LEGEND

(SEDIMENTARY, IGNEOUS AND METAMORPHIC ROCKS)

CENOZOIC

QUATERNARY

PLEISTOCENE - RECENT

Qr — *Outwash plains, undifferentiated river deposits: silt, sand, gravel, and boulder deposits derived mostly from reworking of glacial deposits*

Qu — *Mostly unconsolidated glacial drift with minor associated marine, lake, river, and bog deposits. Includes some weathered bedrock (regolith) mainly in areas underlain by Cretaceous - Eocene strata*

Qp — *Tundra polygons in drift areas*

Qm — *End moraine*

TERTIARY

PALEOCENE - EOCENE

ECLIPSE GROUP (K-T)

T — *Grey to black fissile shale and mudstone: minor interbedded dark grey siltstone and sandstone in beds up to two feet (60 cm) or more thick; ripple-marks, and cone-in-cone structures are present locally*

MESOZOIC

CRETACEOUS AND TERTIARY

UPPER CRETACEOUS - EOCENE

KT2 — *Arkosic sandstone: well-bedded, friable, buff, tan, yellow, orange, brown, and olive green; fine-to coarse-grained, and poorly sorted; very thin-to thick-bedded, beds up to three feet (≈ 1m) or more thick and commonly cemented by calcite; minor intercalated shale and siltstone; ripple-marks, cross-bedding and concretionary structures are locally abundant*

KT1 — *Interbedded siltstone mudstone, subgreywacke and quartzwacke: buff, grey, brown and olive green; very thin-to thin-bedded; commonly cemented by calcite; red hematite-stained strata, and mudcracks are present locally*

KT3 — *Undifferentiated KT1 to T: sandstone, siltstone, shale; grey, brown, black, olive green; very fine-to coarse-grained, poorly consolidated; thinly to thickly bedded*

CRETACEOUS

K — *Orthoquartzite, quartzose and arkosic sandstones: well to poorly sorted, poorly consolidated; white, buff, orange, and light brown; very fine-grained to granular and pebble-bearing; thin-to very thick-bedded; minor interbedded grey shale, siltstone and sandstone; coal beds up to 5 feet (1.5 m) thick; small concretionary nodules and crossbedding are present locally*

PALEOZOIC

LOWER PALEOZOIC ?

P — *Mostly grey, laminated to thick-bedded, shale and minor limestone. Some beds are graphitic and others are quartzitic and rusty weathering*

PROTEROZOIC

HADRYNIAN

Hg — *FRANKLIN DYKES: massive dark grey to dark grey-green tholeiitic diabase and gabbro; may include a few older dykes*

HELIKIAN

ULUKSAN GROUP

HVB — *VICTOR BAY FORMATION: grey sandy dolomite, dolomite, dolomite and chert breccias: thinly bedded to massive; minor chert, agate and greywacke; slump structures and poorly preserved stromatolites are present locally, clasts in breccias up to 1 foot (25 cm) across*

HSC — *SOCIETY CLIFFS FORMATION: dolomite, gypsiferous dolomite: thinly laminated to massive; pale to medium grey; minor interbedded clayey to sandy dolomite, gypsum, shale, chert; a few beds of dolomite-chert-, and intraformational breccias; some shaly zones are pink to red and others are varicoloured; stromatolites are common; some beds contain mudcracks, others slump structures, and a few contain flint nodules*

HVBSC — *UNDIVIDED VICTOR BAY AND SOCIETY CLIFFS FORMATIONS: sandstone, siltstone, shale, mudstone, dolomite; medium to dark red, brown, buff, locally black; ripple-marked, laminated to thick-bedded; minor grey to pink dolomite, sandy, dolomite, dolomite breccia with red and grey chert nodules, grey oolitic chert beds*

HVBAB — *UNDIVIDED VICTOR BAY TO ARCTIC BAY FORMATIONS: dolomite, dolomitic shale; light to medium grey, laminated to thin-bedded; minor brownish-grey to dark reddish-grey shale*

