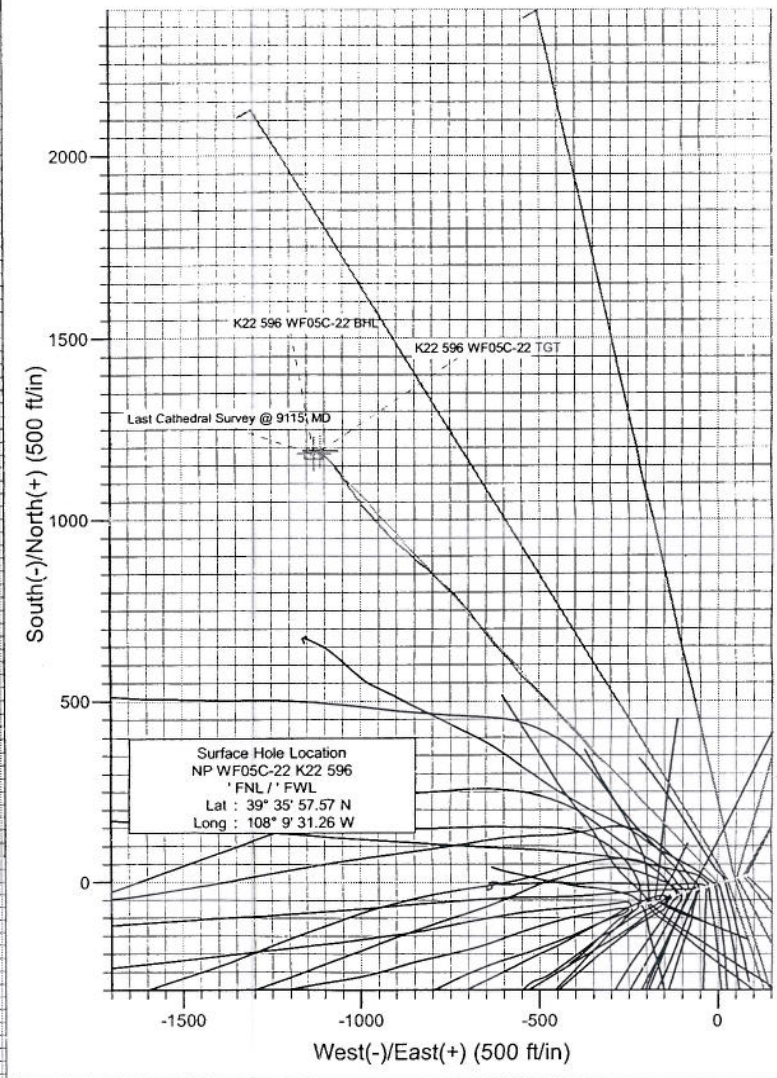
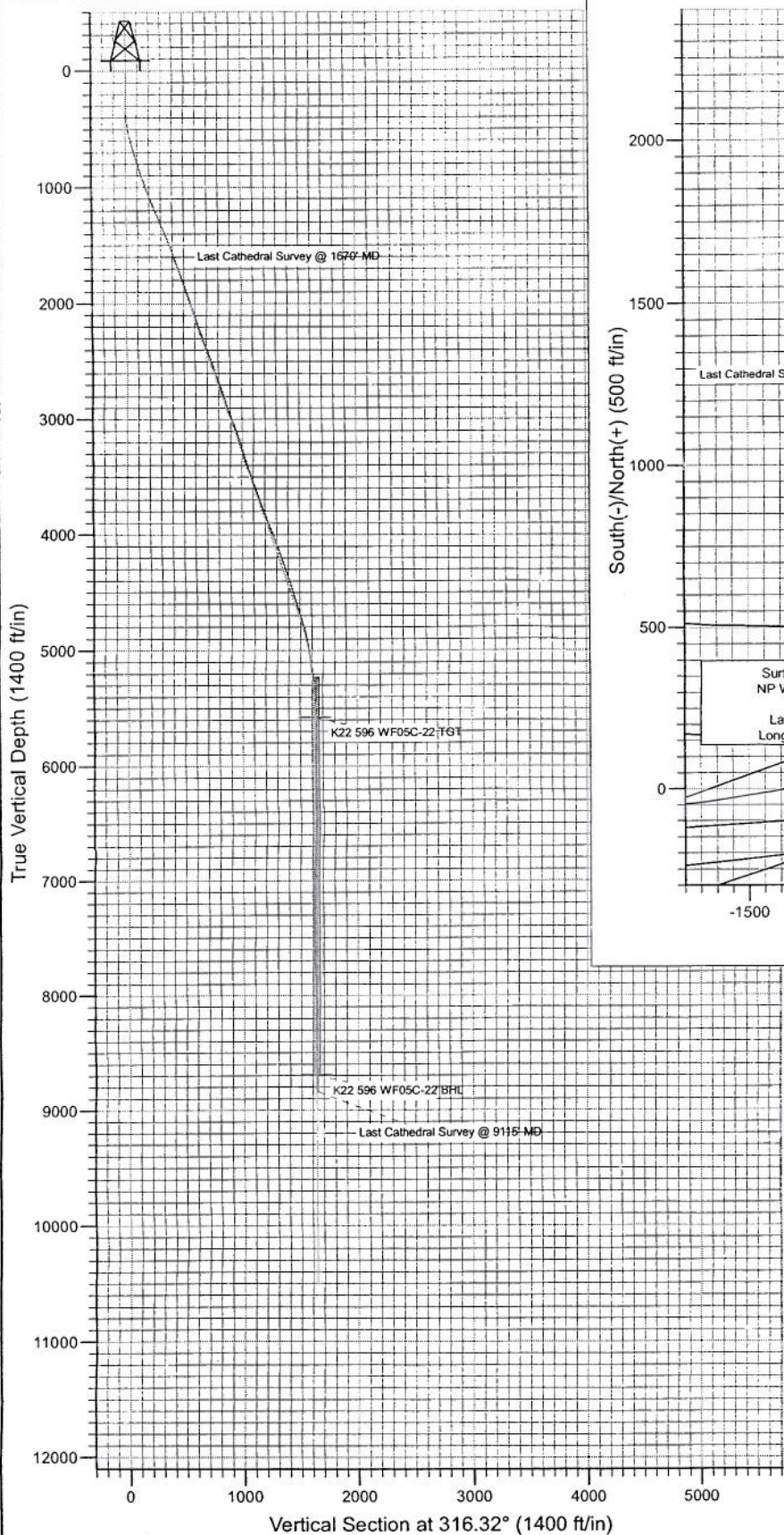




