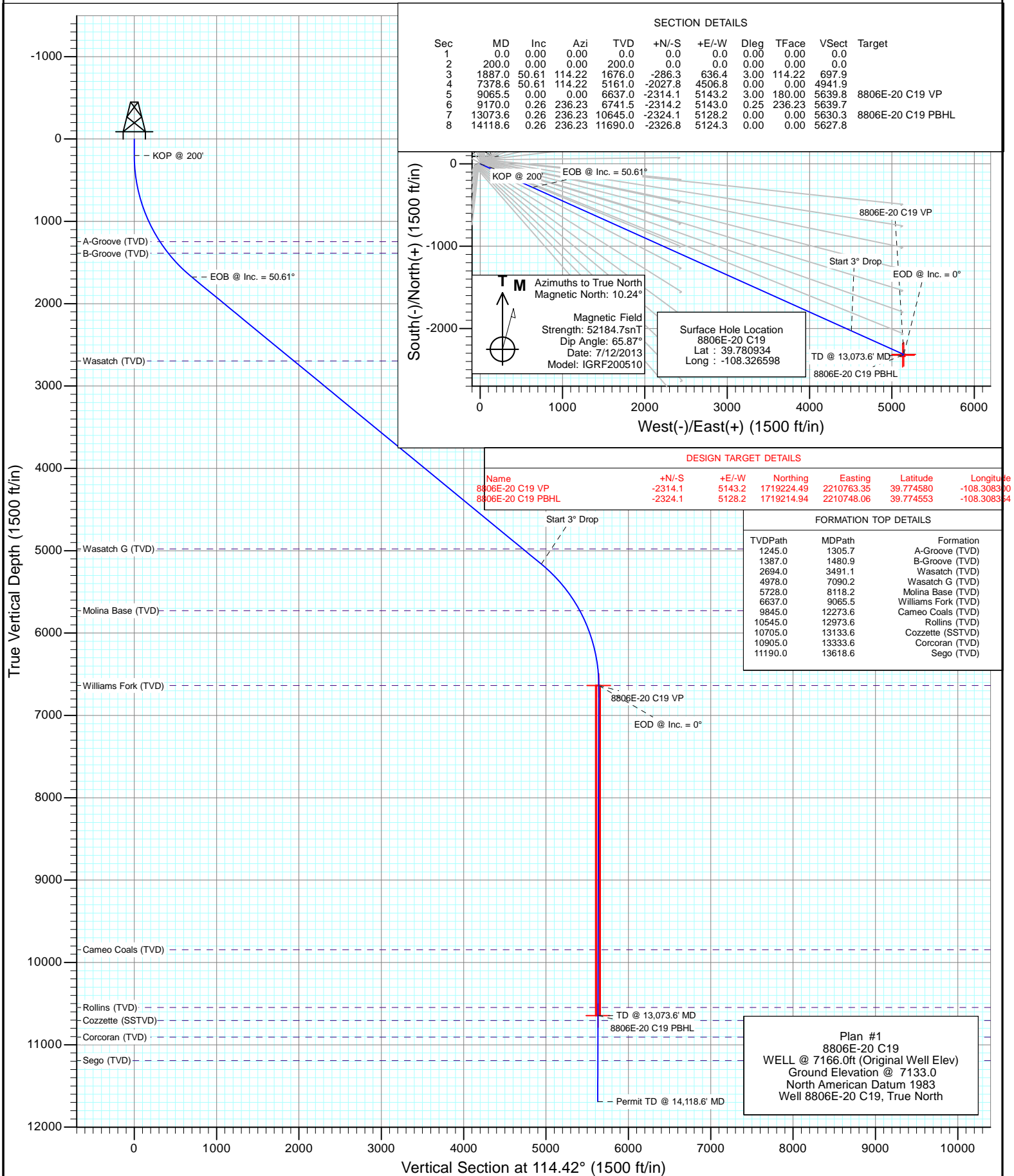
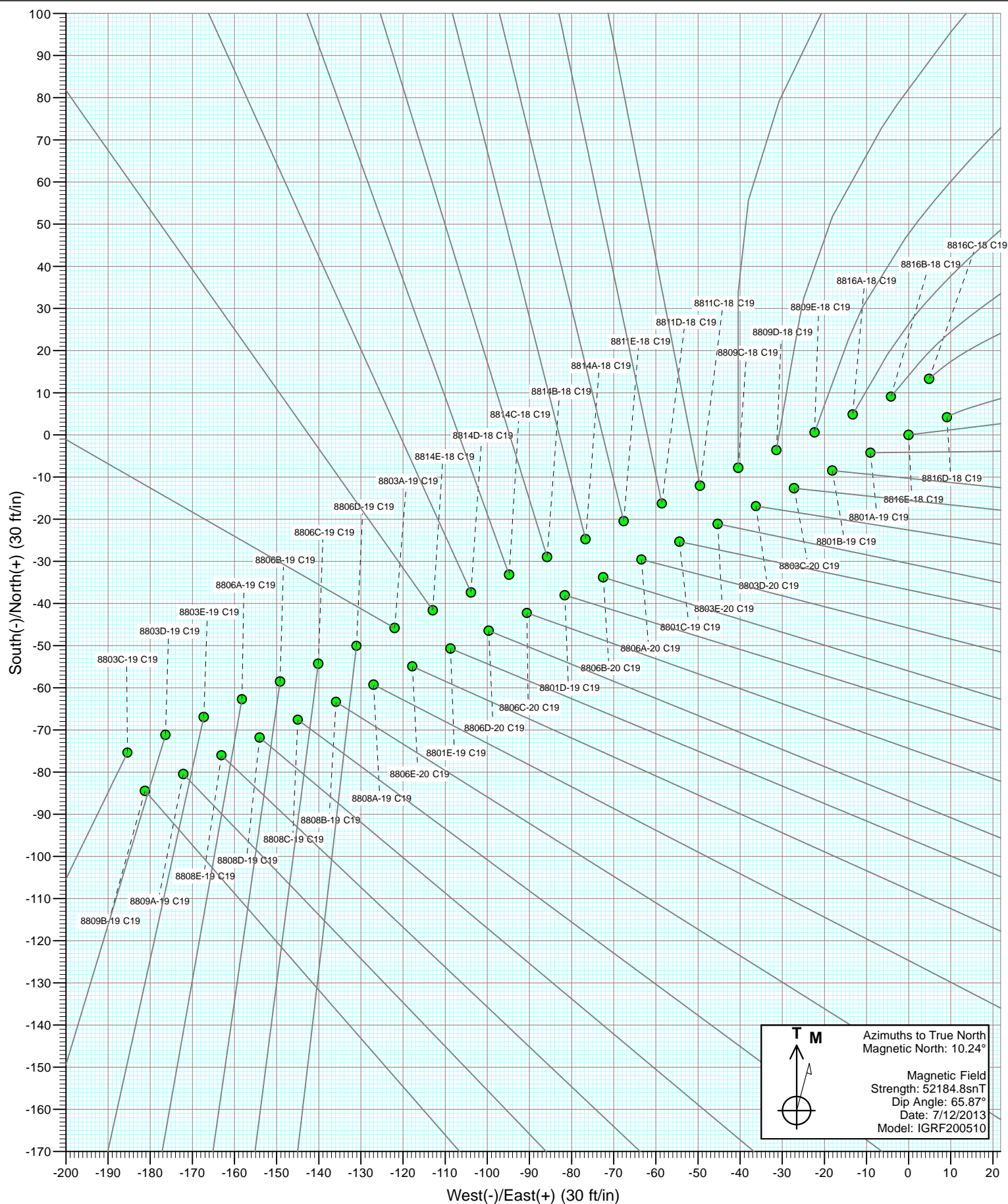
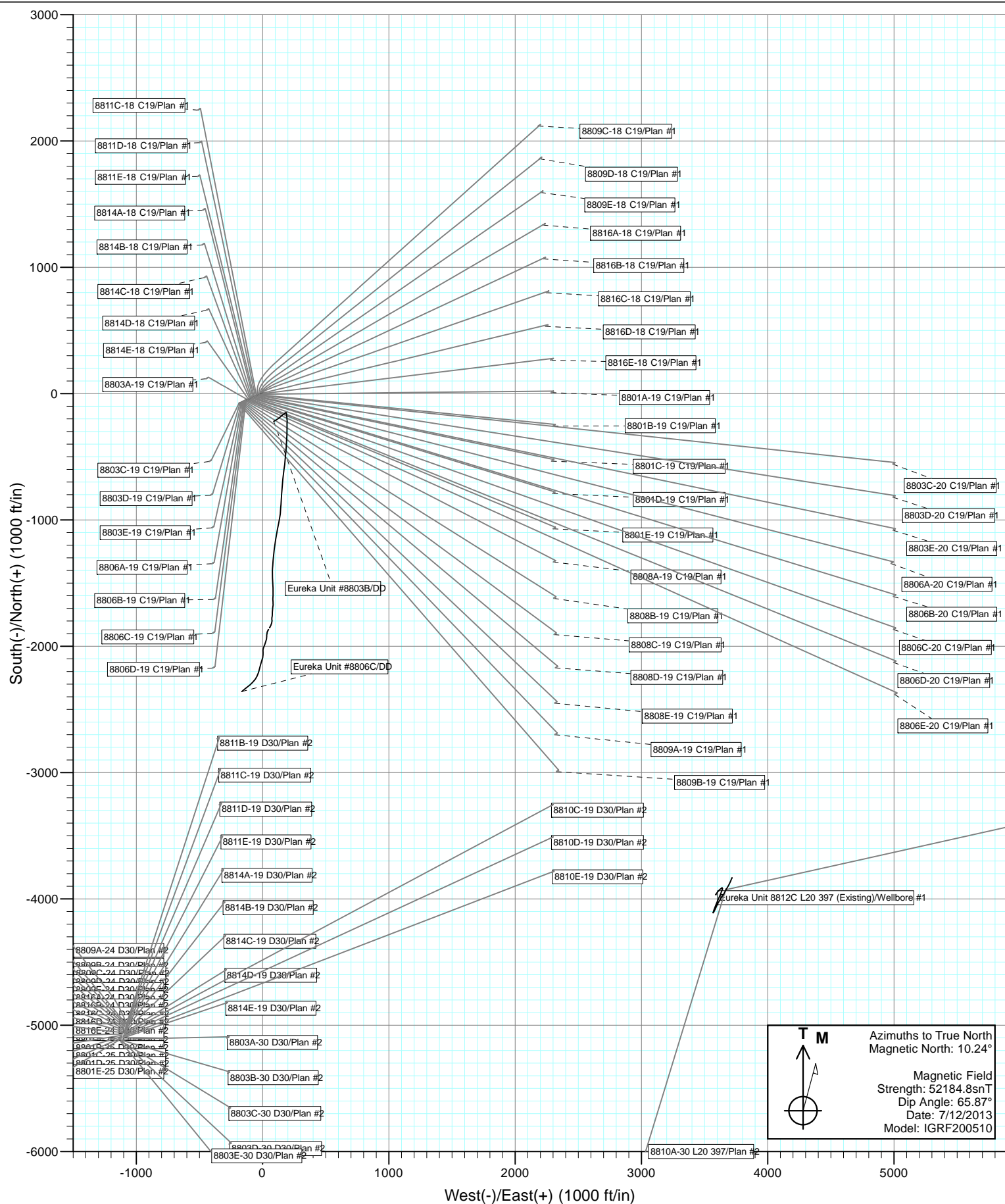




Project: Eureka Unit  
Site: C19 Pad (S19-T3S-R97W)  
Well: 8806E-20 C19  
Wellbore: DD  
Design: Plan #1







# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8806E-20 C19
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Project:</b>	Eureka Unit	<b>MD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Site:</b>	C19 Pad (S19-T3S-R97W)	<b>North Reference:</b>	True
<b>Well:</b>	8806E-20 C19	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

<b>Project</b>	Eureka Unit		
<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		C19 Pad (S19-T3S-R97W)			
Site Position:		Northing:	1,721,669.90 ft	Latitude:	39.780853
From:	Lat/Long	Easting:	2,205,630.31 ft	Longitude:	-108.326824
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.78 °

Well	8806E-20 C19					
Well Position	+N/-S	0.0 ft	Northing:	1,721,697.47 ft	Latitude:	39.780934
	+E/-W	0.0 ft	Easting:	2,205,694.63 ft	Longitude:	-108.326598
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,133.0 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	7/12/2013	10.24	65.87	52,185

<b>Design</b>	Plan #1				
<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	114.42	

<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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,887.0	50.61	114.22	1,676.0	-286.3	636.4	3.00	3.00	0.00	114.22	
7,378.6	50.61	114.22	5,161.0	-2,027.8	4,506.8	0.00	0.00	0.00	0.00	
9,065.5	0.00	0.00	6,637.0	-2,314.1	5,143.2	3.00	-3.00	0.00	180.00	8806E-20 C19 VP
9,170.0	0.26	236.23	6,741.5	-2,314.2	5,143.0	0.25	0.25	-118.48	236.23	
13,073.6	0.26	236.23	10,645.0	-2,324.1	5,128.2	0.00	0.00	0.00	0.00	8806E-20 C19 PBHL
14,118.6	0.26	236.23	11,690.0	-2,326.8	5,124.3	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 8806E-20 C19
