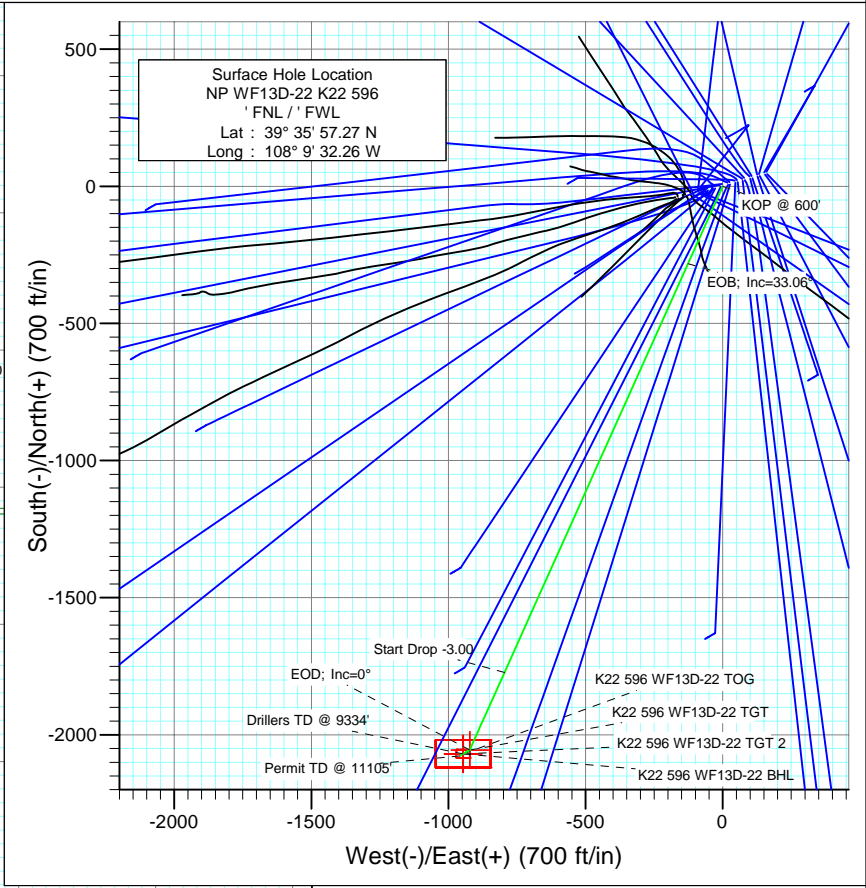
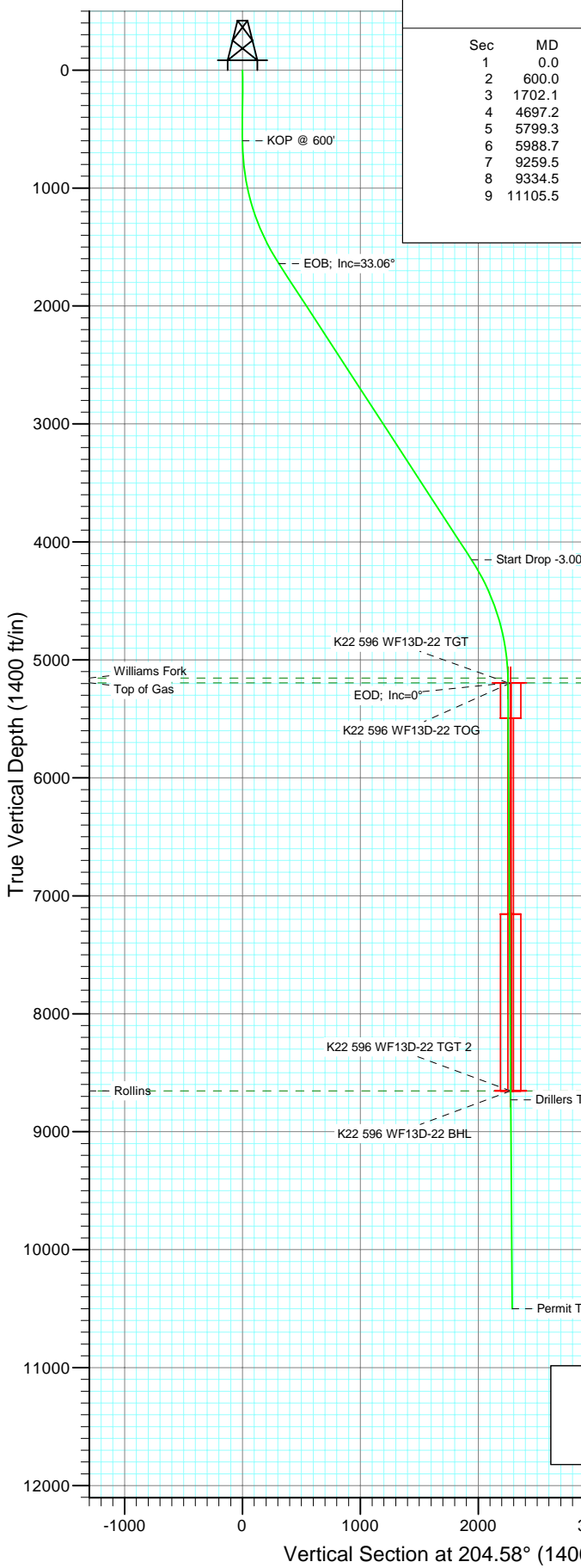




