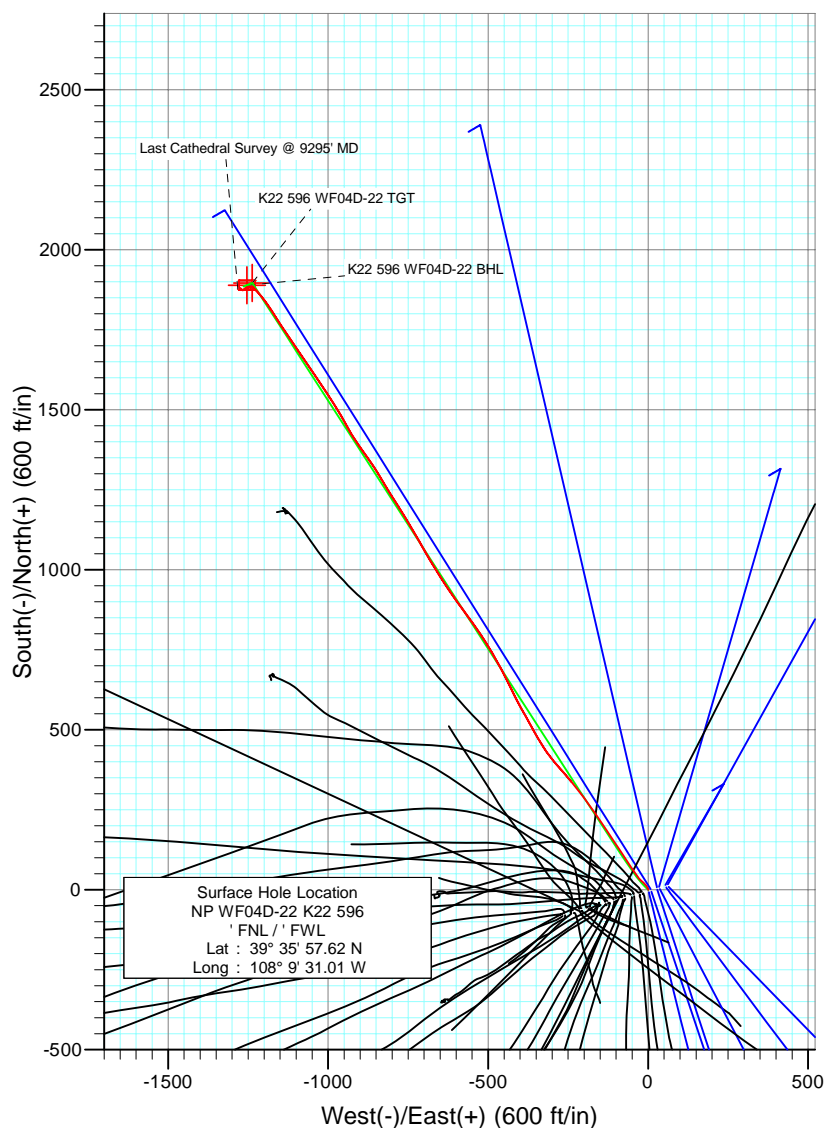
