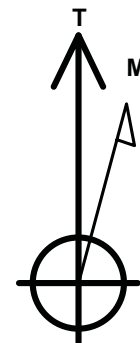
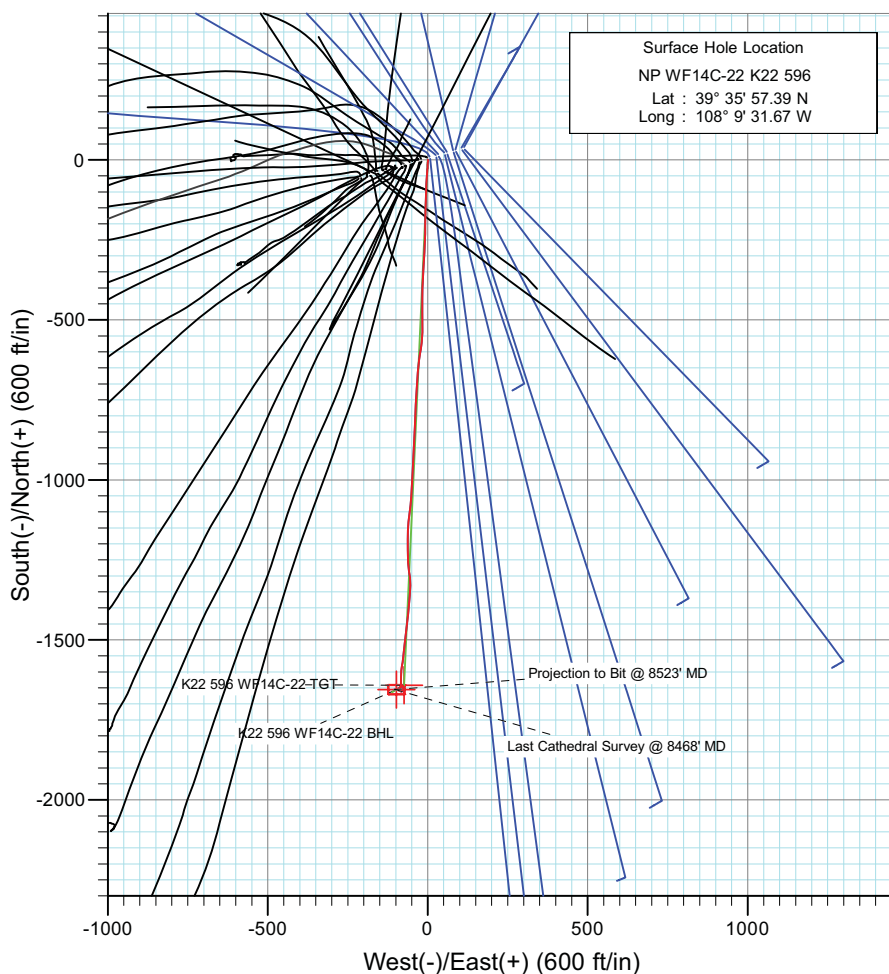
