

NTS 13L/10

Areas of the map symbolized as 'Unconsolidated sand and gravel deposits' display underlying rock type(s) to portray the interpreted continuity of units, based on structural, aeromagnetic and topographic signatures. Rock types other than those shown may be present in these areas.

All data stations collected by the authors are plotted using GPS-based coordinates. This map also incorporates pre-GPS field data collected by Rossie and Emile (1973), Emile (1980) and Barrag (1981). The accuracy of field data stations that were re-plotted from maps or field notes of these sources is dependent on the original plotting accuracy.

The map is segmented by follow-up examination of mineral rock data, petrographic thin sections and whole rock geochemical analyses. In many areas, geological boundaries are poorly constrained, approximated and extrapolated on the basis of outcrop distribution, topographic trends, structural observations and aeromagnetic data. Individual outcrops typically consist of several different rock types. The unit polygon depicted is based on what was interpreted to be the dominant rock type present. All rock types recorded from an individual outcrop may be determined by consulting the Unit Designator string for that locality given in the digital database. Discrepancies in rock names applied to field outcrops versus those interpreted from issued data or this section have not been recorded in the digital database. Differences may be due to non-verbal identification or the sample and/or thin section may not be representative of the source material.

Field work in 2012 by T. van Nieuwland

Recommended citation
van Nieuwland, T.
2023. Geology of the NTS 13L/10 map area, central Labrador. Scale 1:50 000. Geological Survey, Department of Industry, Energy and Technology, Government of Newfoundland and Labrador. Map 2023-29 Open File 13L/10/0159.

Geology compiled by T. van Nieuwland
Geological cartography by S. McKenrue, K. Morgan and J. Sears

The digital topographic database map NTS 13L/10 used here is available from the Surveyor General Branch, Natural Resources, Canada. Magnetic declination at centre of map is 20°30' West (March 31, 2022). Universal Transverse Mercator (UTM) Grid Zone 20, North American Datum (NAD) 27. Elevation is in metres above sea level. Contour interval is 20 m.

Open File 13L/10/0159

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Preliminary versions of parts of this map published in Current Research articles have evolved so there are some differences between the current and preliminary versions of the map, unit designators and the legends (see van Nieuwland and Corcoran, 2013).

Map 2023-29 is sixteen (20) maps on the geology of the Seal Lake Group, including adjacent rocks of older tectonic provinces in central Labrador.

Department website: <https://www.gov.nl.ca/geology>
Geological Survey website: <https://www.gov.nl.ca/ntslmhs/geoscience>
Email: pub@gov.nl.ca