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Project:</b>	Eureka Unit	<b>MD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Site:</b>	C19 Pad (S19-T3S-R97W)	<b>North Reference:</b>	True
<b>Well:</b>	8806E-20 C19	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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	KOP @ 200'
300.0	3.00	114.22	300.0	-1.1	2.4	2.6	3.00	3.00	
400.0	6.00	114.22	399.6	-4.3	9.5	10.5	3.00	3.00	
500.0	9.00	114.22	498.8	-9.6	21.4	23.5	3.00	3.00	
600.0	12.00	114.22	597.1	-17.1	38.1	41.7	3.00	3.00	
700.0	15.00	114.22	694.3	-26.7	59.3	65.1	3.00	3.00	
800.0	18.00	114.22	790.2	-38.4	85.2	93.5	3.00	3.00	
900.0	21.00	114.22	884.4	-52.0	115.7	126.9	3.00	3.00	
1,000.0	24.00	114.22	976.8	-67.7	150.6	165.1	3.00	3.00	
1,100.0	27.00	114.22	1,067.1	-85.4	189.8	208.2	3.00	3.00	
1,200.0	30.00	114.22	1,154.9	-105.0	233.3	255.9	3.00	3.00	
1,300.0	33.00	114.22	1,240.2	-126.4	281.0	308.1	3.00	3.00	
1,305.7	33.17	114.22	1,245.0	-127.7	283.8	311.3	3.00	3.00	A-Groove (TVD)
1,400.0	36.00	114.22	1,322.6	-149.7	332.6	364.7	3.00	3.00	
1,480.9	38.43	114.22	1,387.0	-169.7	377.2	413.7	3.00	3.00	B-Groove (TVD)
1,500.0	39.00	114.22	1,401.9	-174.6	388.1	425.6	3.00	3.00	
1,600.0	42.00	114.22	1,477.9	-201.3	447.4	490.6	3.00	3.00	
1,700.0	45.00	114.22	1,550.5	-229.5	510.1	559.4	3.00	3.00	
1,800.0	48.00	114.22	1,619.3	-259.3	576.3	631.9	3.00	3.00	
1,887.0	50.61	114.22	1,676.0	-286.3	636.4	697.9	3.00	3.00	EOB @ Inc. = 50.61°
1,900.0	50.61	114.22	1,684.3	-290.5	645.6	707.9	0.00	0.00	
2,000.0	50.61	114.22	1,747.7	-322.2	716.1	785.2	0.00	0.00	
2,100.0	50.61	114.22	1,811.2	-353.9	786.5	862.5	0.00	0.00	
2,200.0	50.61	114.22	1,874.7	-385.6	857.0	939.8	0.00	0.00	
2,300.0	50.61	114.22	1,938.1	-417.3	927.5	1,017.0	0.00	0.00	
2,400.0	50.61	114.22	2,001.6	-449.0	998.0	1,094.3	0.00	0.00	