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF13D-22 K22 596
 Wellbore: DD
 Design: Plan #1



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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0		
3	1702.1	33.06	204.17	1642.0	-282.2	-126.6	3.00	204.17	309.3		
4	4697.2	33.06	204.17	4152.0	-1772.9	-795.8	0.00	0.00	1943.3		
5	5799.3	0.00	0.00	5194.0	-2055.1	-922.4	3.00	180.00	2252.6	K22 596 WF13D-22 TGT	
6	5988.7	0.47	239.72	5383.4	-2055.5	-923.1	0.25	239.72	2253.2		
7	9259.5	0.47	239.72	8654.0	-2069.1	-946.4	0.00	0.00	2275.3	K22 596 WF13D-22 BHL	
8	9334.5	0.47	239.72	8729.0	-2069.4	-946.9	0.00	0.00	2275.8		
9	11105.5	0.47	239.72	10500.0	-2076.8	-959.6	0.00	0.00	2287.8		



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
5154.0	5759.3	Williams Fork
5194.0	5799.3	Top of Gas
8654.0	9259.5	Rollins

Azimuths to True North
Magnetic North: 10.74°

Magnetic Field
Strength: 52555.1nT
Dip Angle: 65.87°
Date: 12/22/2008
Model: IGRF200510

DESIGN DETAILS: Plan #1

85xxx; LR
WELL @ 6546.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W From TVD
K22 596 WF13D-22 BHL	204.58	Slot	0.0	0.0

Bottom Hole Location
 NP WF13D-22 K22 596
 'FSL / ' FWL
 Lat : 39 35 36.82
 Long. : 108 9 44.35

Cathedral Energy Services

Planning Report

Database: EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference: Well NP WF13D-22 K22 596
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: WELL @ 6546.0ft (Original Well Elev)
Project: North Piceance	MD Reference: WELL @ 6546.0ft (Original Well Elev)
Site: K22 596 Pad (S22-T5S-R96W)	North Reference: True
Well: NP WF13D-22 K22 596	Survey Calculation Method: Minimum Curvature
Wellbore: DD	
Design: Plan #1	

Project North Piceance		
Map System: US State Plane 1983	System Datum: Mean Sea Level	
Geo Datum: North American Datum 1983		
Map Zone: 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 WF13D-22 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,119.61 ft	Latitude: 39° 35' 57.27 N
	+E/-W	0.0 ft	Easting:	2,250,852.06 ft	Longitude: 108° 9' 32.26 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 6,524.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/22/2008	10.74	65.87	52,555

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	204.58

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,702.1	33.06	204.17	1,642.0	-282.2	-126.6	3.00	3.00	0.00	204.17	
4,697.2	33.06	204.17	4,152.0	-1,772.9	-795.8	0.00	0.00	0.00	0.00	
5,799.3	0.00	0.00	5,194.0	-2,055.1	-922.4	3.00	-3.00	0.00	180.00	K22 596 WF13D-22 T
5,988.7	0.47	239.72	5,383.4	-2,055.5	-923.1	0.25	0.25	-63.52	239.72	
9,259.5	0.47	239.72	8,654.0	-2,069.1	-946.4	0.00	0.00	0.00	0.00	K22 596 WF13D-22 E
9,334.5	0.47	239.72	8,729.0	-2,069.4	-946.9	0.00	0.00	0.00	0.00	
11,105.5	0.47	239.72	10,500.0	-2,076.8	-959.6	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

