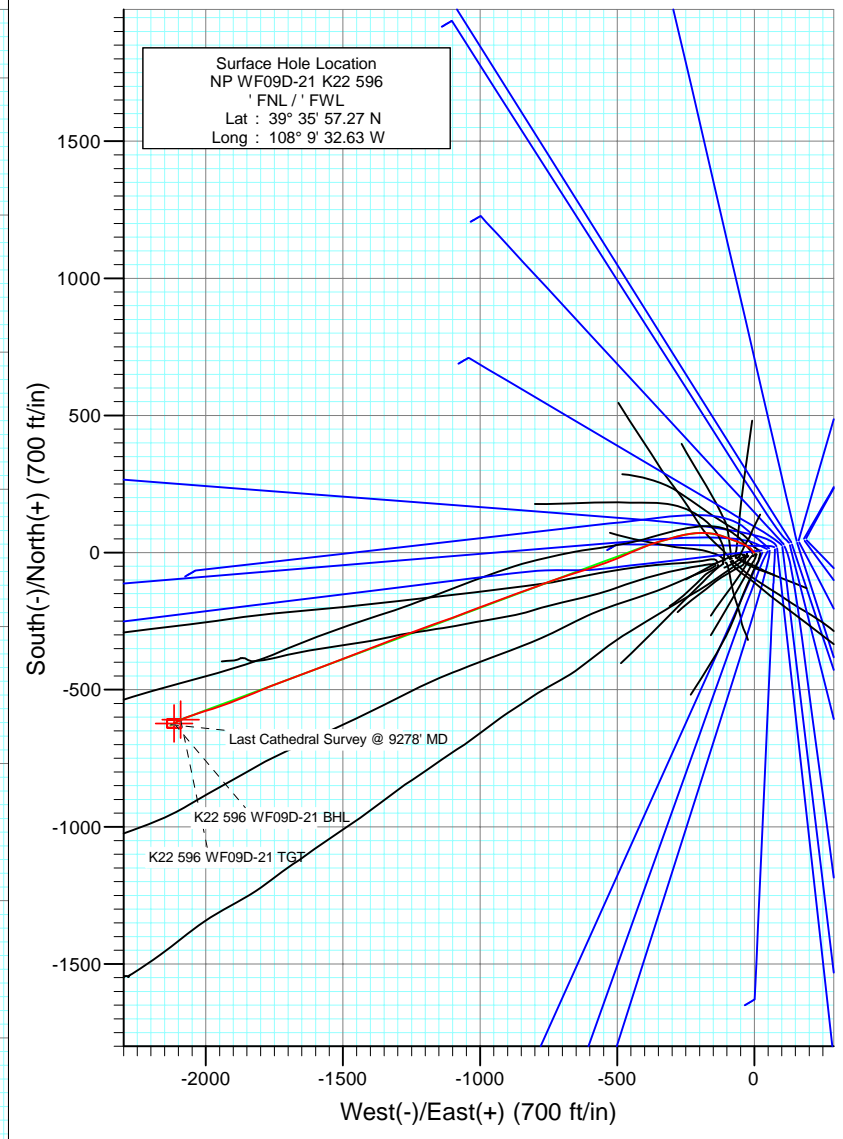
