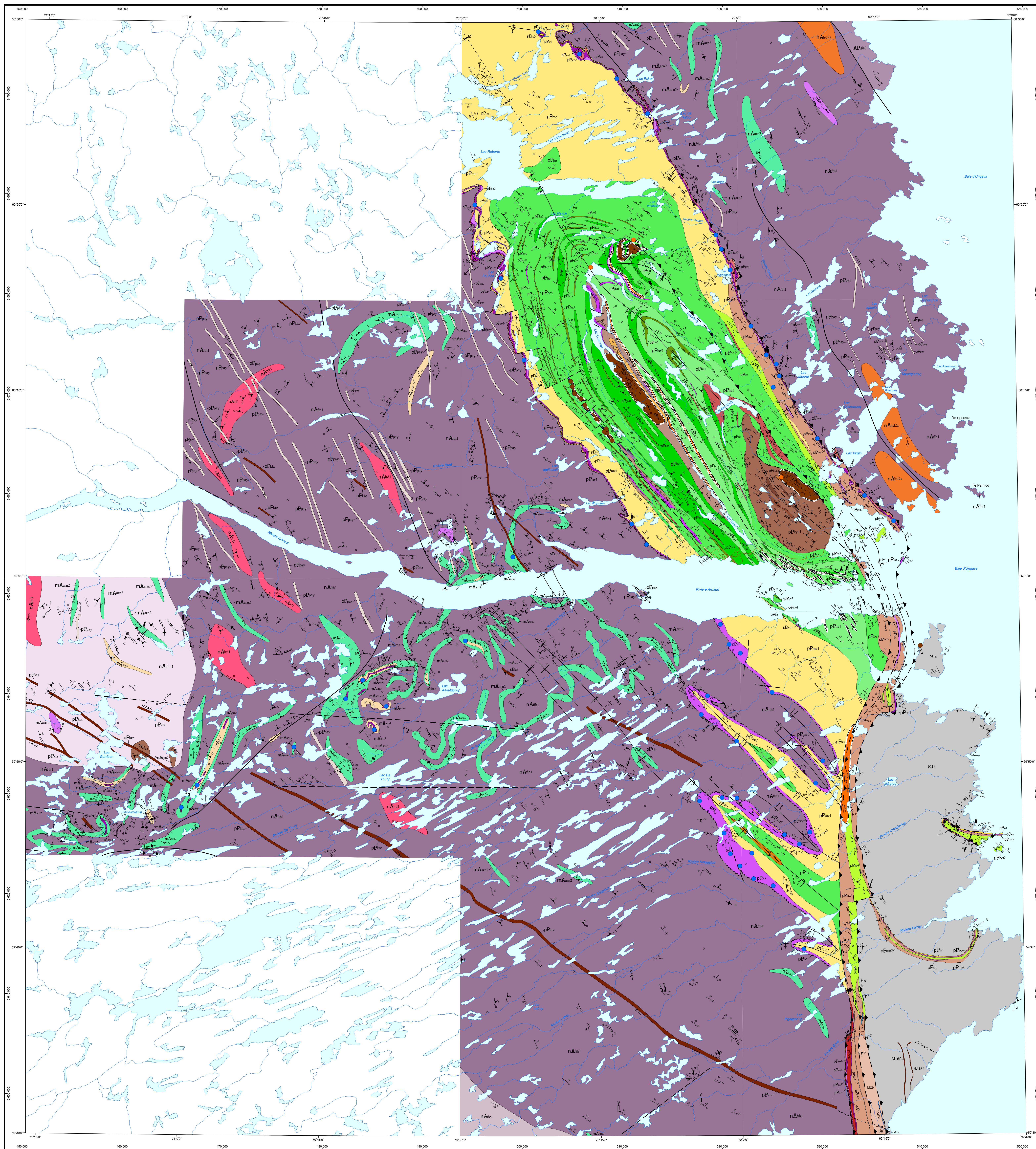


Geology of the Arnaud River Region, Superior (Minto) and Churchill (Labrador Trough) Provinces, Kangirsuk Area, Nunavik, Quebec, Canada