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Well: NP WF13D-22 K22 596
Wellbore: DD
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Local Co-ordinate Reference: Well NP WF13D-22 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
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	
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	
510.0	0.00	0.00	510.0	0.0	0.0	0.0	0.00	0.00	
540.0	0.00	0.00	540.0	0.0	0.0	0.0	0.00	0.00	
570.0	0.00	0.00	570.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
630.0	0.90	204.17	630.0	-0.2	-0.1	0.2	3.00	3.00	
660.0	1.80	204.17	660.0	-0.9	-0.4	0.9	3.00	3.00	
690.0	2.70	204.17	690.0	-1.9	-0.9	2.1	3.00	3.00	
720.0	3.60	204.17	719.9	-3.4	-1.5	3.8	3.00	3.00	
750.0	4.50	204.17	749.8	-5.4	-2.4	5.9	3.00	3.00	
780.0	5.40	204.17	779.7	-7.7	-3.5	8.5	3.00	3.00	
810.0	6.30	204.17	809.6	-10.5	-4.7	11.5	3.00	3.00	
840.0	7.20	204.17	839.4	-13.7	-6.2	15.1	3.00	3.00	
870.0	8.10	204.17	869.1	-17.4	-7.8	19.1	3.00	3.00	
900.0	9.00	204.17	898.8	-21.5	-9.6	23.5	3.00	3.00	
930.0	9.90	204.17	928.4	-25.9	-11.6	28.4	3.00	3.00	
960.0	10.80	204.17	957.9	-30.9	-13.9	33.8	3.00	3.00	
990.0	11.70	204.17	987.3	-36.2	-16.2	39.7	3.00	3.00	
1,020.0	12.60	204.17	1,016.6	-42.0	-18.8	46.0	3.00	3.00	
1,050.0	13.50	204.17	1,045.8	-48.1	-21.6	52.8	3.00	3.00	
1,080.0	14.40	204.17	1,075.0	-54.7	-24.6	60.0	3.00	3.00	
1,110.0	15.30	204.17	1,104.0	-61.8	-27.7	67.7	3.00	3.00	
1,140.0	16.20	204.17	1,132.8	-69.2	-31.1	75.8	3.00	3.00	
1,170.0	17.10	204.17	1,161.6	-77.0	-34.6	84.4	3.00	3.00	
1,200.0	18.00	204.17	1,190.2	-85.3	-38.3	93.5	3.00	3.00	
1,230.0	18.90	204.17	1,218.6	-93.9	-42.2	103.0	3.00	3.00	
1,260.0	19.80	204.17	1,246.9	-103.0	-46.2	112.9	3.00	3.00	
1,290.0	20.70	204.17	1,275.1	-112.5	-50.5	123.3	3.00	3.00	
1,320.0	21.60	204.17	1,303.1	-122.4	-54.9	134.1	3.00	3.00	
1,350.0	22.50	204.17	1,330.9	-132.6	-59.5	145.4	3.00	3.00	
1,380.0	23.40	204.17	1,358.5	-143.3	-64.3	157.1	3.00	3.00	
1,410.0	24.30	204.17	1,385.9	-154.4	-69.3	169.2	3.00	3.00	
1,440.0	25.20	204.17	1,413.2	-165.8	-74.4	181.8	3.00	3.00	
1,470.0	26.10	204.17	1,440.2	-177.7	-79.7	194.7	3.00	3.00	
1,500.0	27.00	204.17	1,467.1	-189.9	-85.2	208.2	3.00	3.00	
1,530.0	27.90	204.17	1,493.7	-202.5	-90.9	222.0	3.00	3.00	

