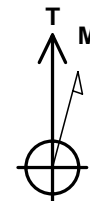
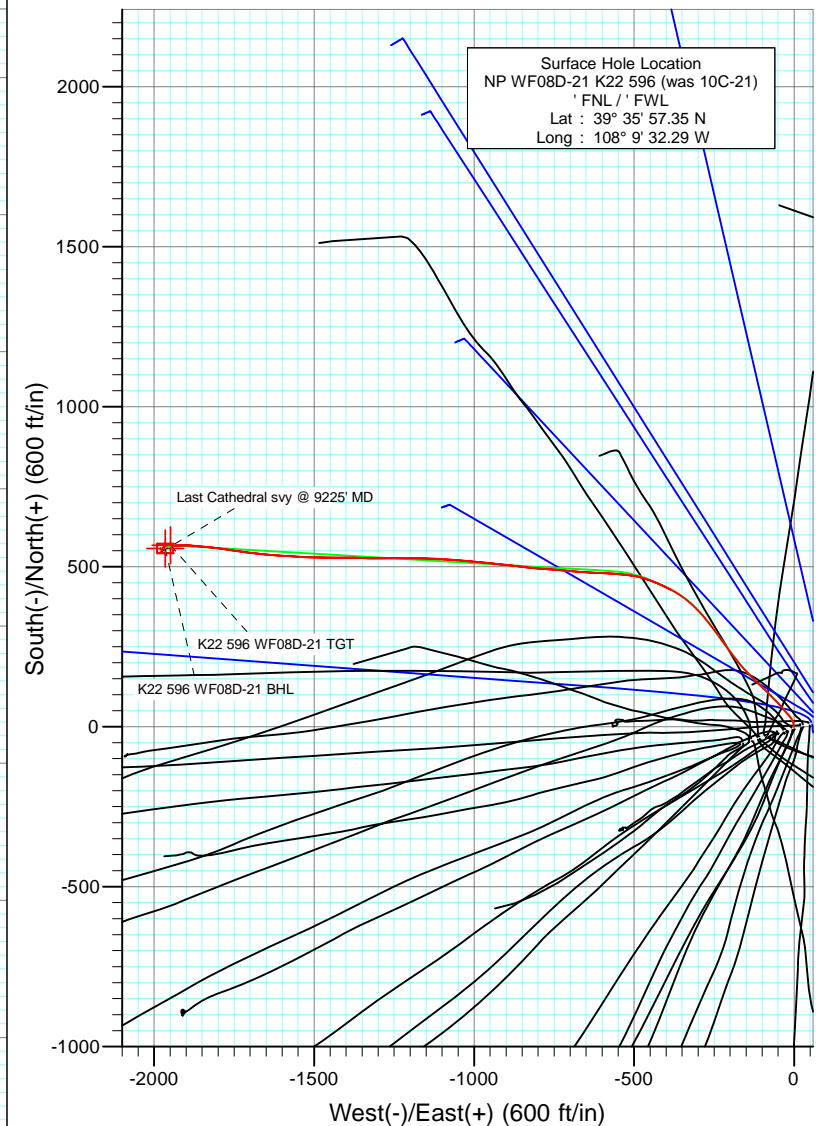