STRATIGRAPHIC LEGEND

CHURCHILL PROVINCE
LABRADOR TROUGH

Baie Kyak Intrusion

	Plagioclase Peridotite
	Olivine melagabbrotonite
	Gabbrotonite, pyroxene-hornblende gabbrotonite, hornblende gabbro
	Gabbrotonite with hornblende lenticular horizons
	Gabbrotonite, dioritic mafic dykes
Montagna Supersuite	
Gerdö Intrusive Suite	
	Megacryst, clinite, amphibolite
	Quartz leucogabbro, quartz diorite and granophyre, locally pegmatite
	Apiphytic mesocratic gabbro, olivine gabbro, differentiated and bedded mafic intrusion
	Peridotite, pyroxenite, serpentinite and metamorphosed ultramafic rocks
Kaniapikaso Supergroup	
Koksoak Group	
Hellulacott Formation (1874 M, Clark and Wares, 2004)	
	Unfolded massive or plow shaped, intruded by gabbro sills; some mafic volcanics, some mafic and/or andesitic dykes

Ferriman Group

Membak Formation	 Pencil	Quartz-biotite-muscovite-chlorite + garnet schist; phyllite
	 Pencil	Dolomite, sandy dolomite, dolomitic sandstone
	 Pencil	Glaube, siltstone, phyllite, some arenite
Sokoman Formation (1880 Ma, Clark and Wones, 2004)	 Pencil	Oxide and ilcaico schists (iron formation, ferruginous arenite, chert) (Graham)
	 Pencil	Metasediments (gabbro, chert) may include siltstone and mudrock
	 Pencil	Iron formation, mica schist, mica-gneiss (granite)
	 Pencil	Silicate facies iron formation; muscovite schist (equivalent of the Iron formation P)
	 Pencil	Silico-carbonate facies iron formation, with carbonate porphyroblasts, intercalification of ferrous carbonate and ferrous amphibole schist
	 Pencil	Oxide facies iron formation; and arenite and recrystallized chert
Rub Formation	 Pencil	Biotite-muscovite-chlorite-garnet-gneiss tremolite phyllite and ferrous schist
	 Pencil	Quartzite, amphibolite, local carbonate facies iron formation intercalifications
Wichat Formation	 Pencil	Quartz arenite, amphibolite, carbonate amphibolite, some muscovite, siltstone, dolomite and conglomerate

SUPERIOR PROVINCE

PALEOPROTEROZOIC
(aurice, 2009)

Kista Dykes (2209 ± 1 Ma, Maurice, 2005) Massive and homogeneous gabbro with oplitic texture, locally sheared	
ARCHAEO TO PROTOKRATON	
Diana Structure Complex (2782 Ma, Madore and Larin, 2006)	Mylonitized gneissic tonalite, diorite, trondhjemite, gabbroic and granitic phases in lesser proportions
NEOARCHAEO	
Lerdorf Suite	Porphyroblast monzonite and quartz monzonite, foliated, contains 25-50% euhedral orthopyroxene phenocrysts
Northcote Suite	Mylonite to foliated biotite-hornblende gabbroic and granitic, local monzonitic phases, granitic veins and dykes cutting the main lithology
Troie Complex (2732-2770 Ma, Madore et al., 1999)	Orthoclase or orthoclase orthopyroxene-dioxyrochlore monzonite biotite tonalite, interbedded with diorite, trondhjemite, gabbroic and granitic phases, rocks are mylonitized and contain 10-50% biotite, microcline and 10-15% plagioclase
Omigumuk Complex (2734 Ma, Madore et al., 1999)	Mylonite hornblende gabbroic and biotite gabbroic, locally foliated, with orthoclase veins
Northcote Suite	Orthoclase or orthoclase orthopyroxene-dioxyrochlore monzonite biotite tonalite, interbedded with diorite, trondhjemite, gabbroic and granitic phases, rocks are mylonitized and contain 10-50% biotite, microcline and 10-15% plagioclase
Farbush-Thury Suite (2765-2772 Ma, Simard et al., 2008)	Orthoclase or orthoclase orthopyroxene-dioxyrochlore monzonite, interbedded with diorite, trondhjemite, gabbroic and granitic phases

