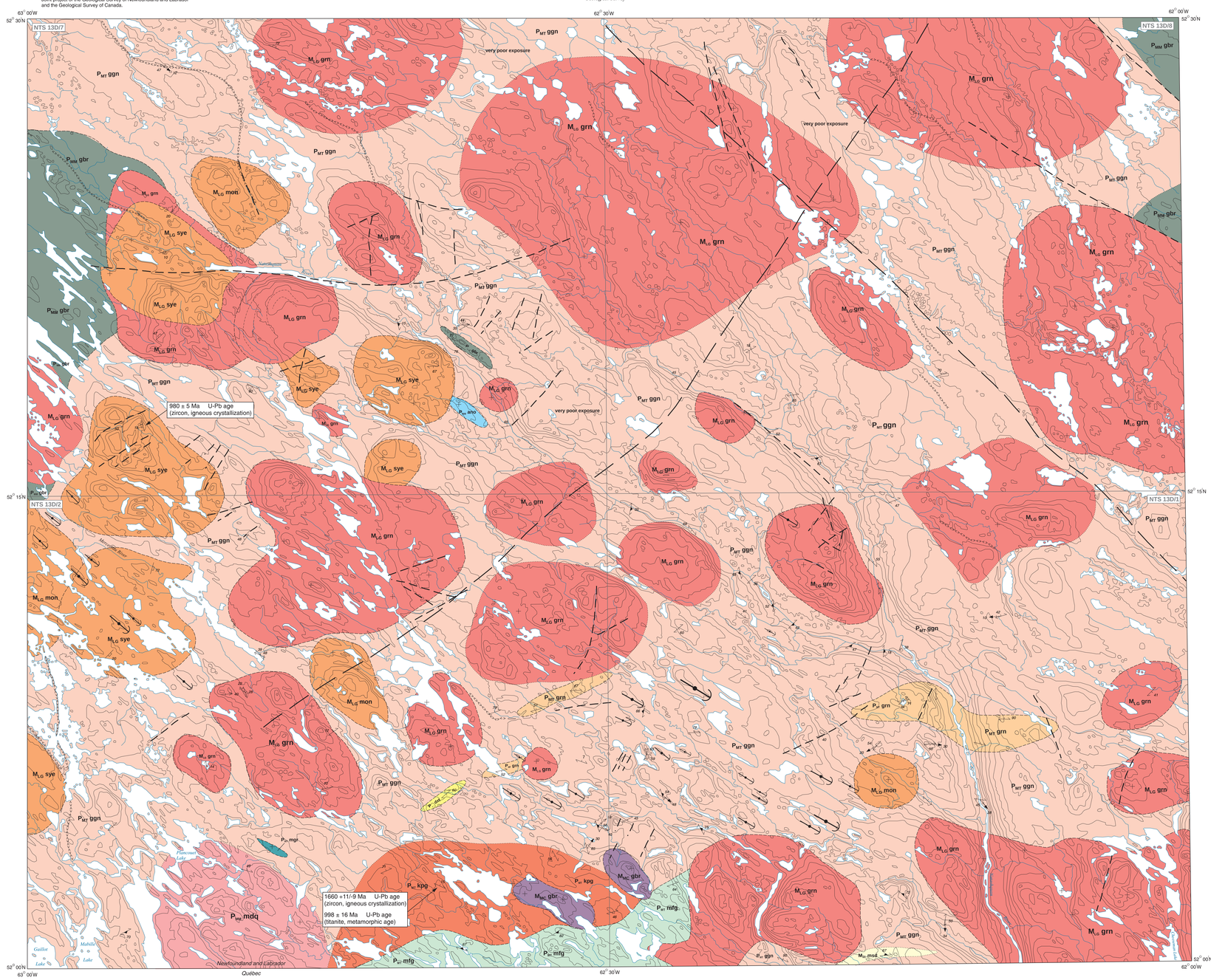
Joint project of the Geological Survey of Newfoundland and Labrador and the Geological Survey of Canada.

