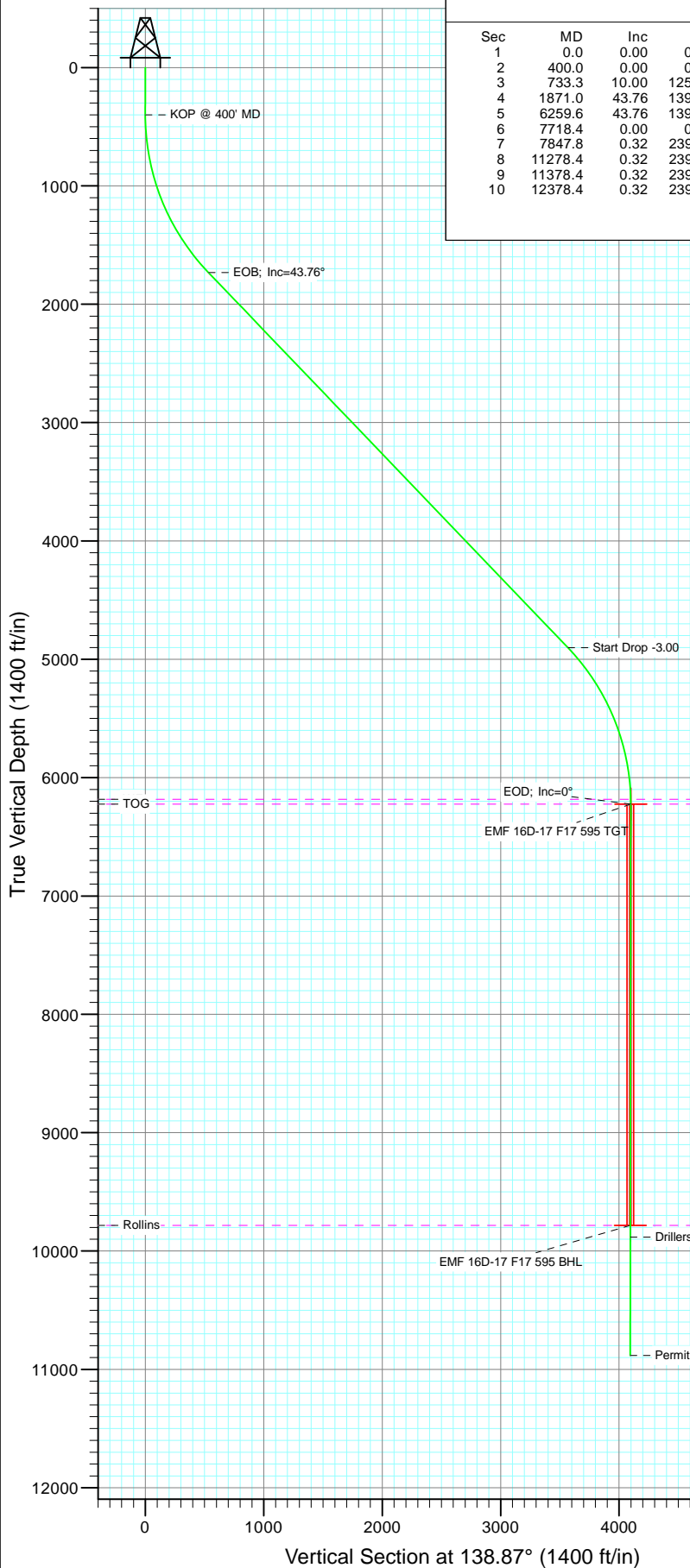
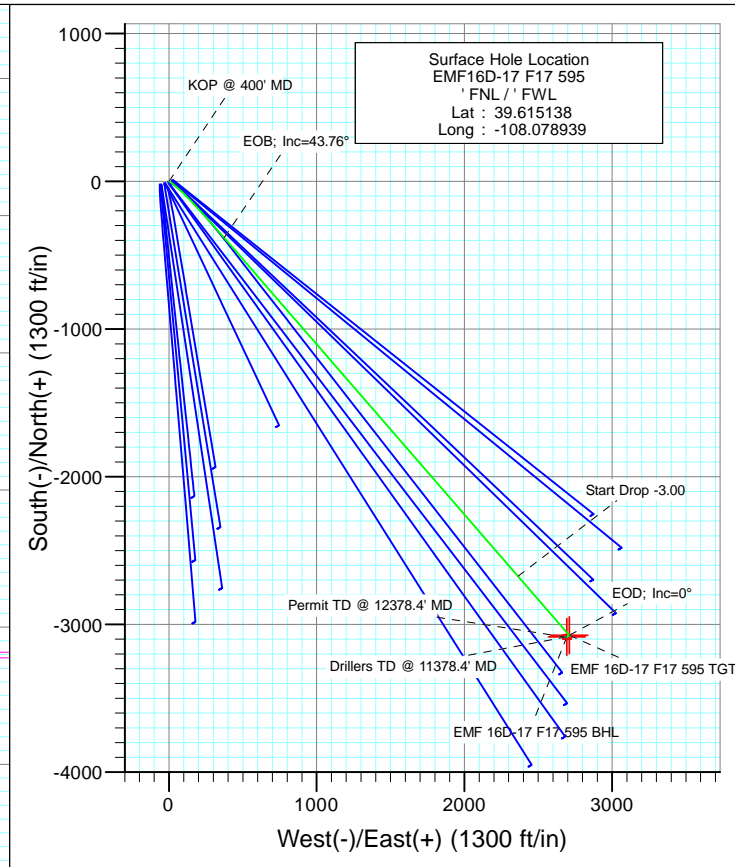




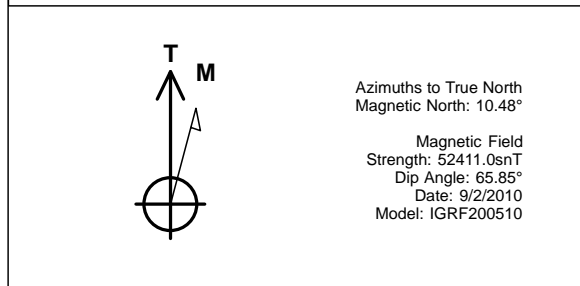
Project: North Piceance  
Site: F17 595 Pad  
Well: EMF16D-17 F17 595  
Wellbore: DD  
Design: Plan #4



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	733.3	10.00	125.00	731.6	-16.6	23.8	3.00	125.00	28.2	
4	1871.0	43.76	139.04	1732.4	-381.3	373.0	3.00	17.40	532.5	
5	6259.6	43.76	139.04	4902.0	-2673.6	2362.7	0.00	0.00	3567.9	
6	7718.4	0.00	0.00	6223.0	-3074.2	2710.5	3.00	180.00	4098.4	EMF 16D-17 F17 595 TGT
7	7847.8	0.32	239.50	6352.5	-3074.4	2710.2	0.25	239.50	4098.4	
8	11278.4	0.32	239.50	9783.0	-3084.2	2693.5	0.00	0.00	4094.8	EMF 16D-17 F17 595 BHL
9	11378.4	0.32	239.50	9883.0	-3084.5	2693.0	0.00	0.00	4094.7	
10	12378.4	0.32	239.50	10883.0	-3087.4	2688.1	0.00	0.00	4093.6	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
6183.0	7678.4	WF
6223.0	7718.4	TOG
9783.0	11278.4	Rollins



Plan #4 EMF16D-17 F17 595 105XXX; LR						
KBE2 @ 6330.0ft North American Datum 1983 Well EMF16D-17 F17 595, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	EMF 16D-17 F17 595 BHL	138.87	Slot		0.0	0.0
From TVD						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
	6223.0	-3074.2	2710.5	39.606698	-108.069319	
EMF 16D-17 F17 595 BHL	9783.0	-3084.2	2693.5	39.606671	-108.069379	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EMF16D-17 F17 595
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE2 @ 6330.0ft
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	KBE2 @ 6330.0ft
<b>Site:</b>	F17 595 Pad	<b>North Reference:</b>	True
<b>Well:</b>	EMF16D-17 F17 595	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #4		

<b>Project</b>	North Piceance		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site		F17 595 Pad			
Site Position:		Northing:	1,659,259.22 ft	Latitude:	39° 36' 54.52 N
From:	Lat/Long	Easting:	2,273,585.37 ft	Longitude:	108° 4' 43.81 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.63 °

