


MAP 2000-11
**GEOLOGY OF THE BOTWOOD MAP AREA
 (NTS 2E/3), NEWFOUNDLAND**
 Open File 002E/03/1067, Version 2.
 Scale 1:50 000
 0 1 2 3 4 5
 kilometres



**GOVERNMENT OF
 NEWFOUNDLAND AND LABRADOR**
Department of Mines and Energy
 Geological Survey

SILURIAN OR YOUNGER

- Su** Massive, grey, fine-grained and very fine-grained, zoned amygdaloid diabase dykes
- Su** Massive, grey, uniform fine-grained diabase dykes
- Su** Massive, epidotized, fine-grained gabbro

SILURIAN

LLANOVYDRY OR YOUNGER

- Sw** Pink, massive, fine-grained granophytic granite

MOUNT PEYTON INTRUSIVE SUITE (LH Su)

- Sw** Pink and cream, massive, medium and fine-grained, equigranular biotite + hornblende granite
- Sw** Light grey, massive, medium and fine-grained, equigranular, biotite + hornblende granodiorite
- Sw** Grey, massive, dominantly fine-grained and minor medium-grained equigranular, uniform and minor sparsely, pyroxene + biotite + hornblende granite

HODGES HILL INTRUSIVE SUITE (LH SH)

- Sw** Grey and buff, massive, medium-grained, equigranular, biotite + hornblende granodiorite and granite
- Sw** Grey, massive, medium-grained, equigranular, pyroxene gabbro

LUDLOW OR OLDER

BOTWOOD GROUP (Units S, and Sw)

Wegman Formation (Sw)

- Sw** White, buff and light-grey, pyritic, quartz-arsenite schist; includes unsparsely felsic volcanic rocks west of Southwest Pond
- Sw** Red clay-supported, polymict conglomerate, composed of subangular pebbles of sandstone and volcanic rocks
- Sw** Red thick and medium-bedded, commonly parallel-laminated and/or cross-laminated, locally rippled and/or graded, variably clayed, medium-grained quartz-rich sandstone, locally includes matrix-supported shale-like conglomerate and beds of nodular limestone
- Sw** Red, aphanitic, flow-banded, felsic volcanic rocks
- Sw** Green-grey, pink and white-weathering parallel and crossbedded, locally rippled, medium and thick-bedded, quartz-rich sandstone and minor felsic volcanic-clast conglomerate

Laurencian Formation (S)

- S** White, buff and light-grey, pyritic, quartz-arsenite schist; includes unsparsely felsic volcanic rocks west of Southwest Pond
- S** Coarse breccia of green and purple, siliceous, aphanitic blocks in a fine-grained, red siliceous matrix and coarse-grained lithic conglomerate, felsic-clast conglomerate and agglomerate and felsic tuff
- S** Clay-supported, poorly sorted, polymict conglomerate composed of subangular to subrounded cobbles and pebbles of volcanic and sedimentary rocks, and local polymict volcanic breccia
- S** Grey and purple, purple-weathering, plagioclase-porphyritic; intermediate to mafic lava and oligoclase volcanic breccia, possibly equivalent to parts of LH Su
- S** Light to dark grey, felsic to intermediate volcanic rocks including banded, plagioclase-porphyritic and aphanitic lava, banded agglomerate, and massive crystalline tuff
- S** Mainly green and dark grey, plagioclase-porphyritic, amygdaloidal basalt flows; flow tops are commonly red or maroon, brecciated and locally contain laminated red sandstone lenses and spherule; west of Upper Scaevola Pond may be equivalent to parts of LH Su
- S** Grey, green and purple, purple-weathering, plagioclase-porphyritic, intermediate to mafic flows and oligoclase volcanic breccia

LATE ORDOVICIAN AND EARLY SILURIAN

ASHBELL TO LANDOVERY

BADGER GROUP AND EQUIVALENTS (OS)

Conglomerate facies

- OS** Green, grey and minor red, very thick to medium-bedded, variably clayed, polymict conglomerate containing abundant chert, lapillar and volcanic pebbles and locally fossiliferous limestone clasts, and interbedded with coarse-grained sandstone and minor siltstone

Argillite facies

- OS** Grey-green, laminated argillite and shale, greywacke, siliceous argillite and chert, minor minor oolitic conglomerate

Greywacke facies

- OS** Dark grey, green and red, locally fossiliferous, medium bedded, variably clayed pelitic wacke, minor interbedded, green and red, siliceous argillite and chert, marls; rare pillow breccia
- OS** Grey and green, medium- and thin-bedded, clayed, locally fossiliferous, fine-grained greywacke, OS₁₀ - dark grey and black humate and argillite greywacke related to granite, granodiorite and gabbro dykes and plugs

ORDOVICIAN

LLANDELO-CARADOC

- OS** Shale, Am. Lawrence Harbour and Lucombe Formations
- OS** Black carbonaceous shale, grey chert locally containing magnetiferous layers and red nodular chert; greenish sandstone and minor debris flows near the top of the sequence; graptolites are common

ARENS-LLANDELO (?)