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



LEGEND

LATE MESOPROTEROZOIC

Late- to post-Grenvillian intrusions II

M_{LG} grn — Granite: pink-weathering, mainly coarse- and medium-grained biotite granite and quartz monzonite, locally K-feldspar porphyritic granite; mainly isotropic, although contains a local, weak foliation that may be a relict igneous foliation

Late- to post-Grenvillian intrusions I

M_{LG} sye, M_{LG} mon — Syenite and monzonite: pink-weathering, mainly coarse- and medium-grained, clinopyroxene-bearing syenite (sye), syenite (sye), and monzonite (mon); mainly isotropic although contains a local, weak foliation that may be a relict igneous foliation; clinopyroxene is variably replaced by amphibole

Atikonak River massif (ca. 1125 to 1133 Ma)

M_{LG} grn — Granite: mainly pink- to pale pink-weathering biotite granite, K-feldspar porphyritic granite, quartz monzonite and local quartz syenite; isotropic to locally foliated and recrystallized

M_{LG} gbr — Gabbro: medium- to coarse-grained gabbro, gabbronorite, and norite; contains fresh, igneous textures, or is recrystallized and foliated, massive or is locally layered, especially along the east shore of Marc Lake

M_{LG} ano — Anorthosite: variably recrystallized and foliated, grey-, or grey and white-weathering anorthosite; mafic igneous minerals are mainly replaced by hornblende and biotite

EARLY MESOPROTEROZOIC TO LATE PALEOPROTEROZOIC (?)

M_{NC} gbr — Gabbro and gabbronorite: medium- to coarse-grained, massive, fresh gabbro and gabbronorite

M_{NC} msd — Metasedimentary gneiss: rusty-weathering, upper amphibolite-facies gneiss including biotite + garnet + sillimanite pelitic migmatite, and local 1- to 2-metre-thick layers of quartzite

LATE PALEOPROTEROZOIC

Mealy Mountains intrusive suite

P_{ss} gbr — Gabbro - gabbronorite: variably metamorphosed and deformed rocks including gabbronorite, gabbro, leucogabbro, minor ultramafic rocks, and olivine-bearing gabbronorite; some components are pervasively recrystallized, foliated and do not have igneous mineral textures, whereas other components consist of fresh, and undeformed rocks containing local igneous layering or lamination

P_{ss} ano — Anorthosite: white- to grey-weathering, massive, medium-grained, recrystallized anorthosite containing relicts of coarse-grained, grey- to blue-weathering plagioclase; contains minor biotite

P_{ss} mdq — Undivided granitoid rocks and gneiss: foliated and locally gneissic granitoid rocks including clinopyroxene-bearing monzonite, quartz monzonite, monzodiorite, and granodiorite

Pre-Mealy Mountains intrusive suite rocks

P_{ss} mgr — Metamorphosed gabbro: amphibolite- to granulite-facies mafic gneiss interpreted to be derived from gabbro; age undefined, although some rocks may be equivalent to P_{ss} gbr rocks

P_{ss} grn — Metamorphosed granite: pink-weathering, fine to medium grained, recrystallized biotite granite; rocks are foliated but only locally gneissic

P_{ss} kpg — K-feldspar porphyritic granite: grey-, white- to light pink-weathering meta-granite containing biotite and minor hornblende; rocks are variably foliated, recrystallized, and medium- to coarse-grained having a relict K-feldspar porphyritic texture; locally, rocks are extensively recrystallized, strongly foliated and have an augen structure

P_{ss} ggn — Orthogneiss: a heterogeneous unit of amphibolite- and local granulite-facies, pink- and grey-weathering granitoid orthogneiss derived mainly from granodiorite, granite, mafic diorite and tonalite; outcrops commonly contain deformed mafic xenoliths, relicts of pre-metamorphic mafic dykes, and granite aplite dykes which cross-cut the gneissosity