Well	EMF16D-17 F17 595					
Well Position	+N/-S	0.0 ft	Northing:	1,659,257.75 ft	Latitude:	39° 36' 54.50 N
	+E/-W	0.0 ft	Easting:	2,273,556.30 ft	Longitude:	108° 4' 44.18 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,308.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/2/2010	10.48	65.85	52,411

<b>Design</b>	Plan #4			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	138.87

<b>Plan Sections</b>										
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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
733.3	10.00	125.00	731.6	-16.6	23.8	3.00	3.00	0.00	125.00	
1,871.0	43.76	139.04	1,732.4	-381.3	373.0	3.00	2.97	1.23	17.40	
6,259.6	43.76	139.04	4,902.0	-2,673.6	2,362.7	0.00	0.00	0.00	0.00	
7,718.4	0.00	0.00	6,223.0	-3,074.2	2,710.5	3.00	-3.00	0.00	180.00	EMF 16D-17 F17 595
7,847.8	0.32	239.50	6,352.5	-3,074.4	2,710.2	0.25	0.25	-93.07	239.50	
11,278.4	0.32	239.50	9,783.0	-3,084.2	2,693.5	0.00	0.00	0.00	0.00	EMF 16D-17 F17 595
11,378.4	0.32	239.50	9,883.0	-3,084.5	2,693.0	0.00	0.00	0.00	0.00	
12,378.4	0.32	239.50	10,883.0	-3,087.4	2,688.1	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 EMF16D-17 F17 595
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE2 @ 6330.0ft
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	KBE2 @ 6330.0ft
<b>Site:</b>	F17 595 Pad	<b>North Reference:</b>	True
<b>Well:</b>	EMF16D-17 F17 595	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #4		

### 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	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400' MD
500.0	3.00	125.00	500.0	-1.5	2.1	2.5	3.00	3.00	
600.0	6.00	125.00	599.6	-6.0	8.6	10.2	3.00	3.00	
700.0	9.00	125.00	698.8	-13.5	19.3	22.8	3.00	3.00	
733.3	10.00	125.00	731.6	-16.6	23.8	28.2	3.00	3.00	
800.0	11.92	127.90	797.1	-24.2	33.9	40.6	3.00	2.88	
900.0	14.85	130.84	894.4	-38.9	51.8	63.4	3.00	2.92	
1,000.0	17.79	132.83	990.3	-57.7	72.7	91.3	3.00	2.95	
1,100.0	20.76	134.27	1,084.7	-80.4	96.6	124.1	3.00	2.96	