Project: North Piceance  
 Site: K22 596 Pad (S22-T5S-R96W)  
 Well: NP WF05C-22 K22 596  
 Wellbore: DD  
 Design: Final Survey



Azimuths to True North  
 Magnetic North: 10.53°  
 Magnetic Field  
 Strength: 52401.4snT  
 Dip Angle: 65.83°  
 Date: 7/22/2010  
 Model: IGRF200510

DD  
 NP WF05C-22 K22 596  
 105253, 105310, LR

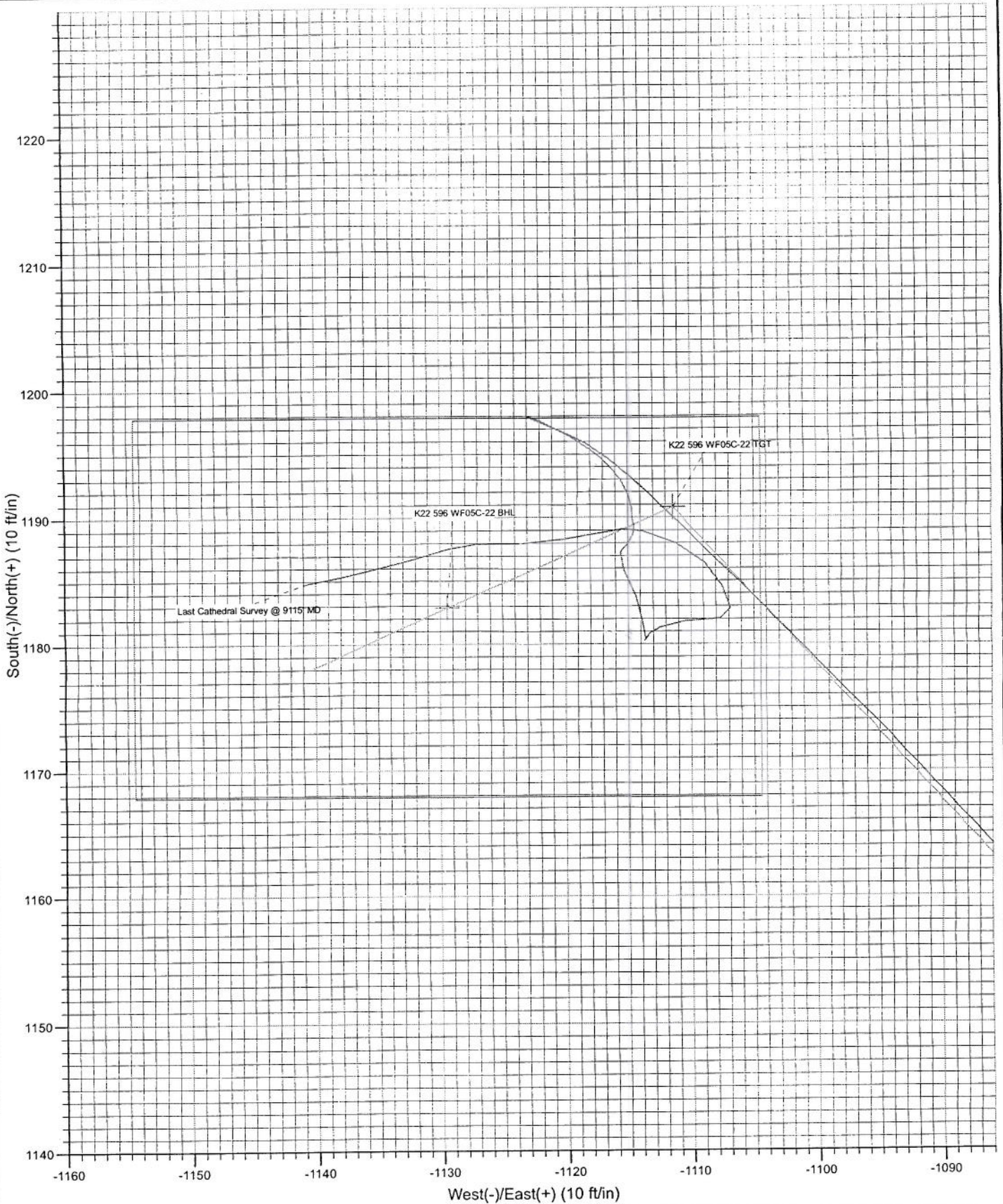
Well @ 6549.0ft (Patterson 303)  
 North American Datum 1983  
 Well NP WF05C-22 K22 596, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
Target	K22 596 WF05C-22 BHL	316.32	Slot		0.0	0.0	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
K22 596 WF05C-22 BHL	8694.0	1182.9	-1129.4	39° 36' 9.26 N	108° 9' 45.69 W



Project: North Piceance  
Site: K22 596 Pad (S22-T5S-R96W)  
Well: NP WF05C-22 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 WF05C-22 K22 596
<b>Project:</b> North Piceance	<b>TVD Reference:</b> Well @ 6549.0ft (Patterson 303)
<b>Site:</b> K22 596 Pad (S22-T5S-R96W)	<b>MD Reference:</b> Well @ 6549.0ft (Patterson 303)
<b>Well:</b> NP WF05C-22 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	

