GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

LEGEND

PALEOZOIC

Pld — *Limestone: dolostone*

SOUTHERN AND GRENVILLE PROVINCES

NEOHELIKIAN

Ndb — *Olivine diabase, diabase*

GRENVILLE PROVINCE

PALEOHELIKIAN

KILLARNEY BATHOLITH (Pkc - Pal)

Pal — *ANNIE LAKE COMPLEX: fine- to medium-grained, foliated to massive, porphyritic to nonporphyritic granite, including two-mica granite; abundant pegmatite;* Pal1, *probable* Pal *equivalent*

Pbl — *BELL LAKE GRANITE: coarse grained porphyritic biotite granite and quartz monzonite, commonly foliated;* Pal1, *late fine- to medium-grained porphyritic and nonporphyritic phases, including muscovite granite*

Ptl — *TERRY LAKE DIORITE: medium- to coarse-grained, massive to foliated diorite*

Pk — *KILLARNEY GRANITE;* Pkc, *coarse grained pink to salmon-red granite, syenitic granite, and quartz monzonite;* Pkp, *fine- to medium-grained pink feldspar porphyry ("Lighthouse porphyry");* Pkpf, *fragmental porphyry phase*

APHEBIAN or PALEOHELIKIAN
ORTHOGNEISS

pm — *Pegmatite: biotite or muscovite granite pegmatite, intercalated with* A'p, A'q, A'a *and* fo

fo — *Felsic orthogneiss:* fou, *undivided pink felsic orthogneiss;* fog, *mainly granite and syenite including hornblendic varieties, hybrid granite, and quartz monzonite;* foq, *mainly quartz monzonite;* fod, *grey granodiorite, diorite, and trondhjemite gneiss;* fop, *brownish-weathering hornblende and pyroxene-bearing gneiss (granulite?)*

EARLY APHEBIAN

A'mg — *Amphibolite (metagabbro): poorly layered, coarse- to medium-grained plagioclase-hornblende gneiss*

SUPRACRUSTAL GNEISS (A'p - A'mc)

A'mc — *Metaconglomerate: dark grey biotitic gneiss with scattered granitic and other pebbles*

A'cg — *Calcareous gneiss: calcite and/or calc-silicate gneiss, minor marble*

A'a — *Amphibolite: fine- to medium-grained plagioclase-hornblende gneiss, with or without intercalations of* A'p, A'q, fo *and* pm

A'q — *Metaquartzite: quartz-feldspar gneiss ± biotite or muscovite, intercalated with* A'p, A'a; A'ql, *metaquartzite and meta-arkose, Lorrain equivalents, commonly mixed with* pm

A'p — *Biotite paragneiss: biotite, biotite-garnet and biotite-hornblende gneiss, intercalated with* A'q, A'a, fo, *and* pm, *commonly migmatitic,* A'pg *probable Gowganda equivalent;* A'ps, *stratiform feldspathic biotite gneiss, minor metaquartzite, with lit-par-lit intercalations*

PROTEROZOIC

SOUTHERN PROVINCE

APHEBIAN OR PALEOHELIKIAN

fi — *Felsic intrusions: trondhjemite, monzonite, granite;* fip, *porphyritic coarse grained biotite granite (Bell Lake-type);* fim, *muscovite leucogranite*

MIDDLE APHEBIAN

An — *NIPISSING DIABASE: metagabbro sheets and dykes;* Ang, *granophyre;* Ana, *coarse grained amphibolite and metagabbro, probably post-Nipissing;* Anp, *post-Nipissing gabbro dyke*

EARLY APHEBIAN
HURONIAN SUPERGROUP
COBALT GROUP (Ag - Abr)

Abr — *BAR RIVER FORMATION: white orthoquartzite, buff, pink, grey and blue-grey siltstone, minor argillite;* Abri, *intercalated, variegated siltstone, argillite, and orthoquartzite*

Agl — *GORDON LAKE FORMATION: variegated grey, green-grey, and buff siltstone; subordinate fine grained quartzite, cherty beds, and argillite*

Al — *LORRAIN FORMATION:* Ala, *pink, buff, green, and brownish arkose, minor siltstone;* Alf, *green and white medium- to coarse-grained arkose, feldspathic quartzite;* Alo, *medium- to coarse-grained to pebbly white orthoquartzite;* Alop, *mainly peach or flesh orthoquartzite, in part ferruginous;* Alof, *fine grained white orthoquartzite*