1,200.0	23.73	135.36	1,177.3	-107.1	123.4	161.9	3.00	2.97	
1,300.0	26.71	136.22	1,267.7	-137.7	153.1	204.4	3.00	2.98	
1,400.0	29.69	136.92	1,355.8	-172.0	185.6	251.6	3.00	2.98	
1,500.0	32.67	137.50	1,441.4	-210.0	220.7	303.4	3.00	2.98	
1,600.0	35.66	138.00	1,524.1	-251.6	258.5	359.5	3.00	2.99	
1,700.0	38.65	138.43	1,603.8	-296.6	298.7	419.9	3.00	2.99	
1,800.0	41.64	138.80	1,680.3	-345.0	341.3	484.4	3.00	2.99	
1,871.0	43.76	139.04	1,732.4	-381.3	373.0	532.5	3.00	2.99	EOB; Inc=43.76°
1,900.0	43.76	139.04	1,753.4	-396.4	386.1	552.6	0.00	0.00	
2,000.0	43.76	139.04	1,825.6	-448.6	431.5	621.7	0.00	0.00	
2,100.0	43.76	139.04	1,897.8	-500.9	476.8	690.9	0.00	0.00	
2,200.0	43.76	139.04	1,970.0	-553.1	522.1	760.1	0.00	0.00	
2,300.0	43.76	139.04	2,042.3	-605.3	567.5	829.2	0.00	0.00	
2,400.0	43.76	139.04	2,114.5	-657.6	612.8	898.4	0.00	0.00	
2,500.0	43.76	139.04	2,186.7	-709.8	658.2	967.6	0.00	0.00	
2,600.0	43.76	139.04	2,258.9	-762.0	703.5	1,036.7	0.00	0.00	
2,700.0	43.76	139.04	2,331.2	-814.3	748.8	1,105.9	0.00	0.00	
2,800.0	43.76	139.04	2,403.4	-866.5	794.2	1,175.1	0.00	0.00	
2,900.0	43.76	139.04	2,475.6	-918.7	839.5	1,244.2	0.00	0.00	
3,000.0	43.76	139.04	2,547.8	-971.0	884.9	1,313.4	0.00	0.00	
3,100.0	43.76	139.04	2,620.0	-1,023.2	930.2	1,382.5	0.00	0.00	
3,200.0	43.76	139.04	2,692.3	-1,075.4	975.5	1,451.7	0.00	0.00	
3,300.0	43.76	139.04	2,764.5	-1,127.7	1,020.9	1,520.9	0.00	0.00	
3,400.0	43.76	139.04	2,836.7	-1,179.9	1,066.2	1,590.0	0.00	0.00	
3,500.0	43.76	139.04	2,908.9	-1,232.1	1,111.5	1,659.2	0.00	0.00	
3,600.0	43.76	139.04	2,981.2	-1,284.4	1,156.9	1,728.4	0.00	0.00	
3,700.0	43.76	139.04	3,053.4	-1,336.6	1,202.2	1,797.5	0.00	0.00	
3,800.0	43.76	139.04	3,125.6	-1,388.8	1,247.6	1,866.7	0.00	0.00	
3,900.0	43.76	139.04	3,197.8	-1,441.1	1,292.9	1,935.9	0.00	0.00	
4,000.0	43.76	139.04	3,270.1	-1,493.3	1,338.2	2,005.0	0.00	0.00	
4,100.0	43.76	139.04	3,342.3	-1,545.5	1,383.6	2,074.2	0.00	0.00	