2,500.0	50.61	114.22	2,065.0	-480.7	1,068.5	1,171.6	0.00	0.00	
2,600.0	50.61	114.22	2,128.5	-512.4	1,138.9	1,248.9	0.00	0.00	
2,700.0	50.61	114.22	2,192.0	-544.2	1,209.4	1,326.2	0.00	0.00	
2,800.0	50.61	114.22	2,255.4	-575.9	1,279.9	1,403.5	0.00	0.00	
2,900.0	50.61	114.22	2,318.9	-607.6	1,350.4	1,480.7	0.00	0.00	
3,000.0	50.61	114.22	2,382.3	-639.3	1,420.8	1,558.0	0.00	0.00	
3,100.0	50.61	114.22	2,445.8	-671.0	1,491.3	1,635.3	0.00	0.00	
3,200.0	50.61	114.22	2,509.3	-702.7	1,561.8	1,712.6	0.00	0.00	
3,300.0	50.61	114.22	2,572.7	-734.4	1,632.3	1,789.9	0.00	0.00	
3,400.0	50.61	114.22	2,636.2	-766.1	1,702.8	1,867.2	0.00	0.00	
3,491.1	50.61	114.22	2,694.0	-795.0	1,767.0	1,937.6	0.00	0.00	Wasatch (TVD)
3,500.0	50.61	114.22	2,699.6	-797.8	1,773.2	1,944.4	0.00	0.00	
3,600.0	50.61	114.22	2,763.1	-829.6	1,843.7	2,021.7	0.00	0.00	
3,700.0	50.61	114.22	2,826.6	-861.3	1,914.2	2,099.0	0.00	0.00	
3,800.0	50.61	114.22	2,890.0	-893.0	1,984.7	2,176.3	0.00	0.00	
3,900.0	50.61	114.22	2,953.5	-924.7	2,055.2	2,253.6	0.00	0.00	
4,000.0	50.61	114.22	3,016.9	-956.4	2,125.6	2,330.9	0.00	0.00	
4,100.0	50.61	114.22	3,080.4	-988.1	2,196.1	2,408.1	0.00	0.00	
4,200.0	50.61	114.22	3,143.9	-1,019.8	2,266.6	2,485.4	0.00	0.00	
4,300.0	50.61	114.22	3,207.3	-1,051.5	2,337.1	2,562.7	0.00	0.00	
4,400.0	50.61	114.22	3,270.8	-1,083.2	2,407.5	2,640.0	0.00	0.00	
4,500.0	50.61	114.22	3,334.2	-1,114.9	2,478.0	2,717.3	0.00	0.00	
4,600.0	50.61	114.22	3,397.7	-1,146.7	2,548.5	2,794.6	0.00	0.00	
4,700.0	50.61	114.22	3,461.2	-1,178.4	2,619.0	2,871.8	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 8806E-20 C19
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Project:</b>	Eureka Unit	<b>MD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Site:</b>	C19 Pad (S19-T3S-R97W)	<b>North Reference:</b>	True
