

LEGEND

QUATERNARY

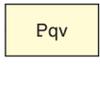
 Unconsolidated cover, little or no outcrop, shown as overlay on bedrock geology.

PALEOPROTEROZOIC

 Lamprophyre dykes interpreted to belong to the Martell intrusions (Christopher Island Formation, Dubawnt Supergroup): medium brown to black, fine- to medium-grained; phlogopite, clinopyroxene and olivine phenocrysts; local country rock inclusions. Line width for dykes scaled to approximate true width for dykes exceeding 10 metres.

 Granite: pink leucocratic to red stained hematitic, medium- to coarse-grained; commonly porphyritic with quartz and perthitic K-feldspar phenocrysts, biotite, magnetite, apatite, fluorite, and titanite in interstitial clots; massive; interpreted to belong to Nueltin granite suite.

 Gabbro and pegmatitic gabbro: dark to medium green and white, medium- to coarse-grained ophitic to subophitic with amphibole (after clinopyroxene?) oikocrysts, leucocratic tonalitic and pegmatitic phases with symplectic amphibole-plagioclase intergrowths and micropoikilitic quartz; massive to foliated and gneissic near contacts, cut by veins of pegmatitic granite. Pdto: orbicular diorite, orbicules (up to 5 cm) comprising coarse-grained white plagioclase in dark, fine- to medium-grained matrix. Pgb: gabbro including sills in Amer quartzite, fine- to coarse-grained, ophitic to subophitic, plagioclase phenocrysts, massive to weakly foliated.

 Quartz veins and pervasively silicified fractured rocks: locally could have inclusions of quartzite or chert.

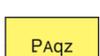
(All older rocks metamorphosed at greenschist to amphibolite facies)

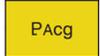
 Amer group (descriptions and stratigraphy in part based on Tippett and Heywood, 1978; Patterson, 1986; and Young, unpublished data, 1979)
Arkose, siltstone and slate: intercalated red to grey arkose and purplish calcareous arkose, red to green siltstone, grey to black slate; thick to thin bedding, locally graded, local basal scours, rare current ripples and crossbeds, commonly calcareous.

 Mafic to intermediate volcanic rocks: dark to medium green, strongly schistose; local relict plagioclase phenocrysts (to 1 cm) and quartz-carbonate-chlorite amygdules.

 Siliceous dolomitic marble: buff to pink massive carbonate with quartzose laminations and layers.

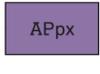
 Arkose and siliciclastic slate: green, reddish and black slates; locally graphitic and pyritic.

 Quartzite: massive white to greenish or pinkish, interbedded oligomictic conglomerate, granule and pebble layers, locally preserved ripple marks and crossbeds.

 Boulder, cobble and pebble conglomerate: dominantly quartz and vein-quartz clasts; local jasper, chert and monocrystalline quartz granules; typically schistose micaceous matrix.

ARCHEAN OR PROTEROZOIC

 Monzodiorite to monzonite: medium- to coarse-grained, massive to foliated; biotite, amphibole (some possibly replacing clinopyroxene); mesocratic; abundant accessory apatite.

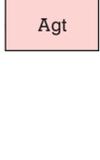
 Olivine and hornblende pyroxenite: black to dark grey, medium- to coarse-grained, massive; locally with thin diffuse magnetite layers, local minor garnet, numerous layers or septa (sheeted inclusions?) of peridotite and septa of strongly recrystallized gossanous iron-formation.

 Gabbro and minor quartz leucogabbro including sills in Ukalik quartzite: dark to medium green, fine- to coarse-grained ophitic, typically with clinopyroxene oikocrysts (1–2 cm, pseudomorphed by amphibole), magnetite (pseudomorphed by titanite); massive to foliated.

 Gabbro or spotted amphibolite: coarse-grained with amphibole and/or plagioclase phenocrysts or porphyroblasts, local minor microcline; foliated or augen-textured.