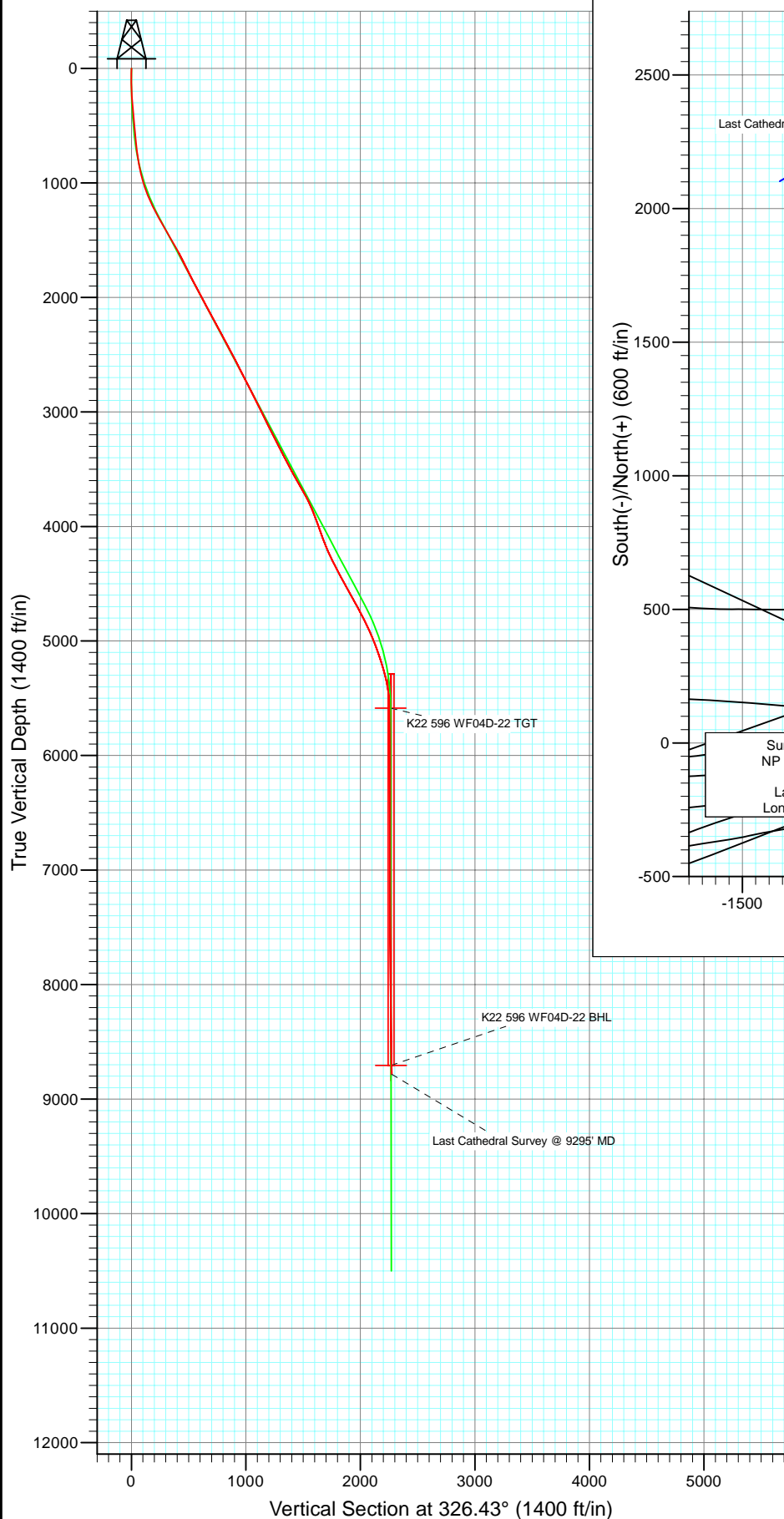