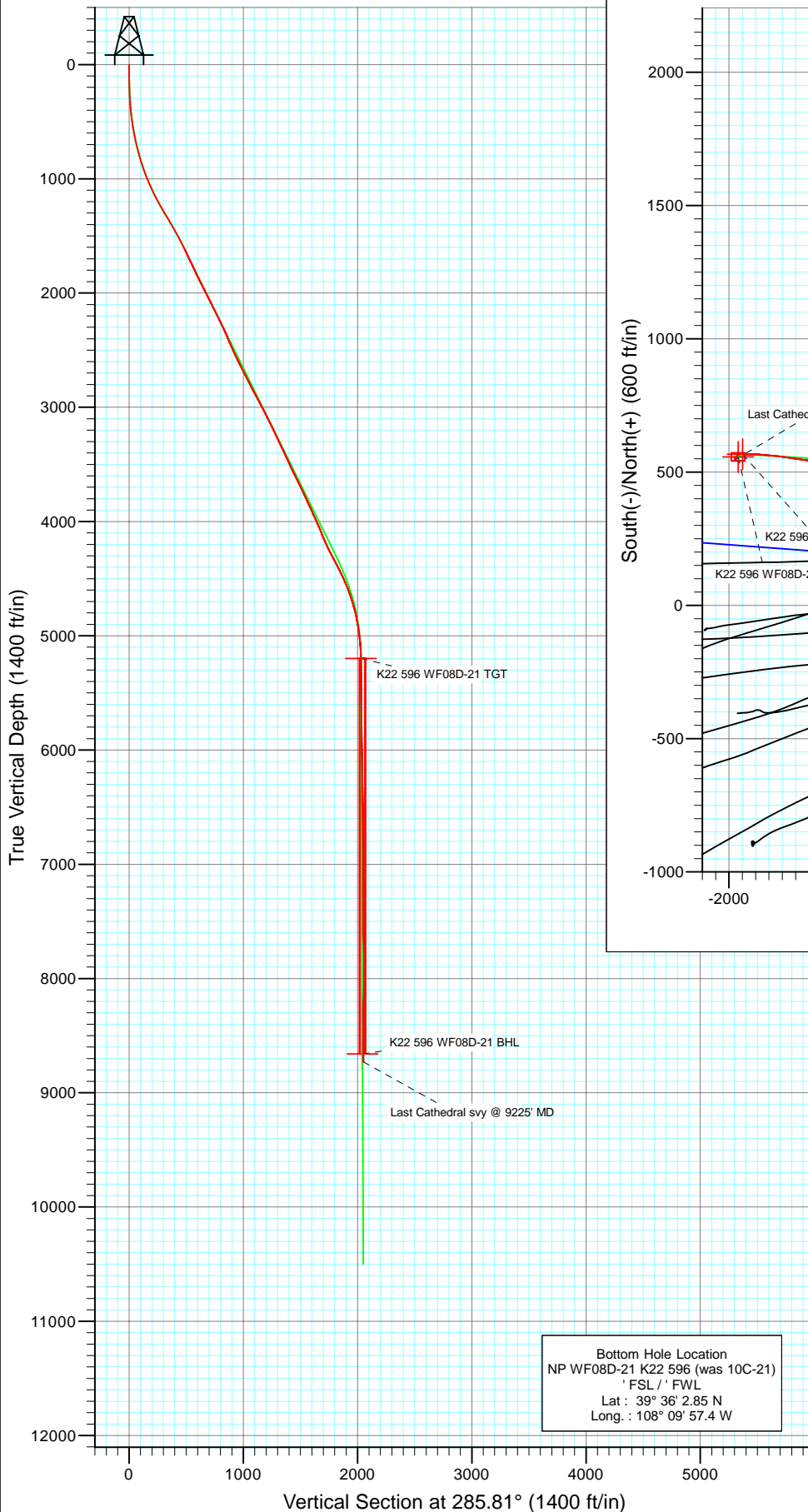




