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Approximate magnetic declination 2000 for centre of map is 24° 26' decreasing 11.5° annually.

Geology by W. Lawson Dickson F.Geo., Regional Geology Section (1998, 1999); field assistance by Barry N. Wheaton.

Digital cartography by Tony Peltanavaga.

Stratigraphic nomenclature from a report by B.H. O'Brien (1993, New Bay Pond area) and petrographic data from a report by A. Kerr (1995, Hodges Hill area) are included in this map.

Radiometric ages for the Charles Lake volcanics and the Mary Ann granite were determined under contract, in March 2000, by G.R. Dunning of Memorial University, St. John's, NF.

North American Datum (NAD) 1927.

Universal Transverse Mercator Projection (UTM) Zone 21

MAP 2000-23
OPEN FILE 002E/O4/1082
**GEOLOGY OF THE HODGES HILL MAP AREA (NTS 2E/4),
NORTH CENTRAL NEWFOUNDLAND**

Scale 1:50 000
0 1 2 3 4 5
kilometres

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 8700, St. John's, Newfoundland, Canada A1B 4J6 (<http://www.geosun.gov.nf.ca>).

References

Kerr, A., 1995: The Hodges Hill Granite between Grand Falls – Windsor and Badger (NTS 2D/13 and 2E/4): geology, petrology and dimension stone potential. Current Research. Newfoundland Department of Mines and Energy, Geological Survey Report 95-1, pages 237-256.

O'Brien, B.H., 1993: Geology of the region around Botwood (parts of 2E/3, 4, 6), north-central Newfoundland. Newfoundland Department of Mines and Energy, Geological Survey, Map 93-168, Open File 002E/0869.

Recommended citation

Dickson, W.L., 2000: Geology of the Hodges Hill map area (NTS 2E/4), central Newfoundland. Newfoundland and Labrador Department of Mines and Energy, Geological Survey, Map 2000-23, OPEN FILE 002E/O4/1082.

LEGEND

SILURIAN TO DEVONIAN?

SDi Massive, fine- to medium-grained, equigranular to coarsely plagioclase-porphyritic grey diabase dykes

EARLY TO LATE SILURIAN

HODGES HILL INTRUSIVE SUITE (SH)

SHgk Massive, coarse- to medium-grained, equigranular, pink, red, and purple, 1-feldspar (perthite), hornblende ± pyroxene ± biotite granite

SHgk Massive, fine-grained, equigranular, pink to red, 2-feldspar biotite granite

SHgk Massive, medium-grained, equigranular to K-feldspar porphyritic, buff to pink, 2-feldspar biotite ± hornblende granodiorite and granite; minor tonalite associated with SHgk

SBw Massive, medium-grained, equigranular, pyroxene-plagioclase gabbro containing steeply dipping layers of relatively pyroxene-rich and pyroxene-poor gabbro

SBw Massive, fine- to medium-grained, rarely coarse-grained, grey to locally black, pyroxene ± hornblende ± biotite gabbro and minor quartz diorite and tonalite commonly veined by thin granodiorite vein; locally displays layering; minor areas of pyroxene-rich, medium- to coarse-grained gabbro

BOTWOOD GROUP (SB)

SBw Wigwam Formation: Massive to weakly cleaved, medium-grained, medium- to thick-bedded red sandstone and minor siltstone and conglomerate, locally displaying cross-bedding, cross- and parallel lamination, grading, scours and rippled surfaces

SBw Lawrenceton Formation: Massive, fine-grained, equigranular to coarsely plagioclase-porphyritic, locally amygdaloidal, very thick, black basalt flows locally interbedded with thin red sandstone units; fine-grained, grey to pink laminated felsic tuff and quartz-feldspar crystal-litic tuff; minor medium-bedded, grey sandstone

EARLY SILURIAN - WENLOCK

CHARLES LAKE VOLCANICS (SC) - NOTE: boundaries between units SCi and SCb are undefined

SCi Massive, very fine-grained, quartz- feldspar porphyritic, commonly flow-layered, pink to purple ignimbrite, very fine-grained, quartz-porphyritic, yellow rhyolite, massive fine grained pink felsic tuff, locally associated with volcanic clast-rich cobble conglomerate; interbedded with SCb basalts; ignimbrite dated by U/Pb (zr) at 429 ± 2 Ma

SCb Massive to locally highly sheared, very fine- to medium grained, equigranular to rarely plagioclase-porphyritic, commonly epidotized, grey to black, very thick basalt flows; rare interbedded grey sandstone; rare massive pillow lava; interbedded with SCi felsic volcanic rocks

MIDDLE ORDOVICIAN (CARADOXIAN) TO EARLY SILURIAN

BADGER GROUP (OSB)

OSBw Highly migmatized, medium- to thin bedded, grey to black, biotite semi-pelite; migmatitic equivalent of unit OSBh