<b>Well:</b>	8806E-20 C19	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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
4,800.0	50.61	114.22	3,524.6	-1,210.1	2,689.5	2,949.1	0.00	0.00	
4,900.0	50.61	114.22	3,588.1	-1,241.8	2,759.9	3,026.4	0.00	0.00	
5,000.0	50.61	114.22	3,651.5	-1,273.5	2,830.4	3,103.7	0.00	0.00	
5,100.0	50.61	114.22	3,715.0	-1,305.2	2,900.9	3,181.0	0.00	0.00	
5,200.0	50.61	114.22	3,778.5	-1,336.9	2,971.4	3,258.3	0.00	0.00	
5,300.0	50.61	114.22	3,841.9	-1,368.6	3,041.9	3,335.5	0.00	0.00	
5,400.0	50.61	114.22	3,905.4	-1,400.3	3,112.3	3,412.8	0.00	0.00	
5,500.0	50.61	114.22	3,968.8	-1,432.1	3,182.8	3,490.1	0.00	0.00	
5,600.0	50.61	114.22	4,032.3	-1,463.8	3,253.3	3,567.4	0.00	0.00	
5,700.0	50.61	114.22	4,095.8	-1,495.5	3,323.8	3,644.7	0.00	0.00	
5,800.0	50.61	114.22	4,159.2	-1,527.2	3,394.2	3,722.0	0.00	0.00	
5,900.0	50.61	114.22	4,222.7	-1,558.9	3,464.7	3,799.2	0.00	0.00	
6,000.0	50.61	114.22	4,286.1	-1,590.6	3,535.2	3,876.5	0.00	0.00	
6,100.0	50.61	114.22	4,349.6	-1,622.3	3,605.7	3,953.8	0.00	0.00	
6,200.0	50.61	114.22	4,413.1	-1,654.0	3,676.2	4,031.1	0.00	0.00	
6,300.0	50.61	114.22	4,476.5	-1,685.7	3,746.6	4,108.4	0.00	0.00	
6,400.0	50.61	114.22	4,540.0	-1,717.4	3,817.1	4,185.7	0.00	0.00	
6,500.0	50.61	114.22	4,603.4	-1,749.2	3,887.6	4,262.9	0.00	0.00	
6,600.0	50.61	114.22	4,666.9	-1,780.9	3,958.1	4,340.2	0.00	0.00	
6,700.0	50.61	114.22	4,730.4	-1,812.6	4,028.6	4,417.5	0.00	0.00	
6,800.0	50.61	114.22	4,793.8	-1,844.3	4,099.0	4,494.8	0.00	0.00	
6,900.0	50.61	114.22	4,857.3	-1,876.0	4,169.5	4,572.1	0.00	0.00	
7,000.0	50.61	114.22	4,920.7	-1,907.7	4,240.0	4,649.4	0.00	0.00	
7,090.2	50.61	114.22	4,978.0	-1,936.3	4,303.6	4,719.1	0.00	0.00	Wasatch G (TVD)
7,100.0	50.61	114.22	4,984.2	-1,939.4	4,310.5	4,726.6	0.00	0.00	
7,200.0	50.61	114.22	5,047.7	-1,971.1	4,380.9	4,803.9	0.00	0.00	