4,200.0	43.76	139.04	3,414.5	-1,597.8	1,428.9	2,143.4	0.00	0.00	
4,300.0	43.76	139.04	3,486.7	-1,650.0	1,474.3	2,212.5	0.00	0.00	
4,400.0	43.76	139.04	3,558.9	-1,702.2	1,519.6	2,281.7	0.00	0.00	
4,500.0	43.76	139.04	3,631.2	-1,754.5	1,564.9	2,350.9	0.00	0.00	
4,600.0	43.76	139.04	3,703.4	-1,806.7	1,610.3	2,420.0	0.00	0.00	
4,700.0	43.76	139.04	3,775.6	-1,858.9	1,655.6	2,489.2	0.00	0.00	
4,800.0	43.76	139.04	3,847.8	-1,911.1	1,701.0	2,558.4	0.00	0.00	
4,900.0	43.76	139.04	3,920.1	-1,963.4	1,746.3	2,627.5	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 EMF16D-17 F17 595
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE2 @ 6330.0ft
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	KBE2 @ 6330.0ft
<b>Site:</b>	F17 595 Pad	<b>North Reference:</b>	True
<b>Well:</b>	EMF16D-17 F17 595	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #4		

### 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
5,000.0	43.76	139.04	3,992.3	-2,015.6	1,791.6	2,696.7	0.00	0.00	
5,100.0	43.76	139.04	4,064.5	-2,067.8	1,837.0	2,765.8	0.00	0.00	
5,200.0	43.76	139.04	4,136.7	-2,120.1	1,882.3	2,835.0	0.00	0.00	
5,300.0	43.76	139.04	4,209.0	-2,172.3	1,927.7	2,904.2	0.00	0.00	
5,400.0	43.76	139.04	4,281.2	-2,224.5	1,973.0	2,973.3	0.00	0.00	
5,500.0	43.76	139.04	4,353.4	-2,276.8	2,018.3	3,042.5	0.00	0.00	
5,600.0	43.76	139.04	4,425.6	-2,329.0	2,063.7	3,111.7	0.00	0.00	
5,700.0	43.76	139.04	4,497.8	-2,381.2	2,109.0	3,180.8	0.00	0.00	
5,800.0	43.76	139.04	4,570.1	-2,433.5	2,154.3	3,250.0	0.00	0.00	
5,900.0	43.76	139.04	4,642.3	-2,485.7	2,199.7	3,319.2	0.00	0.00	
6,000.0	43.76	139.04	4,714.5	-2,537.9	2,245.0	3,388.3	0.00	0.00	
6,100.0	43.76	139.04	4,786.7	-2,590.2	2,290.4	3,457.5	0.00	0.00	
6,200.0	43.76	139.04	4,859.0	-2,642.4	2,335.7	3,526.7	0.00	0.00	
6,259.6	43.76	139.04	4,902.0	-2,673.5	2,362.7	3,567.9	0.00	0.00	Start Drop -3.00
6,300.0	42.55	139.04	4,931.5	-2,694.4	2,380.8	3,595.5	3.00	-3.00	
6,400.0	39.55	139.04	5,006.9	-2,744.0	2,423.9	3,661.2	3.00	-3.00	