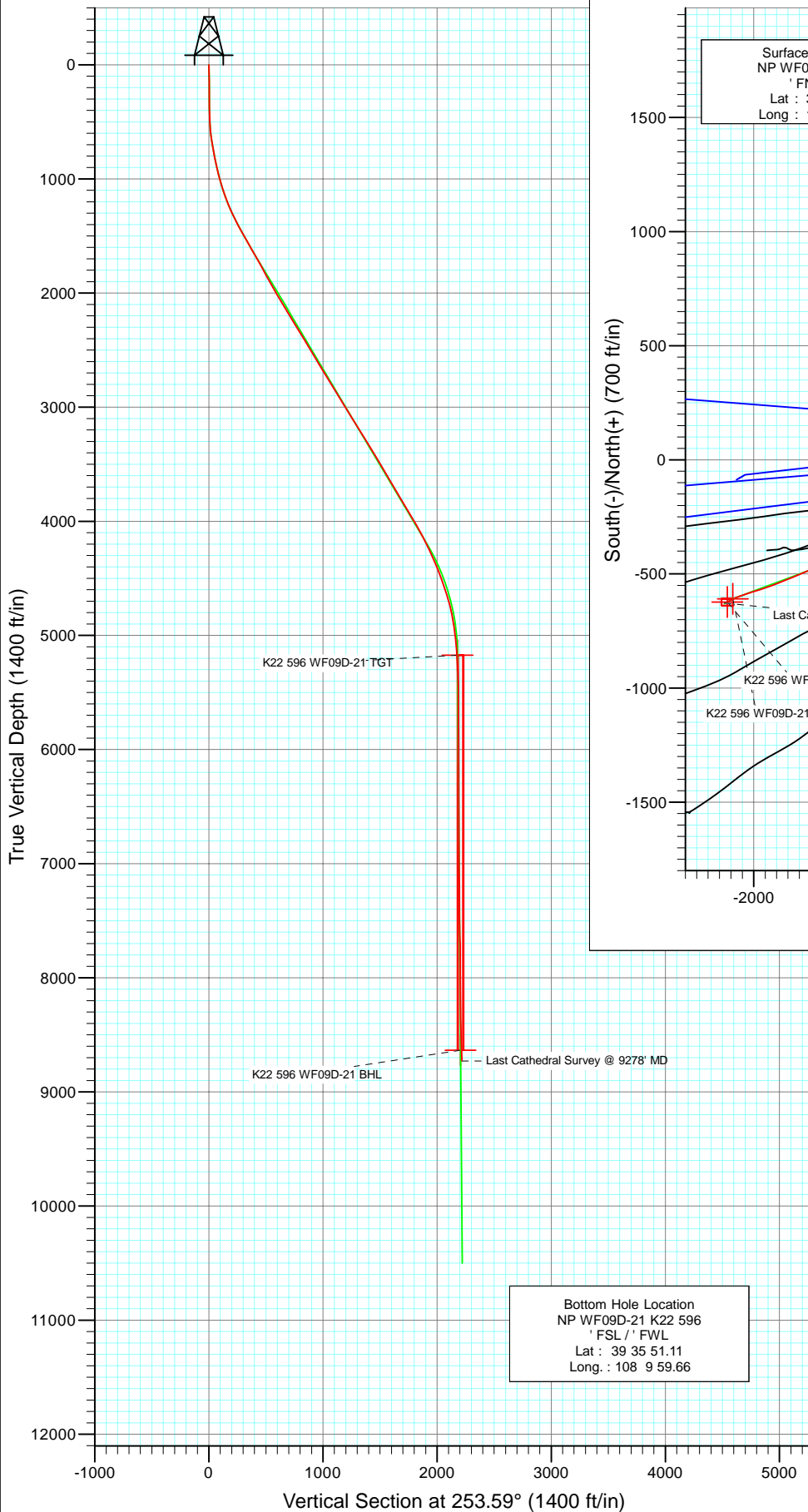