7,300.0	50.61	114.22	5,111.1	-2,002.8	4,451.4	4,881.2	0.00	0.00	
7,378.6	50.61	114.22	5,161.0	-2,027.8	4,506.8	4,941.9	0.00	0.00	Start 3° Drop
7,400.0	49.97	114.22	5,174.7	-2,034.5	4,521.8	4,958.4	3.00	-3.00	
7,500.0	46.97	114.22	5,241.0	-2,065.2	4,590.1	5,033.3	3.00	-3.00	
7,600.0	43.97	114.22	5,311.1	-2,094.5	4,655.1	5,104.5	3.00	-3.00	
7,700.0	40.97	114.22	5,384.9	-2,122.2	4,716.7	5,172.1	3.00	-3.00	
7,800.0	37.97	114.22	5,462.1	-2,148.3	4,774.6	5,235.6	3.00	-3.00	
7,900.0	34.97	114.22	5,542.5	-2,172.6	4,828.8	5,295.0	3.00	-3.00	
8,000.0	31.97	114.22	5,625.9	-2,195.3	4,879.1	5,350.2	3.00	-3.00	
8,100.0	28.97	114.22	5,712.1	-2,216.1	4,925.3	5,400.9	3.00	-3.00	
8,118.2	28.42	114.22	5,728.0	-2,219.6	4,933.3	5,409.6	3.00	-3.00	Molina Base (TVD)
8,200.0	25.97	114.22	5,800.8	-2,235.0	4,967.4	5,447.0	3.00	-3.00	
8,300.0	22.97	114.22	5,891.8	-2,252.0	5,005.1	5,488.4	3.00	-3.00	
8,400.0	19.97	114.22	5,984.8	-2,267.0	5,038.5	5,525.0	3.00	-3.00	
8,500.0	16.97	114.22	6,079.7	-2,280.0	5,067.4	5,556.7	3.00	-3.00	
8,600.0	13.97	114.22	6,176.0	-2,290.9	5,091.7	5,583.3	3.00	-3.00	
8,700.0	10.97	114.22	6,273.7	-2,299.8	5,111.4	5,604.9	3.00	-3.00	
8,800.0	7.97	114.22	6,372.3	-2,306.5	5,126.4	5,621.4	3.00	-3.00	
8,900.0	4.97	114.22	6,471.7	-2,311.2	5,136.7	5,632.6	3.00	-3.00	
9,000.0	1.97	114.22	6,571.5	-2,313.6	5,142.2	5,638.7	3.00	-3.00	
9,065.5	0.00	0.00	6,637.0	-2,314.1	5,143.2	5,639.8	3.00	-3.00	EOD @ Inc. = 0° - Williams Fork (TVD)
9,100.0	0.09	236.23	6,671.5	-2,314.1	5,143.2	5,639.8	0.25	0.25	
9,170.0	0.26	236.23	6,741.5	-2,314.2	5,143.0	5,639.7	0.25	0.25	
9,200.0	0.26	236.23	6,771.5	-2,314.3	5,142.9	5,639.6	0.00	0.00	
9,300.0	0.26	236.23	6,871.5	-2,314.6	5,142.5	5,639.3	0.00	0.00	
9,400.0	0.26	236.23	6,971.5	-2,314.8	5,142.1	5,639.1	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 8806E-20 C19