MESOARCHAEN

	Biotite-garnet a sillimanite + quartz contact zone/epitaxial: perargasite, detrital, quartzite, marble and calc-silicate rock. Muscovite commonly have granoblastic texture and schistose appearance locally. May contain some calcic or diopside; metamorphosed iron formations
	Metamorphosed iron formation: oxide facies (magnetite-quartz garnet + pyrite + pyrrhotite); silicate facies (garnet-grunerite-quartz + magnetite + pyrite + pyrrhotite); hydrothermal alteration zones (garnet-cordierite + biotite + sillimanite + grunerite)
	Amphibolite and gneiss of mafic to intermediate composition metamorphosed to low amphibolite or granulite facies; primary textures (folios, lapilli and rocks) locally preserved. May contain some ultramafic (volcanics or sills), perargasite, marble and iron formation
	Ultramafic rocks: metavolcanics or sills

LITHOLOGIC LEGEND

ARCHAEO TO PALEOPROTEROZOIC	
DA	Amphibolized gabbro
MB	Diorite (dyke)
MTA	Quartz-biotite-plagioclase gneiss (key paragneiss); siliceous paragneiss; hornblende gneiss; garnet-bearing gneiss
MSB	Biotite schist; chlorite schist; quartz-muscovite-biotite-plagioclase schist; quartz schist
MU1	Mantle
MU3B	Dioapsid marble; calcareous schist
MU6B	Quartz amphibolite; quartz-garnet amphibolite

PROSPECTIVE ZONE FOR MINING EXPLORATION

 Copper

 Nickel

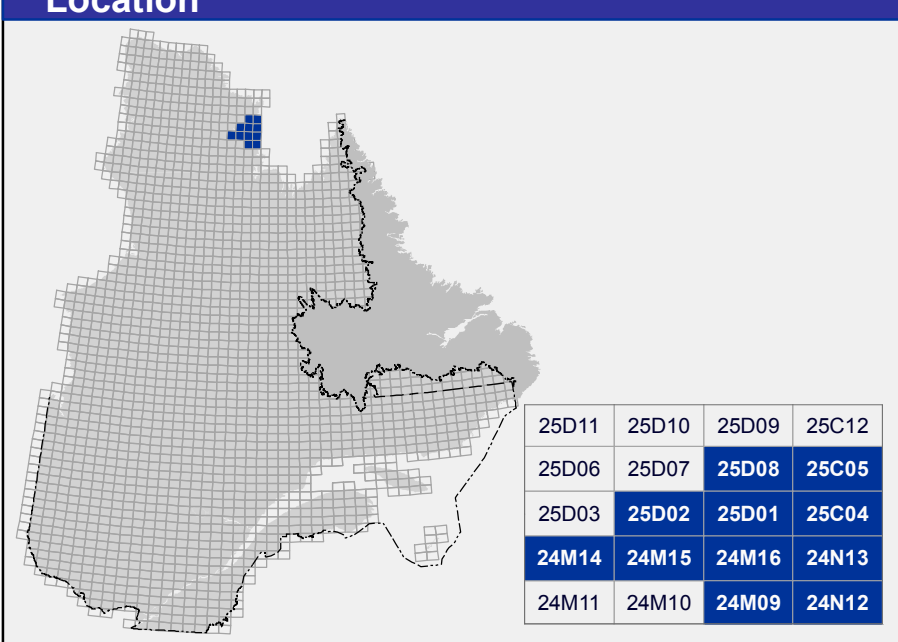
SHOWING AND DEPOSIT

Metallic Substance
☒ Copper, Iron, Nickel

Non-metallic Substance
☐ Corundum

Symbols and abbreviations used on this map are described in publication DV 1014-05 of the Ministère de l'Énergie et des Ressources naturelles.

Location



Metadata

Geodetic reference frame :	Ellipsoid GRS 80
Geodetic reference system :	NAD 83 compatible with the world geodetic system WGS 84
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Original latitude :	0°

Sources

Data

Base de données topographiques et administratives (BDTA 250k)

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Realization

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BG 2018-04-C01

Map of the Bulletin géologique : http://gq.mines.gouv.qc.ca/bulletins/geologiques/niwere-arnaud_en/

To obtain the most recent data for this region, we suggest that you consult the geomatics products of Quebec's Geomining Information System (SIGÉOM).

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