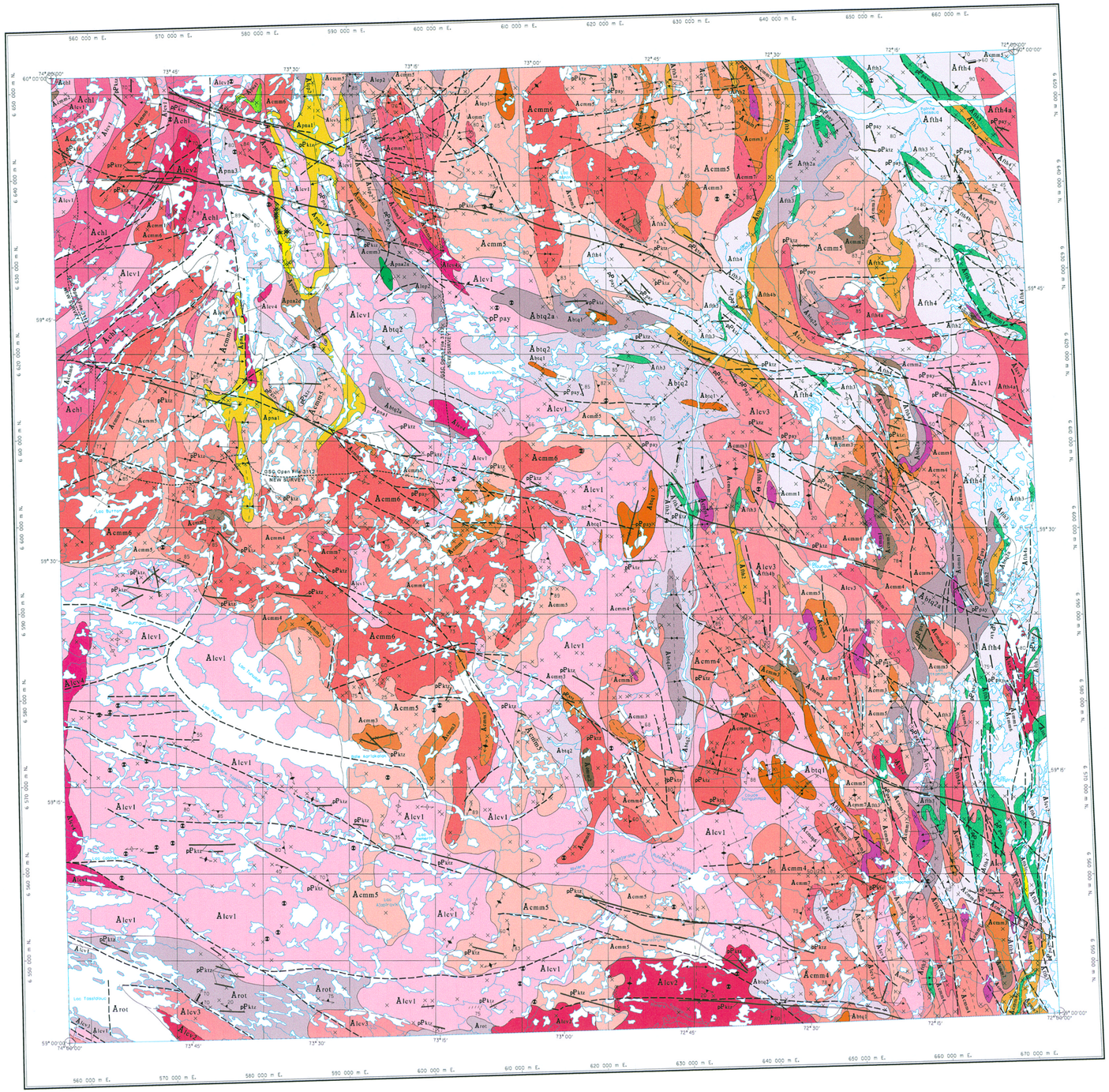
Ressources naturelles, Faune et Parcs
Québec

RG 2002-08-C001



STRATIGRAPHIC LEGEND

PALEOPROTEROZOIC

Payne River Dykes (~1800 Ma)

- pPpay — Diabase dykes, homogeneous, massive, aphanitic to trachytoid texture, strongly magnetic, fine-grained to aphanitic; bluish grey fresh surface, greenish brown weathered surface

Klotz Dykes (~ 2209 Ma)