6,500.0	36.55	139.04	5,085.6	-2,790.5	2,464.3	3,722.8	3.00	-3.00	
6,600.0	33.55	139.04	5,167.5	-2,833.9	2,501.9	3,780.2	3.00	-3.00	
6,700.0	30.55	139.04	5,252.2	-2,874.0	2,536.7	3,833.3	3.00	-3.00	
6,800.0	27.55	139.04	5,339.6	-2,910.6	2,568.5	3,881.8	3.00	-3.00	
6,900.0	24.55	139.04	5,429.5	-2,943.8	2,597.3	3,925.8	3.00	-3.00	
7,000.0	21.55	139.04	5,521.5	-2,973.4	2,623.0	3,964.9	3.00	-3.00	
7,100.0	18.55	139.04	5,615.4	-2,999.2	2,645.5	3,999.2	3.00	-3.00	
7,200.0	15.55	139.04	5,711.0	-3,021.4	2,664.7	4,028.5	3.00	-3.00	
7,300.0	12.55	139.04	5,808.0	-3,039.7	2,680.6	4,052.8	3.00	-3.00	
7,400.0	9.55	139.04	5,906.1	-3,054.2	2,693.1	4,071.9	3.00	-3.00	
7,500.0	6.55	139.04	6,005.1	-3,064.8	2,702.3	4,085.9	3.00	-3.00	
7,600.0	3.55	139.04	6,104.7	-3,071.4	2,708.1	4,094.8	3.00	-3.00	
7,678.4	1.20	139.04	6,183.0	-3,073.9	2,710.2	4,098.0	3.00	-3.00	WF
7,700.0	0.55	139.04	6,204.6	-3,074.1	2,710.4	4,098.3	3.00	-3.00	
7,718.4	0.00	0.00	6,223.0	-3,074.2	2,710.5	4,098.4	3.00	-3.00	EOD; Inc=0° - TOG - EMF 16D-17 F17 595 TG
7,800.0	0.20	239.50	6,304.6	-3,074.3	2,710.4	4,098.4	0.25	0.25	
7,847.8	0.32	239.50	6,352.5	-3,074.4	2,710.2	4,098.4	0.25	0.25	
7,900.0	0.32	239.50	6,404.6	-3,074.5	2,709.9	4,098.3	0.00	0.00	
8,000.0	0.32	239.50	6,504.6	-3,074.8	2,709.4	4,098.2	0.00	0.00	
8,100.0	0.32	239.50	6,604.6	-3,075.1	2,709.0	4,098.1	0.00	0.00	
8,200.0	0.32	239.50	6,704.6	-3,075.4	2,708.5	4,098.0	0.00	0.00	
8,300.0	0.32	239.50	6,804.6	-3,075.7	2,708.0	4,097.9	0.00	0.00	
8,400.0	0.32	239.50	6,904.6	-3,076.0	2,707.5	4,097.8	0.00	0.00	
8,500.0	0.32	239.50	7,004.6	-3,076.2	2,707.0	4,097.7	0.00	0.00	
8,600.0	0.32	239.50	7,104.6	-3,076.5	2,706.5	4,097.6	0.00	0.00	
8,700.0	0.32	239.50	7,204.6	-3,076.8	2,706.0	4,097.5	0.00	0.00	
8,800.0	0.32	239.50	7,304.6	-3,077.1	2,705.6	4,097.4	0.00	0.00	
8,900.0	0.32	239.50	7,404.6	-3,077.4	2,705.1	4,097.3	0.00	0.00	
9,000.0	0.32	239.50	7,504.6	-3,077.7	2,704.6	4,097.2	0.00	0.00	
9,100.0	0.32	239.50	7,604.6	-3,078.0	2,704.1	4,097.0	0.00	0.00	