- OS** Layered, coarse-grained hornblende-pyroxene gabbro sills

LLANVIRN-LLANDELO

EXPLOITS GROUP (O)

- O** Thin-bedded, siliceous chert and grey, orbicular chert interbedded with thin-bedded, siliceous felsophatic wacke; minor interbedded, green and red, siliceous argillite and chert marls; rare pillow breccia
- O** Basaltic pillow lava and subordinate pillow breccia; minor intervals of dark green chert and grey epirostatic sandstone, diabase dykes and minor mafic tuff

New Bay Formation (upper)

- O** Light grey, nodular, siliceous argillite interbedded with thin, slump-local sandstone interstratified red and green silt and clayey argillite rhythmites; grey and red calcarenites containing reworked cobbles conglomerate and selected slump beds of epirostatic sandstone beds; conglomerate to pebbly, graded wacke containing distinctive clasts of brachiopods, limestone and basalt

New Bay Formation (middle)

- O** Dark grey, laminated, pyritic, graptolite-bearing shale and subordinate light grey, thin-bedded siltstone and fine grained sandstone

New Bay Formation (lower)

- O** Light grey, medium bedded, graded sandstone and interbedded green-grey shale and siltstone; minor pebbly to sandy wacke containing common re-py-clasts of dark grey shale and slump-bedded argillite; minor grey, polymict conglomerate and graded wacke

LLANVIRN-LLANDELO (?)

WILD BIGHT GROUP (O)

- O** Grey, grey, massive, fine-grained, basalt breccia, pillow breccia and massive basalt dykes; minor felsic tuff, O₁₀ - interstratified green-grey epirostatic wacke, laminated argillite and silt

ARENS-LLANVIRN (?)

- O** Pillow lava and interstitial variegated chert and minor, graded pillow breccia; O₁₀ - epiclastic wacke and green-grey laminated argillite
- O** Interstratified pillow lava and pillow breccia; O₁₀ - buff-weathering felsic pyroclastic rocks and pink, flow-layered rhyolite
- O** Graded mafic agglomerates interstratified with tuffaceous wacke

EARLY OR MIDDLE ORDOVICIAN

- OD** Vesicular, pyroxene-plagioclase porphyritic, ductile, microbrecciated dikes containing argillite, pyroxene, hornblende and felsular megacrysts; local swarms of diabase dykes; OD - bedded pillow lava and pillow breccia containing interstratified, epirostatic sandstone that grades to green argillite

LEGEND

SYMBOLS

Geological contact (defined, approximate, assumed, transitional) ...

Fault ...

Thrust fault (undefined) ...

Examined outcrop ...

Bedding, tops known (inclined, vertical, overturned) ...

Bedding, tops unknown (inclined, vertical) ...

Younging direction ...

Argillite layering (inclined, vertical) ...

Cleavage, first generation (inclined, vertical) ...

Minor folds (first, second generation) ...

Anticline, plunge specified, unspecified (upright, overturned) ...

Syncline, plunge specified, unspecified (upright) ...

Intersection (location (cleavage with bedding)) ...

Lineation (first generation, unknown) ...

Shears (sense of movement undefined) ...

Dyke (inclined, vertical) ...

Quartz or pegmatite veins (inclined, vertical) ...

Fossil locality ...

Mineral occurrence (pyrite, arsenopyrite) ...

Approximate magnetic declination 1980 for centre of map is 27°32' decreasing 11.6' annually.

Geology by W. Lawson Dickson, Stephen P. Colman-Saddi and Brian H. O'Brien, geological assistants by Barry N. Wheaton, Anthony Benoit and Ernie Wheaton.

Map produced using computer programs Floods, Fieldlog, Autocad, and GeoDraw.

Cartography by Tony Patakevas, Terry Sears and W. Lawson Dickson.

This open file preliminary map is subject to revision.

Copies of this map may be obtained from the Geoscience Publications and Information Section, Geological Survey, Department of Mines and Energy, Government of Newfoundland and Labrador, P.O. Box 4700, St. John's, Newfoundland, Canada A1B 4J6. Tel: (709)729-3158 or Fax (709)729-4491.

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