

DOROTHY LAKE

Areas of the map symbolized as Unconsolidated sand and gravel deposits display underlying rock types) 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 the data stations collected by the authors are plotted using GPS-based coordinates. This map also incorporates pre-GPS field data collected by Fanning (1959), Menier (1970) and Thomas (1981, 1983). The accuracy of field data stations is plotted from the map or field notes. The original stationing accuracy is indicated by the number of digits after the decimal point. The map is not intended to be a geological survey of the region. It is a generalization of the original stationing accuracy. The map is not intended to be a geological survey of the region. It is a generalization of the original stationing accuracy. The map is not intended to be a geological survey of the region. It is a generalization of the original stationing accuracy.

The map is augmented by follow-up examination of detailed rock data, topographic thin sections and whole-rock geochemical analyses. In very 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 the interpreted dominant rock type present. All rock types recorded from an individual outcrop may be determined by consulting the "Unit description" setting for that locality given in the digital database. Discrepancies in rock names applied to field outcrops versus those designated from detailed data, or the authors have not been recorded in the digital database. Differences may be due to field relief, outcrop orientation or the sample used. This section may not be representative of the source material.

Field work in 2008 and 2010 by T. van Nieuwland and S. Lowe

Recommended citation
van Nieuwland, T. and Lowe, S. 2013. Dorothy Lake map area NTS 13K/04, central Labrador. Scale 1:50 000. Geological Survey, Department of Industry, Energy and Technology, Government of Newfoundland and Labrador. Map 2023-17, Open File 13K/04/0354.

Geology compiled by T. van Nieuwland

Geological cartography by S. Nieuwland, K. Morgan and T. Sears

The digital topographic database map NTS 13K/04 used here is available from the Surveyor General Branch, Natural Resources, Canada. Magnetic declination at centre of the map is 20°22' West (March 11, 2022). Universal Transverse Mercator (UTM) Grid Zone 20, North American Datum (NAD) 83. Elevations are in metres above sea level. Contour interval is 20 m.

Open File 13K/04/0354

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Geological Survey website: <https://www.gov.nl.ca/geology/geoscience/geology/index.html>

Preliminary versions of parts of this map, published in Current Research articles, have evolved, hence there may be differences between the current and earlier preliminary versions of this map, the unit designations and the legends (see van Nieuwland and Lowe, 2010 and van Nieuwland and MacFarlane, 2011).

Map 2023-17 is four of twenty (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/geology/geoscience/geology/index.html>

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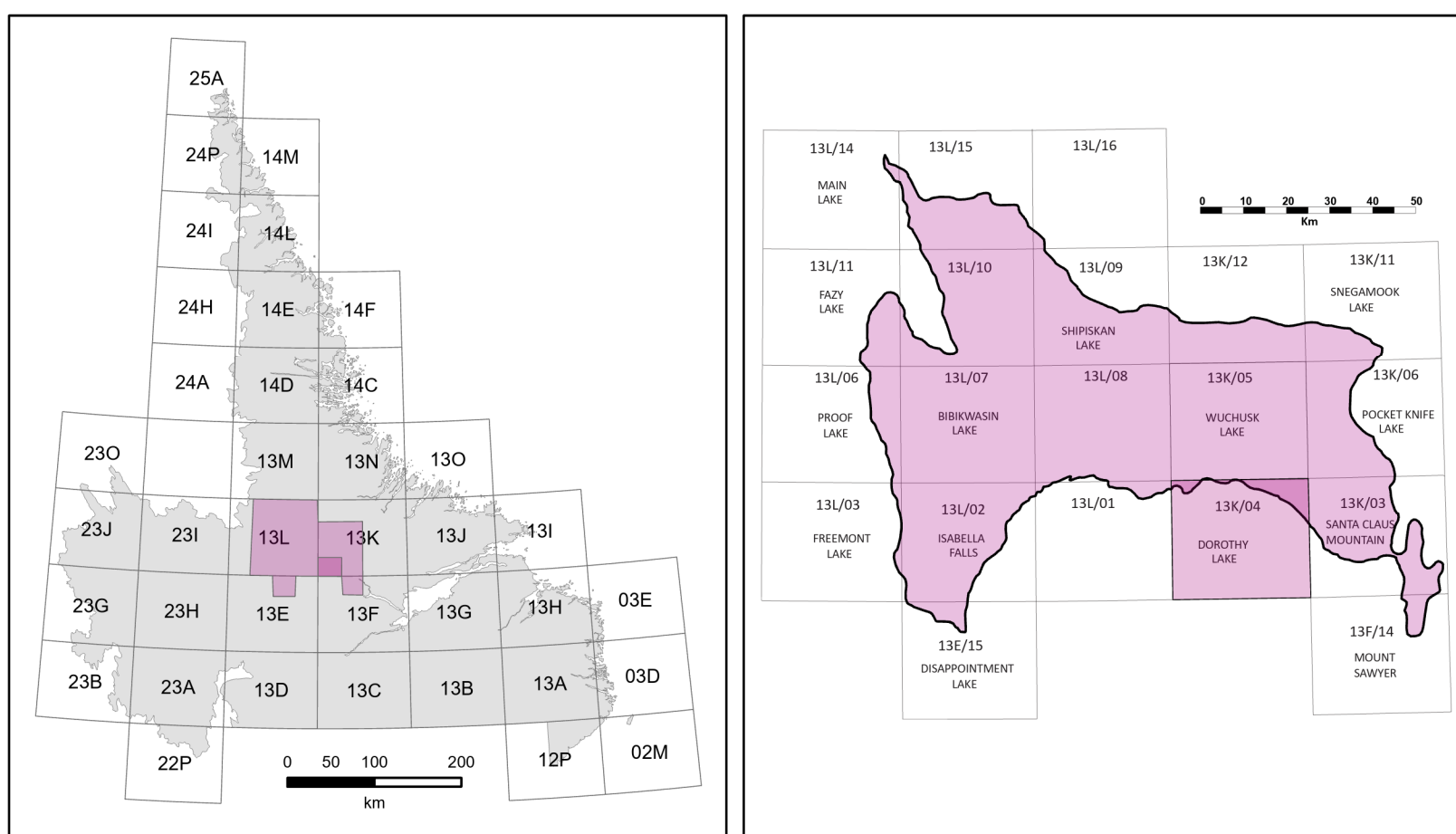
van Nieuwland, T. and Lowe, S.
2010. Geology of the Seal Lake area, central Labrador (parts of NTS map sheets 13K/3, 4, 5 and 6). In Current Research, Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Report 10-1, page 1-30.

