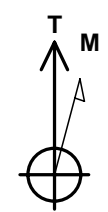
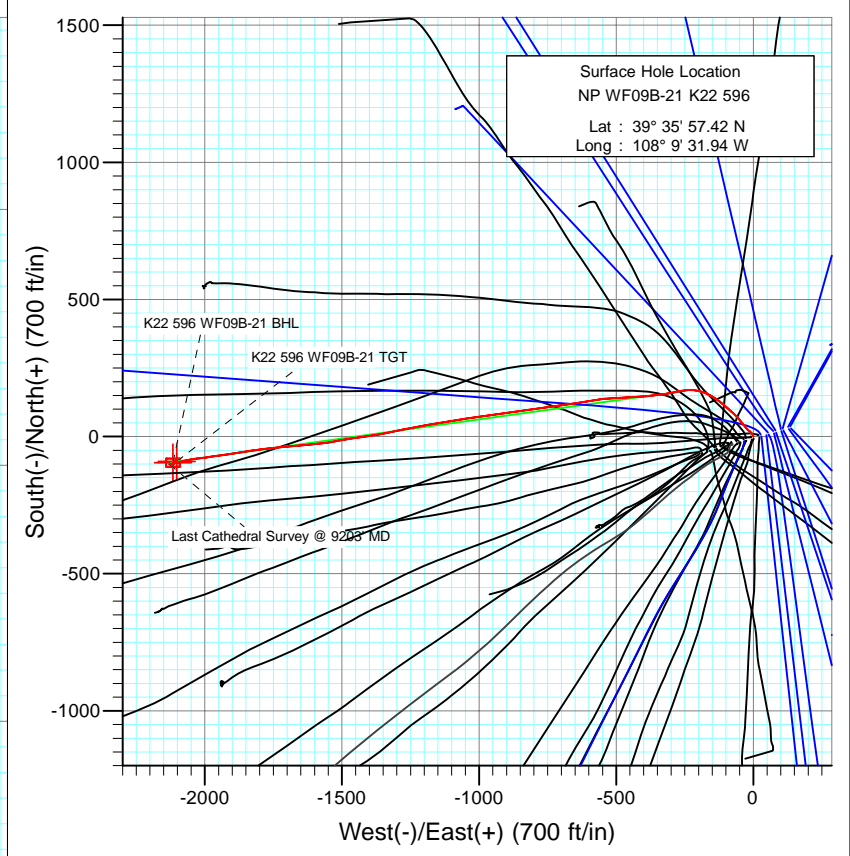
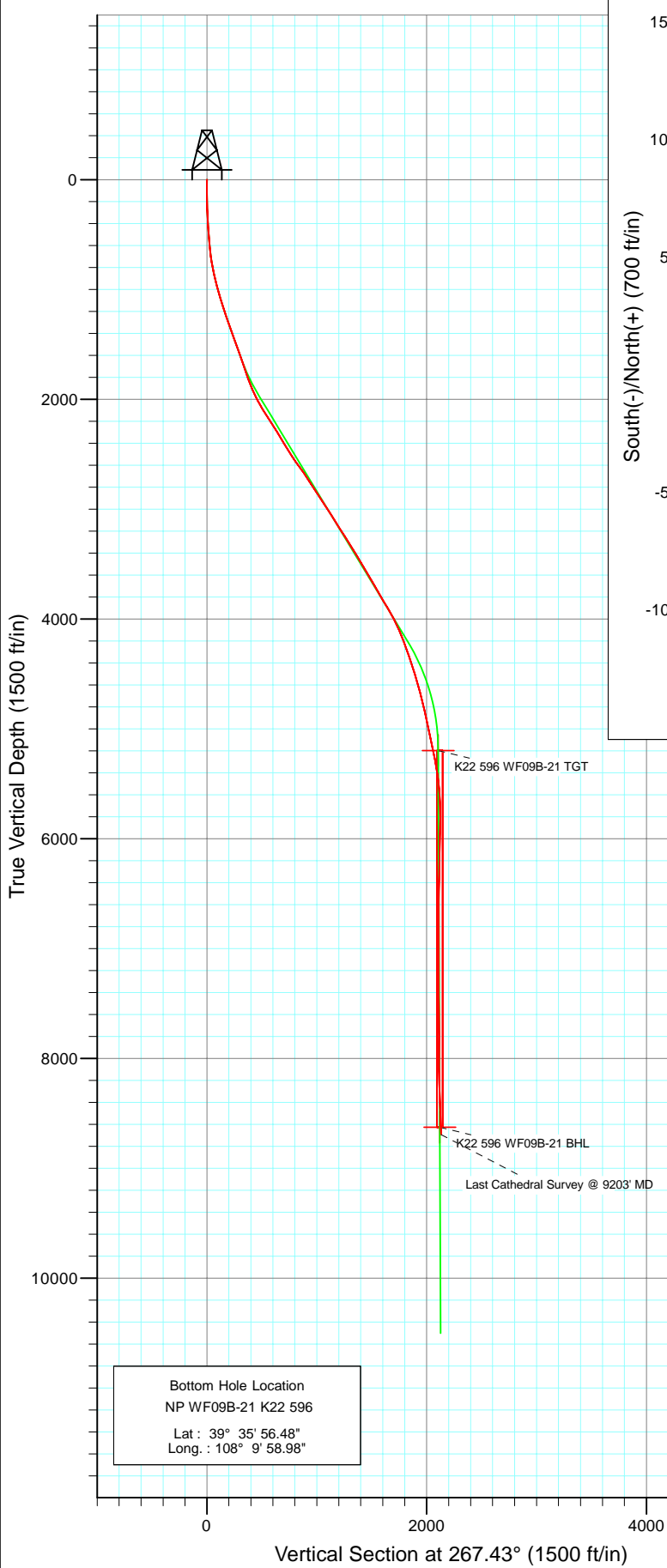