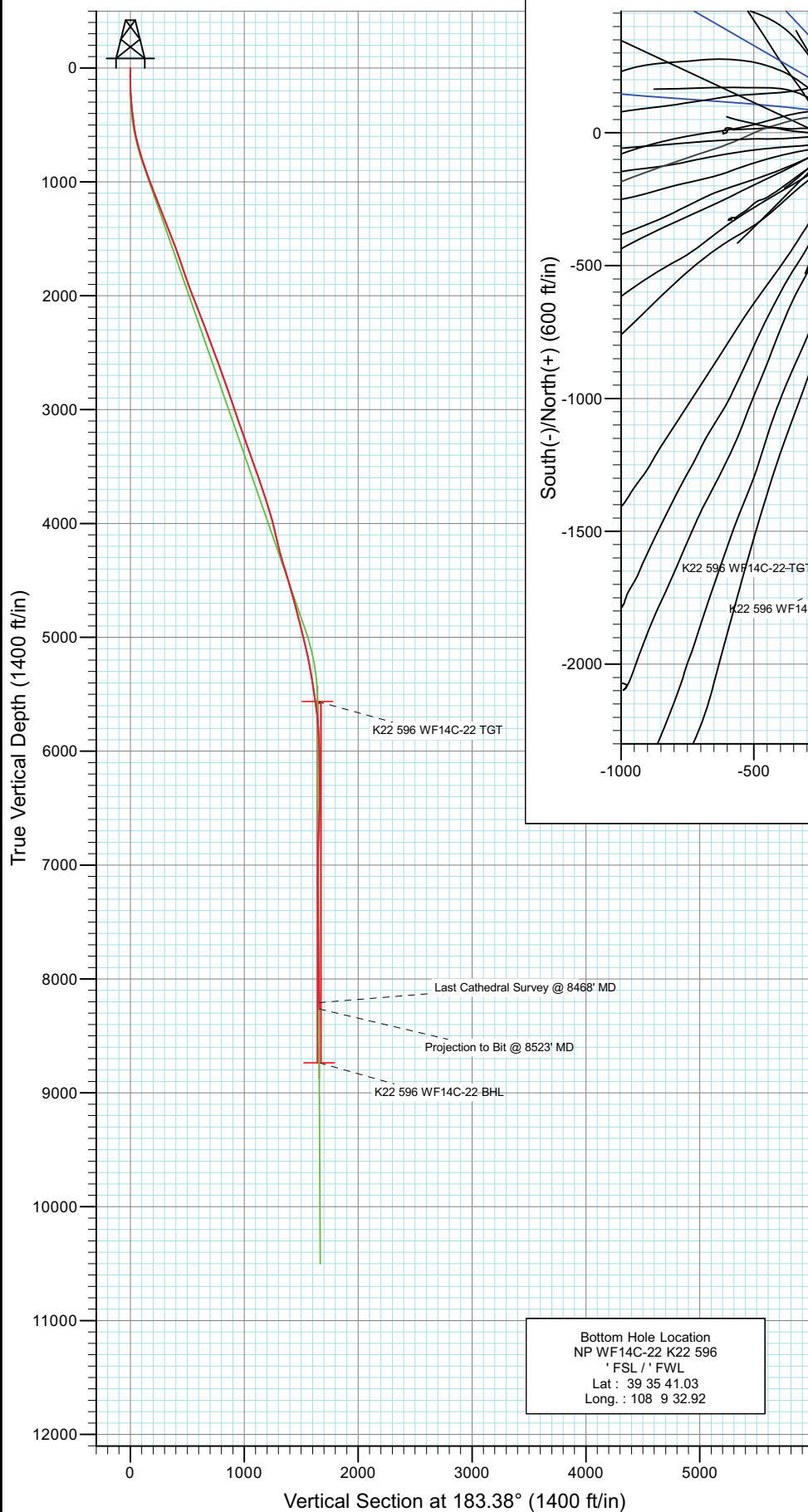




