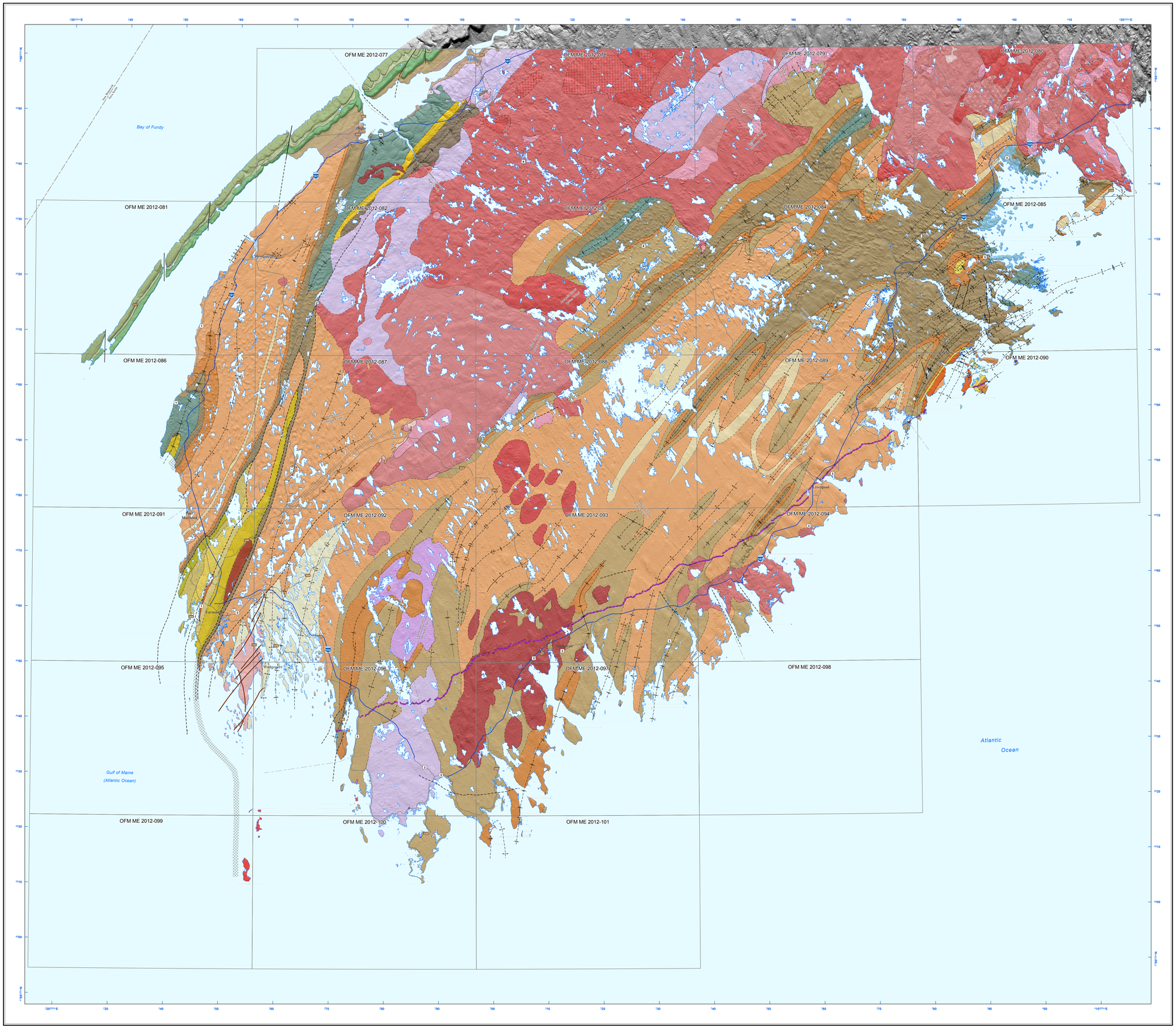


LEGEND*

* Note: Unit labels are not indicated on the map. This map is intended for use as an index only for Open File Maps ME 2012-077 to ME 2012-101.

