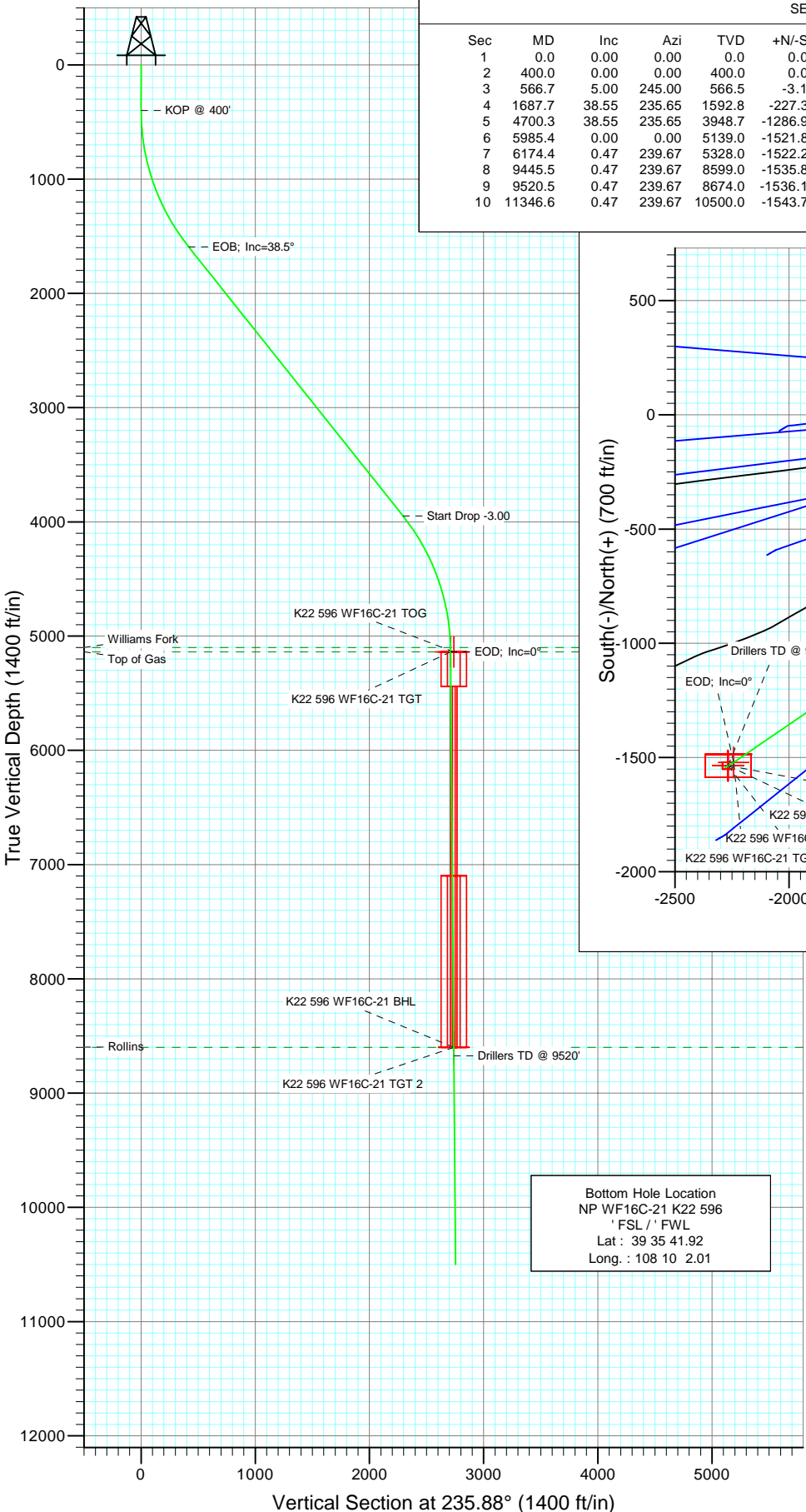
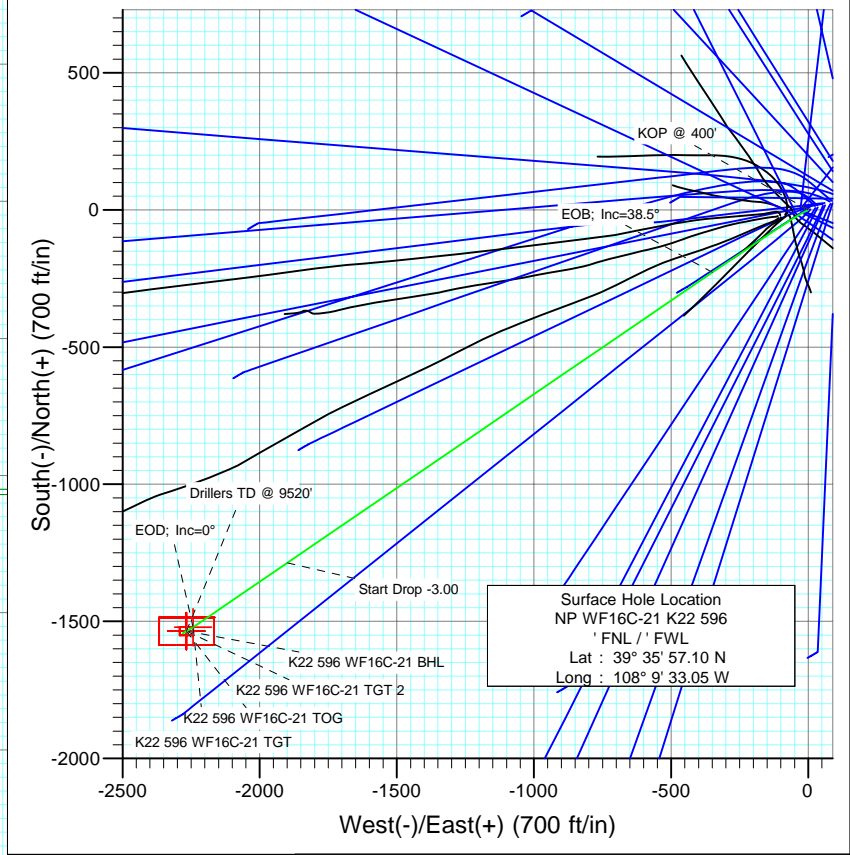




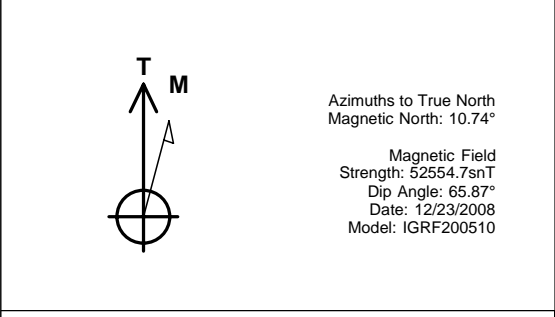
Project: North Piceance  
 Site: K22 596 Pad (S22-T5S-R96W)  
 Well: NP WF16C-21 K22 596  
 Wellbore: DD  
 Design: Plan #1



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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	566.7	5.00	245.00	566.5	-3.1	-6.6	3.00	245.00	7.2	
4	1687.7	38.55	235.65	1592.8	-227.3	-349.2	3.00	-10.54	416.6	
5	4700.3	38.55	235.65	3948.7	-1286.9	-1899.3	0.00	0.00	2294.2	
6	5985.4	0.00	0.00	5139.0	-1521.8	-2243.0	3.00	180.00	2710.5	K22 596 WF16C-21 TGT
7	6174.4	0.47	239.67	5328.0	-1522.2	-2243.7	0.25	239.67	2711.3	
8	9445.5	0.47	239.67	8599.0	-1535.8	-2267.0	0.00	0.00	2738.2	K22 596 WF16C-21 BHL
9	9520.5	0.47	239.67	8674.0	-1536.1	-2267.5	0.00	0.00	2738.8	
10	11346.6	0.47	239.67	10500.0	-1543.7	-2280.5	0.00	0.00	2753.9	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
5099.0	5945.4	Williams Fork
5139.0	5985.4	Top of Gas
8599.0	9445.5	Rollins



DESIGN DETAILS: Plan #1					
85xxx; LR					
WELL @ 6546.0ft (Original Well Elev)					
Target	Azimuth	Origin	N/S	E/W	From TVD
K22 596 WF16C-21 BHL	235.88	Slot	0.0	0.0	0.0

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NP WF16C-21 K22 596
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>North Reference:</b>	True
<b>Well:</b>	NP WF16C-21 K22 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

<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		K22 596 Pad (S22-T5S-R96W)			
Site Position:		Northing:	1,654,096.85 ft	Latitude:	39° 35' 57.02 N
From:	Lat/Long	Easting:	2,250,762.90 ft	Longitude:	108° 9' 33.39 W
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.68 °

Well	NP WF16C-21 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,104.23 ft	Latitude:	39° 35' 57.10 N
	+E/-W	0.0 ft	Easting:	2,250,789.74 ft	Longitude:	108° 9' 33.05 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,524.0 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	12/23/2008	10.74	65.87	52,555

