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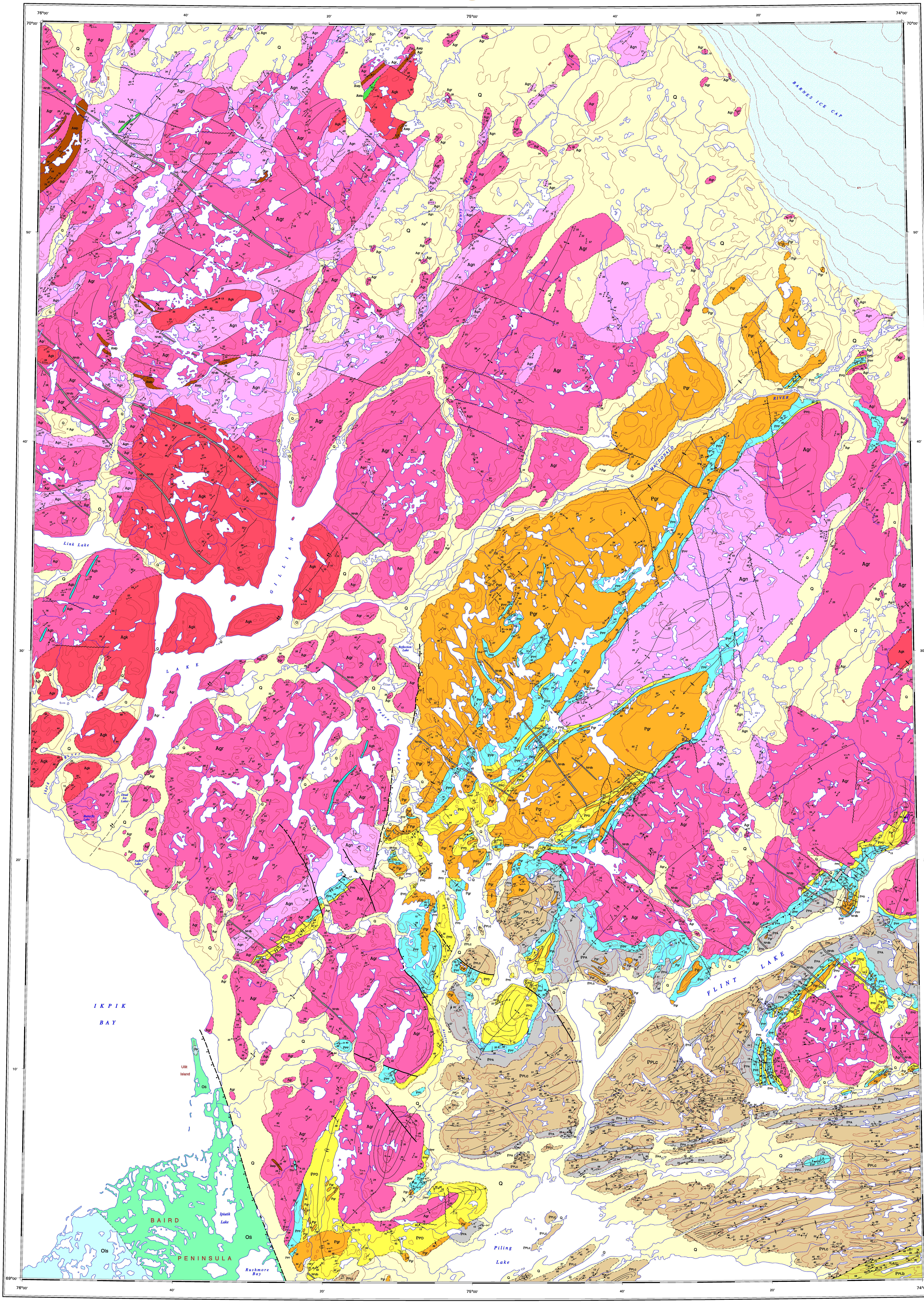
GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA