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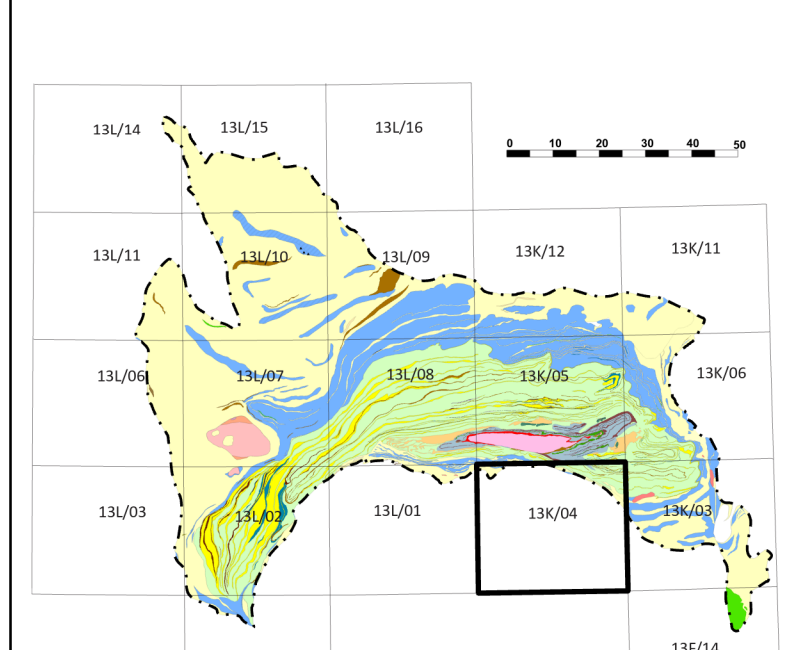
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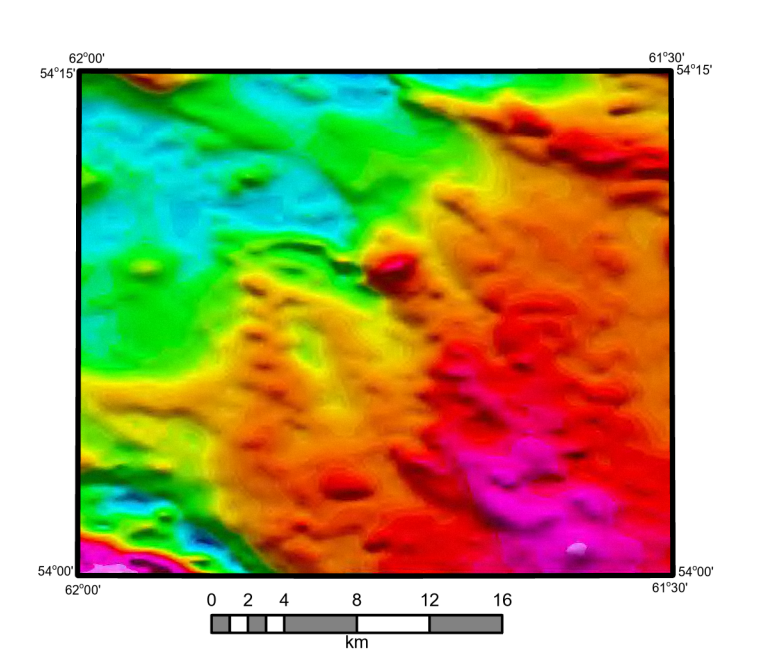
INDEX MAPS