<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	235.88

<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	
566.7	5.00	245.00	566.5	-3.1	-6.6	3.00	3.00	0.00	245.00	
1,687.7	38.55	235.65	1,592.8	-227.3	-349.2	3.00	2.99	-0.83	-10.54	
4,700.3	38.55	235.65	3,948.7	-1,286.9	-1,899.3	0.00	0.00	0.00	0.00	
5,985.4	0.00	0.00	5,139.0	-1,521.8	-2,243.0	3.00	-3.00	0.00	180.00	K22 596 WF16C-21 T
6,174.4	0.47	239.67	5,328.0	-1,522.2	-2,243.7	0.25	0.25	-63.66	239.67	
9,445.5	0.47	239.67	8,599.0	-1,535.8	-2,267.0	0.00	0.00	0.00	0.00	K22 596 WF16C-21 E
9,520.5	0.47	239.67	8,674.0	-1,536.1	-2,267.5	0.00	0.00	0.00	0.00	
11,346.6	0.47	239.67	10,500.0	-1,543.7	-2,280.5	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NP WF16C-21 K22 596
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>North Reference:</b>	True
<b>Well:</b>	NP WF16C-21 K22 596	<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	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	
270.0	0.00	0.00	270.0	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	
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	
390.0	0.00	0.00	390.0	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'
420.0	0.60	245.00	420.0	0.0	-0.1	0.1	3.00	3.00	
450.0	1.50	245.00	450.0	-0.3	-0.6	0.6	3.00	3.00	
480.0	2.40	245.00	480.0	-0.7	-1.5	1.7	3.00	3.00	
510.0	3.30	245.00	509.9	-1.3	-2.9	3.1	3.00	3.00	
540.0	4.20	245.00	539.9	-2.2	-4.6	5.1	3.00	3.00	
566.7	5.00	245.00	566.5	-3.1	-6.6	7.2	3.00	3.00	
570.0	5.10	244.79	569.8	-3.2	-6.9	7.5	3.00	2.95	
600.0	5.99	243.25	599.6	-4.5	-9.5	10.3	3.00	2.96	
630.0	6.88	242.10	629.4	-6.0	-12.4	13.7	3.00	2.97	
660.0	7.77	241.21	659.2	-7.8	-15.8	17.5	3.00	2.98	
690.0	8.66	240.51	688.9	-9.9	-19.5	21.7	3.00	2.98	
720.0	9.56	239.93	718.5	-12.3	-23.7	26.5	3.00	2.98	
750.0	10.46	239.46	748.1	-14.9	-28.2	31.7	3.00	2.99	
780.0	11.35	239.06	777.5	-17.8	-33.0	37.4	3.00	2.99	
810.0	12.25	238.71	806.9	-21.0	-38.3	43.5	3.00	2.99	
840.0	13.15	238.41	836.1	-24.4	-43.9	50.1	3.00	2.99	
870.0	14.05	238.15	865.3	-28.1	-49.9	57.1	3.00	2.99	
900.0	14.94	237.93	894.4	-32.1	-56.3	64.6	3.00	2.99	
