

Geology Legend

(Note: legend common to all four map sheets, items may or may not be located on an individual map sheet.)

STRATIFIED ROCKS

LATE CARBONIFEROUS

- CLAMBER AND GROUP**
 - LCc: undivided, red sandstone and siltstone, 50 m
 - LCps: POLLY BROOK FORMATION (LCps): red conglomerate and sandstone, 20 m

EARLY CARBONIFEROUS

- HORTON GROUP and equivalents**
 - HCw: FALLS FORMATION (HCw): red-brown conglomerate and coarse sandstone, <1 km
 - HCw1: HUTCHY FORMATION (HCw1): undivided, grey sandstone, siltstone and argillite, minor conglomerate, locally black, purple or green siltstone and argillite, <1 km
 - HCw2: fine facies, principally argillite, siltstone and fine sandstone
 - HCw3: coarse facies, principally conglomerate and medium coarse sandstone

DEVONIAN - CARBONIFEROUS

- FOUNTAIN LAKE GROUP (undivided in western Cobequid Highlands)**
 - DCr: undivided, basalt, pink and green myelite, minor red and grey conglomerate, sandstone and siltstone, <800 m
 - DCr1: principally myelite; DCr2: undivided, principally basalt
- DIAMOND BROOK FORMATION (eastern Cobequid Highlands)**
 - DCD: undivided, basalt, pink and green myelite, minor red and grey conglomerate, sandstone and siltstone, <800 m
 - DCD1: sandy facies, grey, brown and red, medium and fine sandstone, red and minor grey siltstone and shale, minor conglomerate, argillite, well sorted, pebbles conglomerate, minor coarse and medium, red and brown sandstone; DCDF: basalt facies, basalt flows, locally vesicular, minor red siltstone and grey sandstone; DCDF1: myelite facies, grey or pink, low basaltic myelite, minor tuff and volcaniclastic sandstone
- BYERS BROOK FORMATION (eastern Cobequid Highlands)**
 - DCB: grey and pink, myelite tuff with minor conglomerate, myelite and basalt flows, and volcaniclastic sandstone, 1.4 km

(?) MIDDLE DEVONIAN

- MURPHY BROOK FORMATION (DCM):** myelite-clast conglomerates, sandstone, siltstone and black argillite (possibly part of Horton Group), 300 m

SILURIAN - EARLY DEVONIAN

- PORTPOURNE RIVER FORMATION (ED):** red and green siltstone and fine sandstone, 1 km
- WILSON BROOK FORMATION (SW):** grey, fine sandstone and siltstone, 1.5 km

NEOPROTEROZOIC

- JEFFERS BLOCK (western and northeastern Cobequid Highlands)**
 - J3: undivided, andesite, diorite and myelite flows and tuff, lithic arkose, siltstone and argillite
- CLAMBER LAKE FORMATION (western Cobequid Highlands between Five Islands and Paribon)**
 - CL3: grey, fine-grained, siltstone and argillite, minor myelite tuff, >300 m
- GILBERT HILLS FORMATION (western Cobequid Highlands between Five Islands and Paribon)**
 - GH3: arkosid and dacite flows and minor tuff, myelite flows, tuff and agglomerate, >200 m
- DAHLGREN MOUNTAIN FORMATION (eastern Cobequid Highlands, north of Mount Thom)**
 - DM3: andesite, basalt flows and tuff, siltstone and argillite, >200 m
- BASS RIVER BLOCK (southeastern Cobequid Highlands)**
 - BR3: myelite and gabbro
- POLLY RIVER FORMATION (tectonic slices in Bass River Block, in southeastern Cobequid Highlands)**
 - PR3: basalt, tuff, chert and silty turbidites, commonly deformed to chloritic schists, >100 m
- GAMBLE BROOK FORMATION (K3g):** fine-grained orthogneiss and psammite schists, >500 m

PLUTONIC ROCKS

EARLY CARBONIFEROUS

- DCg: gabbro/diorite with <5% granite dykes and pods, gabbro/diorite is texturally uniform, fine- to medium-grained, and includes augite gabbro and hornblende diorite. Granite is pink, orange or grey, small felsic granite
- DCgs: gabbro/diorite with 5-30% granite dykes and pods
- Ch: hybrid granite and mafic intrusive rocks, with mingling textures
- CCp: intrusive myelite and porphyry

LATE DEVONIAN - EARLY CARBONIFEROUS

- DCc: granite, undivided, principally pink, orange or grey, alkali feldspar granite
- DCcp: fine-grained granite
- DCcm: medium-grained granite
- DCcg: coarse-grained granite
- DCcp1: intrusive myelite and porphyry
- DCcp2: granite, variable occurrence of several different types of granite
- DCc1: hybrid granite and mafic intrusions
- DCc2: gabbro/diorite with <5% granite dykes and pods, gabbro/diorite is texturally uniform, fine- to medium-grained, and includes augite gabbro and hornblende diorite. Granite is pink, orange or grey, small felsic granite
- DCc3: gabbro/diorite with 5-30% granite dykes and pods
- DCc4: subequal bodies of gabbro/diorite and of granite (on a scale of tens to hundreds of metres)
- DCcp1: gabbro/diorite, tonalite, texturally uniform, with minor biotite and/or hornblende
- DCcp2: gabbro/diorite, texturally uniform, fine- to medium-grained, augite or augite-hornblende gabbro
- DCcp3: myelite with varied igneous protolith

