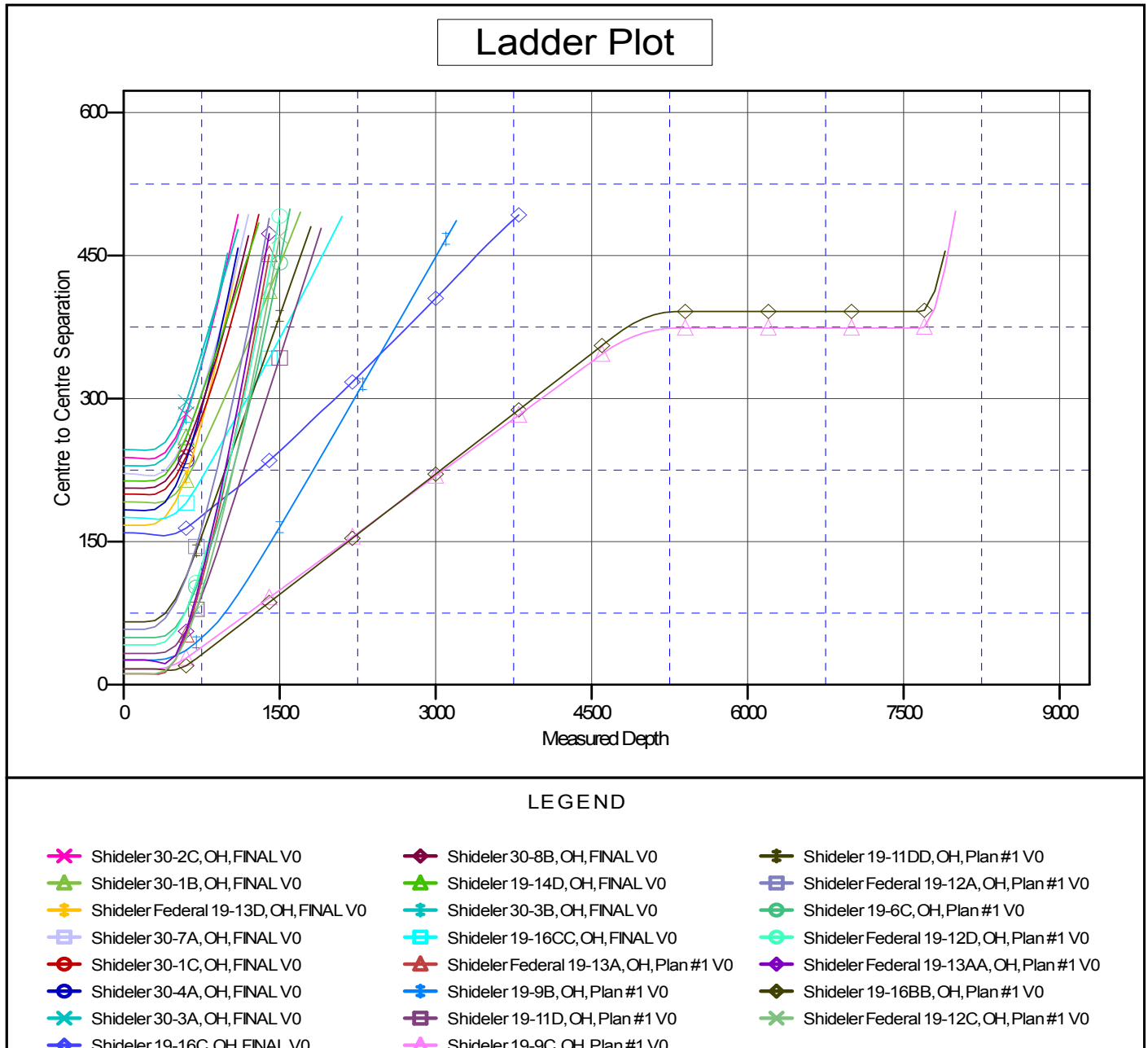
# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Shideler 19-16B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Reference Site:</b>	O19EB Pad (2nd Occupation)	<b>MD Reference:</b>	KB=22' @ 6531.0ft (Nabors M-15)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Shideler 19-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB=22' @ 6531.0ft (Nabors M-15)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Shideler 19-16B  
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