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Emile, R.F.
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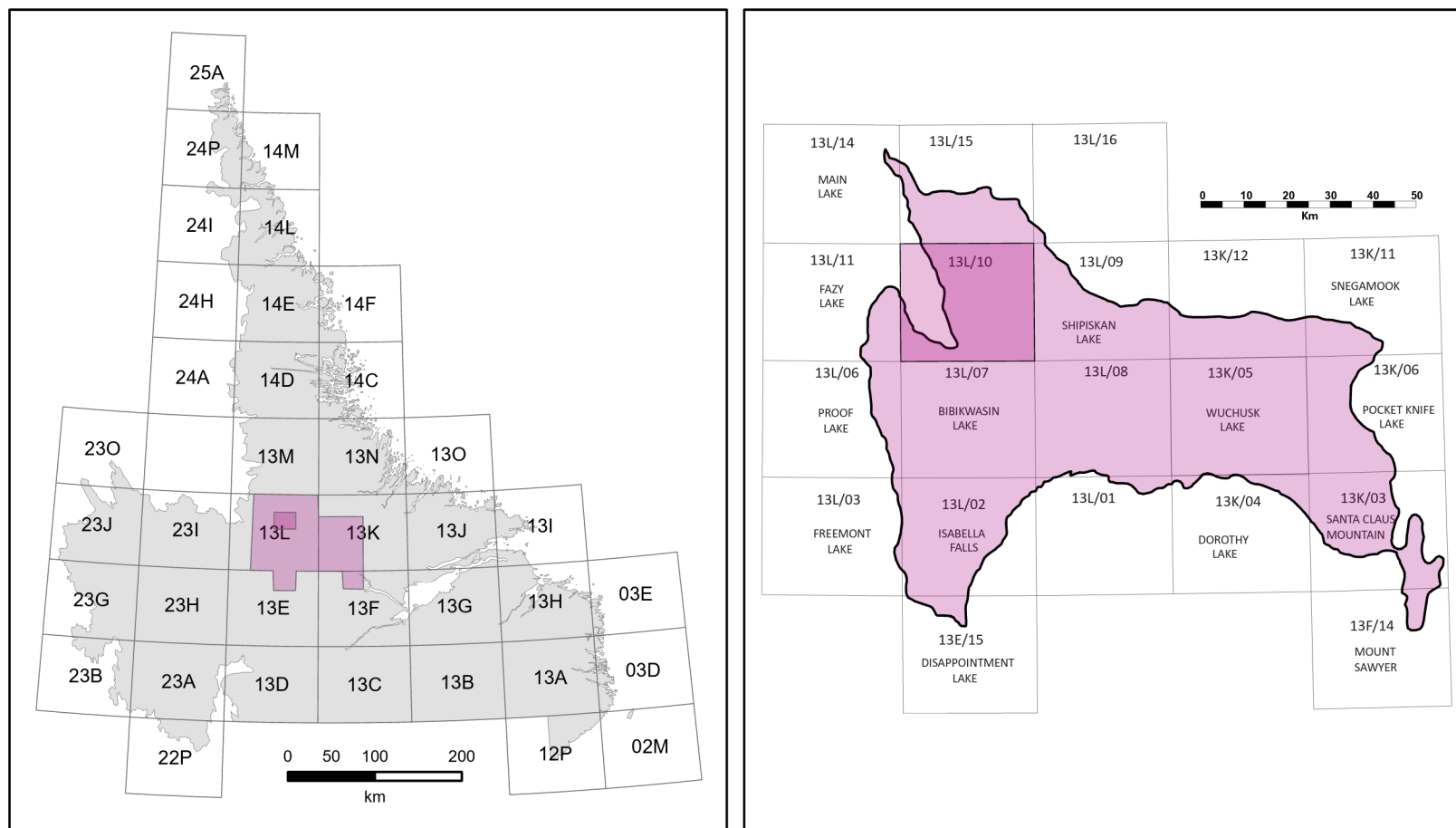
Rossie, S.M. and Emile, R.F.
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2013. Geology of the western Mesoproterozoic Seal Lake Group, central Labrador (including all of NTS areas 13L/2 and 7 and part of NTS areas 13L/1, 13L/11, 13L/12, 13L/13, 13L/14, 13L/15 and 13L/16 and 13L/17). In Current Research: Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Report 131, pages 301-336.