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF04D-22 K22 596
 Wellbore: DD
 Design: Final Survey



Azimuths to True North
 Magnetic North: 10.52°

Magnetic Field
 Strength: 52393.7nT
 Dip Angle: 65.83°
 Date: 8/20/2010
 Model: IGRF200510

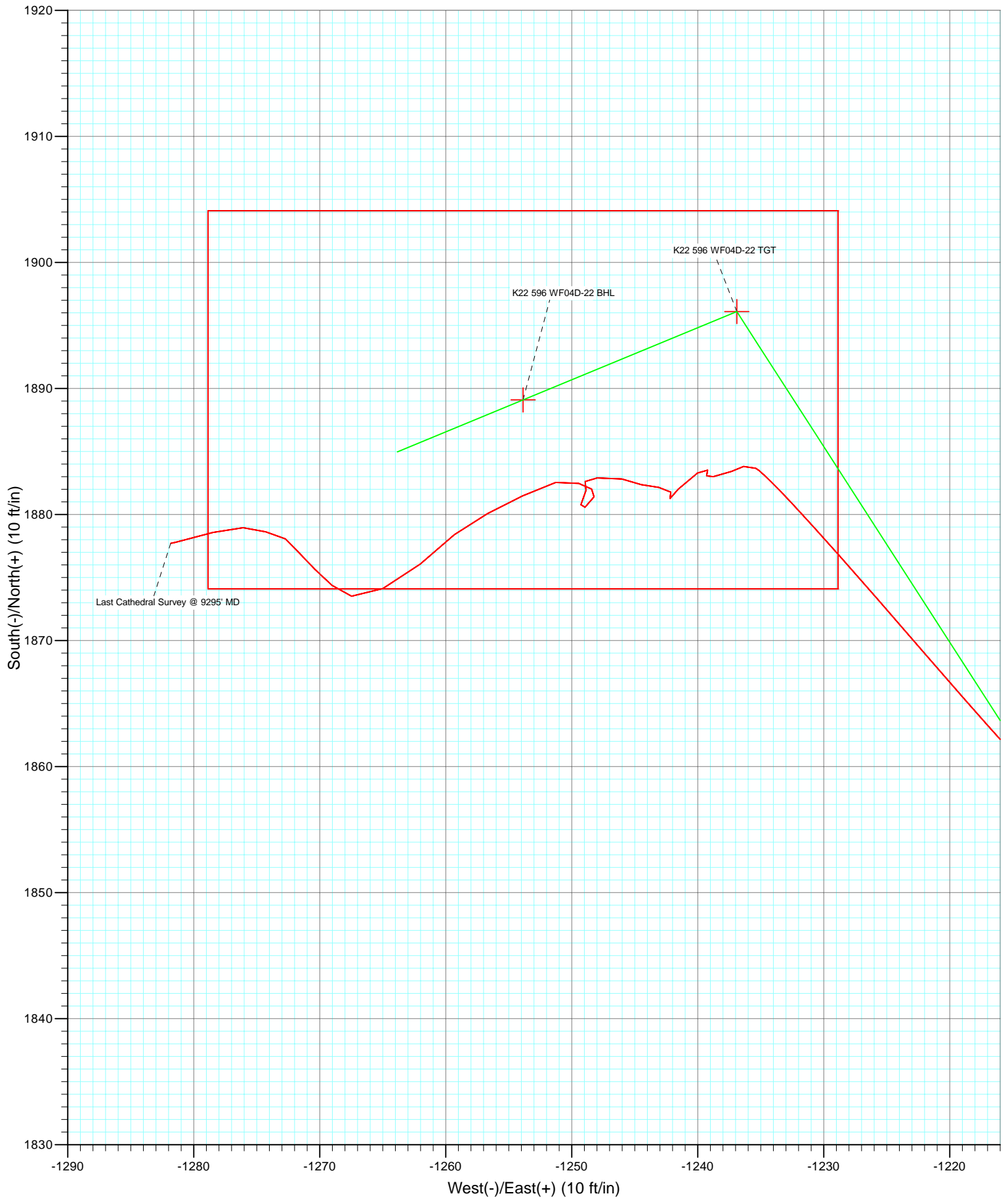
DD
 NP WF04D-22 K22 596
 105257, 105352; LR

Well @ 6549.0ft (Patterson 303)
 North American Datum 1983
 Well NP WF04D-22 K22 596, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	K22 596 WF04D-22 BHL	326.43	Slot		0.0	0.0		0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude			
K22 596 WF04D-22 BHL	8706.0	1889.1	-1253.939° 36'	16.29 N	108° 9' 47.03 W			



Project: North Piceance
Site: K22 596 Pad (S22-T5S-R96W)
Well: NP WF04D-22 K22 596
Wellbore: DD
Design: DD



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF04D-22 K22 596
Project:	North Piceance	TVD Reference:	Well @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	Well @ 6549.0ft (Patterson 303)
Well:	NP WF04D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

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 WF04D-22 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,152.15 ft	Latitude:	39° 35' 57.62 N
	+E/-W	0.0 ft	Easting:	2,250,950.90 ft	Longitude:	108° 9' 31.01 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,527.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/20/2010	10.52	65.83	52,394