Cathedral Energy Services

Planning Report

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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
1,560.0	28.80	204.17	1,520.1	-215.5	-96.7	236.2	3.00	3.00	
1,590.0	29.70	204.17	1,546.3	-228.9	-102.7	250.9	3.00	3.00	
1,620.0	30.60	204.17	1,572.2	-242.6	-108.9	266.0	3.00	3.00	
1,650.0	31.50	204.17	1,597.9	-256.8	-115.2	281.4	3.00	3.00	
1,680.0	32.40	204.17	1,623.4	-271.2	-121.7	297.3	3.00	3.00	
1,702.1	33.06	204.17	1,642.0	-282.2	-126.6	309.3	3.00	3.00	EOB; Inc=33.06°
1,710.0	33.06	204.17	1,648.6	-286.1	-128.4	313.6	0.00	0.00	
1,740.0	33.06	204.17	1,673.7	-301.0	-135.1	329.9	0.00	0.00	
1,770.0	33.06	204.17	1,698.8	-315.9	-141.8	346.3	0.00	0.00	
1,800.0	33.06	204.17	1,724.0	-330.9	-148.5	362.7	0.00	0.00	
1,830.0	33.06	204.17	1,749.1	-345.8	-155.2	379.0	0.00	0.00	
1,860.0	33.06	204.17	1,774.3	-360.7	-161.9	395.4	0.00	0.00	
1,890.0	33.06	204.17	1,799.4	-375.7	-168.6	411.8	0.00	0.00	
1,920.0	33.06	204.17	1,824.6	-390.6	-175.3	428.1	0.00	0.00	
1,950.0	33.06	204.17	1,849.7	-405.5	-182.0	444.5	0.00	0.00	
1,980.0	33.06	204.17	1,874.8	-420.5	-188.7	460.9	0.00	0.00	
2,010.0	33.06	204.17	1,900.0	-435.4	-195.4	477.2	0.00	0.00	
2,040.0	33.06	204.17	1,925.1	-450.3	-202.1	493.6	0.00	0.00	
2,070.0	33.06	204.17	1,950.3	-465.3	-208.8	510.0	0.00	0.00	
2,100.0	33.06	204.17	1,975.4	-480.2	-215.5	526.3	0.00	0.00	
2,130.0	33.06	204.17	2,000.6	-495.1	-222.2	542.7	0.00	0.00	
2,160.0	33.06	204.17	2,025.7	-510.1	-228.9	559.1	0.00	0.00	
2,190.0	33.06	204.17	2,050.8	-525.0	-235.6	575.4	0.00	0.00	
2,220.0	33.06	204.17	2,076.0	-539.9	-242.3	591.8	0.00	0.00	
2,250.0	33.06	204.17	2,101.1	-554.9	-249.0	608.2	0.00	0.00	
2,280.0	33.06	204.17	2,126.3	-569.8	-255.7	624.5	0.00	0.00	
2,310.0	33.06	204.17	2,151.4	-584.7	-262.4	640.9	0.00	0.00	
2,340.0	33.06	204.17	2,176.5	-599.7	-269.1	657.3	0.00	0.00	
2,370.0	33.06	204.17	2,201.7	-614.6	-275.8	673.6	0.00	0.00	
2,400.0	33.06	204.17	2,226.8	-629.5	-282.5	690.0	0.00	0.00	
2,430.0	33.06	204.17	2,252.0	-644.5	-289.3	706.4	0.00	0.00	
2,460.0	33.06	204.17	2,277.1	-659.4	-296.0	722.7	0.00	0.00	
2,490.0	33.06	204.17	2,302.3	-674.3	-302.7	739.1	0.00	0.00	

