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LEGEND

CARBONIFEROUS

MORIEN GROUP
- **CM** — *Conglomerate, sandstone, mudstone, siltstone, and shale with minor thin coal in upper part*

RIVERDALE GROUP
- **CR** — *Sandstone, mudstone, siltstone with coaly debris and rare coal*

CANSO GROUP
- **CC** — *Shale, siltstone, gypsum, anhydrite, and minor limestone and breccia*

WINDSOR GROUP
- **CW** ? — *Gypsum, anhydrite, and limestone with intercalated siltstone, sandstone, and conglomerate*
- **Cs** — *St. Peters gabbro*

HORTON GROUP
- **CH** — *Conglomerate, sandstone, and shale; minor limestone*

DEVONIAN-CARBONIFEROUS
- **DCs** — *Undivided sedimentary rocks of the L'Ardoise block: sandstone, shale, mudstone, and conglomerate; rare volcanic rocks*
- **DCr** — *PETIT-DE-GRAT PLUTON: red to pink leucogranite*

DEVONIAN
- **DM** — *MCADAM LAKE FORMATION: arkosic sandstone, conglomerate, shale, and felsic intrusions*
- **Dg** — *GILLIS MOUNTAIN PLUTON: porphyritic monzogranite, monzogranite, quartz monzodiorite*
- **Dd** — *DEEP COVE PLUTON: biotite monzogranite*
- **DL** — *LOWER ST. ESPRIT PLUTON: hornblende-biotite monzogranite*
- **DS** — *Salmon River rhyolite porphyry*
- **DMB** — *Miller Brook monzodiorite and similar intrusions*

DEVONIAN OR OLDER
- **Da** — *Amphibolite, schist, metasedimentary rocks, myonite*

ORDOVICIAN (?)
- **OM** — *MCADAMS BROOK FORMATION: quartz-rich siltstone and sandstone*

CAMBRIAN
- **CMN** — *MACNEIL FORMATION: dark grey shale, siltstone, and limestone*
- **CML** — *MACLEAN BROOK FORMATION: quartz sandstone, siltstone, and shale*
- **CT** — *TROUT BROOK FORMATION: shale, siltstone, and minor sandstone*
- **CC** — *CANGE BROOK FORMATION: mudstone, siltstone, and minor limestone*
- **CMC** — *MACCODRUM FORMATION: siltstone and shale*
- **CS** — *SGADAN LAKE FORMATION: quartz arenite and quartz pebble conglomerate*

LATE HADRYNIAN-CAMBRIAN
- **HCB** — *BENGAL ROAD FORMATION: maroon to red conglomerate, sandstone, siltstone; minor grey siltstone*

KELVIN GLEN GROUP
- **HCK** — *Orange lithic arkose, pebble to cobble conglomerate, purple subarkose, red siltstone*

LATE HADRYNIAN (?)
- **Hbs** — *Monzodiorite (East Bay Hills belt)*
- **Hgp** — *Granitic porphyry (East Bay Hills belt)*
- **Hgb, Hgr** — *Baleine gabbro (Coastal belt); Hgb, other gabbroic intrusions (coastal belt)*

LATE HADRYNIAN

MAIN-A-DIEU GROUP
- **Hbm** — *Varied maroon to red and green heterolithic lapilli tuff; basaltic flows; basaltic lapilli tuff; conglomerate, litharenite, and siltstone*
- **Hmg** — *Dark grey to light grey-green andesitic to dacitic lithic lapilli tuff*
- **Hbd** — *Varied lapilli tuff, mainly dacitic to rhyolitic; minor fine grained tuff and laminated siltstone*
- **Hwbf** — *Basalt flows, interlayered red conglomerate, tuffaceous arkose, and tuff*
- **Hbf** — *Grey-green laminated siltstone; minor lithic subarkose; minor basalt*

- **HMrt** — *Varied maroon to buff rhyolitic lapilli tuff*
- **Hbacb** — *Tuffaceous conglomerate, buff to green and maroon laminated siltstone, basalt*
- **HMc** — *Maroon to green conglomerate and laminated siltstone; lapilli tuff and tuffaceous conglomerate*
- **HMba** — *Basaltic and andesitic lapilli tuff; tuffaceous conglomerate; thin amygdaloidal basalt flows; maroon siltstone*
- **HMr** — *Varied rhyolitic lapilli tuff; rhyolitic flows; minor maroon siltstone*
- **HMb** — *Basaltic flows and lapilli tuff; maroon siltstone*
- **HMtl** — *Little Lorraine member: lithic lapilli tuff and tuffaceous conglomerate; grey-green laminated siltstone; numerous dacitic porphyry sills and plugs*
- **HH** — *Plutonic units (ca. 575 Ma)* **(Hb - HH)**
  - *Point Michaud leucogranite*
  - *Kennington Cove pluton: tonalite*
  - *Bethey Gut pluton: monzogranite*
  - *Capelin Cove pluton: monzogranite, leucogranite, granodiorite*
  - *Grand River pluton: leucogranite*