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF14C-22 K22 596
 Wellbore: DD
 Design: Final



Azimuths to True North
 Magnetic North: 10.59°

Magnetic Field
 Strength: 52398.2snT
 Dip Angle: 65.83°
 Date: 4/15/2010
 Model: IGRF2010

DESIGN DETAILS: DD
 105169; LR

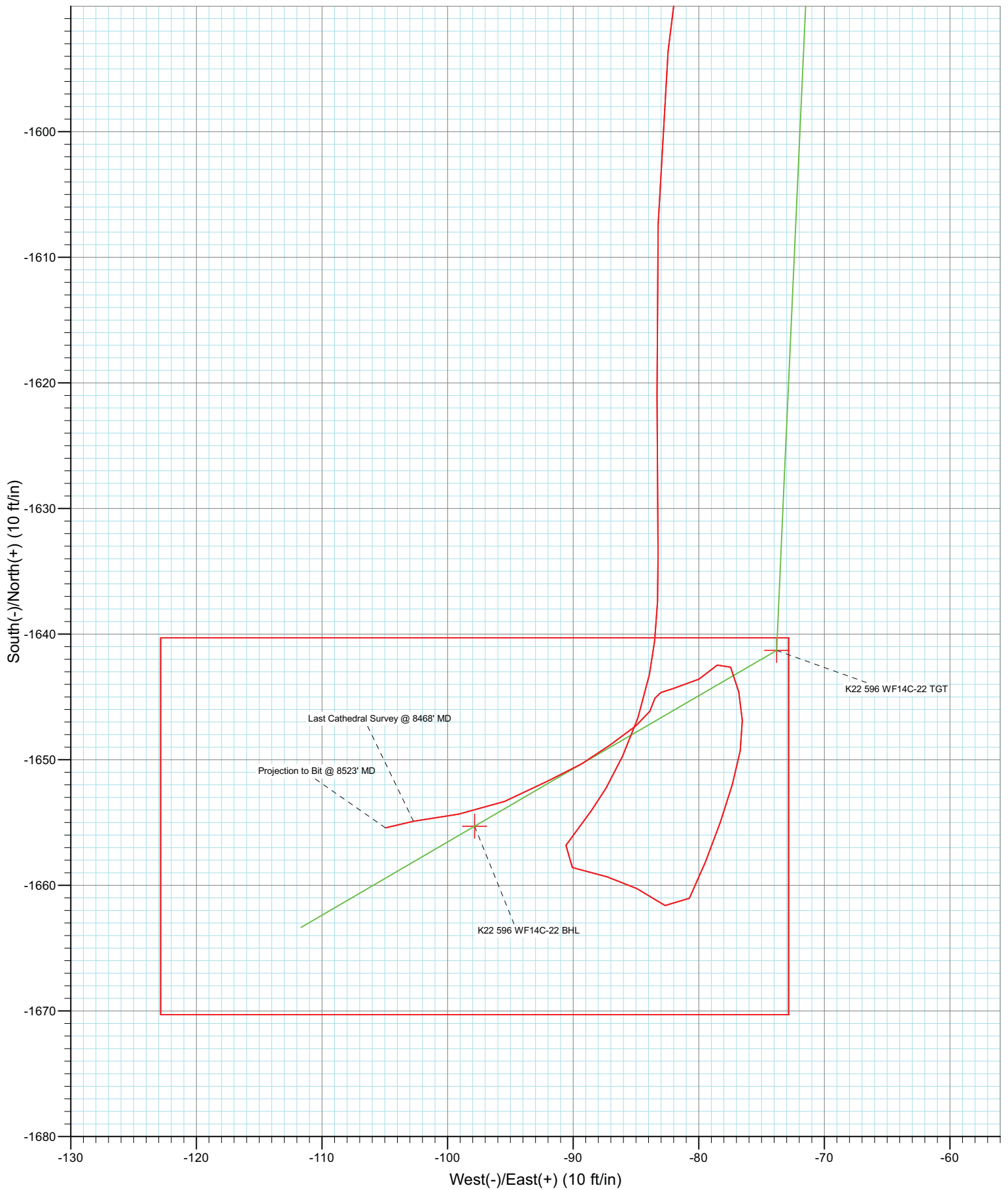
Well @ 6549.0ft (Patterson 303)

Target	Azimuth	Origin	N/S	E/W From TVD
K22 596 WF14C-22 BHL	183.38	Slot	0.0	0.0

Bottom Hole Location
 NP WF14C-22 K22 596
 ' FSL / ' FWL
 Lat : 39 35 41.03
 Long : 108 9 32.92



Project: North Piceance
Site: K22 596 Pad (S22-T5S-R96W)
Well: NP WF14C-22 K22 596
Wellbore: DD
Design: Final



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14C-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 WF14C-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 WF14C-22 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,130.39 ft	Latitude:	39° 35' 57.39 N
	+E/-W	0.0 ft	Easting:	2,250,898.58 ft	Longitude:	108° 9' 31.67 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	4/15/2010	10.59	65.83	52,398