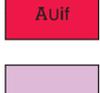
 Granite to granodiorite: pink, fine- to medium-grained, weakly foliated or massive; biotite, local K-feldspar phenocrysts (5 mm).

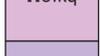
NEOARCHEAN

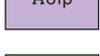
 Granite: pink to buff, medium- to coarse-grained, equigranular or with microcline megacrysts or augen; biotite, amphibole, epidote and/or magnetite, retrograde chlorite and muscovite common; massive to foliated, locally mylonitic or L-tectonite fabric. App: quartz-feldspar porphyry commonly with both plagioclase and K-feldspar phenocrysts in a fine- to medium-grained matrix; massive to foliated, locally mylonitic. Agtb: biotitic quartzo-feldspathic paragneiss enclaves in granite. Adgt: hybrid mixed diorite and granite; heterogeneous with diffuse enclaves of felsic and amphibole-rich composition, locally gneissic; includes local intrusion breccias comprising mafic to intermediate clasts in granitic matrix.

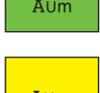
 Amphibole-rich skarn: coarse-grained amphibole and carbonate.

 Woodburn group
Ukalik formation
Iron-formation: oxide-facies dominated by magnetite and chert layers locally with hematite, chlorite-rich interbeds.

 Quartz-feldspar porphyritic volcanic tuff: quartz (2–8 mm), K-feldspar and plagioclase phenocrysts (typically 0.5–5 mm diameter); white to buff; local layering defined by variations in abundance of phenocrysts from sparse to 50%; interbedded with quartzite, slate and iron-formation; includes possible lava flows and subvolcanic rocks.

 Felsic volcanic tuff and flows and tuffaceous sedimentary rocks: plagioclase phenocrysts, local quartz phenocrysts; local chloritic, micaceous and carbonate schists.

 Mafic to intermediate volcanic rocks and schist: medium to dark green; quartz-carbonate amygdules.

 Quartzite and minor oligomictic conglomerate: mostly white, grey, blue or pink, locally green fuchsite or reddish hematitic; crossbedding; massive to strongly cleaved; schistose micaceous interbeds (cm to 10's of cm thick); minor to locally abundant metamorphic kyanite.

 Biotitic quartzite and quartz-rich wacke transitional to or associated with quartzite: silt- to granule-sized quartz grains (commonly blue) in white mica, chlorite, carbonate matrix; local oligomictic conglomerate layers.

 Phyllite interbedded with quartzite: black to light grey to light green, thinly bedded; Fe-rich varieties characterized by chlorite-muscovite-kyanite-chloritoid metamorphic assemblages.

 Oligomictic boulder to pebble conglomerate: quartzite and vein-quartz clasts in a micaceous matrix; commonly pyritic; include to dark grey to gossanous.

 Polymictic basal conglomerate: clasts include quartzite, vein quartz, volcanic rocks, granite, and quartz-feldspar porphyry, rounded and ranging in size from pebbles to boulders (>25 cm); matrix varies from white quartz-rich to grey micaceous to pyritic dark or rusty; locally transitional to oligomictic conglomerate.

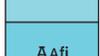
----- unconformity to Meadowbank formation -----

 Meadowbank assemblage
Apuqti'naqtuq assemblage
Mafic to intermediate wacke and slate: quartz, plagioclase and lithic grains in medium to dark green to black matrix dominated by metamorphic chlorite, biotite and/or amphibole; locally pelitic, locally fuchsite; includes tuffaceous volcanoclastic rocks with plagioclase phenocrysts; streaky layering, in part well bedded.

 Iron-formation: dominantly oxide facies, typically chert and magnetite bands, silicate-rich layers or lamellae with grunerite, chlorite, biotite. AAitc: carbonate iron-formation, bedded with white chert and orange Fe-carbonate (mm to cm width).