930.0	15.84	237.72	923.3	-36.3	-63.0	72.6	3.00	2.99	
960.0	16.74	237.54	952.1	-40.9	-70.1	81.0	3.00	3.00	
990.0	17.64	237.37	980.7	-45.6	-77.6	89.8	3.00	3.00	
1,020.0	18.54	237.23	1,009.2	-50.7	-85.5	99.2	3.00	3.00	
1,050.0	19.44	237.09	1,037.6	-55.9	-93.7	108.9	3.00	3.00	
1,080.0	20.34	236.97	1,065.8	-61.5	-102.2	119.1	3.00	3.00	
1,110.0	21.23	236.85	1,093.9	-67.3	-111.1	129.8	3.00	3.00	
1,140.0	22.13	236.75	1,121.7	-73.4	-120.4	140.8	3.00	3.00	
1,170.0	23.03	236.65	1,149.4	-79.7	-130.0	152.4	3.00	3.00	
1,200.0	23.93	236.56	1,177.0	-86.3	-140.0	164.3	3.00	3.00	
1,230.0	24.83	236.47	1,204.3	-93.1	-150.3	176.7	3.00	3.00	
1,260.0	25.73	236.40	1,231.4	-100.2	-161.0	189.5	3.00	3.00	
1,290.0	26.63	236.32	1,258.3	-107.5	-172.0	202.7	3.00	3.00	
1,320.0	27.53	236.25	1,285.0	-115.1	-183.4	216.4	3.00	3.00	
1,350.0	28.43	236.19	1,311.5	-122.9	-195.1	230.5	3.00	3.00	
1,380.0	29.33	236.13	1,337.8	-131.0	-207.1	245.0	3.00	3.00	
1,410.0	30.23	236.07	1,363.8	-139.3	-219.5	259.9	3.00	3.00	
1,440.0	31.13	236.01	1,389.6	-147.9	-232.2	275.2	3.00	3.00	
1,470.0	32.03	235.96	1,415.2	-156.7	-245.2	290.9	3.00	3.00	

# Cathedral Energy Services

## Planning Report

**Database:** EDM 2003.21 US Multi Users DB  
**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** North Piceance  
**Site:** K22 596 Pad (S22-T5S-R96W)  
**Well:** NP WF16C-21 K22 596  
**Wellbore:** DD  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well NP WF16C-21 K22 596  
**TVD Reference:** WELL @ 6546.0ft (Original Well Elev)  
**MD Reference:** WELL @ 6546.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### 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
1,500.0	32.93	235.91	1,440.5	-165.7	-258.6	307.0	3.00	3.00	
1,530.0	33.83	235.86	1,465.6	-174.9	-272.2	323.5	3.00	3.00	
1,560.0	34.73	235.82	1,490.4	-184.4	-286.2	340.4	3.00	3.00	
1,590.0	35.63	235.78	1,514.9	-194.1	-300.5	357.7	3.00	3.00	
1,620.0	36.53	235.73	1,539.1	-204.1	-315.1	375.3	3.00	3.00	
1,650.0	37.43	235.69	1,563.1	-214.2	-330.0	393.4	3.00	3.00	