FOURCHU GROUP
- **HFb** — *Basaltic lapilli tuff and breccia; basaltic flows (locally amygdaloidal); minor litharenite*
- **HFc** — *Grey-green, crystal-rich dacitic tuff and lithic lapilli tuff; minor rhyolitic lapilli tuff and siliceous laminated tuff*
- **HFf** — *Dark grey to black, fine grained massive andesitic tuffs and flows; basaltic tuffs and flows; dark grey to black dacitic crystal-rich tuff; minor litharenite and siltstone*
- **HFa** — *Black to grey, fine grained andesitic lapilli tuffs and flows*
- **HFr** — *Dacitic to rhyolitic crystal-rich lithic lapilli tuff, fine grained rhyolitic tuff and chert; minor rhyolitic flows*
- **HFg** — *Gabarus member: grey-green dacitic to andesitic crystal-rich lithic lapilli tuff; abundant basaltic lenses (flows)*
- **HH** — *Dacitic to rhyolitic lapilli tuff and tuffaceous conglomerate; mainly red to maroon*
- **HFk** — *Kennington Cove member: dacitic quartz-feldspar lapilli tuff and tuff*
- **HFbl** — *Basaltic and andesitic lapilli tuffs and flows (?)*
- **HFf** — *Fourchu Head member: dacitic to rhyolitic lapilli tuff; minor basaltic to andesitic flows and fine grained tuffs*

PLUTONIC UNITS (ca. 620 Ma) **(HChd - HSmg)**
SPORTING MOUNTAIN PLUTON
- **HSmg** — *Granodiorite transitional to monzogranite*
- **HSmt** — *Tonalite*
- **HSMV** — *Sheared granitoid and volcanic rocks*

COXHEATH HILLS PLUTON
- **HCg** — *Granodiorite*
- **HCq** — *Quartz monzodiorite*
- **HCd** — *Dioritic rocks*
- **HCgb** — *Gabbro*

SPRUCE BROOK PLUTON
- **HSm** — *Monzogranite*
- **HSg** — *Granodiorite*
- **HSd** — *Dioritic rocks*

MACEACHERN LAKE PLUTON
- **HMcm** — *Monzogranite, minor granodiorite*
- **HMcg** — *Granodiorite, minor monzogranite*
- **HMcq** — *Quartz diorite, minor diorite and quartz monzodiorite*

HUNTINGTON MOUNTAIN PLUTON
- **Hhs** — *Syenogranite*
- **Hhl** — *Leucogranite*
- **Hhm** — *Monzogranite*
- **Hhg** — *Granodiorite*
- **Hhd** — *Dioritic rocks*

IRISH COVE PLUTON
- **Hirm** — *Monzogranite*

CHISHOLM BROOK SUITE
- **HCbg** — *Granodiorite*
- **HCbq** — *Quartz monzodiorite*
- **HCbd** — *Dioritic rocks*

PRINGLE MOUNTAIN GROUP
- **HP** — *Varied basaltic to rhyolitic lapilli tuff and ash tuff; minor rhyolitic flows*

COXHEATH GROUP
- **HCr** — *Rhyolitic tuff, lapilli tuff, and flows; minor basaltic to dacitic layers/lenses and tuffaceous sedimentary rocks*
- **HCa** — *Andesitic tuff, lapilli tuff, and flows; minor rhyolitic and basaltic lenses*
- **HCb** — *Basaltic flows, tuff, and lapilli tuff; minor rhyolitic, dacitic, and andesitic lenses*