HAB — *ARCTIC BAY FORMATION: shale, slate, argillite, calcareous concretionary siltstone, limestone, dolomite, sandy dolomite, commonly interbedded; thinly laminated to medium-bedded; grey to greenish grey, buff, brown to black; minor red coloured rocks and thin beds of siderite*

EQALULIK GROUP

HAS-U — *ADAMS SOUND FORMATION - UPPER MEMBER: quartzose sandstone and orthoquartzite; cream to light brown or light grey; fine-to medium-grained; very thin-bedded to massive; interbedded with shale and siltstone at some horizons; mudcracks and raindrop pits occur locally*

HAS-L — *ADAMS SOUND FORMATION - LOWER MEMBER: quartzose sandstone; light to reddish brown, medium to dark red, brilliant red and mauve; very fine-to fine-grained; thinly laminated to medium-bedded; some maroon to grey shale and slate; minor feldspathic sandstone, black shale, argillite, siltstone, sandstone, and reddish brown quartz pebble conglomerate; ripple-marks and mudcracks are common*

HAS1 HAS2 — *UNDIVIDED ADAMS SOUND FORMATION:*
HAS1 - *Undivided* HAS-U, HAS-L; *predominantly* HAS-U *but* HAS-L *is well developed in some areas.*
HAS2 - *Quartz sandstone, orthoquartzite: white to buff, grey and locally orange or mauve; very fine-to medium-grained, equigranular, thinly laminated to thickly bedded, silica-cemented; crossbedding is common; pebbly quartzite, shale interbeds and fragments, mudcracks, and carbonate cement are present locally.*

HNA — *NAUYAT FORMATION: thinly laminated red to purple fine-to medium-grained sandstone and siltstone interbedded with dark grey-green fine-grained massive basalt; minor conglomerate*

APHEBIAN

AVM — *Migmatite and gneiss: very thin-banded with alternating layers of medium-grained pink quartz monzonite-granodiorite and grey intermediate gneiss; local agmatite. These rocks are cross-cut by abundant nearly vertical pink granitic and pegmatitic dykes. Mafic minerals include biotite, hornblende and garnet*

ARCHEAN AND/OR APHEBIAN *(a)*

ck — *Charnockite to granoenderbite (hypersthene granite-hypersthene granodiorite) - mostly monzocharnockite (hypersthene-quartz monzonite): mostly fine-to medium-grained, minor coarse-to very coarse-grained and pegmatitic; foliated and/or strongly lineated, sheared, crushed, blastoporphyritic and blastomylonitic; massive porphyritic relics preserved locally; mottled to streaky greasy grey to green, light yellowish green, buff, light brown; includes some undifferentiated banded migmatite, granitic to intermediate gneisses, metasediments, metavolcanics, and minor pegmatite, aplite and syenomangerite-jotunite (hypersthene syenite - syenodiorite); hypersthene, clinopyroxene, hornblende, garnet, biotite and magnetite are common mafic minerals*

an — *Meta-anorthosite: white massive fine-grained to coarse pegmatitic; minor garnet and quartz; may be genetically related to ck; minor associated dark grey-green fine-to medium-grained metamorphosed hypersthene pyroxenite (norite?), migmatite, granitic rocks*

ma — *Mangerite (hypersthene monzonite) - jotunite (hypersthene syenodiorite): mottled light grey and black; fine-to medium-grained, blastoporphyritic; sheared, lineated and finely foliated; may be genetically related to ck; minor charnockite (hypersthene granite), migmatite and granitic gneisses; hornblende, hypersthene, clinopyroxene, biotite, magnetite, and quartz are commonly present*