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF08D-21 K22 596 (was 10C-21)
 Wellbore: DD
 Design: Final Survey



Azimuths to True North
 Magnetic North: 10.59°

Magnetic Field
 Strength: 52400.1snT
 Dip Angle: 65.83°
 Date: 4/8/2010
 Model: IGRF2010

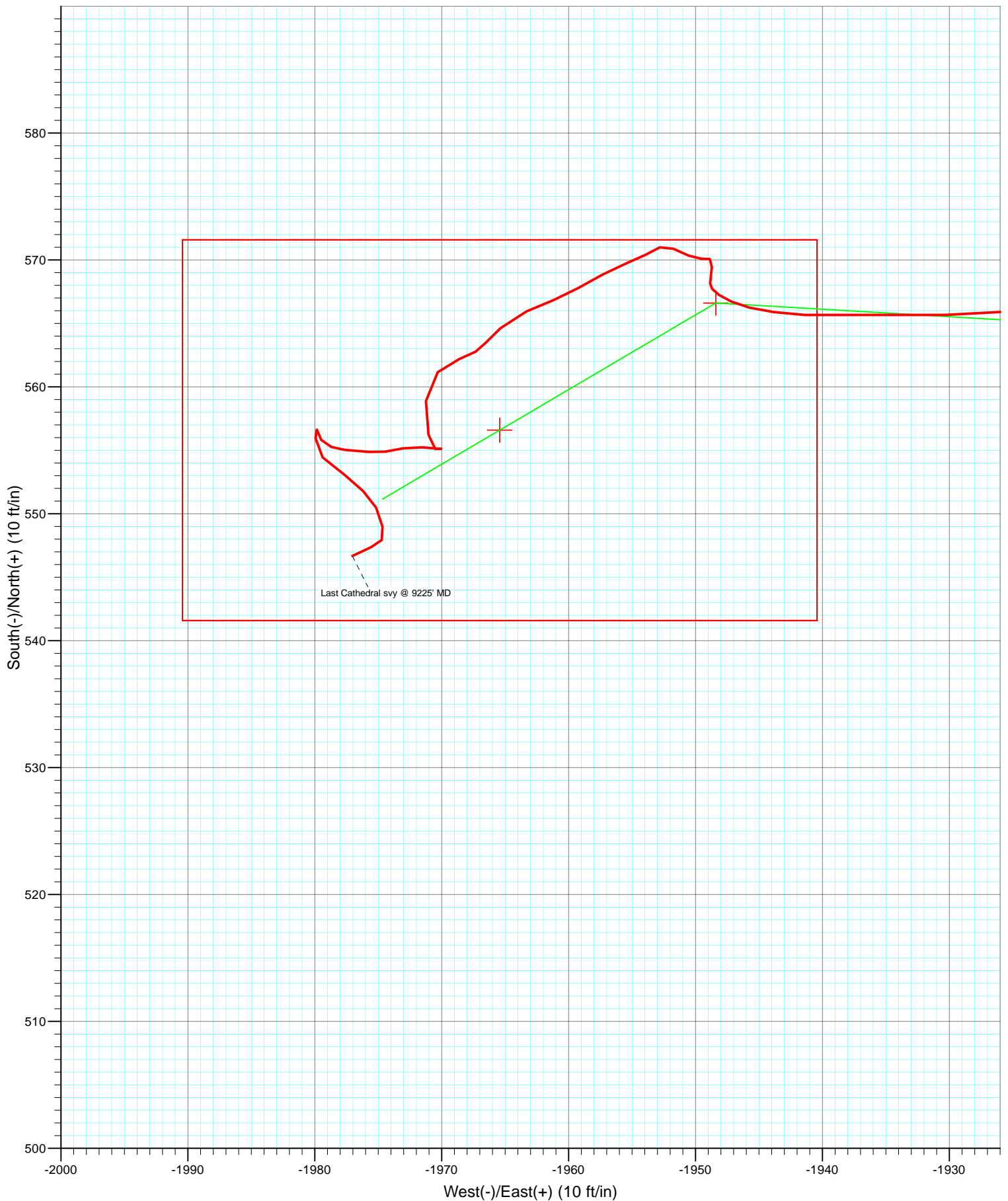
DESIGN DETAILS: DD

105136(SH), 105187 (MH); LR
 Well @ 6549.0ft (Patterson 303)

Target	Azimuth	Origin	N/S	E/W From TVD
K22 596 WF08D-21 BHL	285.81	Slot	0.0	0.0



Project: North Piceance
Site: K22 596 Pad (S22-T5S-R96W)
Well: NP WF08D-21 K22 596 (was 10C-21)
Wellbore: DD
Design: DD