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	326.43	

Survey Program	Date	8/27/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
170.0	1,695.0	Survey #1 (DD)	MWD	Geolink MWD	
1,783.0	9,295.0	Survey #2 (DD)	MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
170.0	0.90	352.80	170.0	1.3	-0.2	1.2	0.53	0.53		
199.0	1.50	346.50	199.0	1.9	-0.3	1.8	2.12	2.07		
230.0	2.40	342.80	230.0	2.9	-0.6	2.8	2.93	2.90		
260.0	3.60	336.90	259.9	4.4	-1.1	4.3	4.13	4.00		
290.0	4.60	326.90	289.8	6.3	-2.2	6.4	4.09	3.33		
320.0	5.30	324.70	319.7	8.4	-3.6	9.0	2.42	2.33		
351.0	5.70	324.00	350.6	10.8	-5.3	12.0	1.31	1.29		
412.0	5.40	318.90	411.3	15.4	-9.0	17.8	0.95	-0.49		
503.0	5.70	315.00	501.9	21.9	-15.0	26.5	0.53	0.33		
597.0	5.50	309.50	595.4	28.0	-21.8	35.4	0.61	-0.21		
645.0	5.60	313.00	643.2	31.1	-25.3	39.9	0.74	0.21		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF04D-22 K22 596
Project:	North Piceance	TVD Reference:	Well @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	Well @ 6549.0ft (Patterson 303)
Well:	NP WF04D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
689.0	6.10	322.60	687.0	34.4	-28.3	44.3	2.49	1.14	
735.0	7.30	328.60	732.7	38.8	-31.3	49.7	3.02	2.61	
780.0	8.50	327.80	777.2	44.1	-34.5	55.8	2.68	2.67	
826.0	9.90	324.70	822.6	50.2	-38.6	63.2	3.23	3.04	
872.0	11.50	323.70	867.8	57.1	-43.6	71.7	3.50	3.48	
918.0	13.30	324.70	912.8	65.1	-49.4	81.6	3.94	3.91	
963.0	14.60	324.40	956.4	74.0	-55.7	92.4	2.89	2.89	
1,009.0	16.70	326.50	1,000.7	84.2	-62.7	104.9	4.73	4.57	
1,056.0	18.80	327.90	1,045.5	96.3	-70.5	119.2	4.56	4.47	
1,101.0	21.00	327.40	1,087.8	109.2	-78.7	134.5	4.90	4.89	
1,146.0	22.60	326.30	1,129.6	123.2	-87.8	151.2	3.67	3.56	
1,192.0	25.30	326.20	1,171.6	138.7	-98.2	169.9	5.87	5.87	
1,238.0	27.30	325.40	1,212.9	155.6	-109.7	190.2	4.42	4.35	
1,329.0	29.00	326.10	1,293.1	191.0	-133.8	233.2	1.90	1.87	
1,421.0	29.50	326.30	1,373.4	228.4	-158.8	278.1	0.55	0.54	
1,512.0	29.80	324.50	1,452.4	265.5	-184.4	323.1	1.03	0.33	
1,604.0	29.70	321.90	1,532.3	302.0	-211.7	368.7	1.41	-0.11	
1,695.0	28.80	319.90	1,611.7	336.5	-239.8	413.0	1.46	-0.99	Last Cathedral svy @ 1695' MD
1,783.0	27.70	320.00	1,689.2	368.4	-266.6	454.3	1.25	-1.25	
1,874.0	26.00	319.50	1,770.4	399.8	-293.1	495.2	1.88	-1.87	
1,966.0	26.30	324.80	1,853.0	431.8	-318.0	535.6	2.56	0.33	
2,057.0	27.70	329.90	1,934.1	466.5	-340.2	576.8	2.97	1.54	
2,149.0	29.90	330.70	2,014.7	505.0	-362.1	621.0	2.43	2.39	
2,241.0	28.70	330.90	2,095.0	544.3	-384.1	665.9	1.31	-1.30	
2,332.0	27.10	331.40	2,175.4	581.6	-404.6	708.4	1.78	-1.76	
2,424.0	29.30	334.30	2,256.5	620.3	-424.4	751.6	2.82	2.39	
2,515.0	28.00	333.70	2,336.3	659.5	-443.6	794.8	1.46	-1.43	
2,606.0	28.60	330.30	2,416.4	697.6	-463.8	837.7	1.89	0.66	
2,698.0	27.00	331.80	2,497.8	735.1	-484.6	880.5	1.90	-1.74	
2,789.0	28.20	326.80	2,578.5	771.3	-506.1	922.6	2.87	1.32	
2,881.0	26.20	326.10	2,660.3	806.4	-529.4	964.6	2.20	-2.17	