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Project:</b>	Eureka Unit	<b>MD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Site:</b>	C19 Pad (S19-T3S-R97W)	<b>North Reference:</b>	True
<b>Well:</b>	8806E-20 C19	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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
9,500.0	0.26	236.23	7,071.4	-2,315.1	5,141.8	5,638.9	0.00	0.00	
9,600.0	0.26	236.23	7,171.4	-2,315.3	5,141.4	5,638.6	0.00	0.00	
9,700.0	0.26	236.23	7,271.4	-2,315.6	5,141.0	5,638.4	0.00	0.00	
9,800.0	0.26	236.23	7,371.4	-2,315.8	5,140.6	5,638.1	0.00	0.00	
9,900.0	0.26	236.23	7,471.4	-2,316.1	5,140.2	5,637.9	0.00	0.00	
10,000.0	0.26	236.23	7,571.4	-2,316.3	5,139.9	5,637.7	0.00	0.00	
10,100.0	0.26	236.23	7,671.4	-2,316.6	5,139.5	5,637.4	0.00	0.00	
10,200.0	0.26	236.23	7,771.4	-2,316.8	5,139.1	5,637.2	0.00	0.00	
10,300.0	0.26	236.23	7,871.4	-2,317.1	5,138.7	5,636.9	0.00	0.00	
10,400.0	0.26	236.23	7,971.4	-2,317.3	5,138.3	5,636.7	0.00	0.00	
10,500.0	0.26	236.23	8,071.4	-2,317.6	5,138.0	5,636.5	0.00	0.00	
10,600.0	0.26	236.23	8,171.4	-2,317.9	5,137.6	5,636.2	0.00	0.00	
10,700.0	0.26	236.23	8,271.4	-2,318.1	5,137.2	5,636.0	0.00	0.00	
10,800.0	0.26	236.23	8,371.4	-2,318.4	5,136.8	5,635.7	0.00	0.00	
10,900.0	0.26	236.23	8,471.4	-2,318.6	5,136.4	5,635.5	0.00	0.00	
11,000.0	0.26	236.23	8,571.4	-2,318.9	5,136.1	5,635.3	0.00	0.00	
11,100.0	0.26	236.23	8,671.4	-2,319.1	5,135.7	5,635.0	0.00	0.00	
11,200.0	0.26	236.23	8,771.4	-2,319.4	5,135.3	5,634.8	0.00	0.00	
11,300.0	0.26	236.23	8,871.4	-2,319.6	5,134.9	5,634.5	0.00	0.00	
11,400.0	0.26	236.23	8,971.4	-2,319.9	5,134.6	5,634.3	0.00	0.00	
11,500.0	0.26	236.23	9,071.4	-2,320.1	5,134.2	5,634.1	0.00	0.00	
11,600.0	0.26	236.23	9,171.4	-2,320.4	5,133.8	5,633.8	0.00	0.00	
11,700.0	0.26	236.23	9,271.4	-2,320.6	5,133.4	5,633.6	0.00	0.00	