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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
2,500.0	33.06	204.17	2,310.6	-679.3	-304.9	744.6	0.00	0.00	
2,600.0	33.06	204.17	2,394.4	-729.1	-327.2	799.1	0.00	0.00	
2,700.0	33.06	204.17	2,478.2	-778.8	-349.6	853.7	0.00	0.00	
2,800.0	33.06	204.17	2,562.0	-828.6	-371.9	908.2	0.00	0.00	
2,900.0	33.06	204.17	2,645.9	-878.4	-394.3	962.8	0.00	0.00	
3,000.0	33.06	204.17	2,729.7	-928.2	-416.6	1,017.3	0.00	0.00	
3,100.0	33.06	204.17	2,813.5	-977.9	-438.9	1,071.9	0.00	0.00	
3,200.0	33.06	204.17	2,897.3	-1,027.7	-461.3	1,126.5	0.00	0.00	
3,300.0	33.06	204.17	2,981.1	-1,077.5	-483.6	1,181.0	0.00	0.00	
3,400.0	33.06	204.17	3,064.9	-1,127.3	-506.0	1,235.6	0.00	0.00	
3,500.0	33.06	204.17	3,148.7	-1,177.0	-528.3	1,290.1	0.00	0.00	
3,600.0	33.06	204.17	3,232.5	-1,226.8	-550.6	1,344.7	0.00	0.00	
3,700.0	33.06	204.17	3,316.3	-1,276.6	-573.0	1,399.2	0.00	0.00	
3,800.0	33.06	204.17	3,400.1	-1,326.4	-595.3	1,453.8	0.00	0.00	
3,900.0	33.06	204.17	3,483.9	-1,376.1	-617.7	1,508.4	0.00	0.00	
4,000.0	33.06	204.17	3,567.7	-1,425.9	-640.0	1,562.9	0.00	0.00	
4,100.0	33.06	204.17	3,651.5	-1,475.7	-662.3	1,617.5	0.00	0.00	
4,200.0	33.06	204.17	3,735.3	-1,525.5	-684.7	1,672.0	0.00	0.00	
4,300.0	33.06	204.17	3,819.1	-1,575.2	-707.0	1,726.6	0.00	0.00	
4,400.0	33.06	204.17	3,902.9	-1,625.0	-729.4	1,781.1	0.00	0.00	
4,500.0	33.06	204.17	3,986.8	-1,674.8	-751.7	1,835.7	0.00	0.00	
4,600.0	33.06	204.17	4,070.6	-1,724.6	-774.0	1,890.2	0.00	0.00	
4,697.2	33.06	204.17	4,152.0	-1,772.9	-795.8	1,943.3	0.00	0.00	Start Drop -3.00
4,700.0	32.98	204.17	4,154.4	-1,774.3	-796.4	1,944.8	3.00	-3.00	
4,800.0	29.98	204.17	4,239.6	-1,822.0	-817.8	1,997.0	3.00	-3.00	
4,900.0	26.98	204.17	4,327.5	-1,865.5	-837.3	2,044.7	3.00	-3.00	
5,000.0	23.98	204.17	4,417.8	-1,904.7	-854.9	2,087.7	3.00	-3.00	
5,100.0	20.98	204.17	4,510.2	-1,939.6	-870.6	2,125.9	3.00	-3.00	
5,200.0	17.98	204.17	4,604.4	-1,970.0	-884.2	2,159.3	3.00	-3.00	
5,300.0	14.98	204.17	4,700.3	-1,995.9	-895.8	2,187.6	3.00	-3.00	
5,400.0	11.98	204.17	4,797.6	-2,017.1	-905.4	2,211.0	3.00	-3.00	
5,500.0	8.98	204.17	4,895.9	-2,033.7	-912.8	2,229.1	3.00	-3.00	
5,600.0	5.98	204.17	4,995.0	-2,045.6	-918.1	2,242.2	3.00	-3.00	
5,700.0	2.98	204.17	5,094.7	-2,052.7	-921.3	2,250.0	3.00	-3.00	
5,759.3	1.20	204.17	5,154.0	-2,054.7	-922.2	2,252.1	3.00	-3.00	Williams Fork
5,799.3	0.00	0.00	5,194.0	-2,055.1	-922.4	2,252.6	3.00	-3.00	EOD; Inc=0° - Top of Gas - K22 596 WF13D-22
5,800.0	0.00	239.72	5,194.7	-2,055.1	-922.4	2,252.6	0.25	0.25	
5,900.0	0.25	239.72	5,294.7	-2,055.2	-922.6	2,252.7	0.25	0.25	
5,988.7	0.47	239.72	5,383.4	-2,055.5	-923.1	2,253.2	0.25	0.25	
6,000.0	0.47	239.72	5,394.7	-2,055.5	-923.2	2,253.3	0.00	0.00	
6,100.0	0.47	239.72	5,494.6	-2,056.0	-923.9	2,253.9	0.00	0.00	
6,200.0	0.47	239.72	5,594.6	-2,056.4	-924.6	2,254.6	0.00	0.00	
6,300.0	0.47	239.72	5,694.6	-2,056.8	-925.3	2,255.3	0.00	0.00	
6,400.0	0.47	239.72	5,794.6	-2,057.2	-926.0	2,256.0	0.00	0.00	
6,500.0	0.47	239.72	5,894.6	-2,057.6	-926.7	2,256.6	0.00	0.00	
6,600.0	0.47	239.72	5,994.6	-2,058.0	-927.4	2,257.3	0.00	0.00	
6,700.0	0.47	239.72	6,094.6	-2,058.5	-928.2	2,258.0	0.00	0.00	
6,800.0	0.47	239.72	6,194.6	-2,058.9	-928.9	2,258.7	0.00	0.00	
6,900.0	0.47	239.72	6,294.6	-2,059.3	-929.6	2,259.4	0.00	0.00	
7,000.0	0.47	239.72	6,394.6	-2,059.7	-930.3	2,260.0	0.00	0.00	
7,100.0	0.47	239.72	6,494.6	-2,060.1	-931.0	2,260.7	0.00	0.00	
7,200.0	0.47	239.72	6,594.6	-2,060.5	-931.7	2,261.4	0.00	0.00	

