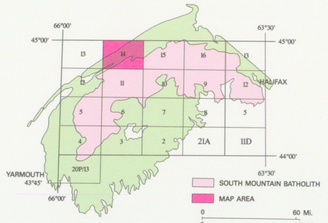
Location Map



LEGEND

TRIASSIC

- TrNM — **NORTH MOUNTAIN BASALT:*** basalt.
- Tr — **BLOMIDON FORMATION:*** siltstone, arenaceous shale and minor claystone.
- TrW — **WOLFVILLE FORMATION:*** sandstone and arkose.

DEVONO-CARBONIFEROUS

SOUTH MOUNTAIN BATHOLITH

- DCmI — **INGLISVILLE LEUCOMONZOGRANITE**[1]: buff, pink and reddish, fine- to medium-grained, slightly porphyritic[2] to equigranular, with minor coarse grained phenocrysts and/or pegmatite pods, may contain 1-20 cm pegmatite pods, biotite 0-6%, muscovite[3] 1-5%, may contain trace amounts of garnet or tourmaline.
  - as above with consistently equigranular texture
- DCm — **LEUCOMONZOGRANITE:** grey, fine grained, equigranular or porphyritic biotite 5-7%, muscovite 1%.
- DCmMR — **MORSE ROAD LEUCOMONZOGRANITE:** buff to pinkish grey, medium- to coarse-grained, alkali feldspar megacrysts[4] (20-35%) are often small (e.g., < 2 cm), biotite 3-10% (av. 5.7), muscovite 1-8% (av. 2.1%), cordierite 0.4-6% (av. 2%), may contain trace-0.2% garnet, often has heterogeneous texture with minor megacryst-rich pods (up to 50%) and megacrystic-poor pods with up to 8- > 10% biotite, selective hematization of plagioclase cores diagnostic.
- DCmgBU — **BUTTON BROOK LEUCOMONZOGRANITE:** light grey to buff, fine- to coarse-grained, porphyritic, seriate or megacrystic, biotite 3.5-9% (av. 4.5%), muscovite 0.2-4% (av. 1.2%), may contain trace cordierite and/or garnet. Finer grained and non-megacrystic near contact with DCmgSG and DCmMR (chilled margin ?).
- DCmgWD — **WEST DALHOUSIE MONZOGRANITE*:** light- to medium-grey, buff, pink, medium- to coarse-grained, megacrystic (20-35%), biotite 5-12% (av. 7.4%), muscovite trace- 0.8% (av. 0.4%), cordierite 1-4% (av. 2.7%), euhedral alkali feldspar megacrysts/phenocrysts which average 1.0 x 2.5 cm in size are diagnostic, metasedimentary (?) xenoliths common, minor igneous xenoliths[5] contain similar sized porphyroblasts/megacrysts.
- DCmgCL — **CLOUD LAKE MONZOGRANITE:** light- to medium-grey, fine- to medium-grained, seriate to slightly megacrystic (1-4%) with minor coarse grained megacrysts and quartz eyes, biotite 7-17% (av. 1.6%), muscovite 0-2% (av. 1.2%), locally has trace cordierite and garnet, very homogeneous texture, finer grained than DCmgSG, small subhedral to anhedral alkali feldspar megacrysts (generally 1-3 cm) are diagnostic, common small metasedimentary (?) xenoliths (< 5-15 cm). One area with pervasive biotite foliation and minor feldspar augen.
- DCgdSG — **SCRAG LAKE GRANODIORITE:** light- to medium-grey, medium- to coarse-grained, megacrystic (5-15%), sub-rounded quartz eyes to 1.5 cm, biotite 7-16% (av. 11%), muscovite trace-1%, may contain garnet (< 0.7%) and/or cordierite (trace), common to abundant metasedimentary (?) xenoliths (5 cm- > 1 m) that are generally larger than in DCmgCL.
- DCmgSG — **SCRAG LAKE MONZOGRANITE:** very similar to DCgdSG except is monzogranitic in composition.
- DCgd — medium grey, fine- to medium-grained, seriate to equigranular granodiorite.
- Dm — **MAFIC INTRUSIONS:**** mostly sills of gabbro; some peridotite and quartz gabbro.