LEGEND

The prefix 'meta' applies to all lithologies in units Agn to PPLc

CENOZOIC

QUATERNARY

PLEISTOCENE–RECENT

Q — *Unconsolidated glacial drift with associated marine, lacustrine, fluvial, and bog deposits. Chiefly marine muds on coastal areas. Includes extensive felsenmeer in proximity to Barnes Ice Cap.*

unconformity

PALEOZOIC

ORDOVICIAN

UPPER MIDDLE AND UPPER ORDOVICIAN

Ols — *Dolomitic limestone; minor calcareous dolostone.*

UPPER LOWER AND LOWER MIDDLE ORDOVICIAN

Os — *SHIP POINT FORMATION: dolostone, in part sandy, silty, argillaceous; dolomitic flat-pebble conglomerate; minor dolomitic sandstone, siltstone, breccia, quartz-cemented sandstone.*

unconformity

NEOPROTEROZOIC

NFdb — *FRANKLIN INTRUSIONS: tholeiitic diabase dykes; medium-grained with ophitic texture; narrow chilled margins.*

intrusive contact

PROTEROZOIC

PALEOPROTEROZOIC

Pum — *Ultramafic rocks; serpentinized peridotite and hornblendite; foliated to schistose; dark green or brown weathering.*

Pgr — *Biotite-allanite±hornblende monzogranite, granodiorite; commonly grades into biotite-allanite±hornblende syenogranite; massive, fine- to coarse-grained, pink to white; abundant crosscutting veins and sheets of associated biotite-muscovite-garnet ±tourmaline pegmatite; locally contains inclusions of layered orthogneiss (unit Agn), quartz diorite(unit Pqd), psammite (unit PPD), and carbonate (unit PPF); local weak foliation.*

Pqd — *Hornblende-clinopyroxene-biotite quartz diorite; biotite-hornblende monzogranite veins; massive, medium- to coarse-grained, black and white peppered texture; locally foliated to amphibolite.*

PILING GROUP (units PPD – PPLc)

Upper Sequence

PPLc — *LONGSTAFF BLUFF FORMATION: (metamorphic mineral units PPLb – PPLc) Psammite, semipelite, pelite, arkosic- and lithic-wacke; interbedded; thin- to thick-bedded, light- to dark-grey; graded beds including inverse metamorphic grading; minor hornblende-bearing calcsilicate beds and concretions; biotite-muscovite-cordierite±andalusite metamorphic assemblages; locally includes bodies of biotite-allanite±hornblende monzogranite, granodiorite, syenogranite or biotite-garnet±muscovite±sillimanite (fibrolite)±cordierite monzogranite, and associated biotite-muscovite-garnet±tourmaline pegmatite.*

mineral isograd

PPLb — *Psammite, semipelite, pelite, arkosic- and lithic-wacke; interbedded; thin- to thick-bedded, light- to dark-grey; graded beds; minor hornblende-bearing calcsilicate beds and concretions; biotite-muscovite±garnet metamorphic assemblages.*

PPA — *ASTARTE RIVER FORMATION: sulphidic schist; rusty-weathering; graphitic, pyrrhotite-pyrite schist and slate; sulphide-facies iron-formation.*

Lower Sequence

PPF — *FLINT LAKE FORMATION: marble, dolomite and calcsilicate; chiefly white to grey or buff weathering; may include semipelite, pelite, quartzite and carbonate facies iron-formation; locally includes bodies of biotite-allanite±hornblende monzogranite, granodiorite, syenogranite and associated biotite-muscovite-garnet±tourmaline pegmatite.*

PPD — *DEWAR LAKES FORMATION: quartzite and feldspathic quartzite, semipelite; grey, white, and black; laminated, bedded, and massive, locally crossbedded; may include magnetite rich laminae; locally includes iron-formation; chiefly oxide facies with silicate facies; metallic grey; fine- to coarse-grained; laminated to bedded; may include marble, dolomite and calcsilicate; locally includes bodies of biotite-allanite±hornblende monzogranite, granodiorite, syenogranite or biotite-garnet±muscovite±sillimanite (fibrolite)±cordierite monzogranite, and associated biotite-muscovite-garnet±tourmaline pegmatite.*

unconformity

ARCHEAN

NEOARCHEAN

Agb — *Hornblende-biotite±clinopyroxene gabbro; dark, medium- to coarse-grained; ophitic- to sub-ophitic texture; locally foliated to amphibolite.*

Agk — *Biotite±hornblende K-feldspar megacrystic monzogranite, granodiorite; pink to buff; K-feldspar megacrysts in a finer-grained matrix of plagioclase, quartz, biotite±hornblende; varies from weakly to strongly foliated, locally an L-tectonite; gradational into granitic and granodioritic rocks lacking megacrysts.*

Agr — *Biotite±hornblende monzogranite, syenogranite; pink, fine- to medium-grained; massive to moderately foliated; locally grades into megacrystic granite.*

MARY RIVER GROUP (units AMa – AMp)

AMp — *Psammite, semipelite; grey- to rusty-brown, flaggy; centimetre- to metre-scale laterally continuous layers; abundant melt pods; local interlayers of quartzite, pelite and iron-formation.*