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF08D-21 K22 596 (was 10C-21)
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 WF08D-21 K22 596 (was 10C-21)	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 WF08D-21 K22 596 (was 10C-21)					
Well Position	+N/-S	0.0 ft	Northing:	1,654,127.77 ft	Latitude:	39° 35' 57.35 N
	+E/-W	0.0 ft	Easting:	2,250,849.95 ft	Longitude:	108° 9' 32.29 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)
	IGRF2010	4/8/2010	10.59	65.83	52,400

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	285.81	

Survey Program	Date	4/13/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
174.0	1,760.0	Survey #1 (DD)	MWD	Geolink MWD	
1,846.0	9,225.0	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	
1,760.0	26.60	296.20	1,619.9	428.2	-386.0	488.1	0.00	0.00		
1,846.0	25.30	294.30	1,697.3	444.3	-420.1	525.2	1.79	-1.51		
1,892.0	24.70	293.30	1,739.0	452.1	-437.9	544.5	1.60	-1.30		
1,937.0	24.80	289.70	1,779.8	459.0	-455.4	563.2	3.36	0.22		
1,983.0	25.20	285.80	1,821.5	464.9	-473.9	582.6	3.69	0.87		
2,029.0	26.80	282.00	1,862.9	469.8	-493.5	602.8	5.02	3.48		
2,075.0	28.10	277.30	1,903.7	473.3	-514.3	623.8	5.49	2.83		
2,167.0	27.60	273.50	1,985.0	477.3	-557.1	666.1	2.00	-0.54		
2,258.0	26.80	273.30	2,066.0	479.8	-598.6	706.7	0.88	-0.88		
2,350.0	26.30	272.20	2,148.3	481.8	-639.7	746.8	0.76	-0.54		
2,442.0	27.50	275.80	2,230.3	484.7	-681.2	787.5	2.20	1.30		
2,533.0	25.20	274.70	2,311.9	488.4	-721.4	827.2	2.58	-2.53		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF08D-21 K22 596 (was 10C-21)
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 WF08D-21 K22 596 (was 10C-21)	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
2,625.0	23.50	273.60	2,395.7	491.2	-759.3	864.4	1.91	-1.85	
2,717.0	23.60	274.50	2,480.0	493.8	-795.9	900.3	0.41	0.11	
2,809.0	25.80	276.70	2,563.6	497.6	-834.2	938.2	2.59	2.39	
2,900.0	27.90	277.40	2,644.8	502.6	-875.0	978.8	2.33	2.31	
2,992.0	28.20	275.60	2,726.0	507.5	-917.9	1,021.5	0.98	0.33	
3,084.0	26.10	275.10	2,807.8	511.4	-959.7	1,062.8	2.30	-2.28	
3,175.0	29.10	275.20	2,888.5	515.2	-1,001.7	1,104.2	3.30	3.30	
3,267.0	27.60	276.00	2,969.4	519.5	-1,045.2	1,147.2	1.68	-1.63	
3,359.0	28.50	272.40	3,050.6	522.6	-1,088.3	1,189.5	2.08	0.98	
3,450.0	27.60	272.20	3,130.9	524.3	-1,131.1	1,231.1	0.99	-0.99	
3,542.0	25.70	272.40	3,213.2	526.0	-1,172.3	1,271.3	2.07	-2.07	
3,633.0	25.80	270.10	3,295.1	526.9	-1,211.8	1,309.5	1.10	0.11	