Project: North Piceance  
 Site: K22 596 Pad (S22-T5S-R96W)  
 Well: NP WF09D-21 K22 596  
 Wellbore: DD  
 Design: Final Survey



Azimuths to True North  
 Magnetic North: 10.62°

Magnetic Field  
 Strength: 52419.4snT  
 Dip Angle: 65.83°  
 Date: 1/28/2010  
 Model: IGRF2010

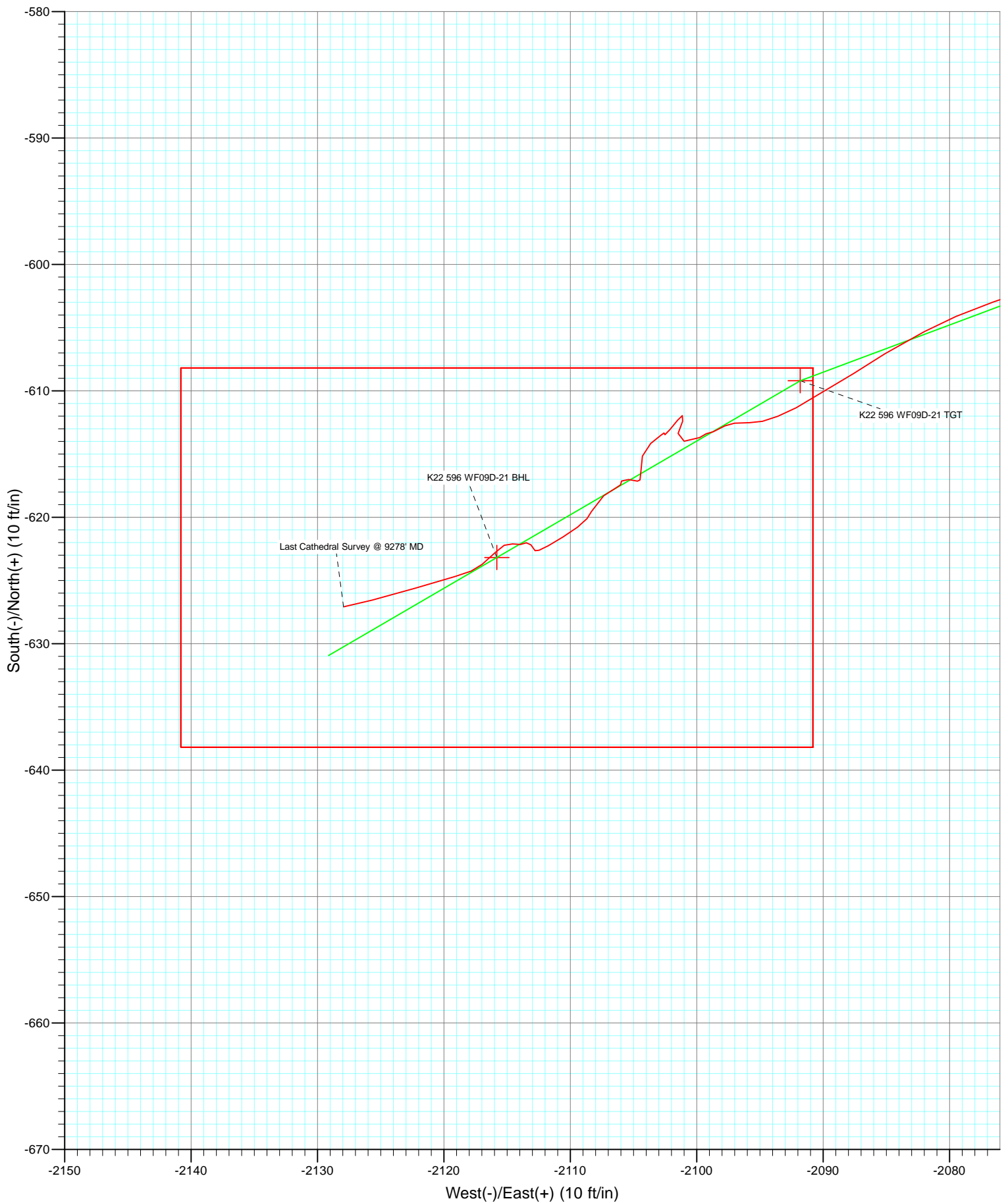
DESIGN DETAILS: DD

105041, 105055; LR  
 WELL @ 6546.0ft (Patterson 303)

Target	Azimuth	Origin	N/S	E/W	From TVD
K22 596 WF09D-21 BHL	253.59	Slot	0.0	0.0	0.0



Project: North Piceance  
Site: K22 596 Pad (S22-T5S-R96W)  
Well: NP WF09D-21 K22 596  
Wellbore: DD  
Design: DD