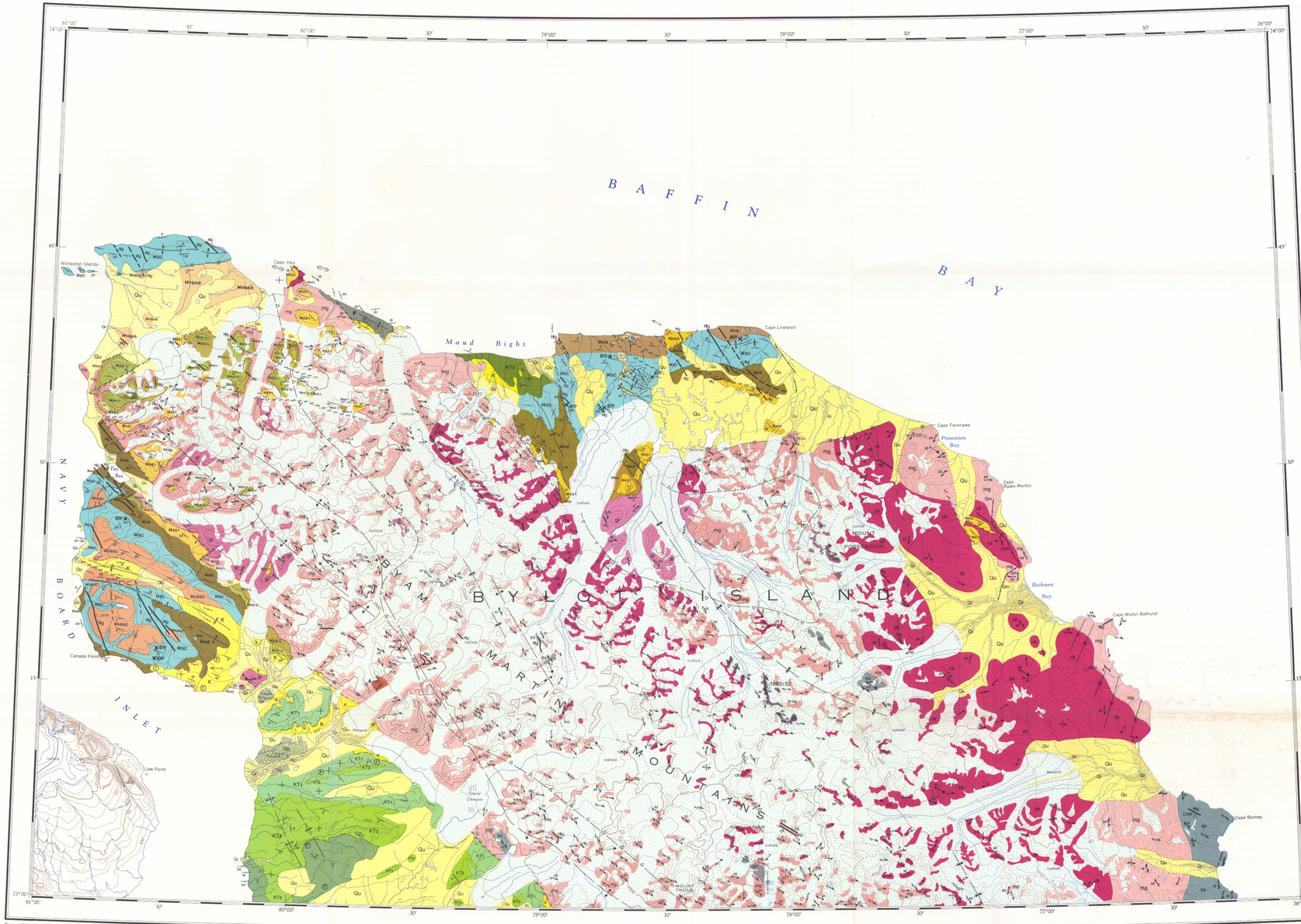
gr — *Granite to granodiorite - mostly quartz monzonite; pink to greyish pink; fine-to coarse-grained, foliated to locally layered, sheared, lineated and blastoporphyritic; some gneisses and migmatites intruded by amphibolite (metagabbro?) and pegmatitic granite; minor biotite amphibolite, syenite to monzonite, biotite, hornblende, garnet, epidote and clinopyroxene are common mafic minerals*