1,680.0	38.33	235.66	1,586.8	-224.6	-345.2	411.8	3.00	3.00	
1,687.7	38.55	235.65	1,592.8	-227.3	-349.2	416.6	2.98	2.98	EOB; Inc=38.5°
1,710.0	38.55	235.65	1,610.2	-235.2	-360.7	430.5	0.00	0.00	
1,740.0	38.55	235.65	1,633.7	-245.7	-376.1	449.2	0.00	0.00	
1,770.0	38.55	235.65	1,657.2	-256.3	-391.5	467.9	0.00	0.00	
1,800.0	38.55	235.65	1,680.6	-266.8	-407.0	486.6	0.00	0.00	
1,830.0	38.55	235.65	1,704.1	-277.4	-422.4	505.3	0.00	0.00	
1,860.0	38.55	235.65	1,727.5	-287.9	-437.8	524.0	0.00	0.00	
1,890.0	38.55	235.65	1,751.0	-298.5	-453.3	542.7	0.00	0.00	
1,920.0	38.55	235.65	1,774.5	-309.0	-468.7	561.4	0.00	0.00	
1,950.0	38.55	235.65	1,797.9	-319.6	-484.1	580.1	0.00	0.00	
1,980.0	38.55	235.65	1,821.4	-330.1	-499.6	598.8	0.00	0.00	
2,010.0	38.55	235.65	1,844.8	-340.7	-515.0	617.5	0.00	0.00	
2,040.0	38.55	235.65	1,868.3	-351.2	-530.5	636.2	0.00	0.00	
2,070.0	38.55	235.65	1,891.8	-361.8	-545.9	654.9	0.00	0.00	
2,100.0	38.55	235.65	1,915.2	-372.3	-561.3	673.6	0.00	0.00	
2,130.0	38.55	235.65	1,938.7	-382.9	-576.8	692.3	0.00	0.00	
2,160.0	38.55	235.65	1,962.1	-393.4	-592.2	711.0	0.00	0.00	
2,190.0	38.55	235.65	1,985.6	-404.0	-607.6	729.7	0.00	0.00	
2,220.0	38.55	235.65	2,009.1	-414.5	-623.1	748.4	0.00	0.00	
2,250.0	38.55	235.65	2,032.5	-425.1	-638.5	767.0	0.00	0.00	
2,280.0	38.55	235.65	2,056.0	-435.7	-653.9	785.7	0.00	0.00	
2,310.0	38.55	235.65	2,079.4	-446.2	-669.4	804.4	0.00	0.00	
2,340.0	38.55	235.65	2,102.9	-456.8	-684.8	823.1	0.00	0.00	
2,370.0	38.55	235.65	2,126.4	-467.3	-700.3	841.8	0.00	0.00	
2,400.0	38.55	235.65	2,149.8	-477.9	-715.7	860.5	0.00	0.00	
2,430.0	38.55	235.65	2,173.3	-488.4	-731.1	879.2	0.00	0.00	
2,460.0	38.55	235.65	2,196.7	-499.0	-746.6	897.9	0.00	0.00	
2,490.0	38.55	235.65	2,220.2	-509.5	-762.0	916.6	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NP WF16C-21 K22 596
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>North Reference:</b>	True
<b>Well:</b>	NP WF16C-21 K22 596	<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
2,500.0	38.55	235.65	2,228.0	-513.0	-767.1	922.9	0.00	0.00	