REGIONAL GEOLOGY MAP



NTS 13K/04 AEROMAGNETIC MAP



NTS 13K/04 Aeromagnetic map, G. Kiloh (2008), unpublished map). Geological Survey of Newfoundland and Labrador, using Geological Survey of Canada data.

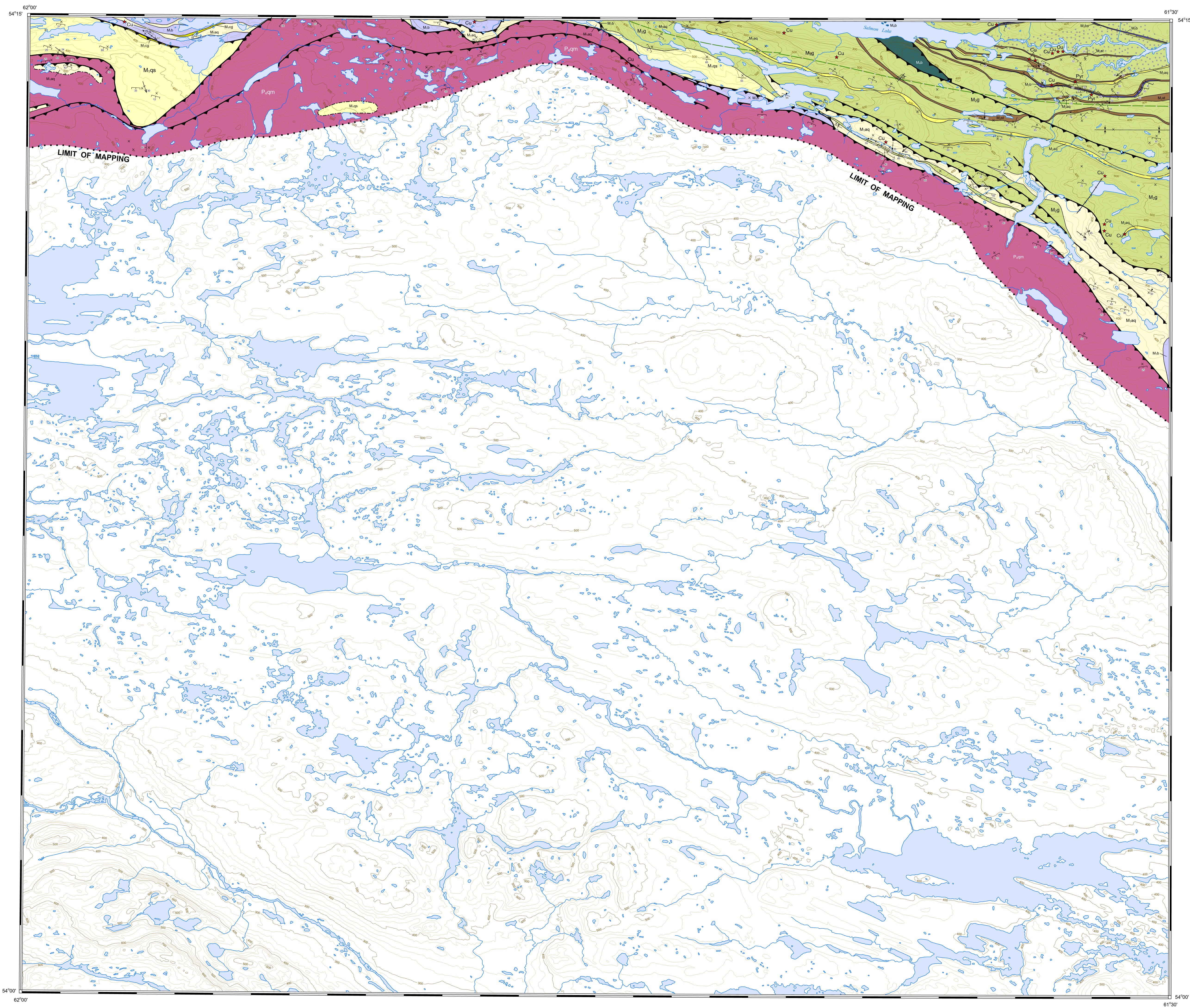
Red end of spectrum indicate magnetic highs. Blue end of spectrum indicate magnetic lows.



