

NTS 13L/01

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/or other geological information. Rock types other than those shown in this map are not shown.

All data stations collected by the authors are plotted using GPS-based coordinates. This map also incorporates pre-GPS field data collected by Burnham and Mann (1981), Burnham and Smith (1973), Mann (1975), Mann and Smith (1975), Currie and Curry (1981), Miller (1987) and Thomas (1987, 1988). The accuracy of these data stations that were acquired from maps or field notes of these sources is dependent on the original plotting accuracy. Mineral occurrences shown on this map are from the Newfoundland and Labrador Geological Survey's Mineral Occurrence Database System (MOCDS) (http://geology.gov.nl.ca/minres/geoscience) and from unpublished assessment reports. The locations of most of these are dependent on initial plotting accuracy. MOCDS occurrences that were located by the authors and new mineral indications were located using GPS-based geographic coordinates.

The map is augmented by follow-up examination of stained rock data, petrographic thin sections and whole rock geochemical analyses. In many cases, these data are only summarized, 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 polygons depicted is based on what map is 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 stained data or thin sections have not been recorded in the digital database. Differences may be due to more refined identifications or the sample and/or thin section may not be representative of the source material.

Field work in 2010 by T. van Nieuwland, A. MacFarlane and H. Sandeman

Recommended citation
van Nieuwland, T. and MacFarlane, A. 2013. NTS 13L/01 map area, central Labrador. Scale 1:50 000. Geological Survey, Department of Industry, Energy and Technology, Government of Newfoundland and Labrador. Map 2023-XX, Open File 13L/01/0152.

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

The digital topographic database map NTS 13L/01 used here is available from the Surveyor General Branch, Natural Resources, Canada. Magnetic declination at centre of the map is 20°21' West (March 31, 2023). Universal Transverse Mercator (UTM, Grid Zone 18, North American Datum (NAD) 83). Elevations are in metres above sea level. Contour interval is 20 m.

Open File 13L/01/0152
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Previous versions of parts of this map published in Current Research articles have evolved so there may be differences between the current and earlier preliminary versions of the map, unit designations and the legends (see van Nieuwland and MacFarlane, 2013).

Map 2023-XX is nine 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/>
Geological Survey website: <https://www.gov.nl.ca/minres/geoscience>
Email: info@gov.nl.ca