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF09B-21 K22 596
 Wellbore: DD
 Design: Final Survey



Azimuths to True North
 Magnetic North: 10.55°

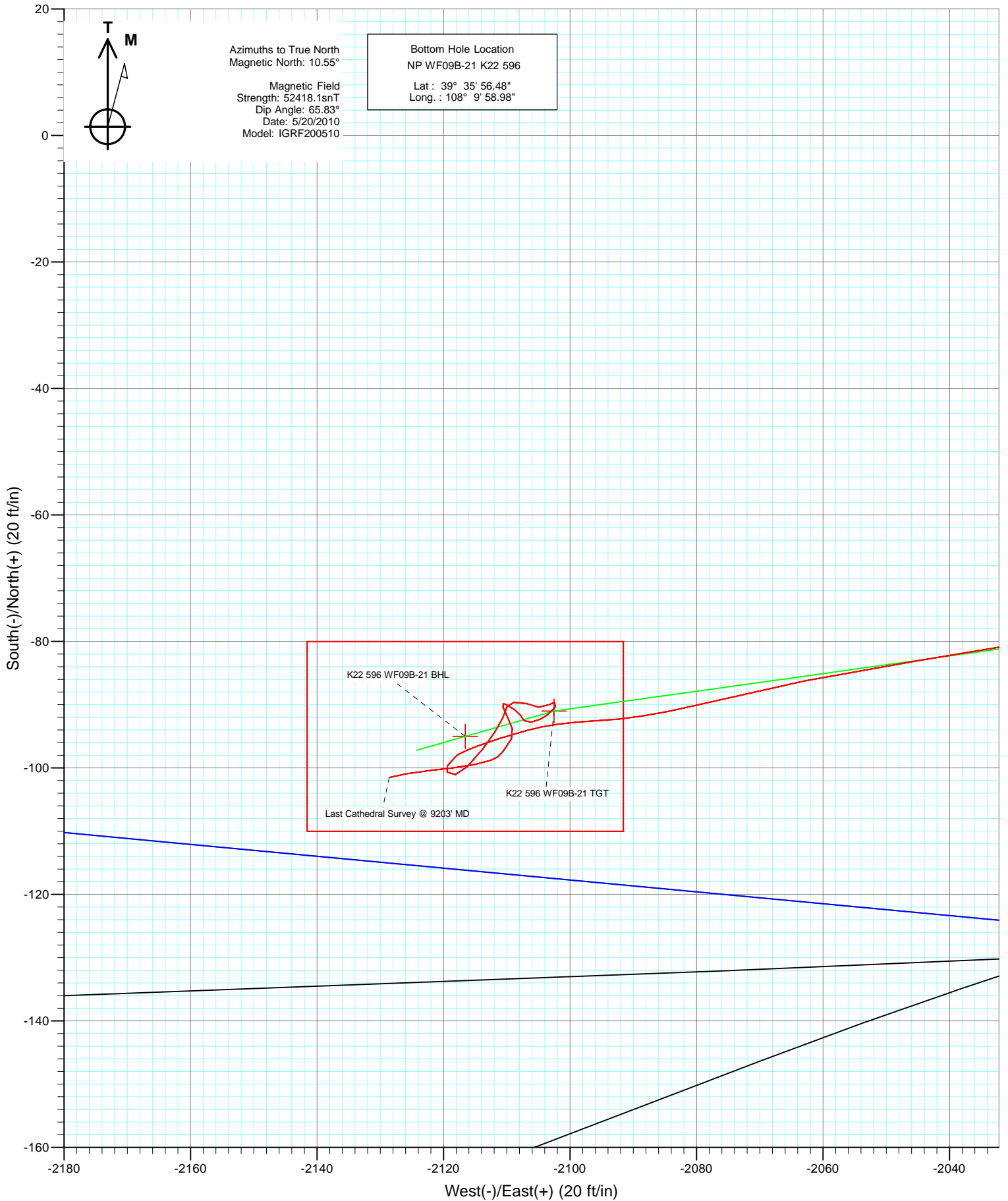
Magnetic Field
 Strength: 52418.1snT
 Dip Angle: 65.83°
 Date: 5/20/2010
 Model: IGRF200510