ORDOVICIAN-DEVONIAN

- DT — **TORBROOK FORMATION:**** shale, siltstone and quartzite; minor shaly limestone and iron formation.
- Sk — **KENTVILLE FORMATION:**** shale, siltstone and slate.
- OSw — **WHITE ROCK FORMATION:**** slate and subordinate siltstone, quartzite, and volcanic rocks.

CAMBRO-ORDOVICIAN

MEGUMA GROUP

- €OH — **HALIFAX FORMATION:**** siltstone and slate.
- €Og — **GOLDENVILLE FORMATION:**** metagreywacke and minor slate.

* Geology modified after:

SMITHERINGALE, W.G. 1973. Geology of parts of Digby, Bridgetown and Gaspereau Lake map areas, Nova Scotia. Geological Survey of Canada, Memoir 358, p.78.

TAYLOR, F.C. 1969. Geology of the Annapolis-St. Mary's Bay map area, Nova Scotia. Geological Survey of Canada, Memoir 358, p.63.

** Geology modified after:

SMITHERINGALE, W.G. 1973.

Planimetric base from National Topographical Series, Department of Energy, Mines and Resources, Ottawa.

Updated from aerial photography that was available in May, 1988.

Cartography by Land Registration and Information Service, Amherst, Nova Scotia.

SYMBOLS

(not all symbols occur on map)

- Rock outcrop, probable outcrop, float
- Geological boundary (defined, approximate, assumed, defined by till clasts)
- Geological boundary — gradational (< 100 m; > 100 m)
- Exposed intrusive contact (arrow pointing toward younger unit, age relation not determined)
- Unconformity (hatching on younger side)
- Limit of mineralogical or textural variation
- Bedding (horizontal, inclined, vertical, overturned, dip unknown, younging direction unknown)
- Anticline (defined, approximate)
- Syncline (defined, approximate)
- Preferred orientation of feldspar megacrysts (horizontal, inclined, vertical, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Breccia
- Schlieren banding (horizontal, inclined, vertical, dip unknown) poorly developed isolated bands and well developed (thin and heavy lines respectively)
- Lineament (from air photos)
- Fault (defined, approximate, assumed, inclined, vertical)
- Fault (sinistral, dextral)
- Shearing and intense fracturing, fracture cleavage (horizontal, inclined, vertical, dip unknown)
- Joint (horizontal, inclined, vertical, dip unknown)
- Striations: sense of ice flow (known or unknown)
- Dyke or vein: ALBI-albitite; APPG-aplite with minor pegmatite; DIAB-diabase; ELVA-elvan; LUGR-leucogranite; LUMZ-leucomonzogranite; LUPO-leucoporphyry; MIAP-mica aplite; MONZ-monzogranite; PGAP-pegmatite with minor aplite; PEGM-pegmatite; PEGMZ-zoned pegmatite; PORP-porphyry; QTZ-quartz (indicated if mineralized); all unlabelled dykes are aplites; < 1 m-thin lines, > 1 m-heavy lines (inclined, vertical, dip unknown)
- Stockwork (type indicated)
- Sheeted complex (type indicated)
- Area of abundant dyking (type or map unit indicated)
- Greisen: < 1 m, > 1 m (indicated if mineralized)
- Megacryst-rich area
- Xenoliths (< 1 m, > 10 m, concentration of xenoliths) map unit indicated when known
- Diamond-drill hole (DDH; reference number from N.S.D.N.R. Drill hole database)
- Trench, adit, shaft
- Mineral occurrence (commodities indicated at top; number on bottom refers to N.S.D.N.R. mineral occurrence cards)
- Mine, Prospect, Quarry (active, abandoned)
- Skarn