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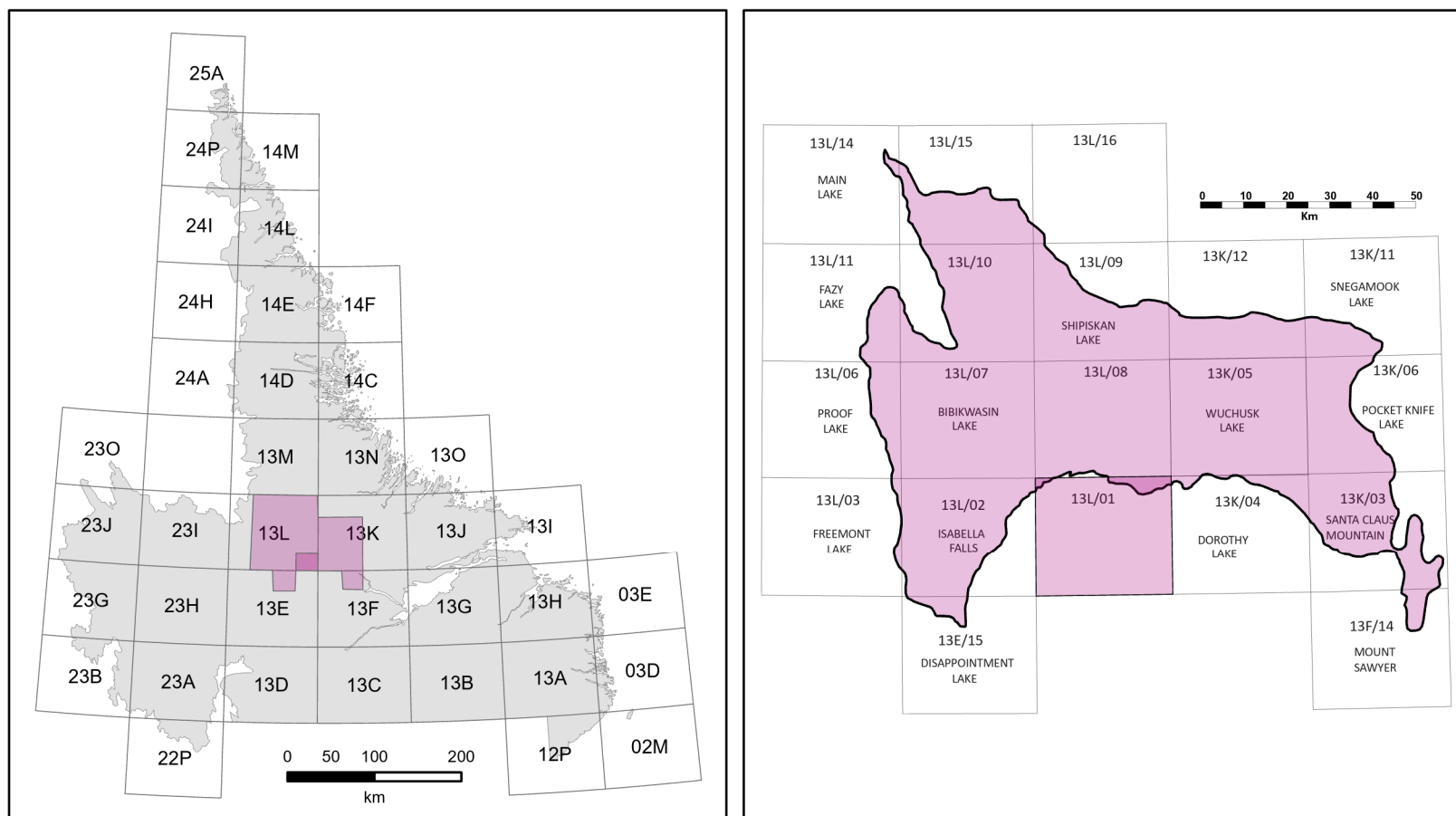
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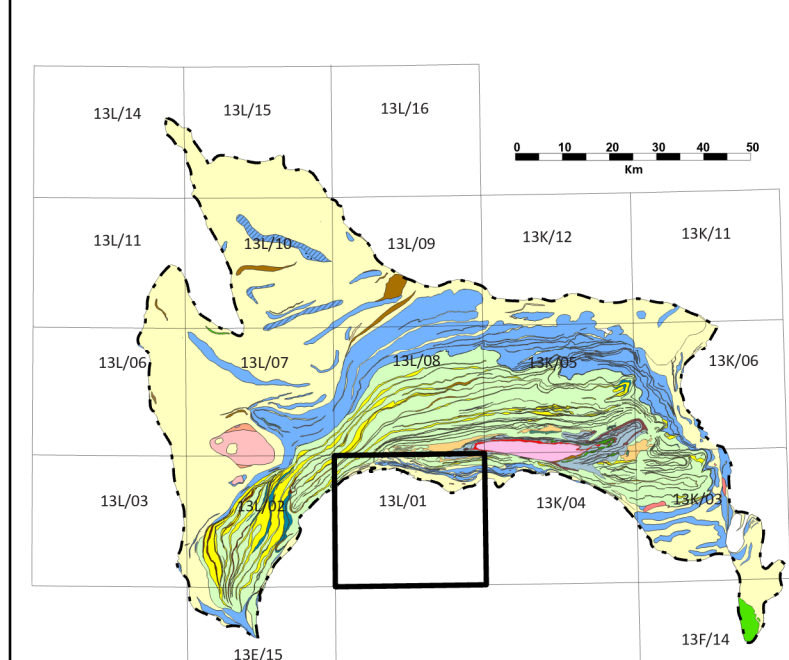
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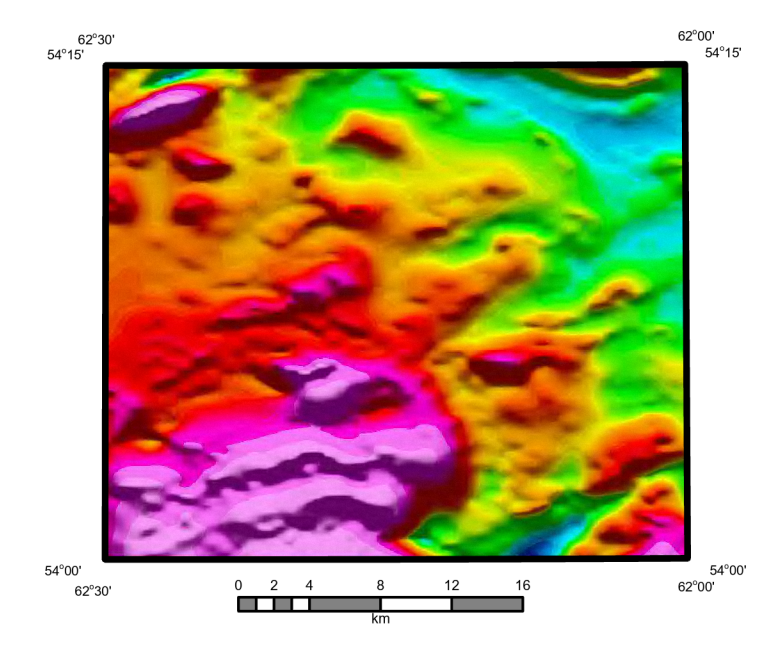
INDEX MAPS