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 WF13D-22 K22 596
Wellbore: DD
Design: Plan #1

Local Co-ordinate Reference: Well NP WF13D-22 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
7,300.0	0.47	239.72	6,694.6	-2,061.0	-932.4	2,262.1	0.00	0.00	
7,400.0	0.47	239.72	6,794.6	-2,061.4	-933.1	2,262.7	0.00	0.00	
7,500.0	0.47	239.72	6,894.6	-2,061.8	-933.9	2,263.4	0.00	0.00	
7,600.0	0.47	239.72	6,994.6	-2,062.2	-934.6	2,264.1	0.00	0.00	
7,700.0	0.47	239.72	7,094.6	-2,062.6	-935.3	2,264.8	0.00	0.00	
7,800.0	0.47	239.72	7,194.6	-2,063.0	-936.0	2,265.4	0.00	0.00	
7,900.0	0.47	239.72	7,294.6	-2,063.5	-936.7	2,266.1	0.00	0.00	
8,000.0	0.47	239.72	7,394.6	-2,063.9	-937.4	2,266.8	0.00	0.00	
8,100.0	0.47	239.72	7,494.6	-2,064.3	-938.1	2,267.5	0.00	0.00	
8,200.0	0.47	239.72	7,594.6	-2,064.7	-938.9	2,268.1	0.00	0.00	
8,300.0	0.47	239.72	7,694.6	-2,065.1	-939.6	2,268.8	0.00	0.00	
8,400.0	0.47	239.72	7,794.6	-2,065.5	-940.3	2,269.5	0.00	0.00	
8,500.0	0.47	239.72	7,894.6	-2,066.0	-941.0	2,270.2	0.00	0.00	
8,600.0	0.47	239.72	7,994.6	-2,066.4	-941.7	2,270.8	0.00	0.00	
8,700.0	0.47	239.72	8,094.6	-2,066.8	-942.4	2,271.5	0.00	0.00	
8,800.0	0.47	239.72	8,194.6	-2,067.2	-943.1	2,272.2	0.00	0.00	
8,900.0	0.47	239.72	8,294.6	-2,067.6	-943.8	2,272.9	0.00	0.00	
9,000.0	0.47	239.72	8,394.5	-2,068.0	-944.6	2,273.5	0.00	0.00	
9,100.0	0.47	239.72	8,494.5	-2,068.5	-945.3	2,274.2	0.00	0.00	
9,200.0	0.47	239.72	8,594.5	-2,068.9	-946.0	2,274.9	0.00	0.00	
9,259.5	0.47	239.72	8,654.0	-2,069.1	-946.4	2,275.3	0.00	0.00	Rollins - K22 596 WF13D-22 BHL - K22 596 WI
9,300.0	0.47	239.72	8,694.5	-2,069.3	-946.7	2,275.6	0.00	0.00	
9,334.5	0.47	239.72	8,729.0	-2,069.4	-946.9	2,275.8	0.00	0.00	Drillers TD @ 9334'
9,400.0	0.47	239.72	8,794.5	-2,069.7	-947.4	2,276.2	0.00	0.00	
9,500.0	0.47	239.72	8,894.5	-2,070.1	-948.1	2,276.9	0.00	0.00	
9,600.0	0.47	239.72	8,994.5	-2,070.5	-948.8	2,277.6	0.00	0.00	
9,700.0	0.47	239.72	9,094.5	-2,071.0	-949.6	2,278.3	0.00	0.00	
9,800.0	0.47	239.72	9,194.5	-2,071.4	-950.3	2,278.9	0.00	0.00	
9,900.0	0.47	239.72	9,294.5	-2,071.8	-951.0	2,279.6	0.00	0.00	
10,000.0	0.47	239.72	9,394.5	-2,072.2	-951.7	2,280.3	0.00	0.00	
10,100.0	0.47	239.72	9,494.5	-2,072.6	-952.4	2,281.0	0.00	0.00	
10,200.0	0.47	239.72	9,594.5	-2,073.0	-953.1	2,281.6	0.00	0.00	
10,300.0	0.47	239.72	9,694.5	-2,073.5	-953.8	2,282.3	0.00	0.00	
10,400.0	0.47	239.72	9,794.5	-2,073.9	-954.5	2,283.0	0.00	0.00	
10,500.0	0.47	239.72	9,894.5	-2,074.3	-955.3	2,283.7	0.00	0.00	
10,600.0	0.47	239.72	9,994.5	-2,074.7	-956.0	2,284.4	0.00	0.00	
10,700.0	0.47	239.72	10,094.5	-2,075.1	-956.7	2,285.0	0.00	0.00	
10,800.0	0.47	239.72	10,194.5	-2,075.5	-957.4	2,285.7	0.00	0.00	
10,900.0	0.47	239.72	10,294.5	-2,076.0	-958.1	2,286.4	0.00	0.00	
11,000.0	0.47	239.72	10,394.5	-2,076.4	-958.8	2,287.1	0.00	0.00	
11,100.0	0.47	239.72	10,494.5	-2,076.8	-959.5	2,287.7	0.00	0.00	
11,105.5	0.47	239.72	10,500.0	-2,076.8	-959.6	2,287.8	0.00	0.00	Permit TD @ 11105'

