GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE-RECENT

Qu — *Chiefly unconsolidated glacial drift; in part reworked by lakes, streams, and frost action; outwash plains (sandurs), bog deposits*

PALEOZOIC

ORDOVICIAN

BRODEUR GROUP

OBA — *BAILLARGE FORMATION: Member B - limestone and dolomite; light grey, buff, brown, thickly laminated to very thick bedded, microcrystalline; commonly fossiliferous, silty, nodular; minor breccia, chip conglomerate, sandstone, cherty beds. Member A - dark grey shaly carbonate rocks*

CAMBRO-ORDOVICIAN

ADMIRALTY GROUP - SHIP POINT FORMATION

€OTCSP — *TURNER CLIFFS - SHIP POINT FORMATIONS UNDIVIDED: microcrystalline to very finely crystalline dolomite, commonly silty or sandy; very fine- to coarse-grained quartzose and dolomitic and calcareous sandstone; light grey to buff, greyish orange, yellowish brown, white; laminated to thick bedded, massive; minor dolomite conglomerate and chip breccia; fossiliferous; cross-laminations, ripple marks, mudcracks, glauconite, sulphide streaks present locally. Sandstones relatively abundant in lower part*

ADMIRALTY GROUP

€OGA — *GALLERY FORMATION: arkose to orthoquartzite, conglomerate beds and lenses mainly at and near base; minor dolomitic sandstone; ferruginous zones; light grey, pale yellow, light to dusky red, white, brown; very fine- to very coarse-grained, thin- to very thick-bedded; crossbedding common, ripple and sole marks present locally; few worm burrows; quartz clasts predominate in conglomerate, hematite iron ore clasts abundant locally*

PROTEROZOIC

HADRYNIAN

Hg — *FRANKLIN INTRUSIONS: tholeiitic diabase*

NEOHELIKIAN

ULUKSAN GROUP

NSC — *SOCIETY CLIFFS FORMATION: dolomite, light- to medium-grey; thin- to very thick-bedded, laminated internally; microcrystalline to very finely recrystallized; minor limestone, dark shale, pink arkosic sandstone, locally vuggy*

NAB-U — *ARCTIC BAY FORMATION-UPPER MEMBER: shale, mudstone, very finely crystalline dolomite; thin laminated to thin bedded, grey to bluish- and greenish-grey, some black shale; minor limestone, siltstone, sandstone, dolomite breccia; mudcracks common, ripple marks and sandstone concretions locally*

NAB-L — *ARCTIC BAY FORMATION-LOWER MEMBER: shale, siltstone; minor mudstone, sandstone; thin laminated to thick bedded, light to dark grey; minor green, brown red; some black gypsiferous and graphitic shale, dolomite, limestone, orthoquartzite beds; abundant mudcracks, ripple marks, crossbedding; rain prints (gas pits?) common; slump structures locally*

EQALULIK GROUP

NAS — *ADAMS SOUND FORMATION: orthoquartzite, quartzose sandstone, white to dark grey, buff, brown, pink, laminated to medium bedded; minor grit, shale, siltstone; granule to cobble conglomerate locally at base; dessication cracks, ripple marks, and crossbedding common; sole marks, rain prints locally*

APHEBIAN

Ag — *Massive granite-granodiorite; chiefly pink quartz monzonite, fine- to coarse-grained and pegmatitic; abundant aplite and pegmatite dykes; syenitic dykes and small diatremes locally*

Agp — *Porphyritic quartz monzonite-granodiorite; minor granite, syenite-syenodiorite; light grey, greyish pink to pink, massive to foliated, medium grained; potash feldspar phenocrysts; commonly locally granulated*

Amp — *Porphyroblastic migmatite; commonly of granodioritic composition; abundant schlieren, nebulae, potash feldspar porphyroblasts; medium grained ; pinkish grey, light to dark grey, pink; streaky laminated to thin banded, massive*

Amg — *Chiefly banded migmatite; white to light grey granitoid bands alternate with grey to black more mafic bands, some pink to red and reddish black. Bands characterized by diverse composition, origin and geometry. Granitoid bands commonly appear to have been introduced. Derived in part from Mary River Group, and may also include some gneisses basement to this group*

ARCHEAN AND/OR APHEBIAN

MARY RIVER GROUP (MQ-M)

M — *Undivided Mary River Group; MQ-M; chiefly MS-MB*

MS - *Metasediments; chiefly mica-quartz-feldspar schists and gneisses (metashales and metagreywackes); fine- to medium-grained, light to dark grey, very thin bedded to massive. Minor hornblende-, garnet-, alumino-silicate-, pyroxene-, and cordierite-bearing gneisses; lit-par-lit gneiss, quartzite. Local conglomerate, agglomerate*

MB - *Basic metavolcanic rocks; chiefly massive to pillowed amphibolite (metabasalt ?) and associated pyroclastic rocks; fine- to medium-grained, dark greyish green to black; laminated to massive; minor metamorphosed ultrabasic and anorthositic rocks*