3,725.0	26.50	269.40	3,377.7	526.7	-1,252.4	1,348.5	0.83	0.76	
3,816.0	24.90	269.10	3,459.7	526.2	-1,291.8	1,386.3	1.76	-1.76	
3,908.0	25.10	271.50	3,543.1	526.4	-1,330.7	1,423.8	1.12	0.22	
4,000.0	28.50	272.20	3,625.2	527.7	-1,372.2	1,464.0	3.71	3.70	
4,091.0	27.60	270.00	3,705.5	528.6	-1,414.9	1,505.4	1.51	-0.99	
4,183.0	25.10	269.30	3,787.9	528.3	-1,455.8	1,544.6	2.74	-2.72	
4,275.0	24.50	270.70	3,871.5	528.3	-1,494.3	1,581.8	0.91	-0.65	
4,366.0	25.50	274.10	3,953.9	529.9	-1,532.8	1,619.2	1.92	1.10	
4,457.0	24.30	273.90	4,036.5	532.6	-1,571.0	1,656.7	1.32	-1.32	
4,549.0	22.10	272.00	4,121.0	534.5	-1,607.2	1,692.0	2.53	-2.39	
4,641.0	25.00	276.10	4,205.4	537.2	-1,643.8	1,728.0	3.62	3.15	
4,732.0	27.90	276.70	4,286.8	541.7	-1,684.1	1,768.0	3.20	3.19	
4,823.0	27.90	277.80	4,367.3	547.1	-1,726.3	1,810.1	0.57	0.00	
4,915.0	27.00	278.70	4,448.9	553.2	-1,768.3	1,852.1	1.08	-0.98	
5,007.0	23.90	276.20	4,532.0	558.3	-1,807.5	1,891.2	3.57	-3.37	
5,098.0	20.60	276.00	4,616.2	562.0	-1,841.7	1,925.2	3.63	-3.63	
5,190.0	17.10	274.60	4,703.2	564.8	-1,871.3	1,954.4	3.84	-3.80	
5,282.0	13.50	273.20	4,792.0	566.5	-1,895.5	1,978.1	3.93	-3.91	
5,373.0	10.90	266.30	4,880.9	566.5	-1,914.7	1,996.6	3.27	-2.86	
5,465.0	8.70	267.80	4,971.5	565.7	-1,930.3	2,011.4	2.41	-2.39	
5,557.0	5.10	273.70	5,062.9	565.7	-1,941.4	2,022.1	3.98	-3.91	
5,648.0	2.40	294.50	5,153.7	566.7	-1,947.2	2,027.9	3.28	-2.97	
5,740.0	0.80	5.40	5,245.6	568.2	-1,948.8	2,029.9	2.47	-1.74	
5,833.0	0.80	7.00	5,338.6	569.4	-1,948.7	2,030.1	0.02	0.00	
5,923.0	0.30	269.10	5,428.6	570.1	-1,948.9	2,030.5	0.99	-0.56	
6,015.0	0.50	274.70	5,520.6	570.1	-1,949.5	2,031.1	0.22	0.22	
6,107.0	0.80	289.20	5,612.6	570.3	-1,950.5	2,032.1	0.37	0.33	
6,198.0	0.90	298.30	5,703.6	570.9	-1,951.7	2,033.4	0.18	0.11	
6,290.0	0.60	241.00	5,795.6	571.0	-1,952.8	2,034.5	0.83	-0.33	
6,382.0	1.00	243.80	5,887.6	570.4	-1,953.9	2,035.4	0.44	0.43	
6,473.0	1.20	247.80	5,978.6	569.7	-1,955.5	2,036.8	0.24	0.22	
6,565.0	1.30	241.50	6,070.5	568.8	-1,957.3	2,038.3	0.18	0.11	
6,657.0	1.40	240.30	6,162.5	567.8	-1,959.2	2,039.8	0.11	0.11	
6,748.0	1.30	247.90	6,253.5	566.8	-1,961.2	2,041.4	0.23	-0.11	
6,840.0	1.60	247.00	6,345.5	565.9	-1,963.3	2,043.2	0.33	0.33	
6,932.0	1.50	226.50	6,437.4	564.6	-1,965.4	2,044.8	0.61	-0.11	
7,023.0	0.60	222.20	6,528.4	563.4	-1,966.6	2,045.7	0.99	-0.99	
7,115.0	0.70	235.50	6,620.4	562.8	-1,967.3	2,046.2	0.20	0.11	
7,206.0	1.10	251.90	6,711.4	562.2	-1,968.6	2,047.3	0.52	0.44	