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP WF09D-21 K22 596
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>MD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Well:</b>	NP WF09D-21 K22 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB

<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 WF09D-21 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,120.46 ft	Latitude:	39° 35' 57.27 N
	+E/-W	0.0 ft	Easting:	2,250,823.11 ft	Longitude:	108° 9' 32.63 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>
	IGRF2010	1/28/2010	10.62	65.83	52,419

<b>Design</b>	DD				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	253.59	

<b>Survey Program</b>	<b>Date</b>	3/3/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
143.0	1,665.0	Survey #1 (DD)	MWD	Geolink MWD	
1,799.0	9,278.0	Survey #2 (DD)	MWD	Geolink MWD	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
143.0	1.10	287.90	143.0	0.4	-1.3	1.1	0.77	0.77	
173.0	1.90	304.30	173.0	0.8	-2.0	1.7	3.00	2.67	
204.0	2.40	298.10	204.0	1.4	-3.0	2.5	1.78	1.61	
234.0	2.90	318.00	233.9	2.2	-4.1	3.3	3.47	1.67	
265.0	3.20	299.80	264.9	3.3	-5.3	4.2	3.25	0.97	
296.0	2.90	325.80	295.8	4.3	-6.5	5.0	4.52	-0.97	
327.0	1.80	358.60	326.8	5.5	-7.0	5.1	5.47	-3.55	
357.0	1.70	329.20	356.8	6.3	-7.2	5.1	2.98	-0.33	
388.0	1.50	327.80	387.8	7.1	-7.7	5.4	0.66	-0.65	
418.0	2.30	331.60	417.8	7.9	-8.2	5.6	2.70	2.67	
449.0	3.80	320.10	448.7	9.3	-9.1	6.1	5.20	4.84	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP WF09D-21 K22 596
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>MVD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Well:</b>	NP WF09D-21 K22 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
480.0	4.90	318.90	479.6	11.0	-10.6	7.1	3.56	3.55	
514.0	6.30	316.90	513.5	13.5	-12.9	8.5	4.16	4.12	
560.0	8.00	307.10	559.1	17.3	-17.1	11.6	4.54	3.70	
605.0	9.90	301.30	603.6	21.2	-23.0	16.0	4.67	4.22	
651.0	11.30	299.60	648.8	25.5	-30.2	21.8	3.12	3.04	
697.0	12.60	296.90	693.8	30.0	-38.6	28.6	3.08	2.83	
743.0	14.30	287.50	738.5	33.9	-48.5	37.0	6.01	3.70	
789.0	14.60	293.30	783.1	37.9	-59.3	46.1	3.21	0.65	
835.0	15.40	292.60	827.5	42.6	-70.2	55.4	1.78	1.74	
880.0	15.80	292.00	870.9	47.2	-81.4	64.8	0.96	0.89	
926.0	15.70	289.20	915.1	51.6	-93.1	74.8	1.67	-0.22	
972.0	16.10	289.70	959.4	55.8	-105.0	85.0	0.92	0.87	
1,018.0	17.30	288.90	1,003.4	60.1	-117.5	95.7	2.66	2.61	
1,064.0	18.60	285.30	1,047.2	64.3	-131.0	107.5	3.71	2.83	