2,600.0	38.55	235.65	2,306.2	-548.2	-818.6	985.2	0.00	0.00	
2,700.0	38.55	235.65	2,384.4	-583.4	-870.1	1,047.5	0.00	0.00	
2,800.0	38.55	235.65	2,462.6	-618.5	-921.5	1,109.8	0.00	0.00	
2,900.0	38.55	235.65	2,540.8	-653.7	-973.0	1,172.2	0.00	0.00	
3,000.0	38.55	235.65	2,619.0	-688.9	-1,024.4	1,234.5	0.00	0.00	
3,100.0	38.55	235.65	2,697.2	-724.0	-1,075.9	1,296.8	0.00	0.00	
3,200.0	38.55	235.65	2,775.4	-759.2	-1,127.3	1,359.1	0.00	0.00	
3,300.0	38.55	235.65	2,853.6	-794.4	-1,178.8	1,421.5	0.00	0.00	
3,400.0	38.55	235.65	2,931.8	-829.6	-1,230.2	1,483.8	0.00	0.00	
3,500.0	38.55	235.65	3,010.0	-864.7	-1,281.7	1,546.1	0.00	0.00	
3,600.0	38.55	235.65	3,088.2	-899.9	-1,333.2	1,608.4	0.00	0.00	
3,700.0	38.55	235.65	3,166.4	-935.1	-1,384.6	1,670.8	0.00	0.00	
3,800.0	38.55	235.65	3,244.6	-970.2	-1,436.1	1,733.1	0.00	0.00	
3,900.0	38.55	235.65	3,322.8	-1,005.4	-1,487.5	1,795.4	0.00	0.00	
4,000.0	38.55	235.65	3,401.0	-1,040.6	-1,539.0	1,857.8	0.00	0.00	
4,100.0	38.55	235.65	3,479.2	-1,075.8	-1,590.4	1,920.1	0.00	0.00	
4,200.0	38.55	235.65	3,557.4	-1,110.9	-1,641.9	1,982.4	0.00	0.00	
4,300.0	38.55	235.65	3,635.6	-1,146.1	-1,693.3	2,044.7	0.00	0.00	
4,400.0	38.55	235.65	3,713.8	-1,181.3	-1,744.8	2,107.1	0.00	0.00	
4,500.0	38.55	235.65	3,792.0	-1,216.4	-1,796.2	2,169.4	0.00	0.00	
4,600.0	38.55	235.65	3,870.2	-1,251.6	-1,847.7	2,231.7	0.00	0.00	
4,700.0	38.55	235.65	3,948.5	-1,286.8	-1,899.2	2,294.0	0.00	0.00	
4,700.3	38.55	235.65	3,948.7	-1,286.9	-1,899.3	2,294.2	0.00	0.00	Start Drop -3.00
4,800.0	35.56	235.65	4,028.2	-1,320.8	-1,948.9	2,354.3	3.00	-3.00	
4,900.0	32.56	235.65	4,111.1	-1,352.4	-1,995.1	2,410.3	3.00	-3.00	
5,000.0	29.56	235.65	4,196.7	-1,381.5	-2,037.7	2,461.9	3.00	-3.00	
5,100.0	26.56	235.65	4,285.0	-1,408.0	-2,076.6	2,508.9	3.00	-3.00	
5,200.0	23.56	235.65	4,375.5	-1,431.9	-2,111.5	2,551.3	3.00	-3.00	
5,300.0	20.56	235.65	4,468.2	-1,453.1	-2,142.5	2,588.8	3.00	-3.00	
5,400.0	17.56	235.65	4,562.7	-1,471.6	-2,169.5	2,621.5	3.00	-3.00	
5,500.0	14.56	235.65	4,658.8	-1,487.2	-2,192.3	2,649.2	3.00	-3.00	