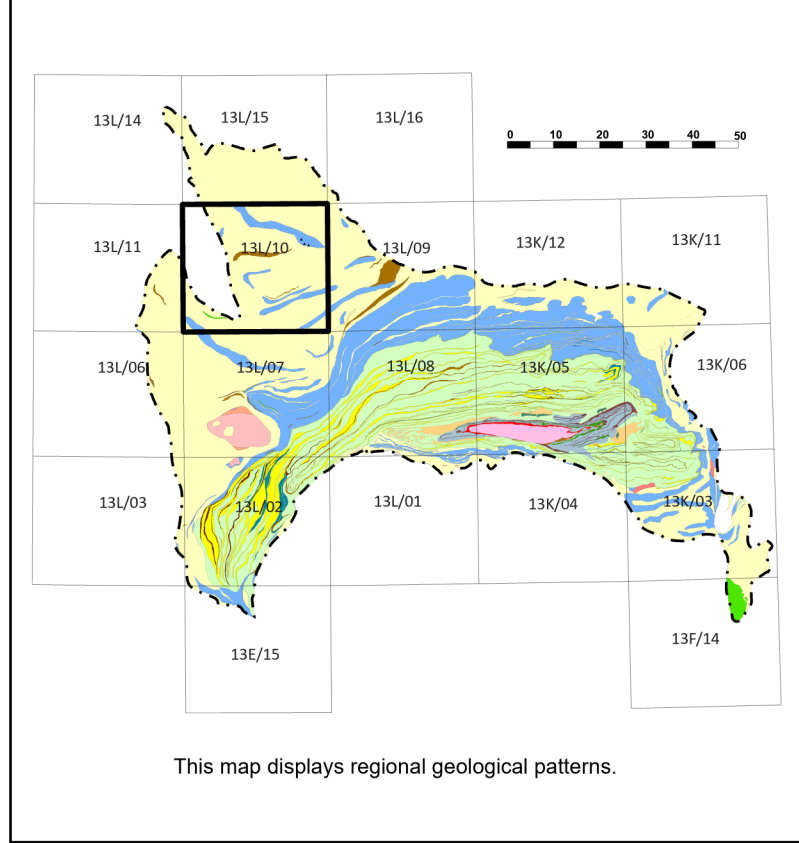
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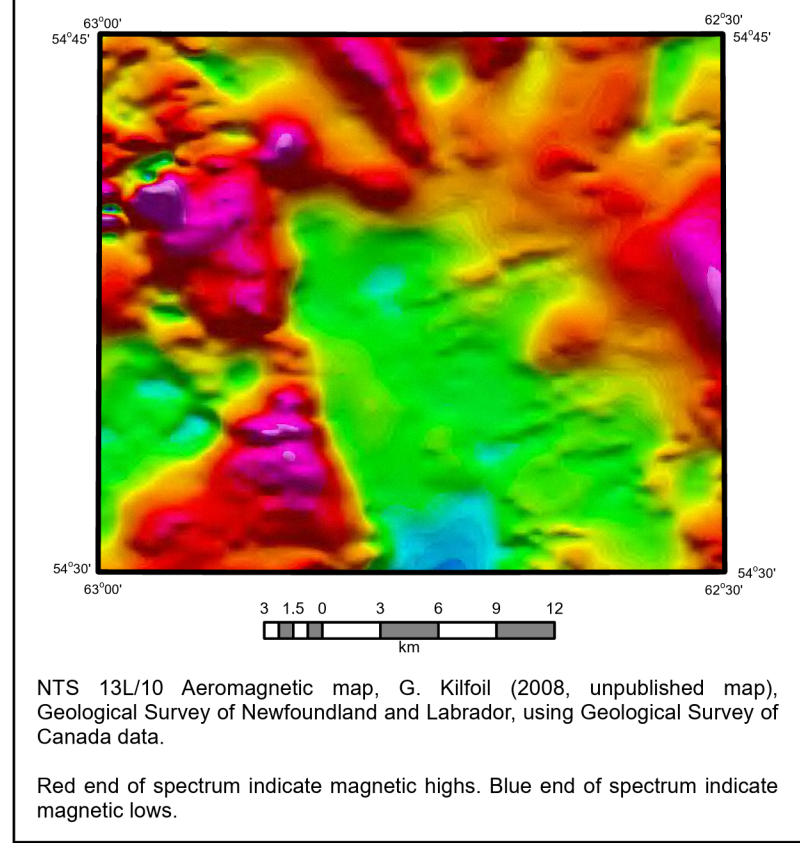
INDEX MAPS



REGIONAL GEOLOGY MAP



NTS 13L/10 AEROMAGNETIC MAP



LEGEND

MIDDLE MESOPROTEROZOIC

Seal Lake Group (1270-1215 Ma)

Upper Red Quartzite Formation

Maq

Red- to pink-weathering, fine- to medium-grained, well-sorted quartz arenite, arenite, and felspathic arenite. Contains local, cm- to m-scale lenses, and layers of fine-grained slate and siltstone, particularly in the lower levels of the formation.

Freigeiged, medium-weathering silt and siltstone. Occur as on- to 10s of m-thick layers and lenses interbedded with quartz arenite near the base of the formation.