 Undifferentiated felsic to intermediate volcanic, volcanoclastic and volcanogenic sedimentary rocks: tuffaceous wackes, arkose and phyllite, arenite with pebbly interbeds, local coarse debris flow deposits. AAfwk: felsic-intermediate volcanoclastic rocks and volcanogenic wacke; buff to medium grey, fine-grained to gritty to pebbly with abundant quartz and plagioclase crystal clasts (to 5 mm diameter); muscovite, carbonate and chlorite in fine-grained matrix.

 Felsic to intermediate tuffs, crystal tuffs, lapilli tuffs and tuff breccias: local subvolcanic intrusions and possible lava flows; grey to buff; plagioclase phenocrysts typical and local amphibole phenocrysts; locally bedded and transitional to reworked deposits.

 Gabbro-textured rocks: medium- to coarse-grained. Aama: mafic schist and amphibolite.

 Komatiitic flows: massive to layered, polyhedral jointing, breccia zones; strongly magnetic.

 Ultramafic to mafic schist: characterized by talc, tremolite, serpentine, magnetite and/or Fe-carbonate, komatiitic protolith.

Nutplilik assemblage

 Felsic to intermediate volcanic rocks: plagioclase porphyritic crystal tuff, lapilli tuff, and volcanogenic sedimentary rocks.

 Cherty felsic tuffs with iron-formation interbeds: fine-grained to aphanitic, thinly bedded, cm-scale banded iron-formation interbeds locally up to 50% of outcrop; local plagioclase phenocrysts or crystal clasts.

 Wacke.

 Iron-formation: dominantly oxide facies, locally sulphidic.

 Mafic to intermediate volcanic rocks: massive to foliated, includes fine-grained to porphyritic flows and medium-grained subvolcanic(?) intrusions; flows commonly have 5–8 mm plagioclase phenocrysts and amphibole pseudomorphs of clinopyroxene(?); pillows locally recognizable, in part amygdaloidal; local schist and volcanogenic sedimentary rocks.

 Quartz-feldspar porphyritic volcanic rock: quartz eyes varying from 0.5–1 cm ellipsoidal lenses of monocrystalline quartz to 0.5–5 mm quartz phenocrysts, very sparse to 25%; matrix white to grey or smokey, very fine-grained to aphanitic; 1–5 mm plagioclase phenocrysts common; includes monolithic lapilli tuffs and breccias; in some cases breccias contain lithic fragments of previously brecciated material; massive to strongly foliated quartz-eye muscovite schists. ANfb: tuffaceous sedimentary rocks and debris-flow deposits.

 Komatiitic flows: massive to layered, commonly with spinifex zones; polyhedral jointing, breccia zones, possible pillows; primary textures and structures pseudomorphed by greenschist-facies retrograde minerals; strongly magnetic.

 Ultramafic schist: characterized by talc, tremolite, serpentine, magnetite and/or Fe-carbonate; locally porphyroblastic.

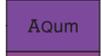
 Gabbro-textured mafic rocks: strongly magnetic, typically medium-grained massive with 50–80% prismatic amphibole, rarely schistose; locally mesocratic with diffuse mafic enclaves; local fine-grained enclaves or inclusions(?) resemble komatiite; granitic veins and epidote-K-feldspar alteration in pods and on fractures common near contacts.

Quggilik assemblage

 Greywacke and felsic to intermediate rocks of possible volcanic and volcanoclastic origin: biotitic to quartzo-feldspathic; local garnet and garnet-sillimanite-K-feldspar metamorphic assemblages.

 Amphibolite or mafic to intermediate schist: commonly associated with banded iron-formation; local amphibole and garnet porphyroblasts; foliation variably developed with local amphibole-augen gneiss.

 Banded iron-formation: mostly oxide facies with chert and magnetite-rich laminations, minor silicate facies; locally sulphidic with rusty weathering.

 Ultramafic rocks: massive or locally schistose, polysutured, strongly magnetic, local olivine cumulate textures.

 Ultramafic porphyroblastic schists: characterized by amphibole-facies metamorphic assemblages including tremolite, orthoamphibole(?), olivine, chlorite and magnetite; massive or with polyhedral jointing, possible relict pillows.