Cathedral Energy Services

Planning Report

Database: EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference: Well NP WF13D-22 K22 596
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: WELL @ 6546.0ft (Original Well Elev)
Project: North Piceance	MD Reference: WELL @ 6546.0ft (Original Well Elev)
Site: K22 596 Pad (S22-T5S-R96W)	North Reference: True
Well: NP WF13D-22 K22 596	Survey Calculation Method: Minimum Curvature
Wellbore: DD	
Design: Plan #1	

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
K22 596 WF13D-22 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	8,654.0	-2,069.1	-946.4	1,652,079.08	2,249,845.50	39° 35' 36.82 N	108° 9' 44.35 W
K22 596 WF13D-22 TG ⁺ - plan hits target center - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,654.0	-2,069.1	-946.4	1,652,079.08	2,249,845.50	39° 35' 36.82 N	108° 9' 44.35 W
K22 596 WF13D-22 TG ⁻ - plan hits target center - Point	0.00	0.00	5,194.0	-2,055.1	-922.4	1,652,092.39	2,249,869.91	39° 35' 36.96 N	108° 9' 44.04 W
K22 596 WF13D-22 TO ⁽ - plan misses target center by 27.8ft at 5799.3ft MD (5194.0 TVD, -2055.1 N, -922.4 E) - Rectangle (sides W100.0 H200.0 D300.0)	0.00	0.00	5,194.0	-2,069.1	-946.4	1,652,079.08	2,249,845.50	39° 35' 36.82 N	108° 9' 44.35 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
5,759.3	5,154.0	Williams Fork		0.00		
5,799.3	5,194.0	Top of Gas		0.00		
9,259.5	8,654.0	Rollins		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
600.0	600.0	0.0	0.0	KOP @ 600'	
1,702.1	1,642.0	-282.2	-126.6	EOB; Inc=33.06°	
4,697.2	4,152.0	-1,772.9	-795.8	Start Drop -3.00	
5,799.3	5,194.0	-2,055.1	-922.4	EOD; Inc=0°	
9,334.5	8,729.0	-2,055.5	-923.1	Drillers TD @ 9334'	
11,105.5	10,500.0	-2,069.1	-946.4	Permit TD @ 11105'	