COMMON MINERAL ABBREVIATIONS

ad-andalusite; am-amethyst; ap-apatite; as-arsenopyrite; at-autunite; bo-bornite; ca-calcite; cc-chalcocite; ks-cassiterite; cp-chalcopyrite; ch-chlorite; cd-cordierite; cy-chrysocola; fl-fluorite; gn-galena; gr-garnet; he-hematite; il-ilmenite; ka-kaolinite; ma-malachite; man-manganese minerals; mo-molybdenite; mu-muscovite; po-pyrrhotite; py-pyrite; qtz-quartz; sh-scheelite; sl-sillimanite; sp-sphalerite; se-sericite; to-torbernite; tr-tourmaline; wo-wolframite.

COMMON ALTERATION ABBREVIATIONS

ALB-albitization; CHL-chloritization; DES-desilicification; HAA-high alumina; HEM-hematization; KAO-kaolinitization; LIM-limonitization; POT-potassic (which includes biotitization and K-feldspathitization); SAU-sausseuritization; SIL-silicification; *intense and pervasive in capitals; slight to moderate in lower case.*

[1] LEUCOMONZOGRANITE: A granitoid rock of monzogranite composition with less than 6% combined mafic minerals.

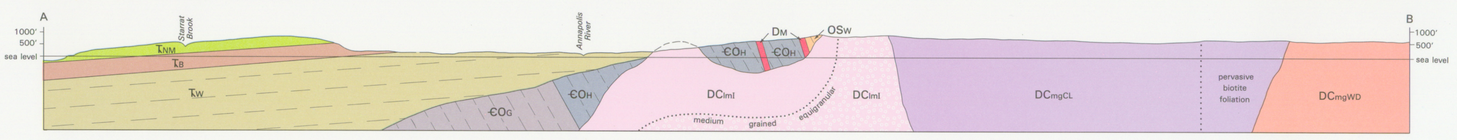
[2] PORPHYRY: A granitoid rock with predominantly fine-grained groundmass and medium- to coarse-grained phenocrysts (i.e., bimodel grain size). Phenocrysts rarely exceed 2 cm (ad. porphyritic).

[3] PERCENT MUSCOVITE, CORDIERITE, BIOTITE: Percentage of muscovite and cordierite from visual model estimates. Percentage of biotite from point counting and visual modal estimates.

[4] MEGACRYST: A non-genetic term for a crystal that is significantly larger than the surrounding groundmass. In the South Mountain Batholith megacrysts are predominatly subhedral to euhedral K-feldspar, and rarely plagioclase, crystals (generally between 2.5-7 cm in length) in medium- to coarse-grained rocks; adj. megacrystic. Percentage of megacrysts from visual modal estimates.

[5] MONZOGRANITE, GRANODIORITE, SYENOGRANITE: After Streckeisen (1976): To each plutonic rock its proper name; Earth Science Review, v. 12, p. 1-33.

[6] XENOLITHS ABUNDANCE: Rare - local xenoliths in some outcrop; Common - a few xenoliths in most outcrop; Abundant - few to many xenoliths in all outcrops.



NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES

MINES AND ENERGY BRANCHES

MAP 94-08

GEOLOGICAL MAP OF

BRIDGETOWN NOVA SCOTIA

(N.T.S. SHEET 21A/14)

SOUTH MOUNTAIN BATHOLITH PROJECT

M. A. MACDONALD and L. J. HAM

SCALE 1 : 50 000

kilometres 1 0 1 2 3 4 kilometres

miles 1 0 1 2 miles

NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES

HONOURABLE DONALD R. DOWNE, MINISTER — DARRELL D. HILTZ, DEPUTY MINISTER

HALIFAX, NOVA SCOTIA
1994

Nova Scotia Department of Natural Resources

Canada-Nova Scotia Mineral Development Agreement

Canada-Nova Scotia Cooperation Agreement on Mineral Development