5,600.0	11.56	235.65	4,756.2	-1,499.9	-2,211.0	2,671.8	3.00	-3.00	
5,700.0	8.56	235.65	4,854.6	-1,509.8	-2,225.4	2,689.2	3.00	-3.00	
5,800.0	5.56	235.65	4,953.9	-1,516.7	-2,235.6	2,701.5	3.00	-3.00	
5,900.0	2.56	235.65	5,053.6	-1,520.7	-2,241.4	2,708.6	3.00	-3.00	
5,945.4	1.20	235.65	5,099.0	-1,521.6	-2,242.7	2,710.1	3.00	-3.00	Williams Fork
5,985.4	0.00	235.65	5,139.0	-1,521.8	-2,243.0	2,710.5	3.00	-3.00	EOD; Inc=0° - Top of Gas - K22 596 WF16C-21
6,000.0	0.04	239.67	5,153.6	-1,521.8	-2,243.0	2,710.5	0.25	0.25	
6,100.0	0.29	239.67	5,253.6	-1,521.9	-2,243.2	2,710.8	0.25	0.25	
6,174.4	0.47	239.67	5,328.0	-1,522.2	-2,243.7	2,711.3	0.25	0.25	
6,200.0	0.47	239.67	5,353.6	-1,522.3	-2,243.9	2,711.5	0.00	0.00	
6,300.0	0.47	239.67	5,453.6	-1,522.7	-2,244.6	2,712.3	0.00	0.00	
6,400.0	0.47	239.67	5,553.6	-1,523.1	-2,245.3	2,713.2	0.00	0.00	
6,500.0	0.47	239.67	5,653.6	-1,523.5	-2,246.0	2,714.0	0.00	0.00	
6,600.0	0.47	239.67	5,753.6	-1,524.0	-2,246.7	2,714.8	0.00	0.00	
6,700.0	0.47	239.67	5,853.6	-1,524.4	-2,247.4	2,715.6	0.00	0.00	
6,800.0	0.47	239.67	5,953.6	-1,524.8	-2,248.1	2,716.4	0.00	0.00	
6,900.0	0.47	239.67	6,053.6	-1,525.2	-2,248.8	2,717.3	0.00	0.00	
7,000.0	0.47	239.67	6,153.5	-1,525.6	-2,249.5	2,718.1	0.00	0.00	
7,100.0	0.47	239.67	6,253.5	-1,526.0	-2,250.3	2,718.9	0.00	0.00	
7,200.0	0.47	239.67	6,353.5	-1,526.5	-2,251.0	2,719.7	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NP WF16C-21 K22 596
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>North Reference:</b>	True
<b>Well:</b>	NP WF16C-21 K22 596	<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
7,300.0	0.47	239.67	6,453.5	-1,526.9	-2,251.7	2,720.6	0.00	0.00	
7,400.0	0.47	239.67	6,553.5	-1,527.3	-2,252.4	2,721.4	0.00	0.00	
7,500.0	0.47	239.67	6,653.5	-1,527.7	-2,253.1	2,722.2	0.00	0.00	
7,600.0	0.47	239.67	6,753.5	-1,528.1	-2,253.8	2,723.0	0.00	0.00	
7,700.0	0.47	239.67	6,853.5	-1,528.5	-2,254.5	2,723.9	0.00	0.00	
7,800.0	0.47	239.67	6,953.5	-1,529.0	-2,255.2	2,724.7	0.00	0.00	
7,900.0	0.47	239.67	7,053.5	-1,529.4	-2,256.0	2,725.5	0.00	0.00	