MESOZOIC

LATE TRIASSIC

SHELBURNE DYKE (TRs): black to brown, fine- to coarse-grained gabbro

FUNDY GROUP

NORTH MOUNTAIN FORMATION (adapted from Kontak and Webster, 2010)

BRIER ISLAND MEMBER (Upper Flow Unit) (TRFnb): dark grey to grey-green, medium-grained, ophitic basalt with plagioclase and pyroxene microcrysts

MARGARETSVILLE MEMBER (Middle Flow Unit) (TRFnm): dark grey to grey-green and red-brown, massive to vesiculated, fine-grained basalt; abundant zeolite phases

EAST FERRY MEMBER (Lower Flow Unit) (TRFne): grey-green, fine- to medium-grained, massive basalt with microcrysts of plagioclase and pyroxene; gabbroic pegmatite common.

MIDDLE TO LATE TRIASSIC

WEDGEPORT DYKES (TRw): black to brown, fine- to medium-grained lamprophyre and alkaline olivine gabbro

BLOMIDON FORMATION (TRFb): red-brown to locally grey-green siltstone and minor sandstone and shale; caliche nodules common; rare evaporite beds

WOLFVILLE FORMATION (TRFw): pink to red, coarse-grained sandstone and conglomerate with minor red to red-brown siltstone and shale

PALEOZOIC

CARBONIFEROUS

VISÉAN

WINDSOR GROUP

UNDIVIDED (CWu): limestone, dolostone, gypsum, sandstone, shale and conglomerate

TOURNAISIAN

WEDGEPORT PLUTON (Cwm): pale grey, medium- to coarse-grained, equigranular to porphyritic biotite monzogranite to syenogranite; garnet locally present; fine- to medium-grained, biotite-rich, round grandioritic enclaves common; cut by lamprophyre and alkaline olivine gabbro dykes

LATE DEVONIAN

SEAL ISLAND PLUTON: grey, coarse-grained, inequigranular to porphyritic biotite monzogranite with megacrysts of K-feldspar (Dsbm); grey, coarse-grained, equigranular muscovite-biotite monzogranite to syenogranite (Dsmbm)

MERSEY POINT GABBRONORITE (Dmpgb): massive, black to brown, coarse-grained gabbronorite

JOHN ISLAND MONZOGRANITE (Djm): pale grey, moderately foliated, medium-grained muscovite-biotite monzogranite

BALD MOUNTAIN PLUTON (Dbm): grey, moderately foliated, medium-grained, equigranular muscovite-biotite monzogranite; pegmatite dykes common

CLAYTONS HILL PLUTON (Dclm): pale grey, medium-grained, equigranular muscovite-biotite leucomonzogranite; abundant miarolitic cavities; aplite and pegmatite dykes common

ELLISON LAKE PLUTON (Dem): grey, medium- to coarse-grained muscovite-biotite monzogranite and granodiorite with locally well-developed K-feldspar megacrysts

PORT MOUTON PLUTON: light grey, medium-grained biotite-muscovite monzogranite to granodiorite (Dpm); grey to dark grey, medium- to coarse-grained, foliated biotite tonalite and granodiorite with minor syntectonic lamprophyric dykes (Dpt); locally layered; abundant aplite and pegmatite dykes; massive, unzoned pegmatite with tourmaline and rare beryl (Dpp)

COFFIN ISLAND PLUTON (Dcm): light grey, medium-grained biotite-muscovite monzogranite to granodiorite

SHELBURNE PLUTON (and related plutons)(Dsm): pale grey, moderately foliated, medium-grained biotite-muscovite monzogranite; abundant aplite and pegmatite dykes

QUINAN PLUTON (Dqpd): grey, medium-grained, foliated to equigranular biotite granodiorite to tonalite; locally porphyritic; abundant aplite and pegmatite dykes

BARRINGTON PASSAGE PLUTON (and related plutons): grey, medium-grained, strongly foliated to equigranular biotite tonalite to quartz diorite and granodiorite; rare hornblende; locally layered (Dbt); massive, unzoned pegmatite (Dbp)

MURRAY COVE GABBRONORITE (Dmgb): black, massive, medium- to coarse-grained gabbronorite

BIRCHTOWN DIORITE (Dbd): massive, medium- to coarse-grained biotite- and hornblende-bearing diorite

LYONS BAY TONALITE (Dlt): grey, medium-grained, equigranular hornblende- and biotite-bearing quartz diorite to tonalite; locally mylonitic along margins

SOUTH MOUNTAIN BATHOLITH (listed in order of increasing mafic mineral content; modified after MacDonald, 1994)

