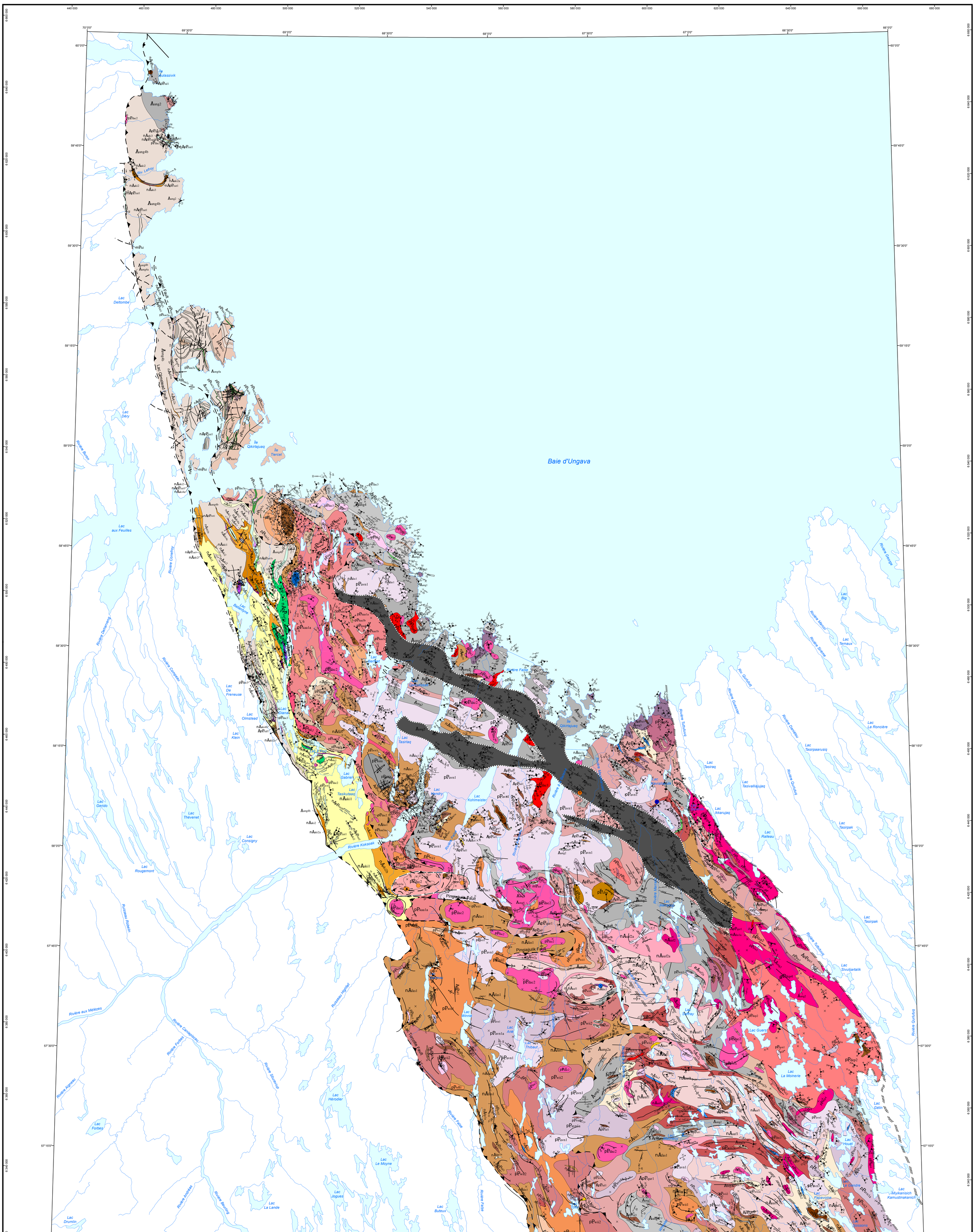
Baleine Lithotectonic Domain, Southeastern Churchill Province, Nunavik, Quebec, Canada: Geological Synthesis



STRATIGRAPHIC LEGEND

CHURCHILL PROVINCE
BALEINE LITHOTECTONIC DOMAIN
MESOPROTEROZOIC

Falcoz Swarm

- mPfal — Subophitic, massive and fine-grained olivine gabbro and olivine gabbronorite

Soisson Suite (1312 ±1 Ma; Corrigan *et al.*, 2019)

- mPsoi — Subophitic troctolite, olivine gabbro, gabbro and gabbronorite; some subophitic monzodiorite