MA - *Acid metavolcanics; chiefly of quartz latite composition; pale to medium grey, very fine- to fine-grained; indistinctly foliated and layered to massive, commonly with quartz and feldspar phenocrysts. Occurs mainly below the iron-formation*

Mu — *Ultrabasic rocks; peridotite, serpentinite, actinolite rock; dark grey, light to dark green, chiefly thick bedded to massive, fine grained to coarse pegmatitic*

Mn MQ — MN - *Meta-anorthosite, metagabbroic anorthosite, white to light grey and mottled greenish grey and white; fine grained to coarse porphyritic, football anorthosite; mostly very thick bedded to massive; minor metagabbro, amphibolite*

MQ - *Metagabbro; chiefly amphibolite, fine- to medium-grained, dark greenish grey, foliated to massive*

Mif — *Metamorphosed iron-formation; mainly oxide facies, abundant silicate facies; local carbonate facies, iron ore (magnetite-hematite rock); fine grained, thin laminated to very thin bedded metallic grey, white, buff, brown, reddish*

MQ — *Upper member: quartzite; fine- to coarse-grained, white to pale grey or green; thin bedded to massive; minor meta-arkose, garnet- and mica (locally fuchsite)-bearing rocks*
Lower member: mica-quartz-feldspar schist and paragneiss, rodded-quartz paragneiss, alumino-silicate paragneisses, minor meta-conglomerate; light to dark grey, fine- to medium-grained, secondary foliation common

gr — *Foliated quartz monzonite-granodiorite, local granite, light pink to light grey, medium grained, massive, minor faint layering; schlieren, mafic lenses, potash feldspar augen. In part younger than Mary River Group.*

Metagabbro: amphibolite pods, dykes, sills; fine- to medium-grained, dark green to black, massive, commonly foliated and/or lineated

mu — *Undifferentiated gneisses, mixed rocks; chiefly undivided* Amg, Amp, gr, Amn, Agn; *minor supracrustal rocks, veined gneiss, agmatite, gneissic mafic plutonic rocks*

ARCHEAN

Amn — *Fluidal nebulitic granodiorite migmatite; minor quartz monzonite-granodiorite, light grey, pinkish grey, pink; minor greyish black, greenish grey, brown; fine- to medium-grained, massive to finely foliated and thin banded; schlieren, lenses and boudined bands of amphibolite, metasedimentary and granitoid rocks are common, streaky appearance common; potash feldspar augen abundant locally. May include some Aphebian rocks*

Agn — *Foliated granodiorite and quartz-monzonite, nebulitic migmatite; light grey to pinkish grey, fine- to coarse-grained; potash feldspar megacrysts are common; some massive, rodded, and indistinctly banded varieties*

Note: Relative ages of some map-units are uncertain, and individual map-units may include rocks belonging to other units

Geological boundary (defined, approximate, assumed, gradational)
Bedding, tops known (horizontal, inclined)
General direction of sedimentary transport indicated by crossbedding
Schistosity, cleavage; ground determinations (inclined)
Gneissosity, general trend, dip unknown
Gneissic layering; mainly ground determinations (horizontal, inclined, vertical, inclination unknown)
Undifferentiated foliation; mainly airborne and airphoto determinations (horizontal, inclined, vertical, inclination unknown)
Linear structures:
Mesoscopic fold axis; hand specimen to large outcrop (horizontal, plunging)
Recumbent fold axis; (plunging)
Rodding; mineral aggregate or segregation, elongated rock fragments (horizontal, plunging)
Mineral lineation; individual crystals (horizontal, plunging)
Fold structure, nature uncertain
Lineament
Fault, solid circle indicates downthrown side (defined, approximate, assumed)
Dyke (defined, approximate-assumed, inferred from aeromagnetic data)
Anticline, arrow indicates direction of plunge (defined-approximate)
Syncline, arrow indicates direction of plunge (defined-approximate)
Antiform (overturned-recumbent)
Synform (upright-inclined)
Glacial striae (direction of ice movement determined, undetermined)
Fossil locality (F)
Iron-formation (observed-inferred from aeromagnetic data)
Iron-formation; iron ore
Mary River iron deposit (1) to (4)
Age determination in millions of years (K, potassium-argon; w, whole-rock; a, actinolite; b, biotite; m, muscovite; h, hornblende) • 1865 ± 60
Sample locations of whole-rock Rubidium Strontium isochron age determinations R(1-9)
See table on map regarding sample combinations in millions of years
Mineral occurrence gn ×
Airstrip (dirt)
Inuit dwelling site (most have square outline) ■

MINERALS

Asbestos	asb	Molybdenite	mo
Chalcopyrite	cp	Pyrite	py
Galena	gn	Pyrrhotite	po
Graphite	gf	Sphalerite	sp

Geology by G.D. Jackson, 1965, 1967, 1968; W.J. Crawford, 1965, 1968; S.L. Blusson, A. Davidson, W.C. Morgan, 1968; W.L. Davison, 1954; Baffinland Iron Mines Ltd. Co. reports for 1963, 1964