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	183.38	

Survey Program	Date	8/20/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
173.0	8,523.0	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	0.80	134.20	173.0	-0.8	0.9	0.8	0.46	0.46		
204.0	2.00	170.60	204.0	-1.5	1.1	1.5	4.63	3.87		
235.0	3.70	190.80	234.9	-3.0	1.0	3.0	6.29	5.48		
266.0	5.00	189.70	265.9	-5.4	0.6	5.3	4.20	4.19		
296.0	5.10	188.70	295.7	-8.0	0.2	7.9	0.44	0.33		
327.0	5.40	188.20	326.6	-10.8	-0.2	10.8	0.98	0.97		
358.0	5.80	185.90	357.5	-13.8	-0.6	13.8	1.48	1.29		
388.0	6.10	181.40	387.3	-16.9	-0.8	16.9	1.85	1.00		
419.0	5.80	181.40	418.1	-20.1	-0.9	20.1	0.97	-0.97		
450.0	6.10	181.10	449.0	-23.3	-1.0	23.3	0.97	0.97		
480.0	7.50	180.40	478.8	-26.8	-1.0	26.9	4.67	4.67		
511.0	8.50	183.40	509.5	-31.2	-1.1	31.2	3.49	3.23		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14C-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 WF14C-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
560.0	10.90	183.70	557.7	-39.4	-1.7	39.4	4.90	4.90	
606.0	12.70	185.10	602.8	-48.8	-2.4	48.8	3.96	3.91	
652.0	14.10	184.80	647.5	-59.4	-3.3	59.5	3.05	3.04	
697.0	14.80	183.90	691.1	-70.6	-4.2	70.7	1.63	1.56	
743.0	15.90	183.10	735.5	-82.7	-4.9	82.9	2.44	2.39	
789.0	16.70	181.40	779.6	-95.6	-5.4	95.8	2.02	1.74	
835.0	17.80	181.80	823.5	-109.3	-5.8	109.4	2.41	2.39	
881.0	19.40	181.60	867.1	-123.9	-6.2	124.1	3.48	3.48	
927.0	19.70	180.90	910.5	-139.3	-6.6	139.5	0.83	0.65	
972.0	19.80	181.00	952.8	-154.5	-6.8	154.7	0.23	0.22	
1,018.0	20.40	181.80	996.0	-170.3	-7.2	170.5	1.43	1.30	
1,064.0	20.70	181.40	1,039.1	-186.5	-7.6	186.6	0.72	0.65	
1,110.0	21.10	180.20	1,082.1	-202.9	-7.9	203.0	1.27	0.87	
1,156.0	21.60	180.20	1,124.9	-219.6	-7.9	219.7	1.09	1.09	
1,202.0	21.90	180.80	1,167.6	-236.7	-8.1	236.7	0.81	0.65	
1,247.0	20.80	183.10	1,209.6	-253.1	-8.6	253.1	3.07	-2.44	
1,293.0	21.10	183.10	1,252.5	-269.5	-9.5	269.6	0.65	0.65	
1,339.0	21.40	183.40	1,295.4	-286.1	-10.5	286.2	0.69	0.65	
1,385.0	21.80	183.60	1,338.2	-303.0	-11.5	303.2	0.88	0.87	
1,431.0	22.10	183.60	1,380.8	-320.2	-12.6	320.4	0.65	0.65	
1,477.0	21.00	183.10	1,423.6	-337.1	-13.6	337.3	2.42	-2.39	
1,523.0	20.80	182.90	1,466.6	-353.4	-14.4	353.7	0.46	-0.43	
1,568.0	21.00	182.90	1,508.6	-369.5	-15.2	369.7	0.44	0.44	
1,614.0	20.60	181.80	1,551.6	-385.8	-15.9	386.1	1.22	-0.87	
1,680.0	20.20	181.40	1,613.5	-408.8	-16.6	409.1	0.64	-0.61	
1,745.0	19.60	181.50	1,674.6	-430.9	-17.1	431.2	0.92	-0.92	
1,791.0	18.90	180.10	1,718.0	-446.1	-17.3	446.3	1.82	-1.52	
1,882.0	18.10	178.90	1,804.3	-474.9	-17.1	475.1	0.97	-0.88	
1,974.0	20.70	177.40	1,891.1	-505.5	-16.1	505.5	2.88	2.83	
2,065.0	20.80	183.20	1,976.2	-537.7	-16.2	537.7	2.26	0.11	