1,110.0	20.10	280.70	1,090.6	67.7	-145.9	120.8	4.65	3.26	
1,155.0	20.90	276.50	1,132.7	70.0	-161.5	135.1	3.72	1.78	
1,201.0	22.20	273.00	1,175.5	71.4	-178.3	150.8	3.97	2.83	
1,247.0	23.00	268.50	1,218.0	71.6	-195.9	167.7	4.14	1.74	
1,293.0	23.90	264.10	1,260.2	70.4	-214.2	185.6	4.28	1.96	
1,339.0	25.40	261.80	1,302.0	68.1	-233.2	204.5	3.87	3.26	
1,385.0	26.60	259.20	1,343.4	64.7	-253.1	224.5	3.60	2.61	
1,431.0	27.40	258.10	1,384.3	60.6	-273.6	245.3	2.05	1.74	
1,476.0	27.30	253.70	1,424.3	55.6	-293.6	266.0	4.50	-0.22	
1,522.0	28.20	251.40	1,465.0	49.2	-314.1	287.4	3.04	1.96	
1,568.0	29.70	254.20	1,505.3	42.6	-335.3	309.6	4.39	3.26	
1,614.0	30.10	255.90	1,545.2	36.7	-357.5	332.6	2.04	0.87	
1,665.0	31.20	249.80	1,589.0	29.0	-382.3	358.5	6.46	2.16	Last Cathedral svy @ 1665'
1,799.0	29.80	244.50	1,704.5	2.7	-444.9	426.0	2.26	-1.04	
1,891.0	28.40	247.90	1,784.9	-15.4	-485.8	470.4	2.35	-1.52	
1,982.0	28.70	248.00	1,864.8	-31.7	-526.1	513.7	0.33	0.33	
2,074.0	28.90	251.60	1,945.5	-47.0	-567.7	557.9	1.90	0.22	
2,166.0	30.10	252.50	2,025.5	-61.0	-610.8	603.2	1.39	1.30	
2,257.0	31.30	252.00	2,103.8	-75.1	-655.1	649.6	1.35	1.32	
2,349.0	31.30	251.20	2,182.4	-90.2	-700.4	697.4	0.45	0.00	
2,440.0	32.10	250.60	2,259.8	-105.9	-745.6	745.1	0.94	0.88	
2,532.0	31.30	249.90	2,338.1	-122.2	-791.1	793.4	0.96	-0.87	
2,624.0	31.90	249.90	2,416.4	-138.8	-836.4	841.5	0.65	0.65	
2,715.0	31.10	249.60	2,494.0	-155.2	-881.0	889.0	0.90	-0.88	
2,807.0	30.80	249.60	2,572.9	-171.7	-925.3	936.2	0.33	-0.33	
2,899.0	30.50	250.30	2,652.1	-187.8	-969.4	983.0	0.51	-0.33	
2,990.0	30.50	248.70	2,730.5	-204.0	-1,012.6	1,029.0	0.89	0.00	
3,082.0	31.40	249.30	2,809.4	-220.9	-1,056.8	1,076.2	1.03	0.98	
3,174.0	31.70	249.20	2,887.8	-238.0	-1,101.8	1,124.2	0.33	0.33	
3,264.0	32.00	251.40	2,964.2	-254.0	-1,146.5	1,171.6	1.33	0.33	
3,356.0	32.60	251.00	3,042.0	-269.8	-1,193.1	1,220.7	0.69	0.65	
3,448.0	32.40	249.20	3,119.6	-286.7	-1,239.6	1,270.0	1.07	-0.22	
3,539.0	32.60	248.50	3,196.4	-304.3	-1,285.2	1,318.8	0.47	0.22	
3,631.0	31.30	247.70	3,274.4	-322.5	-1,330.3	1,367.2	1.49	-1.41	
3,722.0	31.30	249.80	3,352.2	-339.6	-1,374.4	1,414.3	1.20	0.00	
3,814.0	31.30	248.90	3,430.8	-356.4	-1,419.1	1,462.0	0.51	0.00	
3,906.0	29.90	247.90	3,510.0	-373.7	-1,462.6	1,508.6	1.62	-1.52	
3,997.0	30.40	249.40	3,588.7	-390.3	-1,505.2	1,554.2	0.99	0.55	
4,089.0	30.90	251.30	3,667.8	-406.1	-1,549.4	1,601.0	1.18	0.54	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP WF09D-21 K22 596