Compilation and interpretation by G.D. Jackson, W.C. Morgan and A. Davidson, completed 1975

Geological cartography by I.A. Coulthart, Geological Survey of Canada

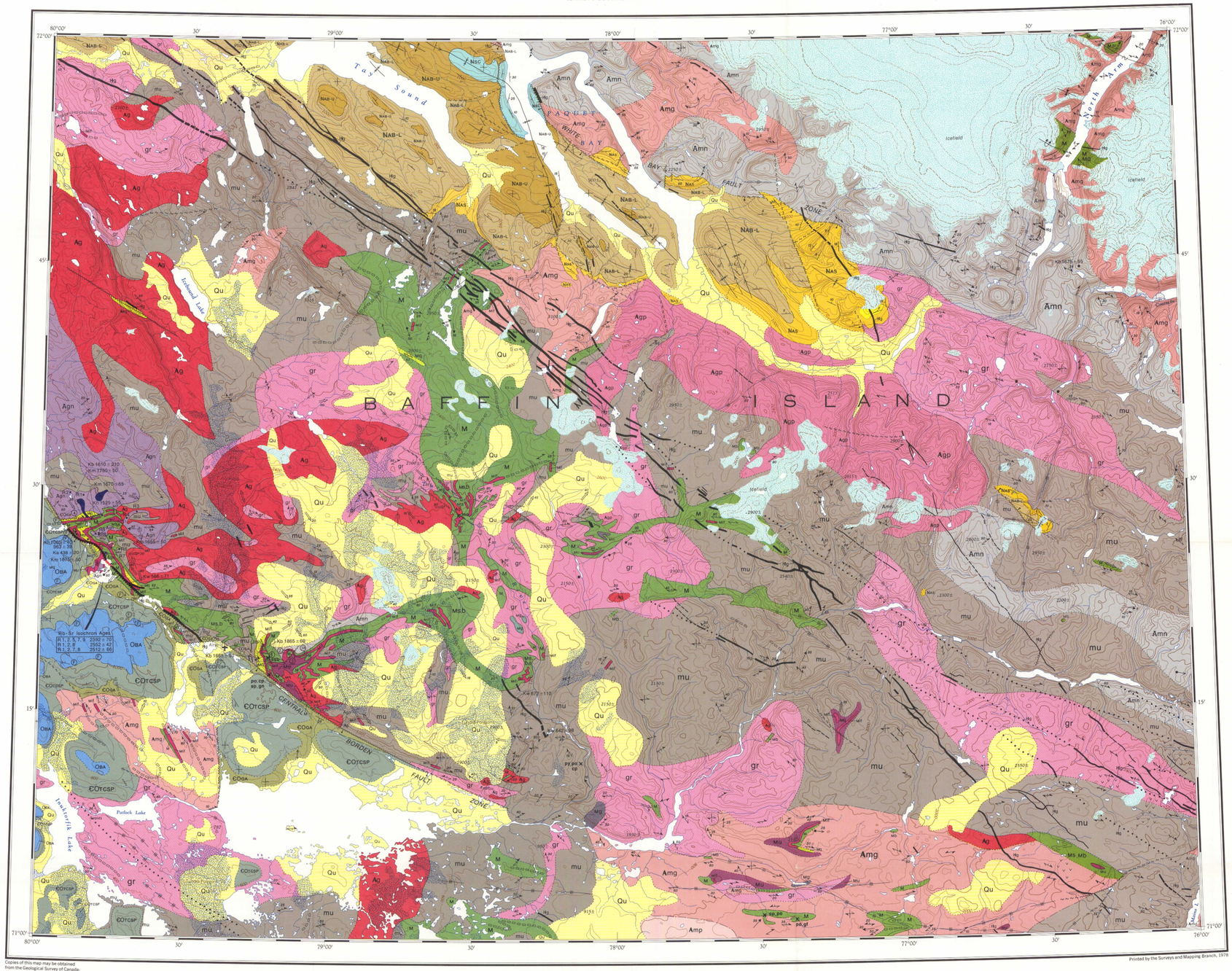
Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base-map at the same scale published by the Surveys and Mapping Branch in 1967

Copies of the topographical edition of this map may be obtained from the Canada Map Office, 615 Booth Street, Ottawa, Ontario K1A 0E9

Mean magnetic declination 1977, 63°11.1' West, decreasing 26.6' annually. Readings vary from 61°21.6' in the SE corner to 65°01.8' in the NW corner of the map-area

Elevations in feet above mean sea-level



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601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7

INDEX MAP

Printed by the Surveys and Mapping Branch, 1978

MAP 1451A

GEOLOGY

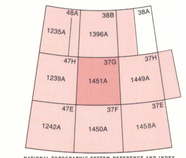
ICEBOUND LAKE

DISTRICT OF FRANKLIN

Scale 1:250,000

Kilometres 6 0 6 12 18 Kilometres
Miles 4 0 4 8 Miles

Universal Transverse Mercator Projection



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

MAP 1451A
ICEBOUND LAKE
DISTRICT OF FRANKLIN

1451A