Map 2023-17 GEOLOGY OF THE DOROTHY LAKE MAP AREA (NTS 13K/04)

OPEN FILE 13K/04/0354

Scale 1:50 000



MIDDLE MESOPROTEROZOIC

Seal Lake Group (1270-1225 Ma)

Upper Red Quartzite Formation

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

M_{uq} Fine-grained, medium-weathering slate and siltstone. Occurs as cm- to 10s of m-thick layers and lenses interbedded with quartzite and arelle near the base of the formation.

Adeline Island Formation

Upper Member

M_{uq} Maroon- to red-weathering, fine-grained shale, locally gabbro to slate.

M_{uq} Grey- to green-weathering, fine-grained slate.

M_{uq} Grey- to green-weathering, fine-grained slate, locally gradational to phyllite.

M_{uq} Red- to purple-weathering slate.

M_{uq} Grey-weathering, fine-grained sandy shale to slate.

M_{uq} Maroon- to purple-weathering, fine-grained slate.

M_{uq} Grey- to green-weathering, fine-grained slate, gradational to phyllite. This unit exhibits a distinctive 'valve-grip' shear' and hosts most of the copper sulfide mineralization within the Seal Lake Group.

M_{uq} Maroon- to purple-weathering, fine-grained slate.

Middle Member

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

Lower Member

M_{uq} 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.

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

Salmon Lake Formation

M_{uq} Maroon- to red-weathering, fine-grained slate. Locally contains thin, fine-grained interbedded siltstone and quartzite.

M_{uq} Grey- to green-weathering, fine-grained phyllite to slate.

M_{uq} Grey- to brown-weathering, fine-grained limestone with rare stromatolitic layers. Also occurs as thin lenses and layers interbedded with other sedimentary rock units.

M_{uq} Pink- to white- to grey-weathering, fine- to medium-grained variably recrystallized quartz arenite to arenite.

M_{uq} Green- to brown-weathering, fine- to medium-grained, moderate to strongly foliated, massive and amygdaloidal basalt flows.

M_{uq} Green- to brown-weathering, fine- to medium-grained gabbro to gabbroic gabbro. Occurs as tabular-shaped sills and small, irregular intrusions.

Whiskey Lake Formation

M_{uq} Brown- to maroon-weathering, thin-bedded to laminated slate, arenite, siltstone and subordinate calcareous rocks and chert.

M_{uq} Maroon-weathering, thin-bedded to laminated slate. Occurs predominantly as thin lenses and layers.

Wachuk Lake Formation

M_{uq} Primarily pink- to white, grey- to red-weathering variably recrystallized quartz arenite and arenite occurring as layers of variable thickness. Interspersed with gabbro sills and basalt flows. Contains cm- to m-scale lenses of siltstone, mudstone and calcareous rocks.

M_{uq} Black- to brown-weathering, fine-grained, thin-bedded to laminated siltstone. Also contains thin quartz arenite, arenite, chert, and calcareous layers.

M_{uq} Fine-grained, red- to brown-weathering mudstone, grading to shale and having a weak to strongly developed S₁ fold-axis cleavage.

M_{uq} Black- to grey-weathering, fine-grained shale interbedded with siltstone and quartz arenite units. Exhibits localized and intermittent elevated radiometric signatures (increased K₂O content on radiometric surface).

M_{uq} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m- to 10s of m-scale lenses and beds interbedded with other sedimentary rock units.

M_{uq} Green-grey, brown- to red-weathering, fine- to medium-grained gabbroic-siltstone-magnetite basalt. Textures range from homogeneous, massive, amygdaloidal, vesicular and porphyritic. May contain intercalated layers of volcanic tuffaceous rocks, sedimentary rocks and gabbro.

M_{uq} Brown- to grey-weathering, fine-grained, well-bedded to massive limestone. Occurs as m- to 10s of m-scale lenses and beds interbedded with other sedimentary rock units.

M_{uq} Green- to brown-weathering, fine- to medium-grained, moderate to strongly foliated gabbro. Rocks are deposited as tabular-shaped sills. Contains local scudroble and leucocrone zones. Some sills may consist of composite intrusions.

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