<b>Site:</b> K22 596 Pad (S22-T5S-R96W)					
<b>Site Position:</b>	<b>From:</b> Lat/Long	<b>Northing:</b> 1,654,096.85 ft	<b>Latitude:</b> 39° 35' 57.02 N	<b>Easting:</b> 2,250,762.90 ft	<b>Longitude:</b> 108° 9' 33.39 W
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b> 0.000 in	<b>Grid Convergence:</b> -1.68 °			

<b>Well:</b> NP WF05C-22 K22 596					
<b>Well Position:</b>	<b>+N/-S:</b> 0.0 ft	<b>Northing:</b> 1,654,147.66 ft	<b>Latitude:</b> 39° 35' 57.57 N	<b>+E/-W:</b> 0.0 ft	<b>Easting:</b> 2,250,931.19 ft
<b>Position Uncertainty:</b> 0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 6,527.0 ft			

<b>Wellbore:</b> DD					
<b>Magnetics:</b>	<b>Model Name:</b> IGRF200510	<b>Sample Date:</b> 7/22/2010	<b>Declination (°):</b> 10.53	<b>Dip Angle (°):</b> 65.83	<b>Field Strength (nT):</b> 52,401

<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) (ft):</b> 0.0	<b>+N/-S (ft):</b> 0.0	<b>+E/-W (ft):</b> 0.0	<b>Direction (°):</b> 316.32	

<b>Survey Program:</b> Date 7/29/2010					
<b>From (ft):</b> 170.0	<b>To (ft):</b> 1,670.0	<b>Survey (Wellbore):</b> Survey #1 (DD)	<b>Tool Name:</b> MWD	<b>Description:</b> Geolink MWD	
1,789.0	9,115.0	Survey #2 (DD)	MWD	Geolink MWD	

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	1.50	233.70	170.0	-1.3	-1.8	0.3	0.88	0.88	
199.0	1.60	249.70	199.0	-1.7	-2.5	0.5	1.53	0.34	
230.0	1.40	255.80	230.0	-1.9	-3.3	0.9	0.82	-0.65	
260.0	0.60	331.80	260.0	-1.9	-3.7	1.2	4.61	-2.67	
290.0	1.20	23.50	290.0	-1.5	-3.6	1.5	3.18	2.00	
320.0	2.50	354.60	319.9	-0.5	-3.6	2.1	5.20	4.33	
351.0	4.40	345.00	350.9	1.3	-3.9	3.7	6.38	6.13	
381.0	6.50	336.60	380.7	4.0	-4.9	6.3	7.47	7.00	
412.0	7.90	330.00	411.5	7.4	-6.7	10.0	5.24	4.52	
442.0	9.00	320.70	441.2	11.0	-9.2	14.3	5.84	3.67	
472.0	9.60	314.60	470.8	14.6	-12.5	19.2	3.84	2.00	