BURNT BLANKET (DSbl); EAST KEMPTVILLE (DSel); KEDDY-REEVES (DSkl); LONG LAKE (DSll): MUSCOVITE LEUCOGRANITE: buff, orange, pink, red, white; predominantly fine- to medium-grained, minor coarse-grained; porphyritic; equigranular or pegmatitic muscovite leucogranite

DOG LAKE (DSdlm); EAST DALHOUSIE (DSelm); MICKEY HILL (DSmlm); NEW CORNWALL (DSnlm); PANUKE LAKE (DSplm); SABEANS LAKE (DSslm); TANTALLON (DStlm); WALDEN (DSwlm); WESTFIELD (DSwflm); UNNAMED PLUTONIC BODIES (DSulm) LEUCOMONZOGRANITE: buff, orange, white, pink, red; predominantly fine- to medium-grained, minor coarse-grained; variably porphyritic and equigranular, minor pegmatitic leucomonzogranite; metasedimentary xenoliths rare

EAST DALHOUSIE (DSelm); PANUKE LAKE (DSplm) LEUCOMONZOGRANITE: buff, orange, pink, red, white; fine-grained, equigranular or slightly megacrystic

DAVIS LAKE (DSdclm); LAKE GEORGE (DSlclm); NEW ROSS (DSnclm) LEUCOMONZOGRANITE: buff, orange, white, pink; predominantly medium- to coarse-grained, minor fine-grained; megacrystic or seriate leucomonzogranite; metasedimentary xenoliths rare

SPECTACLE LAKE LEUCOMONZOGRANITE (DSscm): buff, orange, white, pink; coarse-grained, megacrystic

JOE SIMON (DSjm); KEJIMKUJIK (DSkm); SHERWOOD (DSsm); SOLOMON LAKE (DSslm); WEST DALHOUSIE (DSwm); WHALE LAKE (DSwlm) MUSCOVITE-BIOTITE MONZOGRANITE: light to medium grey, minor buff or orange; predominantly medium- to coarse-grained, minor fine-grained; megacrystic or seriate; metasedimentary xenoliths common

SOLOMON LAKE (DSslm); WEST DALHOUSIE (DSwm) MUSCOVITE-BIOTITE MONZOGRANITE: light to medium grey, minor buff or orange; megacrystic or equigranular

LITTLE ROUND LAKE (DSlrb); SCRAG LAKE (DSsb); SANDY LAKE (DSslb); SALMONTAIL LAKE (DSslb); TOBEATIC LAKE (DStb) BIOTITE MONZOGRANITE: light to medium grey; predominantly medium- to coarse-grained; megacrystic or seriate; metasedimentary xenoliths common to abundant

SCRAG LAKE BIOTITE MONZOGRANITE (DSsb): light to medium grey; fine- to coarse-grained, porphyritic

LEQUILLE (DSlgd); ROSEWAY LAKE (DSrgd); SCRAG LAKE (DSsgd) BIOTITE GRANODIORITE: light to medium grey; predominantly medium- to coarse-grained, minor fine-grained; megacrystic or seriate; metasedimentary xenoliths are abundant

BIOTITE PORPHYRY (DSp): light, medium or dark grey or brownish grey; predominantly fine- to medium-grained, minor coarse-grained; porphyritic; metasedimentary xenoliths abundant

SILURIAN

BRENTON PLUTON (Sbs): grey, medium-grained, foliated syenogranite to monzogranite

MAVILLETTE GABBRO (Smgb): dark green to grey, medium-grained, subophitic to ophitic leuco-gabbronorite to gabbronorite to mela-gabbronorite; locally fine-grained and equigranular

NICKERSONS POINT GABBRO (Sngb): dark green to grey, medium- to locally coarse-grained, intergranular to rarely ophitic and layered leuco-gabbronorite

WENTWORTH LAKE GABBRO (Swgb): grey, medium- to locally coarse-grained, equigranular and massive, hornblende gabbro; locally mylonitic

LATE ORDOVICIAN TO EARLY DEVONIAN

ROCKVILLE NOTCH GROUP

TORBROOK FORMATION (LSDRt): dark grey to black metasiltstone and calcareous metasiltstone with minor slate, metasandstone, marble, quartzite and rare ironstone; abundant shelly fossils

WHITE ROCK FORMATION (LSRw): grey to dark grey slate and metasiltstone and minor light grey to white, thickly bedded quartzite; abundant pinkish-grey calc-silicate lenses; rare marble