PALEOPROTEROZOIC

Dancelou Suite (1793-1748 Ma)

- pPdac3 — Massive biotite-muscovite pegmatitic granite
- pPdac2 — Massive, pink biotite-muscovite granite
- pPdac1 — Homogeneous, massive to slightly foliated, fine-grained, grey biotite-muscovite granite

Aveneau Suite (1817-1811 Ma; Davis *et al.*, 2014, 2015)

- pPavn1 — Massive to foliated, white biotite tonalite and granite
- pPavn1a — Heterogeneous, white tonalite and granite containing biotite schlierens and various enclaves

Kaslac Complex (1835-1827 Ma)

- pPkaa4 — Foliated to mylonitic, granoblastic quartz-rich granitoid
- pPkaa3c — Amphibolite of intrusive origin and hornblende quartz amphibolite
- pPkaa3b — Mylonitic, speckled hornblende-biotite-clinopyroxene leucogabbro, leuconorite, diorite, monzonite and anorthosite
- pPkaa3a — Foliated clinopyroxene-amphibole gabbro, gabbronorite and clinopyroxenite
- pPkaa2 — Garnet-magnetite ferriferous metagabbro
- pPkaa1c — Garnet-hornblende-biotite gneiss
- pPkaa1b — Gneissic or banded orthopyroxene diorite and quartz diorite
- pPkaa1a — Mylonitic or homogeneous, banded, gneissic, granoblastic amphibole diorite and quartz diorite; some tonalite

Tasialuk Suite

- pPtak1 — Foliated to mylonitic, porphyraceous biotite-hornblende granodiorite and tonalite

Chaumaux Pluton

- pPchu — Massive and granoblastic clinopyroxene-hornblende anorthosite

Kuujjuaq Pluton (1869-1833 Ma; Corrigan, personal communication, 2018; Perreault and Hynes, 1990)

- pPkuu — Foliated to gneissic biotite ± hornblende tonalite and granodiorite; some diorite and granite

Winnie Suite (1839-1838 Ma; Corrigan, personal communication, 2018; Davis *et al.*, 2015)

- pPwii2 — Biotite ± hornblende diatexite and stromatic metatexite
- pPwii2a — Biotite-garnet ± sillimanite ± kyanite diatexite and stromatic metatexite
- pPwii1 — Homogeneous, porphyraceous biotite ± hornblende diatexite
- pPwii1a — Homogeneous, heterogranular biotite ± hornblende diatexite

De Pas Supersuite

De Pas Charnockitic Suite (1840-1811 Ma)

- pPcde3 — Leucogabbro, leucobaggronorite, anorthosite and quartz anorthosite

De Pas Granitic Suite (1862-1805 Ma)

- pPdep5 — Magnetic, homogeneous, coarse-grained biotite-clinopyroxene-hornblende syenite and monzonite
- pPdep4 — Biotite ± hornblende monzogranite; biotite granite; massive, medium to coarse-grained leucogranite
- pPdep3 — Heterogeneous granite containing numerous enclaves of gneiss, migmatite and diorite
- pPdep2 — Porphyraceous biotite ± hornblende granodiorite and quartz monzodiorite
- pPdep2a — Biotite ± hornblende granodiorite and quartz monzodiorite

NEOARCHEAN TO PALEOPROTEROZOIC

Curot Suite

- nApPcut1 — Foliated, banded, fine to medium-grained hornblende ± garnet amphibolite
- nApPcut1c — Massive or pillow metabasalt; metavolcaniclastic rocks containing fragments of vesicular lava
- nApPcut1b — Banded hornblende-clinopyroxene-carbonate ± garnet amphibolite; banded epidote-biotite-hornblende felsic to intermediate metapyroclastic rocks
- nApPcut1a — Very fine-grained to aphanitic, schistose hornblende-actinolite ± cummingtonite amphibolite

Qurlutuq Complex (2834-2668 Ma; Augland *et al.*, 2015; Corrigan, personal communication, 2018)

- ApPqur1 — Migmatitic rock of tonalitic composition displaying stromatic, raft or biotite schlieren structure

Ralleau Suite

- ApPral2 — Amphibolitized pyroxenite and peridotite
- ApPral2a — Altered and sheared tremolite-augite-fuchsite-plagioclase schist
- ApPral1 — Homogeneous, granoblastic, amphibolitized hornblende-clinopyroxene-biotite gabbro and diorite
- ApPral1a — Homogeneous, granoblastic, amphibolitized hornblende-garnet-clinopyroxene-biotite gabbro and diorite