AMa — *Hornblende-biotite±clinopyroxene amphibolite; fine- to medium-grained; alternating millimetre- to centimetre-scale black and green layers; metre-scale layers of coarser-grained amphibolite, semipelite and pelite; may be derived from a volcanic protolith and associated sedimentary rocks.*

Agn — *Biotite±hornblende quartzofeldspathic orthogneiss; leucocratic gneiss of plutonic origin; granodioritic to monzogranitic; alternating grey to white, black, pink, fine- to medium-grained; moderately to well foliated, locally layered with concordant syenogranitic leucosome; locally contains amphibolite and tonalite bands, gabbro/anorthosite boudins; locally migmatitic.*

Bedrock outcrop massive . . . Agr ×
Geological contact (defined, approximate)
Form lines
D₁, thrust fault (defined, approximate); teeth on hanging wall
D₂, thrust fault (defined, approximate); teeth on hanging wall
Normal fault (defined, approximate); solid circle on hanging wall
Oblique-slip fault (defined)
Bedding (upright, tops known)
Bedding (overturned, tops known)
Bedding (tops unknown)
Bedding (transposed)
Cleavage
Schistosity
Foliation
Gneissosity
Mineral lineation
Crenulation axis
Mesoscopic S fold axis
Mesoscopic M fold axis
Mesoscopic Z fold axis
Mesoscopic fold axial plane
Glacial striae; direction of ice movement undetermined
Syncline (upright, overturned) (arrow indicates plunge)
Syncline, inferred beneath Quaternary cover (upright) (arrow indicates plunge)
Anticline (upright, overturned) (arrow indicates plunge)
Anticline, inferred beneath Quaternary cover (upright) (arrow indicates plunge)
Synform (upright) (arrow indicates plunge)
Synform, inferred beneath Quaternary cover (upright) (arrow indicates plunge)
Antiform (upright, overturned) (arrow indicates plunge)
Antiform, inferred beneath Quaternary cover (upright, overturned) (arrow indicates plunge)
Cordierite±andalusite isograd (ornament on high-temperature side) (defined)

Geology by M.R. St-Onge, D. Corrigan, F. Berniolles, K. Dubach, S. Modeland, J. Robillard, J. Stacey, J. Chakungal, S. Gagné, C. Hogue, C. Huerbert, A. Simmons, E. de Kemp, and D. Snyder (2000), M.R. St-Onge, D. Corrigan, M. Allan, F. Berniolles, K. Dubach, S. Gagné, J. Gladstone, S. Johns, R. Keiser, B. Sharpe, J. Stacey, and N. Wodicka (2002); D.J. Scott (2000, 2002), Canada-Nunavut Geoscience Office; D.M. Carmichael and H. Helmstaedt (2000), Queen's University

Paleozoic geology from report by H.P. Trettin (Geological Survey of Canada, Map 1406A, Bulletin 251); drift cover not shown

Geological compilation by M.R. St-Onge, D.J. Scott, and D. Corrigan (2003)

This open file (OF4474) replaces previously released OF3958 and OF3959

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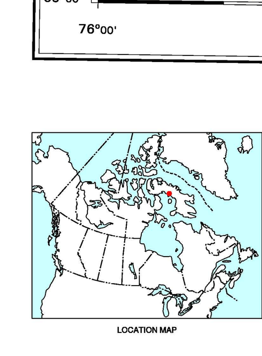
Logistical support provided by the Polar Continental Shelf Project as part of its mandate to promote scientific research in the Canadian North. PCSP 005-02.

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Digital base map from data compiled by Geomatics Canada, modified by ESS Info

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area Mean magnetic declination 2003, 43°24'W, decreasing 38.3' annually. Readings vary from 41°27'W in the SW corner to 45°14'W in the NE corner of the map

Elevations in metres above mean sea level



LOCATION MAP

OPEN FILE 4474

GEOLOGY

IKPIK BAY

BAFFIN ISLAND

NUNAVUT

Scale 1:100 000/Échelle 1/100 000

kilometres 2 0 2 4 6 8 kilomètres

Universal Transverse Mercator Projection
North American Datum 1983

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1983

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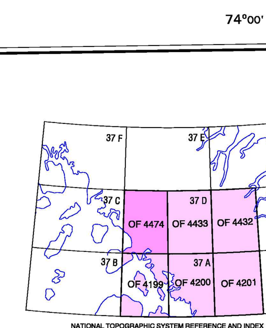

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2003

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