7,298.0	1.40	228.10	6,803.4	561.2	-1,970.3	2,048.7	0.64	0.33	
7,390.0	1.90	183.70	6,895.3	558.9	-1,971.2	2,048.9	1.45	0.54	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF08D-21 K22 596 (was 10C-21)
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 WF08D-21 K22 596 (was 10C-21)	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
7,481.0	1.50	165.50	6,986.3	556.2	-1,971.0	2,048.0	0.73	-0.44	
7,573.0	0.30	76.30	7,078.3	555.1	-1,970.5	2,047.2	1.66	-1.30	
7,664.0	0.30	100.60	7,169.3	555.1	-1,970.0	2,046.8	0.14	0.00	
7,751.0	0.70	274.70	7,256.3	555.1	-1,970.3	2,047.0	1.15	0.46	
7,843.0	0.80	275.30	7,348.3	555.2	-1,971.5	2,048.2	0.11	0.11	
7,935.0	1.10	260.60	7,440.3	555.2	-1,973.1	2,049.7	0.42	0.33	
8,026.0	0.70	258.30	7,531.3	554.9	-1,974.5	2,050.9	0.44	-0.44	
8,118.0	0.90	277.20	7,623.2	554.9	-1,975.7	2,052.2	0.36	0.22	
8,210.0	1.50	273.60	7,715.2	555.0	-1,977.6	2,054.1	0.66	0.65	
8,301.0	1.20	317.20	7,806.2	555.8	-1,979.5	2,056.0	1.14	-0.33	
8,393.0	0.40	70.90	7,898.2	556.6	-1,979.8	2,056.6	1.53	-0.87	
8,484.0	1.10	207.20	7,989.2	556.0	-1,979.9	2,056.5	1.56	0.77	
8,576.0	1.50	126.80	8,081.2	554.4	-1,979.4	2,055.5	1.85	0.43	
8,668.0	1.30	130.30	8,173.1	553.0	-1,977.6	2,053.5	0.24	-0.22	
8,759.0	1.10	132.70	8,264.1	551.8	-1,976.2	2,051.8	0.23	-0.22	
8,851.0	1.00	152.40	8,356.1	550.5	-1,975.2	2,050.4	0.40	-0.11	
8,943.0	1.00	170.30	8,448.1	549.0	-1,974.7	2,049.5	0.34	0.00	
9,035.0	0.40	217.90	8,540.1	547.9	-1,974.7	2,049.3	0.86	-0.65	
9,126.0	0.90	244.20	8,631.1	547.4	-1,975.6	2,049.9	0.63	0.55	
9,225.0	1.00	245.40	8,730.1	546.7	-1,977.0	2,051.2	0.10	0.10	Last Cathedral svy @ 9225' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Plan @ 1564.8 (NP WF1 - survey misses target center by 530.0ft at 1760.0ft MD (1619.9 TVD, 428.2 N, -386.0 E) - Point	0.00	0.00	1,567.8	-66.1	-570.1	1,654,078.39	2,250,278.17	39° 35' 56.70 N	108° 9' 39.57 W
K22 596 WF08D-21 TG1 - survey misses target center by 0.9ft at 5693.3ft MD (5199.0 TVD, 567.5 N, -1948.4 E) - Point	0.00	0.00	5,199.0	566.6	-1,948.4	1,654,751.15	2,248,918.96	39° 36' 2.95 N	108° 9' 57.18 W
K22 596 WF08D-21 BHI - survey misses target center by 31.1ft at 9126.0ft MD (8631.1 TVD, 547.4 N, -1975.6 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	8,659.0	556.6	-1,965.4	1,654,741.64	2,248,901.66	39° 36' 2.85 N	108° 9' 57.40 W

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
9,225.0	8,730.1	546.7	-1,977.0	Last Cathedral svy @ 9225' MD

Checked By: _____ Approved By: _____ Date: _____