DESIGN DETAILS: DD
 105162 (SH) 105219 (MH): LR
 Well @ 6549.0ft (Patterson 303)

Target	Azimuth	Origin	N/S	E/W	From TVD
K22 596 WF09B-21 BHL	267.43	Slot	0.0	0.0	0.0



Project: North Piceance
Site: K22 596 Pad (S22-T5S-R96W)
Well: NP WF09B-21 K22 596
Wellbore: DD
Design: DD



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well NP WF09B-21 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 WF09B-21 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 WF09B-21 K22 596					
Well Position	+N/-S 0.0 ft	Northing: 1,654,134.05 ft	Latitude: 39° 35' 57.42 N		
	+E/-W 0.0 ft	Easting: 2,250,877.54 ft	Longitude: 108° 9' 31.94 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	5/20/2010	10.55	65.83	52,418

Design DD					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.0			
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	267.43	

Survey Program Date 6/7/2011					
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
173.0	9,203.0	Survey #1 (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	
173.0	1.40	343.20	173.0	2.0	-0.6	0.5	0.81	0.81	
204.0	1.80	331.10	204.0	2.8	-1.0	0.8	1.68	1.29	
235.0	2.10	337.30	235.0	3.8	-1.4	1.2	1.18	0.97	
266.0	3.20	339.60	265.9	5.1	-1.9	1.7	3.56	3.55	
296.0	4.70	334.50	295.8	7.0	-2.8	2.4	5.13	5.00	
327.0	5.70	327.40	326.7	9.4	-4.1	3.7	3.83	3.23	
358.0	6.20	321.90	357.6	12.0	-6.0	5.4	2.44	1.61	
388.0	6.50	313.30	387.4	14.5	-8.2	7.6	3.32	1.00	
419.0	6.20	312.10	418.2	16.8	-10.7	10.0	1.06	-0.97	
450.0	5.80	309.50	449.0	18.9	-13.2	12.3	1.56	-1.29	
480.0	5.80	308.60	478.9	20.8	-15.6	14.6	0.30	0.00	
511.0	6.00	305.60	509.7	22.8	-18.1	17.1	1.19	0.65	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF09B-21 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 WF09B-21 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
560.0	7.00	317.20	558.4	26.4	-22.2	21.0	3.36	2.04	
606.0	7.90	322.70	604.0	31.0	-26.0	24.6	2.49	1.96	
652.0	10.20	321.50	649.4	36.7	-30.5	28.8	5.02	5.00	
697.0	12.20	321.70	693.6	43.6	-35.9	33.9	4.45	4.44	
743.0	14.80	321.30	738.3	52.0	-42.6	40.2	5.66	5.65	
789.0	16.40	319.80	782.6	61.5	-50.5	47.6	3.59	3.48	
835.0	17.70	315.50	826.6	71.5	-59.5	56.3	3.94	2.83	
881.0	18.70	313.30	870.3	81.5	-69.8	66.1	2.64	2.17	
927.0	20.40	312.80	913.6	92.0	-81.1	76.9	3.71	3.70	
972.0	20.30	311.10	955.8	102.5	-92.7	88.0	1.33	-0.22	
1,018.0	19.80	309.50	999.0	112.7	-104.7	99.6	1.61	-1.09	