- pPkt2z — Gabbro dykes, homogeneous, massive, subophitic to ophitic texture, strongly magnetic, medium to coarse-grained; medium-light green

ARCHEAN

Lepelle Suite (Alep)

- Alep2 — Tonalite to granodiorite (unsubdivided facies): 5-20% biotite ± clinopyroxene ± hornblende, homogeneous, massive to foliated, coarse-grained, locally porphyritic, weakly to moderately magnetic; pale grey, greenish to pinkish grey (U/Pb zircon age of 2714 ±10 Ma)
- Alep1 — Diorite, gabbro to leucogabbro (unsubdivided facies): with biotite + clinopyroxene + hornblende + magnetite, homogeneous, massive to foliated, fine to medium-grained; moderately to strongly magnetic; charcoal grey, medium to dark green

MacMahon Suite (Acmm)

- Acmm7 — Orthopyroxene diatexite (unsubdivided facies): enderbitic, opdalitic to charnockitic composition, with hornblende + orthopyroxene + biotite ± garnet, heterogeneous aspect, foliated, coarse-grained; yellowish brown
- Acmm6 — Opdalite, mangerite and charnockite (unsubdivided facies): 10-30% biotite + orthopyroxene ± clinopyroxene, massive to foliated or banded, medium to coarse-grained, commonly contains K-feldspar phenocrysts (up to 2 cm long); yellowish brown (U/Pb zircon age of 2717 ±10 Ma)
- Acmm5 — Clinopyroxene-rich enderbite: 15-35% biotite + clinopyroxene + orthopyroxen ± hornblende ± magnetite, homogeneous, massive to moderately foliated, fine to coarse-grained; grey-green to light greenish brown (U/Pb zircon age of 2723 ±7 Ma)
- Acmm4 — Orthopyroxene-rich enderbite: 5-25% biotite + orthopyroxene ± clinopyroxene ± hornblende ± magnetite, leucocratic to mesocratic, massive to strongly foliated and banded, medium to fine-grained, equigranular; yellowish brown (golden brown)
- Acmm3 — Orthopyroxene diorite to monzodiorite (unsubdivided facies): with hornblende + orthopyroxene + clinopyroxene + biotite + magnetite, homogeneous, foliated, fine to medium-grained; greenish grey to dark blue-grey
- Acmm2 — Gabbronorite to leuconorite (unsubdivided facies): with biotite + hornblende + magnetite, melanocratic to leucocratic, homogeneous, massive to foliated, medium to fine-grained, includes pyroxenite and peridotite; dark green to greenish brown (U/Pb zircon age of 2723 ±2 Ma)
- Acmm1 — Ultramafic plutonic rocks (unsubdivided facies): includes pyroxenite, peridotite, dunite, hornblendite and serpentinite in lenticular bodies; dark green to black, buff brown weathered surface

La Chevrotière Suite (Alcv)

- Alcv4 — Hornblende - biotite diatexite: monzogranitic (I1M), granodioritic (I1C) to tonalitic (I1D) composition, with hornblende + biotite, heterogeneous aspect, foliated, medium to coarse-grained, contains mafic schlieren and enclaves; white to pale grey
- Alcv3 — Granodiorite: with biotite + hornblende + magnetite, homogeneous, massive to foliated, coarse-grained, weakly magnetic; pale pinkish grey
- Alcv2 — Granite: with biotite + hornblende + magnetite ± allanite, homogeneous, massive to foliated, coarse-grained, equigranular; pinkish white (U/Pb zircon age of 2723 ±2 Ma)
- Alcv1 — Porphyritic monzogranite, granodiorite to quartz monzonite (unsubdivided facies): with biotite ± hornblende ± clinopyroxene + titanite + magnetite, homogeneous, foliated, porphyritic to megaphyric with K-feldspar phenocrysts up to 10 cm long; pinkish to reddish grey (U/Pb zircon age of 2732 +4/-2 Ma)

Châtelain Suite (Achl)

- Achl — Granodiorite: with hornblende + clinopyroxene ± biotite ± magnetite, homogeneous, massive to foliated, medium to coarse-grained; contains pyroxene cores in hornblende and rare enclaves of diorite, gabbro and amphibolite; purplish grey, reddish to whitish grey

Bottequin Suite (Abtq)