2,157.0	21.80	187.40	2,061.9	-570.9	-19.4	571.1	1.98	1.09	
2,248.0	21.30	187.90	2,146.6	-604.1	-23.8	604.4	0.59	-0.55	
2,340.0	20.00	187.60	2,232.6	-636.2	-28.2	636.8	1.42	-1.41	
2,431.0	21.00	183.90	2,317.9	-667.9	-31.3	668.6	1.80	1.10	
2,523.0	21.40	183.90	2,403.7	-701.1	-33.6	701.9	0.43	0.43	
2,614.0	20.00	182.70	2,488.8	-733.2	-35.5	734.0	1.61	-1.54	
2,706.0	18.40	183.10	2,575.7	-763.4	-37.0	764.3	1.74	-1.74	
2,797.0	21.00	184.00	2,661.3	-794.0	-38.9	794.9	2.88	2.86	
2,889.0	20.70	180.90	2,747.3	-826.7	-40.3	827.7	1.24	-0.33	
2,980.0	19.50	182.00	2,832.8	-858.0	-41.1	858.9	1.38	-1.32	
3,071.0	17.80	184.80	2,919.0	-887.0	-42.8	888.0	2.11	-1.87	
3,163.0	19.10	182.00	3,006.3	-916.1	-44.5	917.1	1.71	1.41	
3,254.0	19.60	182.80	3,092.1	-946.2	-45.8	947.3	0.62	0.55	
3,346.0	18.90	183.60	3,179.0	-976.5	-47.5	977.6	0.81	-0.76	
3,437.0	19.70	183.10	3,264.9	-1,006.5	-49.2	1,007.7	0.90	0.88	
3,529.0	18.40	182.90	3,351.8	-1,036.5	-50.8	1,037.7	1.41	-1.41	
3,620.0	19.20	185.70	3,438.0	-1,065.8	-53.0	1,067.0	1.32	0.88	
3,712.0	20.60	186.00	3,524.5	-1,096.9	-56.2	1,098.3	1.53	1.52	
3,803.0	18.90	187.70	3,610.1	-1,127.4	-59.8	1,129.0	1.97	-1.87	
3,895.0	19.20	181.10	3,697.1	-1,157.3	-62.1	1,159.0	2.36	0.33	
3,986.0	18.00	179.40	3,783.3	-1,186.3	-62.3	1,188.0	1.45	-1.32	
4,078.0	17.30	180.00	3,871.0	-1,214.2	-62.1	1,215.8	0.79	-0.76	
4,170.0	14.60	180.60	3,959.5	-1,239.5	-62.2	1,241.0	2.94	-2.93	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14C-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 WF14C-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
4,261.0	13.30	173.70	4,047.8	-1,261.4	-61.2	1,262.8	2.32	-1.43	
4,353.0	13.50	169.70	4,137.3	-1,282.5	-58.1	1,283.7	1.03	0.22	
4,444.0	14.60	175.20	4,225.5	-1,304.4	-55.3	1,305.3	1.90	1.21	
4,536.0	17.30	182.90	4,314.0	-1,329.6	-55.0	1,330.5	3.72	2.93	
4,627.0	16.80	182.90	4,401.0	-1,356.2	-56.3	1,357.2	0.55	-0.55	
4,718.0	16.10	185.20	4,488.3	-1,381.9	-58.1	1,383.0	1.05	-0.77	
4,810.0	15.70	184.90	4,576.8	-1,407.0	-60.4	1,408.1	0.44	-0.43	
4,902.0	14.80	184.80	4,665.5	-1,431.2	-62.4	1,432.3	0.98	-0.98	
4,993.0	14.80	185.60	4,753.5	-1,454.3	-64.5	1,455.6	0.22	0.00	
5,085.0	14.40	188.80	4,842.5	-1,477.3	-67.4	1,478.7	0.98	-0.43	
5,176.0	14.40	187.90	4,930.7	-1,499.7	-70.7	1,501.2	0.25	0.00	
5,268.0	13.90	186.20	5,019.9	-1,522.0	-73.5	1,523.7	0.71	-0.54	
5,359.0	12.90	187.30	5,108.4	-1,543.0	-75.9	1,544.7	1.13	-1.10	
5,450.0	10.90	184.50	5,197.4	-1,561.6	-77.9	1,563.5	2.29	-2.20	
5,542.0	10.50	191.00	5,287.9	-1,578.5	-80.2	1,580.5	1.38	-0.43	
5,633.0	8.80	185.50	5,377.6	-1,593.6	-82.4	1,595.7	2.12	-1.87	
5,725.0	8.50	180.90	5,468.5	-1,607.4	-83.2	1,609.5	0.82	-0.33	
5,816.0	8.70	179.90	5,558.5	-1,621.0	-83.3	1,623.1	0.27	0.22	