# Cathedral Energy Services

## Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well NP WF05C-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 WF05C-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
503.0	10.10	312.90	501.3	18.3	-16.3	24.5	1.87	1.61	
552.0	11.60	308.30	549.4	24.3	-23.3	33.6	3.53	3.06	
597.0	12.50	321.70	593.5	30.9	-29.9	43.0	6.51	2.00	
643.0	13.80	322.80	638.3	39.2	-36.3	53.4	2.88	2.83	
689.0	15.10	319.80	682.8	48.1	-43.5	64.8	3.26	2.83	
735.0	16.40	317.50	727.1	57.5	-51.7	77.3	3.13	2.83	
780.0	17.40	316.80	770.1	67.1	-60.6	90.4	2.27	2.22	
826.0	17.80	314.90	814.0	77.0	-70.3	104.3	1.52	0.87	
872.0	18.70	318.30	857.7	87.5	-80.2	118.7	3.03	1.96	
918.0	18.60	316.00	901.2	98.3	-90.2	133.4	1.61	-0.22	
963.0	19.50	316.80	943.8	108.9	-100.3	148.1	2.08	2.00	
1,055.0	21.10	315.60	1,030.1	132.0	-122.4	180.0	1.80	1.74	
1,146.0	22.00	315.50	1,114.7	155.8	-145.8	213.4	0.99	0.99	
1,238.0	23.20	315.40	1,199.6	181.0	-170.6	248.7	1.31	1.30	
1,329.0	24.20	313.80	1,283.0	206.7	-196.7	285.3	1.31	1.10	
1,421.0	22.30	317.20	1,367.5	232.5	-222.1	321.6	2.53	-2.07	
1,512.0	22.90	317.40	1,451.5	258.2	-245.9	356.6	0.66	0.66	
1,604.0	19.90	315.40	1,537.2	282.6	-269.0	390.1	3.36	-3.26	
1,670.0	19.30	314.30	1,599.3	298.2	-284.7	412.3	1.07	-0.91	Last Cathedral Survey @ 1670' MD
1,789.0	18.70	312.80	1,711.8	324.9	-312.7	451.0	0.65	-0.50	
1,880.0	20.10	311.60	1,797.7	345.2	-335.1	481.1	1.60	1.54	
1,972.0	20.60	318.10	1,883.9	367.7	-357.8	513.0	2.52	0.54	
2,063.0	20.70	318.10	1,969.1	391.6	-379.2	545.1	0.11	0.11	
2,155.0	20.40	317.60	2,055.2	415.6	-400.9	577.4	0.38	-0.33	
2,246.0	20.50	317.30	2,140.5	439.0	-422.4	609.2	0.16	0.11	
2,338.0	20.10	317.10	2,226.8	462.4	-444.1	641.1	0.44	-0.43	
2,429.0	19.50	316.50	2,312.4	484.9	-465.2	671.9	0.70	-0.66	
2,521.0	19.40	315.60	2,399.2	506.9	-486.4	702.6	0.34	-0.11	
2,612.0	19.00	315.40	2,485.1	528.3	-507.4	732.5	0.45	-0.44	
2,704.0	18.50	314.90	2,572.2	549.2	-528.3	762.0	0.57	-0.54	
2,795.0	20.10	319.70	2,658.1	571.4	-548.6	792.1	2.47	1.76	
2,886.0	19.60	318.40	2,743.7	594.7	-568.8	822.9	0.73	-0.55	
2,978.0	19.00	318.40	2,830.5	617.4	-589.0	853.3	0.65	-0.65	
3,069.0	18.90	317.70	2,916.6	639.4	-608.8	882.9	0.27	-0.11	
3,160.0	18.20	316.30	3,002.9	660.6	-628.5	911.8	0.91	-0.77	