- Abtq2 — Tonalite and trondhjemite (unsubdivided facies): 5-20% biotite ± hornblende ± magnetite, homogeneous, massive to gneissic, medium-grained, weakly to moderately magnetic; medium grey to whitish grey (U/Pb zircon age of 2768 ±3 Ma)
  - Abtq2a — Clinopyroxene tonalite: 5-20% biotite + hornblende + clinopyroxene ± magnetite, homogeneous, massive to gneissic, medium-grained, weakly to moderately magnetic; medium grey
- Abtq1 — Diorite to quartz diorite (unsubdivided facies): with biotite + hornblende ± orthopyroxene + magnetite, homogeneous, foliated to banded, medium-grained, strongly magnetic; medium grey

Rochefort Suite (Arot)

- Arot — Tonalite: with biotite ± hornblende ± magnetite ± epidote ± allanite, leucocratic, homogeneous, foliated to banded; may contain enclaves of intermediate to mafic igneous rock; pale to dark grey (U/Pb zircon age of 2769 +6/-4 Ma)

Pélican-Nantais Complex (Apna)

Tonalite-trondhjemite unit (Apna3)

- Apna3 — Tonalite: with biotite ± hornblende + magnetite, homogeneous, massive to foliated, medium-grained; contains rare enclaves of intermediate to mafic igneous rock and paragneiss; medium grey (U/Pb zircon age of 2691 ±6 Ma)
  - Apna3a — Trondhjemite: 5-10% biotite + magnetite, homogeneous, foliated; contains enclaves of intermediate to mafic igneous rock and paragneiss; white

Metavolcanic rock unit (Apna2)

- Apna2d — Felsic schist: composed of biotite + plagioclase + quartz ± hornblende ± garnet, homogeneous, intensely foliated and lineated, medium-grained; brownish grey
- Apna2c — Dacite to rhyodacite: composed of biotite + muscovite + quartz + plagioclase, leucocratic, foliated and lineated, fine-grained; contains plagioclase (dacite) or quartz (rhyodacite) phenocrysts, suggesting tuffaceous facies; hosts rusty zones with <5% disseminated pyrite; grey-white (U/Pb zircon age of 2742 ±1 Ma)
- Apna2b — Andesite: composed of plagioclase + hornblende, mesocratic, foliated, fine-grained; contains plagioclase phenocrysts (tuff) and blocks (lapilli tuff, block tuff); medium grey, slightly bluish weathered surface
- Apna2a — Basalt (amphibolite, mafic gneiss): composed of hornblende + plagioclase ± clinopyroxene ± orthopyroxene, foliated to gneissic, fine to medium-grained; may contain mobilizate; interbedded with intermediate to felsic volcanic rocks, paragneiss and iron formation; dark green

Paragneiss unit (Apna1)

- Apna1 — Migmatitic quartz-feldspar paragneiss (unsubdivided facies): composed of quartz + plagioclase + biotite + garnet ± cordierite ± orthopyroxene ± sillimanite; contains 5-50% quartz - feldspar leucosome with garnet porphyroblasts; heterogeneous, leucocratic to mesocratic and coarse-grained, or less commonly, homogeneous, melanocratic and fine-grained; locally consists of diatexite (U/Pb metamorphic zircon age of 2733 ±3 Ma); includes iron formation; rusty brown

Faribault-Thury Complex (Afth)