2,972.0	28.00	324.40	2,741.3	840.4	-553.0	1,006.1	2.15	1.98	
3,063.0	27.00	322.80	2,822.0	874.3	-577.9	1,048.0	1.37	-1.10	
3,155.0	26.30	323.40	2,904.2	907.3	-602.7	1,089.2	0.82	-0.76	
3,246.0	26.40	327.40	2,985.8	940.5	-625.6	1,129.6	1.95	0.11	
3,338.0	25.10	327.60	3,068.7	974.2	-647.1	1,169.5	1.42	-1.41	
3,429.0	27.90	328.90	3,150.1	1,008.7	-668.5	1,210.1	3.14	3.08	
3,521.0	26.30	328.70	3,232.0	1,044.6	-690.2	1,252.0	1.74	-1.74	
3,612.0	28.40	330.80	3,312.8	1,080.7	-711.2	1,293.7	2.54	2.31	
3,704.0	26.70	330.10	3,394.4	1,117.7	-732.2	1,336.2	1.88	-1.85	
3,795.0	28.30	329.40	3,475.1	1,154.0	-753.4	1,378.1	1.79	1.76	
3,886.0	28.70	326.60	3,555.1	1,190.8	-776.4	1,421.5	1.53	0.44	
3,978.0	30.30	328.40	3,635.1	1,229.0	-800.7	1,466.8	1.99	1.74	
4,070.0	28.40	328.90	3,715.3	1,267.5	-824.2	1,511.8	2.08	-2.07	
4,161.0	25.80	328.80	3,796.3	1,303.0	-845.6	1,553.3	2.86	-2.86	
4,253.0	20.40	324.60	3,880.9	1,333.2	-865.3	1,589.3	6.13	-5.87	
4,344.0	21.40	325.60	3,965.9	1,359.9	-883.8	1,621.8	1.17	1.10	
4,436.0	18.70	323.10	4,052.4	1,385.5	-902.2	1,653.3	3.08	-2.93	
4,527.0	20.30	329.70	4,138.2	1,410.8	-918.9	1,683.6	2.99	1.76	
4,618.0	26.40	330.40	4,221.7	1,442.1	-936.9	1,719.6	6.71	6.70	
4,710.0	25.00	329.70	4,304.6	1,476.6	-956.8	1,759.4	1.56	-1.52	
4,801.0	27.40	328.20	4,386.2	1,511.0	-977.5	1,799.5	2.74	2.64	
4,893.0	29.10	326.10	4,467.2	1,547.6	-1,001.2	1,843.1	2.14	1.85	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF04D-22 K22 596
Project:	North Piceance	TVD Reference:	Well @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	Well @ 6549.0ft (Patterson 303)
Well:	NP WF04D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,984.0	28.60	326.00	4,546.9	1,584.0	-1,025.7	1,887.0	0.55	-0.55	
5,076.0	29.60	326.00	4,627.3	1,621.1	-1,050.7	1,931.7	1.09	1.09	
5,167.0	28.10	325.70	4,707.0	1,657.5	-1,075.3	1,975.6	1.66	-1.65	
5,259.0	27.20	326.10	4,788.5	1,692.8	-1,099.3	2,018.3	1.00	-0.98	
5,350.0	26.00	325.00	4,869.9	1,726.4	-1,122.3	2,059.1	1.43	-1.32	
5,442.0	23.20	327.40	4,953.5	1,758.2	-1,143.7	2,097.3	3.23	-3.04	
5,533.0	20.50	327.80	5,038.0	1,786.8	-1,161.8	2,131.2	2.97	-2.97	
5,625.0	19.10	326.50	5,124.6	1,813.0	-1,178.7	2,162.4	1.60	-1.52	
5,716.0	16.20	324.30	5,211.3	1,835.7	-1,194.3	2,189.9	3.27	-3.19	
5,808.0	14.90	318.40	5,299.9	1,855.0	-1,209.7	2,214.5	2.22	-1.41	
5,899.0	10.60	319.20	5,388.6	1,870.1	-1,222.9	2,234.4	4.73	-4.73	
5,991.0	5.90	317.40	5,479.7	1,880.0	-1,231.7	2,247.4	5.12	-5.11	
6,082.0	0.80	295.40	5,570.5	1,883.7	-1,235.4	2,252.6	5.68	-5.60	
6,174.0	0.50	250.50	5,662.5	1,883.8	-1,236.4	2,253.3	0.62	-0.33	
6,265.0	0.80	245.90	5,753.5	1,883.4	-1,237.3	2,253.5	0.33	0.33	
6,357.0	1.10	260.00	5,845.4	1,883.0	-1,238.8	2,253.9	0.41	0.33	
6,448.0	0.50	55.60	5,936.4	1,883.1	-1,239.3	2,254.3	1.72	-0.66	
6,539.0	0.40	313.30	6,027.4	1,883.5	-1,239.2	2,254.6	0.77	-0.11	
6,631.0	0.90	232.20	6,119.4	1,883.3	-1,240.0	2,254.9	1.01	0.54	
6,722.0	1.60	228.90	6,210.4	1,882.0	-1,241.5	2,254.6	0.77	0.77	