REGIONAL GEOLOGY MAP



NTS 13L/01 AEROMAGNETIC MAP



NTS 13L/01 Aeromagnetic map, G. Kirk (2008, unpublished map). Geological Survey of Newfoundland and Labrador, using Geological Survey of Canada data.

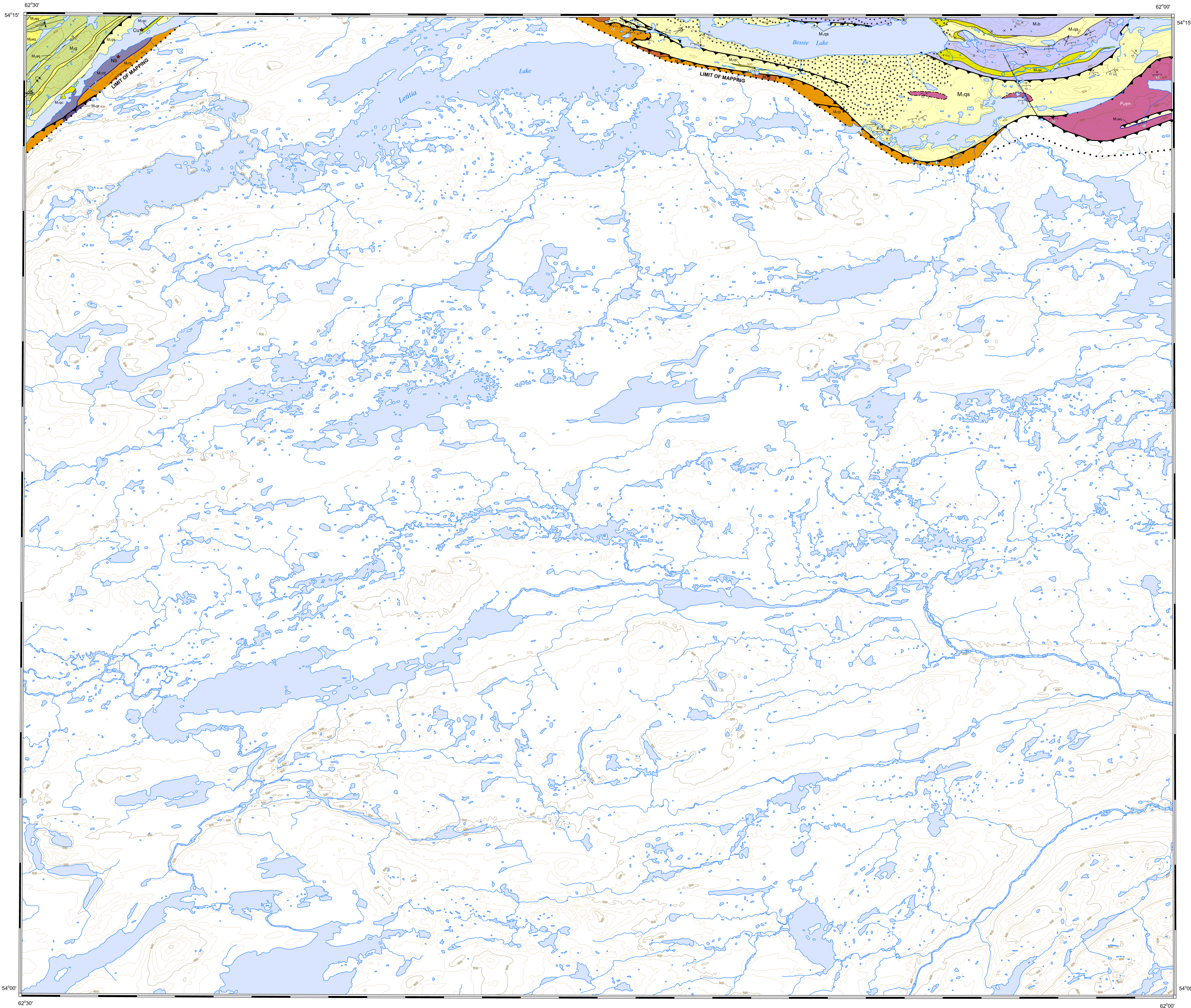
Red end of spectrum indicate magnetic highs. Blue end of spectrum indicate magnetic lows.