NEOPROTEROZOIC

JEFFERS BLOCK

- J3g: gabbro/diorite (northeastern Cobequid Highlands) (J3g): with minor mafic rocks, orthogneiss, medium- to coarse-grained, alkali feldspar granite
- J3cp: principally coarse-grained gabbro/diorite with lesser quartz diorite and tonalite, common mafic enclaves and felsic dykes
- J3cp1: porphyritic, fine-grained gabbro

BASS RIVER BLOCK

- BR3g: medium- to coarse-grained, pink, coarse-grained, alkali feldspar granite
- BR3cp: medium- to coarse-grained, biotite gabbro/diorite with symmetrical foliation
- BR3cp1: texturally inhomogeneous hornblende gabbro with tonalite veins
- BR3cp2: myelite hornblende gabbro/diorite

FAULT ZONES with a variety of rock types

- F3: tectonic slices of Neoproterozoic igneous and metamorphic rocks
- Fv: fault zone with subvertical, sheared or cataclastic to mylonitic rocks
- Fh: fault zone with subhorizontal foliated rocks

Geological Symbols

- Geological boundary (defined, approximate)
- Geological boundary (gradational within pluton)
- Line on geological mapping
- Fault (defined, assumed)
- Trust fault (defined, assumed)
- Bedding (inferred)
- Foliation (inferred)
- Outcrop (top rock, right)
- Outcrop (from Danube and Wallace, 1982)
- Mineral occurrence (NSMDO? commodity?)
- Mineral occurrence (NSMDO? commodity?)
- Diamond-drill hole (NSMDO?)

Credits

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Mineral occurrences derived from the Nova Scotia Department of Natural Resources, Mineral Occurrence Database, 2004.

Diamond-drill holes derived from the Nova Scotia Department of Natural Resources, Driftless Database, 2004.

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Mineral Resources Branch
Open File Map ME 2005-116
Bedrock Geology Map of the
Wentworth Area (parts of NTS sheets 11E/05, 11E/06, 11E/11 and 11E/12),
Cobequid Highlands,
Nova Scotia
G. Pe-Piper and D.J.W. Piper
Scale 1:50 000

References

The following paper provides a comprehensive bibliography and a synopsis of the geology of the Cobequid Highlands:
Pe-Piper, G. and Piper, D.J.W. 2003. A synopsis of the geology of the Cobequid Highlands. *Atlantic Geology*, v. 38(2), p.145-160.

Selected outcrop locations derived from:
Dunlop, W.V. J. and Wallace, P.L. 1982. Geological maps of the Cobequid Highlands, Colchester, Cumberland and Pictou counties, Nova Scotia. Nova Scotia Department of Mines and Energy, Maps 1982-4, 1982-7, 1982-8 and 1982-9, scale 1:50 000.

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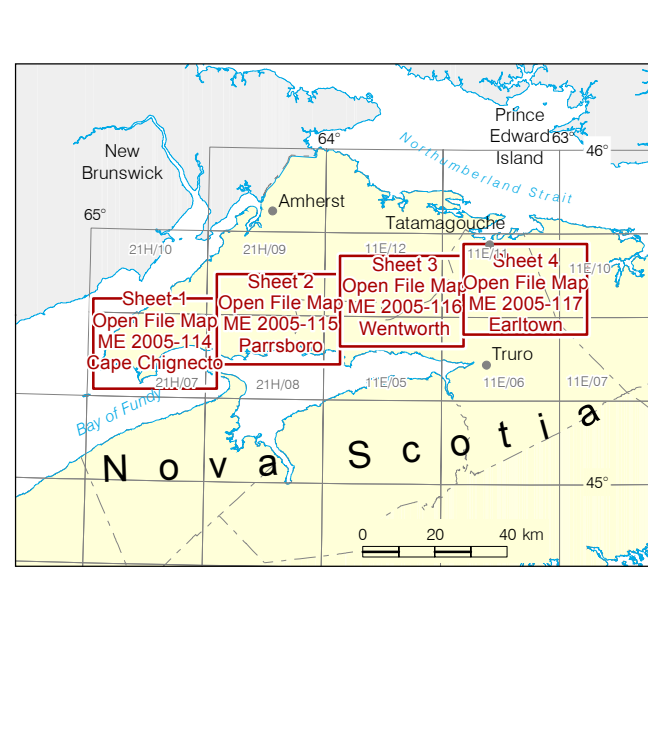
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Legend

- Trans-Canada Highway
- Atlantic Trunk Highway
- Trunk Highway
- Collector Highway
- Hard surface
- Loose surface road
- Resource access road
- Vehicle track
- Railway
- Railway abandoned
- Power line (single, multiple)
- County line
- Contour 20 m
- Contour 100 m (index)
- Hydrographic feature
- Rock in water

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