1,064.0	19.90	307.40	1,042.3	122.4	-117.0	111.4	1.57	0.22	
1,110.0	20.10	305.80	1,085.5	131.8	-129.6	123.6	1.27	0.43	
1,156.0	20.50	305.60	1,128.6	141.1	-142.6	136.1	0.88	0.87	
1,202.0	20.50	299.10	1,171.7	149.7	-156.1	149.3	4.95	0.00	
1,247.0	20.70	293.20	1,213.9	156.7	-170.3	163.1	4.63	0.44	
1,293.0	20.60	288.00	1,256.9	162.4	-185.5	178.0	3.99	-0.22	
1,339.0	20.10	283.30	1,300.0	166.7	-200.9	193.2	3.71	-1.09	
1,385.0	20.00	274.60	1,343.3	169.1	-216.4	208.6	6.48	-0.22	
1,431.0	20.30	269.70	1,386.5	169.7	-232.3	224.4	3.73	0.65	
1,477.0	20.20	264.20	1,429.6	168.9	-248.1	240.3	4.14	-0.22	
1,523.0	20.20	259.30	1,472.8	166.6	-263.8	256.1	3.68	0.00	
1,568.0	19.80	257.20	1,515.1	163.5	-278.9	271.3	1.83	-0.89	
1,614.0	19.40	257.70	1,558.4	160.1	-294.0	286.5	0.94	-0.87	
1,664.0	19.80	263.50	1,624.4	156.3	-317.1	309.8	2.84	0.57	
1,752.0	19.10	262.70	1,688.5	153.6	-339.6	332.4	1.10	-1.03	
1,798.0	18.10	258.00	1,732.1	151.1	-354.0	346.9	3.92	-2.17	
1,890.0	20.20	265.30	1,819.0	146.9	-383.9	376.9	3.46	2.28	
1,981.0	23.60	267.00	1,903.4	144.6	-417.7	410.8	3.80	3.74	
2,073.0	26.30	267.70	1,986.8	142.8	-456.5	449.6	2.95	2.93	
2,165.0	29.80	267.70	2,068.0	141.1	-499.7	492.9	3.80	3.80	
2,256.0	33.80	263.30	2,145.3	137.2	-547.5	540.8	5.08	4.40	
2,348.0	32.90	261.10	2,222.2	130.4	-597.6	591.1	1.64	-0.98	
2,440.0	31.20	260.10	2,300.2	122.4	-645.7	639.6	1.94	-1.85	
2,531.0	31.90	262.20	2,377.7	115.1	-692.8	686.9	1.43	0.77	
2,623.0	30.70	261.20	2,456.3	108.2	-740.1	734.5	1.42	-1.30	
2,715.0	34.30	261.50	2,533.9	100.8	-788.9	783.6	3.92	3.91	
2,807.0	36.30	263.40	2,609.0	93.8	-841.6	836.6	2.48	2.17	
2,898.0	34.70	262.90	2,683.1	87.5	-894.1	889.3	1.79	-1.76	
2,990.0	33.40	262.50	2,759.3	81.0	-945.2	940.6	1.43	-1.41	
3,082.0	32.00	260.80	2,836.7	73.8	-994.4	990.0	1.82	-1.52	
3,173.0	34.80	261.70	2,912.7	66.2	-1,043.9	1,039.8	3.12	3.08	
3,265.0	32.90	260.20	2,989.1	58.1	-1,094.5	1,090.8	2.26	-2.07	
3,357.0	32.40	260.60	3,066.5	49.9	-1,143.4	1,140.0	0.59	-0.54	
3,448.0	31.30	259.20	3,143.8	41.4	-1,190.7	1,187.6	1.46	-1.21	
3,540.0	34.10	259.90	3,221.3	32.4	-1,239.6	1,236.9	3.07	3.04	
3,631.0	33.10	259.30	3,297.1	23.4	-1,289.1	1,286.7	1.16	-1.10	
3,723.0	30.30	257.20	3,375.3	13.5	-1,336.4	1,334.5	3.27	-3.04	
3,815.0	32.00	261.20	3,454.1	4.7	-1,383.1	1,381.5	2.91	1.85	
3,906.0	29.50	262.70	3,532.3	-1.9	-1,429.2	1,427.8	2.87	-2.75	
3,998.0	32.50	260.10	3,611.1	-9.0	-1,476.0	1,474.9	3.57	3.26	