11,800.0	0.26	236.23	9,371.4	-2,320.9	5,133.0	5,633.3	0.00	0.00	
11,900.0	0.26	236.23	9,471.4	-2,321.1	5,132.7	5,633.1	0.00	0.00	
12,000.0	0.26	236.23	9,571.4	-2,321.4	5,132.3	5,632.9	0.00	0.00	
12,100.0	0.26	236.23	9,671.4	-2,321.7	5,131.9	5,632.6	0.00	0.00	
12,200.0	0.26	236.23	9,771.4	-2,321.9	5,131.5	5,632.4	0.00	0.00	
12,273.6	0.26	236.23	9,845.0	-2,322.1	5,131.2	5,632.2	0.00	0.00	Cameo Coals (TVD)
12,300.0	0.26	236.23	9,871.4	-2,322.2	5,131.1	5,632.1	0.00	0.00	
12,400.0	0.26	236.23	9,971.4	-2,322.4	5,130.8	5,631.9	0.00	0.00	
12,500.0	0.26	236.23	10,071.4	-2,322.7	5,130.4	5,631.7	0.00	0.00	
12,600.0	0.26	236.23	10,171.4	-2,322.9	5,130.0	5,631.4	0.00	0.00	
12,700.0	0.26	236.23	10,271.4	-2,323.2	5,129.6	5,631.2	0.00	0.00	
12,800.0	0.26	236.23	10,371.4	-2,323.4	5,129.2	5,630.9	0.00	0.00	
12,900.0	0.26	236.23	10,471.4	-2,323.7	5,128.9	5,630.7	0.00	0.00	
12,973.6	0.26	236.23	10,545.0	-2,323.9	5,128.6	5,630.5	0.00	0.00	Rollins (TVD)
13,000.0	0.26	236.23	10,571.4	-2,323.9	5,128.5	5,630.5	0.00	0.00	
13,073.6	0.26	236.23	10,645.0	-2,324.1	5,128.2	5,630.3	0.00	0.00	TD @ 13,073.6' MD
13,100.0	0.26	236.23	10,671.4	-2,324.2	5,128.1	5,630.2	0.00	0.00	
13,133.6	0.26	236.23	10,705.0	-2,324.3	5,128.0	5,630.1	0.00	0.00	Cozzette (SSTVD)
13,200.0	0.26	236.23	10,771.4	-2,324.4	5,127.7	5,630.0	0.00	0.00	
13,300.0	0.26	236.23	10,871.4	-2,324.7	5,127.4	5,629.7	0.00	0.00	
13,333.6	0.26	236.23	10,905.0	-2,324.8	5,127.2	5,629.7	0.00	0.00	Corcoran (TVD)
13,400.0	0.26	236.23	10,971.4	-2,324.9	5,127.0	5,629.5	0.00	0.00	
13,500.0	0.26	236.23	11,071.4	-2,325.2	5,126.6	5,629.3	0.00	0.00	
13,600.0	0.26	236.23	11,171.4	-2,325.5	5,126.2	5,629.0	0.00	0.00	
13,618.6	0.26	236.23	11,190.0	-2,325.5	5,126.1	5,629.0	0.00	0.00	Sego (TVD)
13,700.0	0.26	236.23	11,271.4	-2,325.7	5,125.8	5,628.8	0.00	0.00	
13,800.0	0.26	236.23	11,371.4	-2,326.0	5,125.5	5,628.5	0.00	0.00	