9,200.0	0.32	239.50	7,704.6	-3,078.2	2,703.6	4,096.9	0.00	0.00	
9,300.0	0.32	239.50	7,804.6	-3,078.5	2,703.1	4,096.8	0.00	0.00	
9,400.0	0.32	239.50	7,904.6	-3,078.8	2,702.6	4,096.7	0.00	0.00	
9,500.0	0.32	239.50	8,004.6	-3,079.1	2,702.1	4,096.6	0.00	0.00	
9,600.0	0.32	239.50	8,104.6	-3,079.4	2,701.7	4,096.5	0.00	0.00	
9,700.0	0.32	239.50	8,204.6	-3,079.7	2,701.2	4,096.4	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 EMF16D-17 F17 595
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE2 @ 6330.0ft
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	KBE2 @ 6330.0ft
<b>Site:</b>	F17 595 Pad	<b>North Reference:</b>	True
<b>Well:</b>	EMF16D-17 F17 595	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #4		

### 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
9,800.0	0.32	239.50	8,304.6	-3,080.0	2,700.7	4,096.3	0.00	0.00	
9,900.0	0.32	239.50	8,404.6	-3,080.3	2,700.2	4,096.2	0.00	0.00	
10,000.0	0.32	239.50	8,504.6	-3,080.5	2,699.7	4,096.1	0.00	0.00	
10,100.0	0.32	239.50	8,604.6	-3,080.8	2,699.2	4,096.0	0.00	0.00	
10,200.0	0.32	239.50	8,704.6	-3,081.1	2,698.7	4,095.9	0.00	0.00	
10,300.0	0.32	239.50	8,804.6	-3,081.4	2,698.2	4,095.8	0.00	0.00	
10,400.0	0.32	239.50	8,904.6	-3,081.7	2,697.8	4,095.7	0.00	0.00	
10,500.0	0.32	239.50	9,004.6	-3,082.0	2,697.3	4,095.6	0.00	0.00	
10,600.0	0.32	239.50	9,104.6	-3,082.3	2,696.8	4,095.5	0.00	0.00	
10,700.0	0.32	239.50	9,204.6	-3,082.5	2,696.3	4,095.4	0.00	0.00	
10,800.0	0.32	239.50	9,304.6	-3,082.8	2,695.8	4,095.3	0.00	0.00	
10,900.0	0.32	239.50	9,404.6	-3,083.1	2,695.3	4,095.2	0.00	0.00	
11,000.0	0.32	239.50	9,504.6	-3,083.4	2,694.8	4,095.1	0.00	0.00	
11,100.0	0.32	239.50	9,604.6	-3,083.7	2,694.4	4,095.0	0.00	0.00	
11,200.0	0.32	239.50	9,704.6	-3,084.0	2,693.9	4,094.9	0.00	0.00	
11,278.4	0.32	239.50	9,783.0	-3,084.2	2,693.5	4,094.8	0.00	0.00	Rollins - EMF 16D-17 F17 595 BHL
11,300.0	0.32	239.50	9,804.6	-3,084.3	2,693.4	4,094.8	0.00	0.00	