3,252.0	19.90	322.70	3,089.8	683.4	-647.9	941.8	2.92	1.85	
3,343.0	19.30	322.80	3,175.6	707.7	-666.4	972.1	0.66	-0.66	
3,435.0	19.00	321.60	3,262.5	731.6	-684.9	1,002.1	0.54	-0.33	
3,526.0	18.00	322.10	3,348.8	754.3	-702.8	1,030.8	1.11	-1.10	
3,618.0	19.90	316.20	3,435.8	776.8	-722.3	1,060.7	2.93	2.07	
3,710.0	19.50	314.30	3,522.4	798.8	-744.2	1,091.7	0.82	-0.43	
3,801.0	18.40	313.00	3,608.5	819.2	-765.5	1,121.2	1.29	-1.21	
3,893.0	21.30	312.60	3,695.0	840.5	-788.5	1,152.3	3.16	3.15	
3,984.0	21.10	311.40	3,779.8	862.5	-812.9	1,185.2	0.53	-0.22	
4,076.0	19.90	309.40	3,866.0	883.4	-837.4	1,217.2	1.51	-1.30	
4,167.0	20.40	310.10	3,951.4	903.4	-861.5	1,248.3	0.61	0.55	
4,259.0	20.80	311.50	4,037.6	924.6	-886.0	1,280.6	0.69	0.43	
4,350.0	21.40	316.50	4,122.5	947.3	-909.6	1,313.3	2.08	0.66	
4,442.0	20.10	316.20	4,208.5	970.9	-932.1	1,345.9	1.42	-1.41	
4,533.0	18.80	315.50	4,294.3	992.6	-953.2	1,376.2	1.45	-1.43	
4,625.0	18.30	316.50	4,381.5	1,013.7	-973.5	1,405.4	0.64	-0.54	
4,716.0	17.70	324.50	4,468.1	1,035.3	-991.4	1,433.4	2.79	-0.66	
4,808.0	17.80	323.50	4,555.7	1,058.0	-1,007.8	1,461.2	0.35	0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP WF05C-22 K22 596
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	Well @ 6549.0ft (Patterson 303)
<b>Site:</b>	K22 596 Pad (S22-T5S-R96W)	<b>MD Reference:</b>	Well @ 6549.0ft (Patterson 303)
<b>Well:</b>	NP WF05C-22 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
4,899.0	16.00	324.10	4,642.8	1,079.4	-1,023.5	1,487.4	1.99	-1.98	
4,991.0	15.80	323.80	4,731.2	1,099.7	-1,038.3	1,512.4	0.24	-0.22	
5,082.0	14.30	325.00	4,819.1	1,118.9	-1,052.1	1,535.8	1.68	-1.65	
5,174.0	12.30	325.60	4,908.7	1,136.3	-1,064.1	1,556.7	2.18	-2.17	
5,265.0	10.30	322.00	4,997.9	1,150.7	-1,074.6	1,574.4	2.33	-2.20	
5,357.0	9.50	317.70	5,088.5	1,162.8	-1,084.8	1,590.2	1.18	-0.87	
5,446.0	9.30	315.90	5,176.3	1,173.4	-1,094.7	1,604.7	0.40	-0.22	
5,540.0	9.60	314.60	5,269.0	1,184.4	-1,105.6	1,620.1	0.39	0.32	
5,631.0	5.60	312.80	5,359.2	1,192.7	-1,114.3	1,632.1	4.40	-4.40	
5,722.0	3.40	290.90	5,449.9	1,196.7	-1,120.0	1,639.0	3.03	-2.42	
5,814.0	0.60	308.30	5,541.9	1,198.0	-1,123.0	1,642.0	3.08	-3.04	
5,905.0	1.80	115.80	5,632.9	1,197.7	-1,122.1	1,641.1	2.63	1.32	