8,000.0	0.47	239.67	7,153.5	-1,529.8	-2,256.7	2,726.3	0.00	0.00	
8,100.0	0.47	239.67	7,253.5	-1,530.2	-2,257.4	2,727.1	0.00	0.00	
8,200.0	0.47	239.67	7,353.5	-1,530.6	-2,258.1	2,728.0	0.00	0.00	
8,300.0	0.47	239.67	7,453.5	-1,531.0	-2,258.8	2,728.8	0.00	0.00	
8,400.0	0.47	239.67	7,553.5	-1,531.5	-2,259.5	2,729.6	0.00	0.00	
8,500.0	0.47	239.67	7,653.5	-1,531.9	-2,260.2	2,730.4	0.00	0.00	
8,600.0	0.47	239.67	7,753.5	-1,532.3	-2,260.9	2,731.3	0.00	0.00	
8,700.0	0.47	239.67	7,853.5	-1,532.7	-2,261.7	2,732.1	0.00	0.00	
8,800.0	0.47	239.67	7,953.5	-1,533.1	-2,262.4	2,732.9	0.00	0.00	
8,900.0	0.47	239.67	8,053.5	-1,533.5	-2,263.1	2,733.7	0.00	0.00	
9,000.0	0.47	239.67	8,153.5	-1,534.0	-2,263.8	2,734.5	0.00	0.00	
9,100.0	0.47	239.67	8,253.5	-1,534.4	-2,264.5	2,735.4	0.00	0.00	
9,200.0	0.47	239.67	8,353.5	-1,534.8	-2,265.2	2,736.2	0.00	0.00	
9,300.0	0.47	239.67	8,453.5	-1,535.2	-2,265.9	2,737.0	0.00	0.00	
9,400.0	0.47	239.67	8,553.5	-1,535.6	-2,266.6	2,737.8	0.00	0.00	
9,445.5	0.47	239.67	8,599.0	-1,535.8	-2,267.0	2,738.2	0.00	0.00	Rollins - K22 596 WF16C-21 BHL - K22 596 WI
9,500.0	0.47	239.67	8,653.5	-1,536.0	-2,267.3	2,738.7	0.00	0.00	
9,520.5	0.47	239.67	8,674.0	-1,536.1	-2,267.5	2,738.8	0.00	0.00	Drillers TD @ 9520'
9,600.0	0.47	239.67	8,753.5	-1,536.5	-2,268.1	2,739.5	0.00	0.00	
9,700.0	0.47	239.67	8,853.5	-1,536.9	-2,268.8	2,740.3	0.00	0.00	
9,800.0	0.47	239.67	8,953.5	-1,537.3	-2,269.5	2,741.1	0.00	0.00	
9,900.0	0.47	239.67	9,053.4	-1,537.7	-2,270.2	2,742.0	0.00	0.00	
10,000.0	0.47	239.67	9,153.4	-1,538.1	-2,270.9	2,742.8	0.00	0.00	
10,100.0	0.47	239.67	9,253.4	-1,538.5	-2,271.6	2,743.6	0.00	0.00	
10,200.0	0.47	239.67	9,353.4	-1,539.0	-2,272.3	2,744.4	0.00	0.00	
10,300.0	0.47	239.67	9,453.4	-1,539.4	-2,273.0	2,745.2	0.00	0.00	
10,400.0	0.47	239.67	9,553.4	-1,539.8	-2,273.8	2,746.1	0.00	0.00	
10,500.0	0.47	239.67	9,653.4	-1,540.2	-2,274.5	2,746.9	0.00	0.00	
10,600.0	0.47	239.67	9,753.4	-1,540.6	-2,275.2	2,747.7	0.00	0.00	
10,700.0	0.47	239.67	9,853.4	-1,541.0	-2,275.9	2,748.5	0.00	0.00	
10,800.0	0.47	239.67	9,953.4	-1,541.5	-2,276.6	2,749.4	0.00	0.00	