Adeline Island Formation

Maq

Maq: medium- to red-weathering, fine-grained slate, locally grades to silt.

Maq: Grey- to green-weathering, fine-grained slate.

Maq: Grey- to green-weathering, fine-grained slate, locally gradational to phyllite.

Maq: Red- to purple-weathering slate.

Maq: Grey-weathering, fine-grained sandy shale to silt.

Maq: Maroon- to purple-weathering, fine-grained slate.

Maq: Grey- to green-weathering, fine-grained slate, gradational to phyllite. This unit exhibits a distinctive 'vulve grain' shales and hosts most of the copper sulfide mineralization within the Seal Lake Group.

Maq: Maroon- to purple-weathering, fine-grained slate.

Maq

Maq: Pink- to red- to locally white-weathering variably recrystallized quartz arenite to arenite. This unit also contains local, thin layers and lenses of slate.

Maq

Maq: Maroon- to red-weathering, fine-grained slate. Basal unit of the Adeline Island Formation is locally intercalated with layers and lenses of fine-grained quartz arenite.

Maq

Maq: Green- to brown-weathering, fine-grained, massive amygdaloidal basalt flows. Flows are 1- to 5-m thick, and intercalated with sedimentary units.

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Maq: Brown, maroon- to red-weathering, thin-bedded to laminated slate, arenite, siltstone and subordinate calcareous rocks and chert.

Maq: Maroon-weathering, thin-bedded to laminated slate. Occurs predominantly as thin lenses and layers.

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EARLY MESOPROTEROZOIC

Harp Lake Intrusive Suite (ca. 1490 Ma)

Maq

Maq: Grey- to grey-white-weathering, medium- to coarse-grained, massive to layered, orthopyroxene-megacrystic hornblende anorthositic, gabbro and monzonitic. The predominant rock type mapped proximal to the unconformity with Seal Lake Group rocks is massive anorthositic, with zones of weakly foliated.

Maq: Light brown- to red-weathering, medium- to coarse-grained, massive biotite-hornblende granite, locally gradational to quartz monzonite.

LATE PALEOPROTEROZOIC

LATE LABRADORIAN ROCKS (1650 - 1650 Ma, reworked during Grenvillian Orogeny)

North Pole Brook Intrusive Suite (Trans-Labrador batholith, ca. 1650 Ma)

Maq

Maq: White- to pink-weathering, fine- to medium-grained, recrystallized, weakly foliated to mylonitic, K-feldspar porphyritic.

Maq: Grey- to green-grey-weathering, medium- to coarse-grained, massive biotite-hornblende granite, locally gradational to quartz monzonite.

Maq

Maq: Unconsolidated gabbro to gabbroite.

Maq

Maq: Rhyolite, andesite, trachyandesite and basalt. Occurs as massive to brecciated flows, agglomerate and locally bedded.

Maq

Maq: Volcaniclastic sandstone, tuff, minor conglomerate and arkose.

MIDDLE PALEOPROTEROZOIC

Moran Lake Group (ca. 1800 Ma)

Maq

Maq: Grey- to black-weathering mudstone, silt, siltstone and minor limestone, dolomite and chert.

ARCHAEO-PALEOPROTEROZOIC

Southeastern Churchill Province (reworked during Grenvillian Orogeny)

Maq

Maq: Unconsolidated foliated granite and orthogneiss. May be correlative with rocks of the Seal Lake Intrusive Suite.

Maq: Fine- to medium-grained, weak to moderately foliated, biotite-hornblende granite to quartz monzonite.

Maq: Medium-grained, weakly foliated, hornblende-biotite quartz diorite to diorite. May be correlative with rocks of the Seal Lake Intrusive Suite.

Maq: Medium-grained, weakly to strongly foliated hornblende-biotite monzonite. May be correlative with rocks of the Seal Lake Intrusive Suite.

Maq: Seal Lake Intrusive Suite, includes foliated to gneissic granite, quartz monzonite, granodiorite, quartz diorite and diorite.

Maq

Maq: Granodiorite, tonalite orthogneiss and abundant mafic intrusions.

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