5,997.0	1.60	118.60	5,724.8	1,196.4	-1,119.6	1,638.5	0.24	-0.22	
6,088.0	1.10	128.30	5,815.8	1,195.3	-1,117.8	1,636.4	0.60	-0.55	
6,180.0	1.10	133.90	5,907.8	1,194.1	-1,116.5	1,634.7	0.12	0.00	
6,271.0	0.80	151.10	5,998.8	1,192.9	-1,115.6	1,633.2	0.45	-0.33	
6,363.0	0.80	153.60	6,090.8	1,191.8	-1,115.0	1,632.0	0.04	0.00	
6,454.0	0.70	178.10	6,181.8	1,190.7	-1,114.7	1,630.9	0.37	-0.11	
6,546.0	0.40	174.40	6,273.8	1,189.8	-1,114.6	1,630.3	0.33	-0.33	
6,637.0	0.30	159.80	6,364.8	1,189.3	-1,114.5	1,629.8	0.15	-0.11	
6,728.0	0.40	204.60	6,455.8	1,188.8	-1,114.5	1,629.5	0.31	0.11	
6,820.0	0.60	209.70	6,547.7	1,188.0	-1,114.9	1,629.2	0.22	0.22	
6,911.0	0.70	227.30	6,638.7	1,187.3	-1,115.6	1,629.1	0.24	0.11	
7,003.0	1.50	146.90	6,730.7	1,185.9	-1,115.3	1,627.9	1.68	0.87	
7,094.0	1.50	163.90	6,821.7	1,183.7	-1,114.3	1,625.7	0.49	0.00	
7,186.0	1.10	168.60	6,913.7	1,181.7	-1,113.8	1,623.9	0.45	-0.43	
7,277.0	0.60	175.00	7,004.7	1,180.4	-1,113.6	1,622.7	0.56	-0.55	
7,369.0	0.50	342.40	7,096.7	1,180.3	-1,113.7	1,622.7	1.19	-0.11	
7,460.0	0.80	70.20	7,187.7	1,180.9	-1,113.2	1,622.8	1.02	0.33	
7,552.0	0.40	39.60	7,279.7	1,181.3	-1,112.4	1,622.6	0.54	-0.43	
7,643.0	2.20	82.50	7,370.6	1,181.8	-1,110.5	1,621.6	2.12	1.98	
7,735.0	1.30	89.60	7,462.6	1,182.0	-1,107.7	1,619.9	1.00	-0.98	
7,826.0	1.00	345.70	7,553.6	1,182.8	-1,106.8	1,619.8	2.00	-0.33	
7,918.0	1.30	335.40	7,645.6	1,184.5	-1,107.5	1,621.5	0.39	0.33	
8,009.0	1.70	314.40	7,736.5	1,186.4	-1,108.9	1,623.9	0.74	0.44	
8,101.0	1.80	295.20	7,828.5	1,188.0	-1,111.2	1,626.6	0.64	0.11	
8,192.0	1.80	283.10	7,919.4	1,188.9	-1,113.8	1,629.1	0.42	0.00	
8,238.0	1.90	268.70	7,965.4	1,189.1	-1,115.3	1,630.2	1.03	0.22	
8,375.0	2.10	253.60	8,102.3	1,188.3	-1,120.0	1,632.9	0.41	0.15	
8,466.0	2.60	273.00	8,193.3	1,188.0	-1,123.6	1,635.2	1.02	0.55	
8,558.0	1.80	264.90	8,285.2	1,187.9	-1,127.2	1,637.6	0.93	-0.87	
8,649.0	1.10	251.70	8,376.2	1,187.5	-1,129.4	1,638.8	0.85	-0.77	
8,741.0	1.20	256.20	8,468.1	1,187.0	-1,131.2	1,639.7	0.15	0.11	
8,832.0	1.10	253.90	8,559.1	1,186.6	-1,133.0	1,640.6	0.12	-0.11	
8,924.0	1.60	256.00	8,651.1	1,186.0	-1,135.1	1,641.6	0.55	0.54	
9,015.0	1.70	258.10	8,742.1	1,185.4	-1,137.6	1,643.0	0.13	0.11	
9,115.0	1.80	259.60	8,842.0	1,184.8	-1,140.6	1,644.6	0.11	0.10	Last Cathedral Survey @ 9115' MD

# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc <b>Project:</b> North Piceance <b>Site:</b> K22 596 Pad (S22-T5S-R96W) <b>Well:</b> NP WF05C-22 K22 596 <b>Wellbore:</b> DD <b>Design:</b> DD	<b>Local Co-ordinate Reference:</b> Well NP WF05C-22 K22 596 <b>TVD Reference:</b> Well @ 6549.0ft (Patterson 303) <b>MD Reference:</b> Well @ 6549.0ft (Patterson 303) <b>North Reference:</b> True <b>Survey Calculation Method:</b> Minimum Curvature <b>Database:</b> EDM 5000.1 US Multi Users DB	
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### 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 WF05C-22 BHI	0.00	0.00	8,694.0	1,182.9	-1,129.4	1,655,363.05	2,249,836.84	39° 36' 9.26 N	108° 9' 45.69 W
- actual wellpath misses target center by 7.4ft at 8966.8ft MD (8693.8 TVD, 1185.7 N, -1136.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
K22 596 WF05C-22 TG1	0.00	0.00	5,577.0	1,190.8	-1,111.4	1,655,370.47	2,249,855.11	39° 36' 9.34 N	108° 9' 45.46 W
- actual wellpath misses target center by 13.7ft at 5849.3ft MD (5577.1 TVD, 1198.1 N, -1123.0 E)									
- Point									

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,670.0	1,599.3	298.2	-284.7	Last Cathedral Survey @ 1670' MD
9,115.0	8,842.0	1,184.8	-1,140.6	Last Cathedral Survey @ 9115' MD

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