



LEGEND

Carboniferous

- C Undifferentiated Carboniferous rocks

Westphalian

- CMf Lower Mabou: interbedded grey shale, siltstone, and thin beds of brown locally arenaceous dolomite.

Mabou Group

- CWu Upper Windsor: anhydrite, gypsum, red and grey siltstone, with thin beds of fossiliferous grey limestone.
- CWl Lower Windsor: anhydrite, gypsum, minor dolomitized biohermal limestone, siltstone and shale.
- CWM Macumber Formation: laminated intraclastic peloidal and micritic grey limestone, locally oolitic.

Fammanian - Tournaisian

- CHA Ainslie Formation: mostly fluvial cross-bedded sandstone and conglomerate, siltstone.
- CHS Stratborne Formation: grey and red siltstone, sandstone, micritic limestone, conglomerate with carbonate clasts.
- DCH Crispish Formation: dominantly conglomerate with red and grey sandstone, thick and thin bedded, alluvial fan facies.
- DCFb Fisset Brook Formation, basal member: vesicular porphyritic basalt and andesite, with minor interbedded red siltstone and conglomerate.
- DCMgr Margaree pluton, coarse porphyritic rapakivi granite (342 +/- 17 Ma, Rb-Sr, O'Beirne-Ryan et al., 1995).

Devonian

- Dbx Cataclaste, breccia, and microbreccia.
- Dmy Mylonite, strongly linearized muscovite-chlorite schist, mylonitic gneiss, subordinate cataclaste.
- Dg granite to syenogranite, pink equigranular to slightly porphyritic with quartz phenocrysts, biotite, schistose gneiss, granodiorite, and medium- to coarse-grained pink granite. (399 +/- 5 Ma, Rb-Sr, O'Beirne-Ryan and Jamieson, 1986).
- DNRg West Branch North River Pluton: composite pluton of medium- to coarse-grained, light grey, porphyritic biotite-hornblende granodiorite, and medium- to coarse-grained pink granite. (399 +/- 5 Ma, Rb-Sr, O'Beirne-Ryan and Jamieson, 1986).

Silurian-Devonian

- SDg Medium-grained equigranular granite, biotite monzonite, locally foliated and weakly chloritized.
- SDPbgn Pleasant Bay - Belle Cote gneissic complex: amphibole-grade gneiss and granodiorite orthogneiss containing garnet and kyanite, also includes amphibolite, schistose gneiss, and pegmatite dykes (gneiss dated at 453 +/- 20 Ma, U-Pb Zircon, Jamieson et al., 1988, and 417 +/- 2 Ma, U-Pb monazite, Barr and Jamieson, 1991).

Silurian

- STBg Medium- to coarse-grained, pink, weakly to strongly foliated granite and augen granite (419 +/- 17 Ma, Rb-Sr, Gaudette et al., 1995).

Ordovician-Silurian

- OST Sarach Brook Formation: rhyolite, felsic to intermediate tuff, lahar tuff and volcanic breccia, minor volcanic flows and slate (433 +/- 4 Ma, U-Pb zircon in rhyolite, Dunning et al., 1990).
- OSv Schistose chloritic volcanic rocks, metabasalt and mylonitic diorite.
- OSc Schistose quartz pebble wacke, siltstone, polymictic meta-conglomerate and meta-sandstone.

uncertain age

- ODv Chlorite schist, metapelitic rocks.

Rock outcrops mapped by the authors

- Rock outcrops mapped by Home (1992)
- Bedding: tops unknown, tops known, overturned
- Gneissic fabric:
 - Foliation: generation unknown, 1st generation, 2nd generation
 - Gauge plane or striated fracture
 - Shear zone or mylonite: sense unknown, sinistral, normal
- Litic, lineation
- Intersection lineation
- Fold axis
- S fold
- Axial plane: generation unknown, 2nd generation
- Joint
- Dyke, includes granitic and fine grained mafic dykes
- Quartz vein
- Slackenside
- Mineral Occurrence (Ponford and Lytle, 1984): Au, Gold, Co, Copper Fe, Iron Mo, Molybdenum Ni, Nickel Pb, Lead Zn, Zinc
- Geological boundary (defined, approximate, assumed)
- Steep fault (defined, approximate, assumed)
- Detachment fault (defined, approximate, assumed)
- Extensional shear zone (defined, approximate, assumed)
- Litic fault (defined, approximate, assumed)
- Thrust fault (defined, approximate, assumed)
- Anticlinal axis
- Synclinal axis