11,378.4	0.32	239.50	9,883.0	-3,084.5	2,693.0	4,094.7	0.00	0.00	Drillers TD @ 11378.4' MD
11,400.0	0.32	239.50	9,904.6	-3,084.6	2,692.9	4,094.7	0.00	0.00	
11,500.0	0.32	239.50	10,004.6	-3,084.8	2,692.4	4,094.5	0.00	0.00	
11,600.0	0.32	239.50	10,104.6	-3,085.1	2,691.9	4,094.4	0.00	0.00	
11,700.0	0.32	239.50	10,204.6	-3,085.4	2,691.4	4,094.3	0.00	0.00	
11,800.0	0.32	239.50	10,304.6	-3,085.7	2,690.9	4,094.2	0.00	0.00	
11,900.0	0.32	239.50	10,404.6	-3,086.0	2,690.5	4,094.1	0.00	0.00	
12,000.0	0.32	239.50	10,504.6	-3,086.3	2,690.0	4,094.0	0.00	0.00	
12,100.0	0.32	239.50	10,604.6	-3,086.6	2,689.5	4,093.9	0.00	0.00	
12,200.0	0.32	239.50	10,704.6	-3,086.8	2,689.0	4,093.8	0.00	0.00	
12,300.0	0.32	239.50	10,804.6	-3,087.1	2,688.5	4,093.7	0.00	0.00	
12,378.4	0.32	239.50	10,883.0	-3,087.4	2,688.1	4,093.6	0.00	0.00	Permit TD @ 12378.4' MD

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
EMF 16D-17 F17 595 T(	0.00	0.00	6,223.0	-3,074.2	2,710.5	1,656,107.87	2,276,178.45	39° 36' 24.11 N	108° 4' 9.55 W
- plan hits target center									
- Point									
EMF 16D-17 F17 595 BI	0.00	0.00	9,783.0	-3,084.2	2,693.5	1,656,098.34	2,276,161.16	39° 36' 24.01 N	108° 4' 9.77 W
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well EMF16D-17 F17 595
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE2 @ 6330.0ft
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	KBE2 @ 6330.0ft
<b>Site:</b>	F17 595 Pad	<b>North Reference:</b>	True
<b>Well:</b>	EMF16D-17 F17 595	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #4		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
7,678.4	6,183.0	WF		0.00		
7,718.4	6,223.0	TOG		0.00		
11,278.4	9,783.0	Rollins		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400' MD	
1,871.0	1,732.4	-16.6	23.8	EOB; Inc=43.76°	
6,259.6	4,902.0	-381.3	373.0	Start Drop -3.00	
7,718.4	6,223.0	-2,673.6	2,362.7	EOD; Inc=0°	
11,378.4	9,883.0	-3,074.2	2,710.5	Drillers TD @ 11378.4' MD	
12,378.4	10,883.0	-3,074.4	2,710.2	Permit TD @ 12378.4' MD	