4,089.0	30.50	259.80	3,688.7	-17.3	-1,522.8	1,522.1	2.20	-2.20	
4,181.0	28.90	263.70	3,768.6	-23.9	-1,567.9	1,567.4	2.73	-1.74	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF09B-21 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 WF09B-21 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
4,273.0	30.50	264.10	3,848.5	-28.7	-1,613.3	1,612.9	1.75	1.74	
4,364.0	31.00	265.00	3,926.7	-33.1	-1,659.6	1,659.4	0.75	0.55	
4,455.0	27.30	265.00	4,006.2	-37.0	-1,703.7	1,703.7	4.07	-4.07	
4,547.0	23.60	264.30	4,089.3	-40.7	-1,743.1	1,743.1	4.03	-4.02	
4,639.0	21.70	262.70	4,174.2	-44.6	-1,778.3	1,778.5	2.17	-2.07	
4,730.0	20.10	262.30	4,259.2	-48.9	-1,810.5	1,810.8	1.77	-1.76	
4,822.0	18.80	261.50	4,345.9	-53.2	-1,840.8	1,841.3	1.44	-1.41	
4,913.0	17.80	261.70	4,432.3	-57.4	-1,869.1	1,869.7	1.10	-1.10	
5,005.0	16.70	261.40	4,520.2	-61.4	-1,896.0	1,896.9	1.20	-1.20	
5,097.0	15.90	261.00	4,608.5	-65.3	-1,921.6	1,922.5	0.88	-0.87	
5,188.0	14.80	262.00	4,696.2	-68.9	-1,945.4	1,946.5	1.24	-1.21	
5,280.0	13.70	260.60	4,785.4	-72.3	-1,967.8	1,969.0	1.25	-1.20	
5,371.0	12.80	263.40	4,874.0	-75.2	-1,988.4	1,989.8	1.21	-0.99	
5,463.0	11.50	264.20	4,963.9	-77.3	-2,007.7	2,009.1	1.42	-1.41	
5,555.0	12.20	259.80	5,054.0	-80.0	-2,026.3	2,027.9	1.24	0.76	
5,646.0	11.50	261.50	5,143.0	-83.0	-2,044.8	2,046.4	0.86	-0.77	
5,738.0	11.50	258.20	5,233.2	-86.2	-2,062.8	2,064.6	0.72	0.00	
5,830.0	11.10	256.60	5,323.4	-90.2	-2,080.4	2,082.4	0.55	-0.43	
5,922.0	8.40	267.30	5,414.1	-92.5	-2,095.8	2,097.8	3.52	-2.93	
6,013.0	5.70	254.70	5,504.4	-94.0	-2,106.8	2,108.9	3.40	-2.97	
6,106.0	4.40	249.50	5,597.0	-96.5	-2,114.6	2,116.8	1.48	-1.40	
6,196.0	0.90	213.30	5,686.9	-98.3	-2,118.2	2,120.5	4.12	-3.89	
6,288.0	1.40	226.50	5,778.9	-99.7	-2,119.4	2,121.7	0.61	0.54	
6,380.0	1.00	103.00	5,870.9	-100.6	-2,119.4	2,121.8	2.31	-0.43	
6,471.0	0.70	113.90	5,961.9	-101.0	-2,118.1	2,120.5	0.37	-0.33	
6,563.0	2.50	43.30	6,053.8	-99.8	-2,116.2	2,118.6	2.57	1.96	
6,655.0	2.20	38.80	6,145.7	-97.0	-2,113.8	2,116.0	0.38	-0.33	
6,746.0	1.80	31.70	6,236.7	-94.4	-2,111.9	2,114.0	0.52	-0.44	
6,836.0	1.50	26.10	6,326.7	-92.1	-2,110.7	2,112.7	0.38	-0.33	
6,930.0	0.90	12.30	6,420.6	-90.3	-2,110.0	2,111.9	0.70	-0.64	
7,021.0	1.20	90.40	6,511.6	-89.6	-2,108.9	2,110.8	1.48	0.33	
7,113.0	1.30	101.60	6,603.6	-89.8	-2,106.9	2,108.8	0.29	0.11	
7,204.0	1.20	111.60	6,694.6	-90.4	-2,105.0	2,106.9	0.26	-0.11	