5,908.0	7.30	179.30	5,649.6	-1,633.8	-83.2	1,635.9	1.52	-1.52	
5,999.0	4.70	191.90	5,740.1	-1,643.2	-83.9	1,645.3	3.19	-2.86	
6,090.0	4.00	205.60	5,830.8	-1,649.7	-86.1	1,651.9	1.37	-0.77	
6,182.0	2.20	217.40	5,922.7	-1,654.0	-88.5	1,656.4	2.07	-1.96	
6,274.0	2.10	214.80	6,014.6	-1,656.8	-90.6	1,659.3	0.15	-0.11	
6,365.0	1.90	105.20	6,105.6	-1,658.6	-90.1	1,661.0	3.59	-0.22	
6,456.0	1.70	104.90	6,196.6	-1,659.3	-87.3	1,661.6	0.22	-0.22	
6,548.0	1.50	118.90	6,288.5	-1,660.3	-84.9	1,662.4	0.48	-0.22	
6,639.0	1.80	122.60	6,379.5	-1,661.6	-82.7	1,663.6	0.35	0.33	
6,731.0	1.90	27.90	6,471.5	-1,661.0	-80.7	1,662.9	2.96	0.11	
6,822.0	2.10	20.50	6,562.4	-1,658.1	-79.5	1,659.9	0.36	0.22	
6,914.0	2.10	20.50	6,654.3	-1,655.0	-78.3	1,656.7	0.00	0.00	
7,005.0	1.90	14.70	6,745.3	-1,652.0	-77.3	1,653.6	0.31	-0.22	
7,095.0	1.60	10.90	6,835.2	-1,649.3	-76.7	1,650.9	0.36	-0.33	
7,188.0	1.40	356.30	6,928.2	-1,646.9	-76.5	1,648.5	0.46	-0.22	
7,279.0	1.50	349.60	7,019.2	-1,644.6	-76.8	1,646.3	0.22	0.11	
7,371.0	1.10	331.10	7,111.2	-1,642.6	-77.5	1,644.3	0.62	-0.43	
7,462.0	1.10	227.30	7,202.1	-1,642.5	-78.5	1,644.2	1.90	0.00	
7,554.0	1.20	237.20	7,294.1	-1,643.6	-80.0	1,645.4	0.24	0.11	
7,645.0	1.60	259.10	7,385.1	-1,644.3	-82.0	1,646.3	0.73	0.44	
7,737.0	0.70	201.30	7,477.1	-1,645.1	-83.5	1,647.2	1.48	-0.98	
7,828.0	0.70	201.30	7,568.1	-1,646.1	-83.9	1,648.2	0.00	0.00	
7,920.0	1.40	234.40	7,660.1	-1,647.3	-85.0	1,649.5	0.98	0.76	
8,011.0	1.80	232.80	7,751.0	-1,648.8	-87.1	1,651.1	0.44	0.44	
8,103.0	1.60	240.80	7,843.0	-1,650.3	-89.3	1,652.7	0.34	-0.22	
8,194.0	2.20	244.90	7,933.9	-1,651.7	-92.0	1,654.2	0.68	0.66	
8,285.0	2.60	244.50	8,024.9	-1,653.3	-95.5	1,656.1	0.44	0.44	
8,377.0	2.20	266.30	8,116.8	-1,654.3	-99.1	1,657.3	1.07	-0.43	
8,468.0	2.40	256.50	8,207.7	-1,654.9	-102.7	1,658.1	0.48	0.22	Last Cathedral Survey @ 8468' MD Projection to Bit @ 8523' MD
8,523.0	2.40	256.50	8,262.7	-1,655.4	-104.9	1,658.7	0.00	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14C-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 WF14C-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 WF14C-22 TG ⁻	0.00	0.00	5,562.0	-1,641.3	-73.8	1,652,491.96	2,250,776.78	39° 35' 41.17 N	108° 9' 32.61 W
- survey misses target center by 21.7ft at 5822.3ft MD (5564.7 TVD, -1621.9 N, -83.3 E)									
- Point									
K22 596 WF14C-22 BHI	0.00	0.00	8,737.0	-1,655.3	-97.8	1,652,478.66	2,250,752.33	39° 35' 41.03 N	108° 9' 32.92 W
- survey misses target center by 474.4ft at 8523.0ft MD (8262.7 TVD, -1655.4 N, -104.9 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
8,468.0	8,207.7	-1,654.9	-102.7	Last Cathedral Survey @ 8468' MD
8,523.0	8,262.7	-1,655.4	-104.9	Projection to Bit @ 8523' MD

Checked By: _____ Approved By: _____ Date: _____