10,900.0	0.47	239.67	10,053.4	-1,541.9	-2,277.3	2,750.2	0.00	0.00	
11,000.0	0.47	239.67	10,153.4	-1,542.3	-2,278.0	2,751.0	0.00	0.00	
11,100.0	0.47	239.67	10,253.4	-1,542.7	-2,278.7	2,751.8	0.00	0.00	
11,200.0	0.47	239.67	10,353.4	-1,543.1	-2,279.4	2,752.7	0.00	0.00	
11,300.0	0.47	239.67	10,453.4	-1,543.5	-2,280.2	2,753.5	0.00	0.00	
11,346.6	0.47	239.67	10,500.0	-1,543.7	-2,280.5	2,753.9	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NP WF16C-21 K22 596
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Project:</b>	North Piceance	<b>MD Reference:</b>	WELL @ 6546.0ft (Original Well Elev)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>North Reference:</b>	True
<b>Well:</b>	NP WF16C-21 K22 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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)		
K22 596 WF16C-21 BHL - plan hits target center - Rectangle (sides W300.0 H500.0 D0.0)	0.00	0.00	8,599.0	-1,535.8	-2,267.0	1,652,635.42	2,248,478.81	39° 35' 41.92 N	108° 10' 2.01 W
K22 596 WF16C-21 TG1 - plan hits target center - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,599.0	-1,535.8	-2,267.0	1,652,635.42	2,248,478.81	39° 35' 41.92 N	108° 10' 2.01 W
K22 596 WF16C-21 TOC - plan misses target center by 27.8ft at 5985.4ft MD (5139.0 TVD, -1521.8 N, -2243.0 E) - Rectangle (sides W100.0 H200.0 D300.0)	0.00	0.00	5,139.0	-1,535.8	-2,267.0	1,652,635.42	2,248,478.81	39° 35' 41.92 N	108° 10' 2.01 W
K22 596 WF16C-21 TG2 - plan hits target center - Point	0.00	0.00	5,139.0	-1,521.8	-2,243.0	1,652,648.73	2,248,503.17	39° 35' 42.06 N	108° 10' 1.70 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
5,945.4	5,099.0	Williams Fork		0.00		
5,985.4	5,139.0	Top of Gas		0.00		
9,445.5	8,599.0	Rollins		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
1,687.7	1,592.8	-3.1	-6.6	EOB; Inc=38.5°	
4,700.3	3,948.7	-227.3	-349.2	Start Drop -3.00	
5,985.4	5,139.0	-1,286.9	-1,899.3	EOD; Inc=0°	
9,520.5	8,674.0	-1,521.8	-2,243.0	Drillers TD @ 9520'	
11,346.6	10,500.0	-1,522.2	-2,243.7	Permit TD @ 11346'	