6,814.0	0.40	72.00	6,302.4	1,881.3	-1,242.2	2,254.4	2.15	-1.30	
6,905.0	0.60	329.50	6,393.4	1,881.8	-1,242.1	2,254.8	0.87	0.22	
6,997.0	0.90	266.50	6,485.4	1,882.2	-1,243.1	2,255.6	0.90	0.33	
7,088.0	0.90	291.20	6,576.4	1,882.4	-1,244.5	2,256.6	0.42	0.00	
7,180.0	1.10	282.30	6,668.4	1,882.8	-1,246.0	2,257.8	0.27	0.22	
7,271.0	1.40	264.70	6,759.4	1,882.9	-1,248.0	2,258.9	0.53	0.33	
7,363.0	0.30	137.00	6,851.3	1,882.6	-1,248.9	2,259.2	1.74	-1.20	
7,454.0	0.70	189.90	6,942.3	1,881.9	-1,248.9	2,258.6	0.63	0.44	
7,546.0	0.80	208.70	7,034.3	1,880.8	-1,249.3	2,257.9	0.29	0.11	
7,637.0	0.90	60.70	7,125.3	1,880.6	-1,248.9	2,257.5	1.80	0.11	
7,729.0	0.60	11.10	7,217.3	1,881.4	-1,248.2	2,257.8	0.75	-0.33	
7,820.0	0.40	297.90	7,308.3	1,882.0	-1,248.4	2,258.4	0.68	-0.22	
7,912.0	1.00	292.30	7,400.3	1,882.5	-1,249.4	2,259.4	0.66	0.65	
8,003.0	1.40	257.90	7,491.3	1,882.5	-1,251.3	2,260.5	0.89	0.44	
8,095.0	2.20	241.80	7,583.2	1,881.5	-1,253.9	2,261.0	1.02	0.87	
8,186.0	1.70	244.90	7,674.2	1,880.1	-1,256.7	2,261.4	0.56	-0.55	
8,278.0	2.20	231.80	7,766.1	1,878.4	-1,259.3	2,261.4	0.72	0.54	
8,369.0	2.30	226.90	7,857.1	1,876.1	-1,262.0	2,261.0	0.24	0.11	
8,461.0	2.20	247.20	7,949.0	1,874.1	-1,265.0	2,261.0	0.87	-0.11	
8,552.0	1.10	274.20	8,040.0	1,873.5	-1,267.5	2,261.9	1.45	-1.21	
8,644.0	1.30	320.30	8,131.9	1,874.4	-1,269.0	2,263.5	1.04	0.22	
8,735.0	1.10	303.80	8,222.9	1,875.7	-1,270.4	2,265.3	0.44	-0.22	
8,827.0	1.10	329.10	8,314.9	1,876.9	-1,271.6	2,267.0	0.52	0.00	
8,918.0	1.00	300.50	8,405.9	1,878.1	-1,272.7	2,268.6	0.58	-0.11	
9,010.0	1.10	280.50	8,497.9	1,878.6	-1,274.3	2,269.9	0.41	0.11	
9,101.0	1.20	279.20	8,588.9	1,879.0	-1,276.1	2,271.2	0.11	0.11	
9,193.0	1.90	250.10	8,680.8	1,878.6	-1,278.5	2,272.2	1.12	0.76	
9,284.0	2.00	259.80	8,771.8	1,877.8	-1,281.4	2,273.2	0.38	0.11	
9,295.0	2.00	258.30	8,782.8	1,877.7	-1,281.8	2,273.3	0.48	0.00	Last Cathedral Survey @ 9295' MD

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF04D-22 K22 596
Project:	North Piceance	TVD Reference:	Well @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	Well @ 6549.0ft (Patterson 303)
Well:	NP WF04D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

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 WF04D-22 BHL	0.00	0.00	8,706.0	1,889.1	-1,253.9	1,656,077.13	2,249,752.85	39° 36' 16.29 N	108° 9' 47.03 W
- actual wellpath misses target center by 27.6ft at 9217.3ft MD (8705.1 TVD, 1878.3 N, -1279.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
K22 596 WF04D-22 TG ¹	0.00	0.00	5,587.0	1,896.1	-1,236.9	1,656,083.63	2,249,770.01	39° 36' 16.36 N	108° 9' 46.81 W
- actual wellpath misses target center by 12.4ft at 6098.6ft MD (5587.0 TVD, 1883.8 N, -1235.6 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,695.0	1,611.7	336.5	-239.8	Last Cathedral svy @ 1695' MD
9,295.0	8,782.8	1,877.7	-1,281.8	Last Cathedral Survey @ 9295' MD

Checked By: _____ Approved By: _____ Date: _____