GOVERNMENT BROOK MEMBER (SRwg): grey, biotite (+/- garnet and staurolite)-bearing slate, phyllite, schist and metasandstone interlayered with green mafic to intermediate lithic metatuff and tuffaceous metasandstone and amphibolite; rare quartzite

SUNDAY POINT MEMBER (SRws): grey, mafic lithic to lithic crystal metatuff and flows, minor pale, felsic crystal metatuff and tuffaceous metasandstone; rare pillow basalt flows

DAYTON MEMBER (SRwd): grey, chloritoid-bearing, thin-bedded metasandstone, biotite-spotted slate, and calc-silicate nodules interlayered with mafic lithic metatuff, flows, and tuffaceous metasandstone

CAPE FORCHU MEMBER (SRwcf): green to dark grey, massive mafic flows and lithic to crystal lithic metatuff interlayered with actinolite-bearing tuffaceous metasandstone and calc-silicate nodules; rare pillow basalt flows

OVERTON MEMBER (SRwo): dark green and pink, mafic to felsic, crystal to crystal lithic metatuff and mafic flows interlayered with grey, actinolite-bearing tuffaceous metasandstone, metasiltstone, and minor quartzite; calc-silicate beds common; minor amphibolite and conglomerate; trace and shelly fossils locally abundant

CHEGOGGIN POINT MEMBER (LOSRwc): grey, tuffaceous metasandstone, metasiltstone, slate and quartzite, locally chloritoid- and garnet-bearing; calc-silicate beds and nodules common; minor amphibolite; rare trace fossils

CAPE ST. MARYS MEMBER (LOSRwcs): green, massive mafic flows and lithic tuff with grey metasandstone, metasiltstone and minor quartzite; minor metaconglomerate; rare trace fossils

EARLY CAMBRIAN TO EARLY ORDOVICIAN

HALIFAX GROUP

BEAR RIVER FORMATION (EOHb): light to dark grey, well-laminated, cleaved metasiltstone with thin beds of slate; minor medium-bedded, fine-grained metasandstone; trace fossils and bioturbated beds common; minor mafic sills

ACADIA BROOK FORMATION (LCHa): grey to dark grey, laminated slate with minor, thin beds and lenses of light grey metasiltstone; medium-bedded, crosslaminated, fine- to medium-grained metasandstone; sulphide minerals common; minor mafic sills

GOLDENVILLE GROUP

BLOOMFIELD FORMATION (MCGb): maroon and green to grey, thin- to medium-bedded metasiltstone to slate; rare thin-bedded, fine-grained metasandstone; minor mafic sills

CHURCH POINT FORMATION (ECGc): grey, medium- to thick-bedded, very fine- to medium-grained metasandstone locally interlayered with green, cleaved metasiltstone, and rare black slate; calc-silicate nodules common; minor mafic sills

HIGH HEAD MEMBER (ECGch): greyish-green, parallel-laminated, magnetite-rich, metasiltstone to slate; abundant trace fossils; minor, very thick-bedded, fine- to coarse-grained metasandstone; minor mafic sills

SHEAR ZONE

HALIFAX GROUP

FELTZEN FORMATION (EOHf): light grey to blue-grey slate, rhythmically interlayered with laminated to thin-bedded, fine-grained metasandstone; trace fossils and bioturbated beds common

CUNARD FORMATION (LCHc): black to rust-brown slate with thin beds and lenses of minor black metasiltstone; medium-bedded, fine-grained, crosslaminated metasandstone; sulphide minerals common

GOLDENVILLE GROUP

MOSHERS ISLAND FORMATION (MCGm): green to greenish-grey to grey, well-laminated metasiltstone to slate; minor, very thin- to thin-bedded, fine-grained metasandstone; abundant manganiferous nodules, laminations and coticules

GOVERNMENT POINT FORMATION (MCGgp): grey, thin- to thick-bedded metasandstone with minor calc-silicate nodules and rare manganese nodules; laminated, green to greyish-green to purple metasiltstone and rare black slate; trace fossils common

TANCOOK MEMBER (MCGgpt): grey, thin-bedded and thick-bedded, fine-grained metasandstone with green and green-grey metasiltstone; rare metacarbonate with trilobite fossils