EAST BAY HILLS GROUP
- **HEr** — *Pink, brown, and maroon rhyolitic lapilli tuff, tuff, and flows; (–Johnstown area, ea–Murphy Road area*
- **HEbs** — *Basaltic flows, commonly amygdaloidal, locally plagioclase-phyric; basaltic lapilli tuff; minor slaty tuff and tuffaceous conglomerate*
- **HEdc** — *Andesitic to dacitic crystal-rich tuff and lapilli tuff; minor rhyolitic tuffs*
- **HEad** — *Varied andesitic, dacitic, and rhyolitic lapilli tuff and crystal-rich tuff*
- **HEac** — *Andesitic crystal-rich tuff and lapilli tuff; minor rhyolite and siltstone*
- **HEdl** — *Basaltic to andesitic lapilli tuff and flows; minor tuffaceous conglomerate and litharenite*
- **HEdl** — *Dark grey to black dacitic lapilli tuff; minor basaltic to andesitic tuff*
- **HEab** — *Amygdaloidal basalt; porphyritic basalt; basaltic to andesitic tuff and lapilli tuff*
- **HEt** — *Varied grey-green andesitic to dacitic lapilli tuff, mainly strongly chloritized; minor rhyolitic tuff*
- **Hu** — *Minor plutonic units* **(Hmp - Hg)**
  - *Gabbro (Stirling belt)*
  - *Mafic porphyry (Stirling belt)*

STIRLING GROUP
- **HSrf** — *Rhyolite flows (?) and lapilli tuff; minor andesite, and lapilli tuff*
- **HSbr** — *Basalt-andesite-dacite flow breccia*
- **HSbs** — *Basalt-andesite flows, flow breccia, minor lapilli tuff*
- **HSla** — *Litharenite, conglomerate, siltstone, chert, and dolostone*
- **HSa** — *Andesite lapilli tuff and ash tuff, minor dacite, lapilli tuff*
- **HSlt** — *Lapilli tuff and ash tuff, rhyolite flows (?)*
- **HSr** — *Rhyolite porphyry*

Rock outcrop
Geological boundary (defined, approximate, assumed)
Bedding, top known (inclined, vertical)
Bedding, top unknown (inclined)
Primary flow structure (inclined)
Foliation (inclined, vertical)
Fault (approximate, assumed)
Mine or mineral prospect (copper) ⚒ Cu

MINERALS

Arsenic	As	Lead	Pb
Barium	Ba	Molybdenum	Mo
Bismuth	Bi	Silver	Ag
Cobalt	Co	Strontium	Sr
Copper	Cu	Tin	Sn
Gold	Au	Zinc	Zn
Iron	Fe		

GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA

MAP 1853A

GEOLOGY

SOUTHEASTERN CAPE BRETON ISLAND

NOVA SCOTIA

Scale 1:100 000 - Échelle 1/100 000

Kilometres 0 1 2 3 4 Kilomètres

Universal Transverse Mercator Projection
Projection transverse universelle de Mercator

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Geology by S.M. Barr, C.E. White, and A.S. Macdonald, 1987-1991

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Geological cartography by the 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 assembled by the Geological Survey of Canda from maps 11K/1, 11J/4 (1992), 11I/16, 11G/13 (1991), 11I/6 (1983), 11I/11, 11K/2 (1981), 11I/5, 11I/10 (1980), 11I/7, 11I/2 (1975), 11I/10, 11I/15 (1971)

Geographical names subject to revision

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

Mean magnetic declination 1994, 21°54' W, decreasing 5.5' annually. Readings may vary from 22°12' W, in the NE corner to 21°34' W in the SW corner of the map

Elevations in feet above mean sea level

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Parts of the geology by A.S. Sexton (1988, Sporting Mountain belt), and M.J. Thicke (1987, part of East Bay Hills and Coxheath Hills belts), were modified and incorporated in this map. Some boundaries and descriptions for Carboniferous units were taken from Boehner and Giles (1986), Boehner and Prime (1985) and Donohoe and Grantham (1989).

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1985: Loch Lomond Basin and Glengarry half-graben; Nova Scotia Department of Mines and Energy, Map 85-2, scale 1:50 000

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Thicke, M.J.
1987: Geology of the Late Hadrynian metarenites and granitoid rocks of the Coxheath Hills - northeastern East Bay Hills areas, Cape Breton Island, Nova Scotia; Unpublished M.Sc. Thesis, Acadia University.

NOTE

More detailed maps showing all outcrops and additional unit subdivisions are available in:

Barr, S.M., White, C.E., and Macdonald, A.S.
1996: Geological maps of Late Precambrian and Cambrian rocks, southeastern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 2732

LOCATION MAP

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE

COOPERATION
COOPERATION AGREEMENT ON MINERAL DEVELOPMENT
ENTENTE DE COOPÉRATION SUR L'EXPLOITATION MINÉRALE

Contribution to Canada-Nova Scotia Cooperation Agreement on Mineral Development (1990-1995) a subsidiary agreement under the Economic and Regional Development Agreement.

Contribution à l'Entente de coopération Canada- Nouvelle-Écosse sur l'exploitation minérale (1990-1995), une entente relevant de l'Entente de l'Entente Canada-Nouvelle-Écosse de développement économique et régional.

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