7,296.0	1.30	44.90	6,786.6	-90.0	-2,103.3	2,105.3	1.50	0.11	
7,388.0	0.50	154.60	6,878.6	-89.6	-2,102.4	2,104.3	1.68	-0.87	
7,479.0	0.40	188.70	6,969.5	-90.3	-2,102.3	2,104.2	0.31	-0.11	
7,575.0	0.80	236.40	7,065.5	-91.0	-2,102.9	2,104.9	0.63	0.42	
7,663.0	0.70	222.60	7,153.5	-91.7	-2,103.8	2,105.8	0.23	-0.11	
7,754.0	0.70	254.40	7,244.5	-92.3	-2,104.7	2,106.7	0.42	0.00	
7,846.0	1.20	251.70	7,336.5	-92.8	-2,106.2	2,108.2	0.55	0.54	
7,938.0	0.70	341.30	7,428.5	-92.5	-2,107.3	2,109.3	1.51	-0.54	
8,029.0	0.70	311.30	7,519.5	-91.6	-2,107.9	2,109.8	0.40	0.00	
8,121.0	0.90	313.30	7,611.5	-90.8	-2,108.8	2,110.7	0.22	0.22	
8,213.0	1.10	292.20	7,703.5	-89.9	-2,110.1	2,112.1	0.45	0.22	
8,304.0	1.10	155.50	7,794.5	-90.4	-2,110.6	2,112.5	2.25	0.00	
8,396.0	1.20	154.30	7,886.5	-92.1	-2,109.8	2,111.8	0.11	0.11	
8,488.0	1.10	162.00	7,978.4	-93.8	-2,109.1	2,111.2	0.20	-0.11	
8,579.0	1.10	207.10	8,069.4	-95.4	-2,109.2	2,111.4	0.93	0.00	
8,671.0	1.80	217.40	8,161.4	-97.3	-2,110.5	2,112.8	0.81	0.76	
8,762.0	1.50	253.60	8,252.4	-98.8	-2,112.5	2,114.8	1.17	-0.33	
8,854.0	1.80	257.60	8,344.3	-99.4	-2,115.1	2,117.4	0.35	0.33	
8,946.0	2.40	263.90	8,436.3	-100.0	-2,118.4	2,120.8	0.70	0.65	
9,038.0	2.30	262.70	8,528.2	-100.4	-2,122.2	2,124.5	0.12	-0.11	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well NP WF09B-21 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 WF09B-21 K22 596	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: EDM 5000.1 US Multi Users DB

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
9,129.0	2.40	261.10	8,619.1	-100.9	-2,125.9	2,128.3	0.13	0.11	
9,203.0	1.90	254.00	8,693.0	-101.5	-2,128.6	2,131.0	0.76	-0.68	Last Cathedral Survey @ 9203' MD

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
K22 596 WF09B-21 TG1 - hit/miss target - Shape - Point	0.00	0.00	5,197.0	-91.0	-2,102.5	1,654,104.61	2,248,773.28	39° 35' 56.52 N	108° 9' 58.80 W
- survey misses target center by 46.3ft at 5710.5ft MD (5206.2 TVD, -85.2 N, -2057.5 E)									
K22 596 WF09B-21 BHL - survey misses target center by 12.5ft at 9129.0ft MD (8619.1 TVD, -100.9 N, -2125.9 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	8,625.0	-95.0	-2,116.5	1,654,101.02	2,248,759.12	39° 35' 56.48 N	108° 9' 58.98 W

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,203.0	8,693.0	-101.5	-2,128.6	Last Cathedral Survey @ 9203' MD

Checked By: _____ Approved By: _____ Date: _____