False Suite (<2678 ±12 Ma; Godet *et al.*, in preparation)

- nAfas4 — Massive, fine-grained, granoblastic quartzite
- nAfas3 — Banded oxide facies iron formation; some banded silicate facies iron formation
- nAfas2 — Banded and granoblastic calcosilicate rocks
- nAfas1 — Banded, granoblastic, biotite ± hornblende migmatized paragneiss
- nAfas1a — Banded, granoblastic, biotite-garnet migmatized paragneiss

Akiasirviup Suite

- nAak4b — Dolomitic marble, calcitic marble and tremolite marble
- nAak4a — Banded diopside calcosilicate rock; some marble
- nAak3 — Silicate-oxide facies iron formation; some sulphide facies iron formation
- nAak2 — Banded, fine-grained, granoblastic biotite-muscovite paragneiss and paraschist
- nAak2c — Biotite-garnet ± kyanite ± sillimanite ± staurolite paraschist
- nAak2b — Banded, fine-grained, granoblastic biotite-muscovite-sillimanite paragneiss and paraschist
- nAak2a — Banded, fine-grained, granoblastic biotite-muscovite-garnet paragneiss and paraschist
- nAak1 — Homogeneous, granoblastic biotite-muscovite migmatized paragneiss

Saffray Suite (2696-2683 Ma; Davis *et al.*, 2015; Rayner *et al.*, 2017; Corrigan, personal communication, 2017)

- nAsaf2 — Massive to slightly foliated, homogeneous, pink biotite-magnetite granite
- nAsaf2a — Heterogeneous biotite-magnetite granite containing numerous gneiss enclaves
- nAsaf1 — Foliated, granoblastic biotite-magnetite-hornblende ± clinopyroxene quartz monzonite; some granodiorite, quartz monzodiorite and monzogranite

Ungava Complex (2950-2656 Ma)

- Aung4 — Biotite ± hornblende granitic gneiss
- Aung4b — Banded, siliceous biotite-muscovite granitic gneiss
- Aung4a — Augen granitic gneiss and microcline-biotite gneiss
- Aung3 — Tonalitic gneiss containing >25% pink granite bands
- Aung2 — Foliated biotite ± amphibole tonalitic gneiss containing whitish bands
- Aung2a — Hornblende-biotite ± clinopyroxene dioritic gneiss
- Aung1 — Banded hornblende-biotite gneiss of tonalitic to dioritic composition

PROSPECTIVE ZONE FOR MINERAL EXPLORATION

- Rare earth elements
- Nickel
- Vanadium

STRUCTURAL DOMAIN

- Shear zone

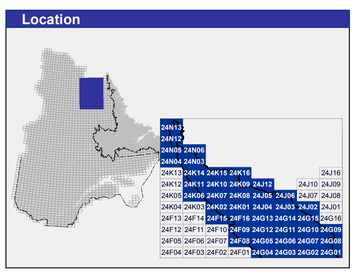
SHOWING AND DEPOSIT

- Silver, copper, iron
- Nickel, lead, rare earth elements
- Thorium, uranium

This geological map in PDF format contains layers that group the various elements of the document (geological zones, hydrography, geofiche outcrops, etc.). These layers can be displayed or hidden in the "Layers" section of the "Browser Pane" in Adobe Acrobat Reader©.

Symbols and abbreviations used on this map are described in the DV 2014-06 publication of the Ministère de l'Énergie et des Ressources naturelles.

Location



Metadata

Geodetic reference frame :	GRS 80 ellipsoid
Geodetic reference system :	NAD 83 compatible with the world geodetic system WGS 84
Cartographic projection :	Universal Transverse Mercator (UTM), zone 19
Original longitude :	68°00'
Original latitude :	0°

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1/325 000

Sources

Data

Base de données géographiques et administratives (BDGA 1M)

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Ministère de l'Énergie et des Ressources naturelles

Realization

Geology :	Isabelle Lafrance, Marc-Antoine Vanier, Benoit Charrette (2017)
References :	Girard, R. (1995) - MB 95-20 Hammouche, H. *et al.* (2011) - RG 2011-03 Lafrance, I. *et al.* (2014) - RG 2014-02 Lafrance, I., Charette, B. (2015) - BG 2015-01 Lafrance, I. *et al.* (2015) - RG 2015-01 Lafrance, I. *et al.* (2016) - RG 2015-05 Simard, M. *et al.* (2013) - RG 2013-04
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Bulletin géologiQUE

SIGÉOM Système d'information géominière du Québec

Énergie et Ressources naturelles Québec