Ag — *GOWGANDA FORMATION: greywacke and siltstone paraconglomerate, argillite, siltstone, feldspathic quartzite, orthoconglomerate;* Agp, *basal member, mainly paraconglomerate;* Ags *middle member, interbedded siltstone, quartzite, and argillite, minor paraconglomerate;* Aga, *upper laminated argillite member*

QUIRKE LAKE GROUP (As - As)

As — *SERPENT FORMATION: feldspathic quartzite, arkose, subgreywacke;* As1, *basal transition member;* Asq, *quartzite member;* Asa, *arkose member*

Ae — *ESPANOLA FORMATION: calcareous siltstone, siltstone, dolostone, siliceous limestone;* As1, *basal limestone-dolostone member;* As2, *middle siltstone member;* As3, *upper dolostone-limestone member*

Ab — *BRUCE FORMATION: siliceous paraconglomerate, minor feldspathic quartzite*

HOUGH LAKE GROUP (Arl - Am)

Am — *MISSISSAGI FORMATION: feldspathic quartzite, minor argillite*

Ap — *PECORS FORMATION: subgreywacke, siltstone, argillite feldspathic quartzite;* Apq, *quartzite, quartz-pebble conglomerate;* Apa, *argillite*

Arl — *RAMSAY LAKE FORMATION: paraconglomerate, greywacke*

Geological boundary (defined, approximate)
Bedding, tops known (inclined, vertical, overturned)
Bedding, tops unknown (inclined, vertical)
Foliation, schistosity (inclined, vertical, dip unknown)
Lineation (inclined)
Structural trend (from air photographs)
Fault, shear zone (defined, approximate, assumed)
Anticline
Syncline
Tectonic, fault or impact breccia
Agmatite zone
Glacial striae (direction of ice movement known)
Mineral occurrence (sulfide, s; uranium, u; quartz, q)
Pit or quarry (quartz, q; stone, st; gravel, gr)
Mylonite, cataclasite, or augen gneiss zone
Portage
Location where age has been determined in millions of years 1180 ± 40 K-m A

AGE DETERMINATION ABBREVIATIONS

Zc = U-Pb, zircon concordia — i = Rb-Sr, isochron — K-m = K-Ar, muscovite, sericite
Rb-m = Rb-Sr, muscovite — K-b = K-Ar, biotite — K-w = K-Ar, whole rock

Geology by M.J. Frarey, 1964-1968, 1970 and R.T. Cannon, 1965, 1966

Geological cartography by L.A. Daley, Geological Survey of Canada

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

Copies of the topographical editions covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0E9

Base maps at the same scale published by the Surveys and Mapping Branch in 1975-1976. Roads, portages and trails were revised by the Geological Survey of Canada for this edition

Approximate magnetic declination 1984, 9°03.2' West increasing 5.5' annually

Elevations in feet above mean sea level

Recommended citation:
Frarey M.J. and Cannon R.T.
1985: Geology, Lake Panache-Collins Inlet, Ontario; Geological Survey of Canada, Map 1593A, scale 1: 50 000

Copies of this map may be obtained from the Geological Survey of Canada
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7

INDEX MAP

Canada

This map has been produced from a scanned version of the original map
Reproduction par numérisation d'une carte sur papier

MAP 1593A

PROTEROZOIC GEOLOGY

LAKE PANACHE - COLLINS INLET

ONTARIO

Scale 1:50 000

Kilometres 1 0 1 2 3 4 Kilometres

Universal Transverse Mercator Projection

© Crown Copyrights reserved

MAP LIBRARY / CARTOTHÈQUE

LIBRARY / BIBLIOTHÈQUE
OCT 6 1989
GEOLOGICAL SURVEY
COMMISSION GÉOLOGIQUE

Printed by the Surveys and Mapping Branch, Published 1986

41 I/5 291A	41 I/6 292A	41 I/7
41 I/4	41 I/3 1593A	41 I/2 238A
41 H/13	41 H/14 221A	41 H/15 239A

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

LAKE PANACHE - COLLINS INLET
ONTARIO

NOT TO BE TAKEN FROM LIBRARY
NE PAS SORTIR DE LA BIBLIOTHÈQUE
1593A