OSBw Contact metamorphosed, thin- to medium-bedded, grey to buff, locally rusty, biotite psammite and semi-pelite commonly displaying parallel-lamination, cross-lamination, grading and locally scours; locally interbedded with chert-pebble conglomerate and very coarse-grained, chert clast-rich sandstone

OSBw Massive to weakly cleaved, chert ± rhyolite ± granite ± limestone ± quartz pebble and cobble, thick- to very thick-bedded, clast-supported conglomerate and lesser very coarse- to coarse-grained chert-rich sandstone all commonly displaying normal and reverse grading, scours and cross-lamination

OSBw Massive, medium- to thick-bedded, uniform, medium-grained, grey sandstone

OSBw Schistose and folded, medium- to thin-bedded, grey biotite psammite, semipelite, migmatite and minor felsic tuff, all probably contact metamorphosed by the Hodges Hill intrusive suite

OSBw Point Leamington Formation: Massive to weakly cleaved, medium- to very thick-bedded, grey to buff, fine- to very coarse-grained feldspathic sandstone, pebbly sandstone and pebble conglomerate, commonly displaying parallel and cross-lamination, grading and scours; larger clasts are most commonly grey chert, Jasper, basalt, plagioclase and quartz; interbedded with the Shoal Harbour Formation at base of sequence

MIDDLE ORDOVICIAN - CARADOXIAN

SHOAL AREA FORMATION (OS)

OSw Strongly cleaved, thin- to medium bedded, locally laminated, commonly pyritic, locally graptolitic slate and siltstone; minor interbedded grey sandstone; locally displays light, steeply plunging folds

OSw Massive, thin- to medium-bedded, red (jasper), maroon, grey, white and purple (manganiferous) chert locally interbedded with very thin grey slate partings

EARLY TO MIDDLE ORDOVICIAN INTRUSIVE ROCKS

MARY ANN GRANITE (MOM)

MOMw Weakly to strongly foliated, medium-grained, white to buff, equigranular, 2-feldspar, biotite granite and granodiorite commonly containing psammite, semipelite and amphibole xenoliths; commonly rust coloured where biotite-rich psammite xenoliths are abundant; granite dated by U/Pb (zr) at 463-474 Ma

OMw Massive, medium- to coarse-grained, equigranular, grey pyroxene gabbro sills

EARLY TO MIDDLE ORDOVICIAN

WILD BIGHT GROUP (OW)

OWw Massive to weakly cleaved, extremely thick-bedded, green to grey, mafic agglomerates containing fine- and medium-grained, equigranular and plagioclase-porphyritic, uniform and amygdaloidal basalt fragments; rare massive basalt flows and mafic tuffaceous horizons; variably chloritized and epidotized

OWw Massive to cleaved, medium- to very thick-bedded, grey sandstone, pebble sandstone and pebble conglomerate, thin- to medium-bedded, grey sandstone and siltstone, yellow and cream, thin-bedded chert and siltstone; minor intraformational, chert-clast breccia and slumped chert units

OWw Massive, very thick-bedded, fine-grained, green basalt flows, pillow lava, pillow breccia, hyaloclastite; minor coarse-grained poorly sorted, polymict conglomerate at the top of the succession

OWw Massive to weakly cleaved, medium- to coarse-grained, green to buff, coarse-grained, poorly sorted, subangular, tuffaceous sandstone and pebble breccia; minor laminated, thick-bedded sandstone and quartz-rich sandstone

OWw Massive to weakly cleaved, massive basalt flows and pillow lava

OWw Massive, fine-grained, flow-layered pink, quartz-feldspar porphyritic rhyolite and coarse-grained lapilli tuff

OWw Massive, very fine-grained, equigranular or feldspar-porphyritic, cream to yellow, rhyolite locally associated with minor fine-grained, weakly foliated, biotite granite

OWw Massive to locally sheared, very thick units of massive fine-grained, equigranular to plagioclase-porphyritic basalt, pillow lava, basalt breccia and pillow breccia

SYMBOLS

Geological contacts (defined, approximate, assumed, transitional)
Bedding with dip (dip known, unknown, overturned)
Cleavage with dip
Igneous layering with dip
Shear foliation with dip
Intense jointing with dip
Fault (strike-slip direction, if known)
Thrust fault - south on hanging wall
Diabase dyke (unit SDi)
Granite vein or dyke
Quartz vein
Fold trace (anticline, syncline)
Minor fold axis with plunge (first, second generation)
Outcrop examined
Graptolite locality
Dimension-stone quarry
Mineral occurrence (pyrite, manganese chert)
Forest access roads (updated from 1983 aerial photographs and field observations (1998))
U/Pb age
Note: Structural symbols are offset from their outcrop location