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>MD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Well:</b>	NP WF09D-21 K22 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
4,181.0	31.70	247.70	3,746.4	-422.8	-1,594.1	1,648.6	2.21	0.87	
4,273.0	30.50	248.80	3,825.2	-440.4	-1,638.3	1,696.0	1.44	-1.30	
4,364.0	30.10	250.00	3,903.8	-456.6	-1,681.2	1,741.7	0.80	-0.44	
4,456.0	31.00	249.60	3,983.0	-472.7	-1,725.1	1,788.4	1.00	0.98	
4,547.0	30.10	248.50	4,061.4	-489.3	-1,768.3	1,834.5	1.16	-0.99	
4,639.0	27.00	246.30	4,142.2	-506.1	-1,808.9	1,878.2	3.56	-3.37	
4,731.0	25.90	249.30	4,224.5	-521.6	-1,846.8	1,919.0	1.88	-1.20	
4,822.0	24.30	248.10	4,307.0	-535.6	-1,882.8	1,957.4	1.84	-1.76	
4,914.0	22.50	247.90	4,391.4	-549.3	-1,916.7	1,993.8	1.96	-1.96	
5,006.0	20.30	253.00	4,477.0	-560.6	-1,948.3	2,027.3	3.13	-2.39	
5,097.0	18.60	252.00	4,562.8	-569.7	-1,977.2	2,057.6	1.90	-1.87	
5,189.0	17.80	252.50	4,650.2	-578.5	-2,004.5	2,086.3	0.89	-0.87	
5,280.0	13.70	251.60	4,737.8	-586.1	-2,028.0	2,111.0	4.51	-4.51	
5,372.0	11.20	250.00	4,827.6	-592.6	-2,046.8	2,130.8	2.74	-2.72	
5,464.0	8.70	249.70	4,918.2	-598.0	-2,061.7	2,146.6	2.72	-2.72	
5,555.0	6.80	253.70	5,008.4	-601.9	-2,073.3	2,158.9	2.17	-2.09	
5,647.0	4.90	241.70	5,099.9	-605.3	-2,082.0	2,168.2	2.45	-2.07	
5,738.0	3.30	236.10	5,190.7	-608.6	-2,087.6	2,174.5	1.81	-1.76	
5,830.0	3.30	242.20	5,282.5	-611.3	-2,092.1	2,179.6	0.38	0.00	
5,921.0	1.70	271.70	5,373.5	-612.5	-2,095.8	2,183.5	2.20	-1.76	
6,018.0	0.70	241.00	5,470.4	-612.8	-2,097.8	2,185.4	1.19	-1.03	
6,105.0	0.70	246.00	5,557.4	-613.2	-2,098.7	2,186.5	0.07	0.00	
6,196.0	0.10	341.30	5,648.4	-613.4	-2,099.2	2,187.0	0.79	-0.66	
6,288.0	0.80	232.80	5,740.4	-613.7	-2,099.8	2,187.6	0.91	0.76	
6,379.0	0.90	278.40	5,831.4	-614.0	-2,101.0	2,188.9	0.73	0.11	
6,470.0	0.70	25.00	5,922.4	-613.4	-2,101.5	2,189.1	1.42	-0.22	
6,562.0	0.60	14.80	6,014.4	-612.4	-2,101.1	2,188.5	0.17	-0.11	
6,653.0	0.20	260.90	6,105.4	-612.0	-2,101.1	2,188.4	0.77	-0.44	
6,745.0	0.50	212.30	6,197.4	-612.3	-2,101.5	2,188.9	0.43	0.33	
6,837.0	0.70	224.10	6,289.4	-613.1	-2,102.1	2,189.7	0.25	0.22	
6,928.0	0.00	2.40	6,380.4	-613.5	-2,102.5	2,190.2	0.77	-0.77	
7,019.0	0.20	330.50	6,471.4	-613.3	-2,102.6	2,190.2	0.22	0.22	
7,111.0	0.50	210.60	6,563.4	-613.5	-2,102.9	2,190.5	0.68	0.33	
7,203.0	0.80	243.20	6,655.4	-614.2	-2,103.6	2,191.5	0.51	0.33	
7,294.0	0.90	186.90	6,746.4	-615.2	-2,104.3	2,192.4	0.89	0.11	