mg — *Mixed rocks (b): mostly banded migmatite (including lit-par-lit gneiss) with some paragneiss, orthogneiss, and minor local agmatite;layered rocks include all those present in* Avm, ck, gr, sv; *minor amphibolite, pyroxenite, metamorphosed anorthositic gabbro, and late pegmatites and granite dykes; grey to pink, olive grey to olive green and brown, minor white, black; fine-to coarse-grained, massive, finely foliated, very thin-to thick-banded; intensely deformed, sheared, rodded, crushed; blastoporphyritic to porphyroblastic, blastomylonitic; biotite, hornblende, hypersthene, clinopyroxene, garnet, and magnetite are common mafic minerals*

sv — *Metasediments, metavolcanics (b): mottled white and grey to massive grey quartzofeldspathic gneisses, yellow-green intermediate pencil gneisses, greasy dark grey-green intermediate to mafic gneisses; biotite-hornblende-pyroxene-quartz-feldspar paragneiss is common; equigranular to locally porphyroblastic, homogeneous, fine-to medium-grained, very thinly to medium-bedded, massive; highly deformed, sheared, rodded, recrystallized; minor migmatitic rocks, granitic rocks, pegmatite; hypersthene, clinopyroxene, garnet, biotite, magnetite, and hornblende are common mafic minerals*

(a) Relative ages and structural relationships between map-units uncertain. Many nunataks and outcrop areas in cols, cirques and arêtes not shown.
(b) These units more than the others in this age group probably include rocks of varied primary ages; mg for example may include rocks both derived from, and basement to sv.

GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES



Printed by the Surveys and Mapping Branch 1974

Geology by G.D. Jackson, S.L. Blusson, W.J. Crawford, A. Davidson, W.C. Morgan, 1968; and W.L. Davison, 1954, 1963

Compilation and interpretation by G.D. Jackson and A. Davidson, 1969-1973

To accompany Paper 74-29 by G.D. Jackson and A. Davidson

Geological cartography by J.A. King, 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 as Bylot Island (38C) and part of Navy Board Inlet (48D) published by the Surveys and Mapping Branch, 1965

Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa

Mean magnetic declination 1974, 71°07' West, decreasing 25.5 annually. Readings vary from 68°57' in the SE corner to 73°28' in the NW corner of the map-area

Elevations in feet above mean sea-level

INDEX MAP

Geological boundary (defined, approximate, assumed)

Granulite facies in Aphebian, and Archean and/or Aphebian rocks as defined mainly by the presence of hypersthene (triangles point toward granulite facies)

Bedding, tops known (horizontal, inclined) (includes ground, airborne and airphoto observations)

Bedding, general trend (dip and top known, dip unknown, top unknown)

Direction of sedimentary transport indicated by crossbedding

Gneissic layering (horizontal, inclined, vertical) (mainly ground but includes airborne and airphoto observations)

Undifferentiated foliation (horizontal, inclined, vertical, inclination unknown) (mainly airborne and airphoto observations)

Linear Structures

Mesoscopic fold axis - hand specimen to large outcrop (plunging)

Rodding - mineral aggregate or segregation, fragmented dyke, vein, bed (horizontal, plunging)

Mineral Lineation - orientation of individual crystals (horizontal, plunging)

MAP 1397A

PAPER 74-29

GEOLOGY

BYLOT ISLAND

DISTRICT OF FRANKLIN

Scale 1:250,000

Miles 4 0 4 8 12 Miles

Kilometres 6 0 6 12 18 Kilometres

Universal Transverse Mercator Projection

Lineament

Fault (defined, approximate, assumed; solid circle indicates downthrow side)

Dyke (defined, approximate - assumed)

Axial trace of anticline (defined, approximate)

Axial trace of syncline (defined, approximate; arrow indicates plunge)

Axial trace of antiform (approximate)

Axial trace of synform (approximate)

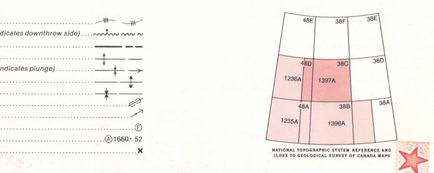
Glacial striae (direction of movement undetermined)

Crag and tail (direction of ice movement known)

Fossil locality (F)

K-Ar age of phlogopite in millions of years (A) 1660±52

Mineral locality (gypsum - gyp, malachite - mal)



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

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1397A