13,900.0	0.26	236.23	11,471.4	-2,326.2	5,125.1	5,628.3	0.00	0.00	
14,000.0	0.26	236.23	11,571.4	-2,326.5	5,124.7	5,628.1	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 8806E-20 C19
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Project:</b>	Eureka Unit	<b>MD Reference:</b>	WELL @ 7166.0ft (Original Well Elev)
<b>Site:</b>	C19 Pad (S19-T3S-R97W)	<b>North Reference:</b>	True
<b>Well:</b>	8806E-20 C19	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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
14,100.0	0.26	236.23	11,671.4	-2,326.7	5,124.3	5,627.8	0.00	0.00	
14,118.6	0.26	236.23	11,690.0	-2,326.8	5,124.3	5,627.8	0.00	0.00	Permit TD @ 14,118.6' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8806E-20 C19 VP	0.00	0.00	6,637.0	-2,314.1	5,143.2	1,719,224.49	2,210,763.35	39.774580	-108.308300
- plan hits target center									
- Point									
8806E-20 C19 PBHL	0.00	0.00	10,645.0	-2,324.1	5,128.2	1,719,214.94	2,210,748.06	39.774553	-108.308354
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,305.7	1,245.0	A-Groove (TVD)		0.00		
1,480.9	1,387.0	B-Groove (TVD)		0.00		
3,491.1	2,694.0	Wasatch (TVD)		0.00		
7,090.2	4,978.0	Wasatch G (TVD)		0.00		
8,118.2	5,728.0	Molina Base (TVD)		0.00		
9,065.5	6,637.0	Williams Fork (TVD)		0.00		
12,273.6	9,845.0	Cameo Coals (TVD)		0.00		
12,973.6	10,545.0	Rollins (TVD)		0.00		
13,133.6	10,705.0	Cozzette (SSTVD)		0.00		
13,333.6	10,905.0	Corcoran (TVD)		0.00		
13,618.6	11,190.0	Sego (TVD)		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP @ 200'	
1,887.0	1,676.0	-286.3	636.4	EOB @ Inc. = 50.61°	
7,378.6	5,161.0	-2,027.8	4,506.8	Start 3° Drop	
9,065.5	6,637.0	-2,314.1	5,143.2	EOD @ Inc. = 0°	
13,073.6	10,645.0	-2,324.1	5,128.2	TD @ 13,073.6' MD	
14,118.6	11,690.0	-2,326.8	5,124.3	Permit TD @ 14,118.6' MD	