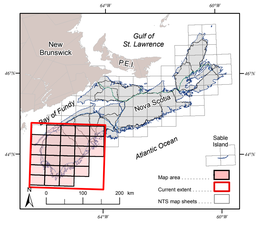
WEST DUBLIN MEMBER: grey, thin- to thick-bedded, fine-grained metasandstone with green and green-grey metasiltstone (MCGgpw); abundant sedimentary structures; green, slump-folded metasiltstone (MCGgpws)

RISSERS BEACH MEMBER (MCGgpr): green metasiltstone and grey, thin-bedded, fine-grained, crosslaminated, metasandstone; rare trace fossils

GREEN HARBOUR FORMATION (ECGg): grey, thick-bedded, medium-grained metasandstone with minor calc-silicate nodules; minor green, cleaved metasiltstone and slate; rare trace fossils

LAKE ROSSIGNOL MEMBER (ECGgl): grey, very thick-bedded, fine-grained metasandstone with conglomeratic bases

MOSES LAKE FORMATION (ECGml): grey, thin- to medium-bedded, fine- to medium-grained metasandstone with minor calc-silicate nodules interlayered with sulphide-bearing, magnetic slate; minor green, cleaved metasiltstone



Descriptive Text

In 1998 the Nova Scotia Department of Natural Resources initiated a program of geological mapping of the Meguma Terrane of southwestern Nova Scotia. The principal goals of this project are to produce a series of 1:50 000 scale geological bedrock maps of the area, to describe and interpret the sedimentary, igneous, metamorphic and deformational history of the Cambrian to Early Devonian metamorphic rocks, and to evaluate the area's economic potential. This map is an overview of the series of 25 maps highlighting the bedrock geology of southwestern Nova Scotia.

These new maps, combined with stratigraphic, geochemical, geochronological, paleontological and isotopic data (White, 2010; White and Barr, 2010), have highlighted the need to produce a new stratigraphic paradigm together with the 1:50 000 scale geological maps for the Meguma Terrane.

Disclaimer

The information on this map may have come from a variety of government and nongovernment sources. The Nova Scotia Department of Natural Resources does not assume any liability for errors that may occur. This map is intended for use as an index map only. Not for use as a geological map at 1:250 000 scale.

Map Notes

GIS databases, cartography and reproduction by Angie Ehler, Brian Fisher and Jeff McKinnon of the Nova Scotia Department of Natural Resources, Geoscience Information Services Section, 2009-2012. The GIS databases and map were developed using ArcGIS® 9.3.

Universal Transverse Mercator Projection (UTM), Zone 20, Central Meridian 63°00' West.

North American Datum (NAD) 1983 Canadian Spatial Reference System (CSRS) 98.

Base and digital data derived from the Nova Scotia Topographic Database (NSTDB). Copyright Her Majesty the Queen in Right of the Province of Nova Scotia. The NSTDB is available from Service Nova Scotia and Municipal Relations (SNSMR), Land Information Services Division (LIS), Nova Scotia Geomatics Centre (NSGC), Amherst, Nova Scotia.

Shaded relief image derived from a 25 m digital elevation model of the Province of Nova Scotia, DP ME 56, version 2, 2006. Azimuth of 0°, sun angle of 45° and a vertical exaggeration of 5.

Nova Scotia Department of Natural Resources
Mineral Resources Branch

Open File Map ME 2012-076

Overview Map Showing Locations of Bedrock Geology Maps for the Southwestern Area of Nova Scotia

C. E. White

Scale 1:250 000

5 0 5 10 15 20 km

Halifax, Nova Scotia
2012

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Recommended Citation

White, C. E. 2012: Overview map showing locations of bedrock geology maps for the southwestern area of Nova Scotia; Nova Scotia Department of Natural Resources, Mineral Resources Branch, Open File Map ME 2012-076, scale 1:250 000.

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† Internal Search Number (ISN) is a unique identifier used in NovaScan - the Nova Scotia Geoscience Maps and Publications Database. The ISN can be used to retrieve a digital version of the listed citation - http://www.gov.ns.ca/natr/msi/delta/ef.asp

Symbols

Geological contact (assumed, approximate, defined)
Fault (assumed, approximate, defined)
Anticline (assumed, approximate, defined)
Overturned anticline (approximate, defined)
Syncline (assumed, approximate, defined)
Overturned syncline (approximate)
Shear zone
Map series index
Arterial highway — 102
Trunk highway — 4
Collector highway — 333
County boundary
Lake/ocean

NOVA SCOTIA

Open File Map ME 2012-076

Oct 15, 2012