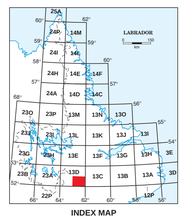
P_{ss} mfg — Mafic gneiss: granulite-facies mafic gneiss consisting of variable proportions of pyroxene, amphibole, garnet, plagioclase and biotite; in part, may be derived from a supracrustal protolith

P_{ss} msd, P_{ss} dxt — Metasedimentary gneiss: black-, brown- to rusty-weathering granulite-facies metasedimentary gneiss (P_{ss} msd) and related diatexite (P_{ss} dxt); rocks contain biotite, garnet, and local sillimanite; orthopyroxene occurs in some sillimanite-absent rocks; unit contains dismembered relicts of presumed iron formation, and local, < 20-cm-thick, boudinaged layers of quartzite

Note: This legend applies to open file maps for the Natashquan River (NTS 13D/SE) and Senécal Lake (NTS 13D/SW) map areas. Not all of the units in the legend appear on this map.

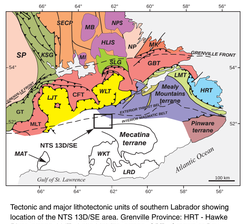
SYMBOLS

- *Contact (defined, approximate, assumed)*
- *Prominent topographic lineament assumed to be a minor, post-Grenvillian (Neoproterozoic ?) fault*
- *Prominent lineament in the magnetic anomaly pattern*
- *Outcrop (massive structure or no structural fabrics measured)*
- *Igneous layering, or igneous lamination* — 45
- *Dyke*
- *Foliation (inclined, vertical)* — 67
- *Gneissosity (inclined, vertical)* — 52
- *Gneissosity or foliation and contained mineral elongation lineation* — 12 → 21; 12 → 76
- *Planar fabric in highly strained rocks* — 50
- *Drumlinoid ridge (rounded 'arrow' points in the interpreted ice-flow direction)*
- *Esker*



INDEX MAP

NTS index map of Labrador showing location of the NTS 13D/SE area.



Tectonic and major lithotectonic units of southern Labrador showing location of the NTS 13D/SE area. Grenville Province: HRT - Hawke River terrane, LMT - Lake Melville terrane, GBT - Groswater Bay terrane, WLT - Wilson Lake terrane, CFT - Churchill Falls terrane, LJT - Lac Joseph terrane, MLT - Molson Lake terrane, GT - Gagnon terrane, MAT - Matamec terrane, WKT - Wakeham terrane, LRD - La Romaine domain. Archean divisions: Superior Province, NP - Nain Province (Hopedale Block). Archean and Paleoproterozoic divisions: MK - Makkovik Province, SECP - Southeastern Churchill Province (core zone), KSG - Kaniapiskau Supergroup (2.25-1.86 Ga). Mesoproterozoic units: NPS - Nain Plutonic Suite, HLIS - Harp Lake intrusive suite, MB - Mistastin batholith, MI - Michikamau Intrusion, SLG - Seal Lake Group.

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This map represents a preliminary interpretation of the geological field data and is subject to change without notice. Comments regarding revisions or errors are invited and should be submitted to the Director, Geological Survey of Newfoundland and Labrador, P.O. Box 8700, St. John's, Newfoundland, Canada, A1B 4J6.

MAP 2002-05

OPEN FILE 013D/0032

GEOLOGY OF THE NATASHQUAN RIVER AREA

(NTS 13D/SE), GRENVILLE PROVINCE, SOUTHERN LABRADOR

scale: 1:100 000

0 1 2 3 4 5
kilometres

DATA POSITIONING

On this map, structural and outcrop data are plotted in the position where the data were collected in the field (i.e., symbols representing tectonic structures or primary features are not offset from the outcrop location). The centre of the symbol representing a planar fabric element (e.g., foliation or gneissosity) or a planar primary feature (e.g., bedding or igneous layering) is plotted in the position where the data were collected in the field. The + symbol represents an outcrop that has a massive (i.e., isotropic) structure or one that does not contain a measurable fabric (e.g., frost heave or an extensively fractured outcrop).