- Afth4 — Tonalite (unsubdivided facies): 10-25% biotite ± hornblende ± magnetite, homogeneous, massive, foliated to banded, medium-grained; includes trondhjemite, contains enclaves of quartz diorite, diorite, gabbro, injections of granite and granodiorite and numerous pink pegmatite dykes; medium grey
  - Afth4b — Diorite: diorite to gabbro (unsubdivided facies): with biotite + hornblende + magnetite, homogeneous, foliated to banded, fine to medium-grained, strongly magnetic; contains tonalitic bands parallel to the foliation; medium grey
  - Afth4a — Trondhjemite: 5-10% biotite + magnetite, homogeneous, foliated; contains enclaves of quartz diorite, diorite and gabbro, as well as numerous dykes of pink pegmatite; white
- Afth3 — Basalt (amphibolite, mafic gneiss): unsubdivided mafic facies composed of hornblende + plagioclase ± clinopyroxene ± orthopyroxene ± garnet, foliated to gneissic, fine to medium-grained; may contain orthopyroxene-bearing mobilizate; interbedded with ultramafic, andesitic, dacitic to rhyodacitic rocks, paragneiss and iron formation; dark green
  - Afth3c — Dacite and rhyodacite: felsic facies composed of biotite + muscovite + quartz + plagioclase, leucocratic, foliated and lineated, fine-grained, contains plagioclase (dacite) and quartz (rhyodacite) phenocrysts, suggesting tuffaceous facies; hosts rusty zones with <5% disseminated pyrite; white to pale grey
- Afth2 — Migmatitic quartz-feldspar paragneiss (unsubdivided facies): composed of biotite + quartz + plagioclase + garnet ± orthopyroxene ± hornblende ± cordierite ± sillimanite; homogeneous, melanocratic and fine-grained, or heterogeneous, mesocratic to leucocratic and coarse-grained; contains 5-50% quartz-feldspar leucosome with garnet ± orthopyroxene porphyroblasts, includes a minor proportion of calcitic to dolomitic marble; rusty brown
  - Afth2a — Biotite ± garnet diatexite: tonalitic to granodioritic composition, composed of > 50% quartz - feldspar leucosome, heterogeneous aspect, foliated, coarse-grained; contains schlieren and enclaves of paragneiss and mafic rock; white to pale grey
- Afth1 — Iron formation: foliated or banded, metamorphosed, granoblastic texture, composed of magnetite + quartz laminae (oxide facies) and garnet + quartz + biotite ± cordierite ± biotite ± sillimanite ± grunerite laminae (silicate facies); locally mineralized; black to rusty brown

This final map contains the results of a geological survey conducted in 2000 by the following geologists: Alain Berclaz (team leader), Anne-Marie Cadieux, Joanne Nadeau, Robert Thériault (Ministère des Ressources naturelles, de la Faune et des Parcs), Frédéric Blondeau (U. Laval), Gabrielle Lemieux (UQAM) and Gabriel Machado (U. of Ottawa). It also contains data compiled from the map cited in reference. Explanatory descriptions accompanying this map are provided in publication RG 2002-08.

Reference : Percival, J.A., Skulski, T. et Nadeau, L., 1997. Geological Survey of Canada, map 3525.

Compilation and interpretation : Alain Berclaz, Anne-Marie Cadieux

Technical assistance : Patrick Olivier, Nelson Leblond, Christian Garneau

We suggest references to this map be made in the following form: Berclaz, A.- Cadieux, A.-M.- Labbé, J.-Y.- Lacoste, P.- Sharma, K.N.M.- David, J., 2004 - Geology 1:250,000, 34P - Lac du Pélican, Ministère des Ressources naturelles,de la Faune et des Parcs, Québec; map RG 2002-08-C001.

Note to user: Although every attempt has been made to ensure the quality of this product, this map may contain errors. The Direction de la Géologie therefore asks for your assistance to improve its products by reporting observed discrepancies. To do so, please complete the form entitled "Modification à une carte - Produit SIGÉOM", sent with each order, or available in all Resident Geologist offices.

LAC DU PÉLICAN
34P

35 B	35 A	25 D
34 O	34 P	24 M
34 J	34 I	24 L

RG 2002-08-C001

Canada — Québec

SIGÉOM was initially developed within the scope of the Canada-Québec Mineral Development Agreement (1992-1998).

© Government of Québec, for data derived from the Provincial Topographic System Reference at 1:20,000 scale and for geoscience data.

© Her Majesty the Queen in Right of Canada, for data derived from the National Topographic System Reference at 1:50,000 and 1:250,000 scale.

Copyright owners for these data shall not be liable for any damage which might result from the use of this information. All users are responsible for ensuring the accuracy of said data.

Any reproduction or redistribution of this information for commercial purposes is strictly forbidden. Any other use of geoscience information is authorized, provided credit is given to the Ministère des Ressources naturelles du Québec and the Government of Québec remains the copyright owner.

MAP PRODUCED USING SIGÉOM TECHNOLOGY

SCALE: 1:250,000

Kilometre 0 5,0 10 15 20 25 30 Kilometres

Universal Transverse Mercator (UTM) Projection, Zone : 18
Angle of grid relative to true north: 4°44' East
Reference ellipsoid: GRS80
Geodetic reference system: NAD83

⊕ Marker indicating the location of the map sheet in the NAD27 grid system

RG 2002-08-C001
Date of compilation: December 2003

Geoscience compilation - Geology 1:250,000

34P - LAC DU PÉLICAN

Geoscience compilation - Geology 1:250,000
Codes and symbols used for this map comply with the general legend for geological maps (publication MB 96-28)