7,385.0	0.70	183.20	6,837.4	-616.4	-2,104.4	2,192.8	0.23	-0.22	
7,475.0	0.10	211.10	6,927.4	-617.0	-2,104.5	2,193.1	0.68	-0.67	
7,567.0	0.20	263.90	7,019.4	-617.1	-2,104.7	2,193.3	0.17	0.11	
7,658.0	0.70	283.50	7,110.4	-617.0	-2,105.4	2,193.9	0.57	0.55	
7,750.0	0.30	184.00	7,202.4	-617.1	-2,105.9	2,194.5	0.88	-0.43	
7,842.0	0.10	223.80	7,294.4	-617.4	-2,106.0	2,194.7	0.25	-0.22	
7,933.0	0.40	238.30	7,385.4	-617.6	-2,106.3	2,195.0	0.33	0.33	
8,025.0	1.10	237.20	7,477.4	-618.3	-2,107.4	2,196.2	0.76	0.76	
8,117.0	1.00	196.40	7,569.3	-619.5	-2,108.3	2,197.5	0.80	-0.11	
8,208.0	3.00	238.30	7,660.3	-621.6	-2,110.6	2,200.2	2.59	2.20	
8,300.0	0.30	320.30	7,752.2	-622.6	-2,112.8	2,202.6	3.23	-2.93	
8,392.0	0.40	329.00	7,844.2	-622.2	-2,113.1	2,202.8	0.12	0.11	
8,483.0	0.30	243.80	7,935.2	-622.0	-2,113.5	2,203.1	0.53	-0.11	
8,575.0	0.30	262.30	8,027.2	-622.1	-2,113.9	2,203.6	0.10	0.00	
8,667.0	0.50	280.60	8,119.2	-622.1	-2,114.6	2,204.2	0.26	0.22	
8,758.0	0.40	236.40	8,210.2	-622.2	-2,115.2	2,204.8	0.39	-0.11	
8,850.0	0.70	227.60	8,302.2	-622.8	-2,115.9	2,205.6	0.34	0.33	
8,942.0	1.10	228.80	8,394.2	-623.7	-2,117.0	2,207.0	0.44	0.43	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP WF09D-21 K22 596
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>MD Reference:</b>	WELL @ 6546.0ft (Patterson 303)
<b>Well:</b>	NP WF09D-21 K22 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
9,033.0	1.90	255.60	8,485.2	-624.7	-2,119.1	2,209.3	1.15	0.88	
9,125.0	2.20	252.00	8,577.1	-625.6	-2,122.3	2,212.5	0.35	0.33	
9,217.0	2.20	257.20	8,669.1	-626.5	-2,125.7	2,216.1	0.22	0.00	
9,278.0	2.20	256.30	8,730.0	-627.1	-2,127.9	2,218.4	0.06	0.00	Last Cathedral Survey @ 9278' MD

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude Longitude
K22 596 WF09D-21 BHI	- actual wellpath misses target center by 9.1ft at 9181.6ft MD (8633.7 TVD, -626.2 N, -2124.3 E)	0.00	0.00	8,634.0	-623.2	-2,115.8	1,653,559.47	2,248,689.97	39° 35' 51.11 N 108° 9' 59.66 W
	- Rectangle (sides W30.0 H50.0 D0.0)								
K22 596 WF09D-21 TG1	- actual wellpath misses target center by 5.2ft at 5721.6ft MD (5174.4 TVD, -608.1 N, -2086.8 E)	0.00	0.00	5,174.0	-609.2	-2,091.8	1,653,572.75	2,248,714.38	39° 35' 51.25 N 108° 9' 59.35 W
	- Point								

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,665.0	1,589.0	29.0	-382.3	Last Cathedral svy @ 1665'	
9,278.0	8,730.0	-627.1	-2,127.9	Last Cathedral Survey @ 9278' MD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_