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GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA
OTTAWA, 1996

References and related maps:

- Barr, S.M., Raseide, R.P., and Jamieson, R.A. 1987. Geological map of the gneissic and metamorphic rocks of northern Cape Breton Island. Geological Survey of Canada, Open File 1056, six sheets 1:500 000 scale.
- Barr, S.M., Jamieson, R.A., and Raseide, R.P. 1982. Geology, northern Cape Breton Island, Nova Scotia. Geological Survey of Canada, Map 1752A, scale 1:100 000.
- Cormier, R.F. 1980. New rubidium-strontium ages in Nova Scotia. Nova Scotia Department of Mines and Energy, Report 80-1, p. 223-233.
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- Home, R.J. 1992. Preliminary geological map of west-central Cape Breton Highlands, Nova Scotia Department of Mines and Energy, OF-81-001, NTS reference 11K07 and 11K10, one sheet, 1:250 000 scale.
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- O'Beirne-Ryan, A.M., Barr, S.M., and Jamieson, R.A. 1986. Constraining tectonics and age of two magmatic granitoid plutons, Cape Breton Island, Nova Scotia, in Current Research, Part B, Geological Survey of Canada, Paper 86-B, p. 179-190.
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- Ponford, M., Lytle, N.A. 1984. Metalic Mineral Occurrences Map and Data Compilation, Eastern Nova Scotia (Map Sheets 11F, 11G, 11H, 11K, 11N). Nova Scotia Department of Mines and Energy, OFR 60.

Copies of this map may be obtained from the Geological Survey of Canada, P.O. Box 1086, Corner Brook, New Brunswick A2B 4A2 or 601 Booth St., Ottawa, Ontario, K1S 0S8.

Geology by G. Lynch and B. Lafrance 1994; assisted by J. Ortega; additional information compiled from Barr et al (1987), Barr et al (1992), Home (1992), and Dunning et al. (1992).
Digital cartography by T. Houshian and C. Deblonde, Geological Survey of Canada
Electrostatic plot produced by the Geological Survey of Canada

Any revisions or additional information known to the user would be welcomed by the Geological Survey of Canada.
Digital base map assembled and modified by the Geological Survey of Canada from digital bases compiled by the Canada Centre for Geomatics

Mean magnetic declination 1995 estimated to be 21°45'W at coordinates 46°15'N and 60°37'30"W

WORKING MAP
BEDROCK GEOLOGY
ST. ANNS HARBOUR
CAPE BRETON ISLAND
NOVA SCOTIA

Scale 1:50 000 - Echelle 1/50 000

Kilometres 1 2 3 4 Kilometres

Canada International 5D Feet
North American Datum 1983
Universal Transverse Mercator Projection
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COOPERATION
AGREEMENT ON MINERAL DEVELOPMENT / ENTENTE DE COOPÉRATION SUR L'EXPLOITATION MINÉRIALE

Contribution to Canada-Nova Scotia Cooperation Agreement on Mineral Development 1992-1995, a subsidiary agreement under the Economic and Regional Development Agreement.

Contribution à l'Entente de coopération Canada-Nouvelle-Écosse sur l'exploitation minérale 1992-1995, entente subsidiaire respectant le cadre de l'Entente Canada-Nouvelle-Écosse de développement économique et régional.

Canada Nova Scotia Province of Nova Scotia

11 K11	11 K10	11 K9
11 K8	11 K7	11 K6
11 K3	11 K2	11 K1

NATIONAL TOPOGRAPHIC SYSTEM PROJECTIONS

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