Map 2023-XX GEOLOGY OF THE NTS 13L/01 MAP AREA Central Labrador

OPEN FILE 13L/01/0152

Scale 1:50 000



MIDDLE MESOPROTEROZOIC

Seal Lake Group (1271 ± 225 Ma)

Upper Red Quartzite Formation

M_{1a} M_{1b}

M_{1a} Red- to pink-weathering, fine- to medium-grained, well-sorted quartz arenite, arenite, and felsophic arenite. Contains local, cm- to m-scale lenses, and layers of fine-grained silt and siltstone, particularly in the lower levels of the formation.

M_{1b} Fine-grained, maroon-weathering silt and siltstone. Occur as cm- to 10s of m-thick layers and lenses interbedded with quartz and arenite near the base of the formation.

Adeline Island Formation

Upper Member

M_{1c} M_{1d} M_{1e} M_{1f} M_{1g} M_{1h} M_{1i} M_{1j} M_{1k} M_{1l} M_{1m} M_{1n} M_{1o} M_{1p} M_{1q} M_{1r} M_{1s} M_{1t} M_{1u} M_{1v} M_{1w} M_{1x} M_{1y} M_{1z}

M_{1c} Maroon- to red-weathering, fine-grained shale, locally grades to silt.

M_{1d} Grey- to green-weathering, fine-grained slate.

M_{1e} Grey- to green-weathering, fine-grained slate, locally gradational to phyllite.

M_{1f} Red- to purple-weathering slate.

M_{1g} Grey-weathering, fine-grained sandy shale to silt.

M_{1h} Maroon- to purple-weathering, fine-grained slate.

M_{1i} Grey- to green-weathering, fine-grained slate, gradational to phyllite. This unit exhibits a distinctive 'olive-grey' sheen' and hosts most of the copper-sulfide mineralization within the Seal Lake Group.

M_{1j} Maroon- to purple-weathering, fine-grained slate.

Middle Member

M_{2a} M_{2b} M_{2c} M_{2d} M_{2e} M_{2f} M_{2g} M_{2h} M_{2i} M_{2j} M_{2k} M_{2l} M_{2m} M_{2n} M_{2o} M_{2p} M_{2q} M_{2r} M_{2s} M_{2t} M_{2u} M_{2v} M_{2w} M_{2x} M_{2y} M_{2z}

M_{2a} Pink- to red- to locally white-weathering variably recrystallized quartz arenite to arenite. This unit also contains local, thin layers and lenses of slate.

M_{2b} 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_{2c} Grey- to brown-weathering, fine-grained sandstone, locally gradational to siltstone.

M_{2d} Grey- to brown-weathering, fine-grained sandstone, locally gradational to siltstone. Also occurs as thin lenses and layers interbedded with other sedimentary rock units.

M_{2e} Pink- to grey-weathering, fine- to medium-grained variably recrystallized quartz arenite to arenite.

M_{2f} Green- to brown-weathering, fine- to medium-grained, moderate to strongly foliated, massive and amygdaloidal basalt flows.

M_{2g} Green- to grey-weathering, fine- to medium-grained siltite to argillaceous gabbro. Occurs as tabular-shaped sills and small, irregular intrusions.

Whiskey Lake Formation

M_{3a} M_{3b} M_{3c} M_{3d} M_{3e} M_{3f} M_{3g} M_{3h} M_{3i} M_{3j} M_{3k} M_{3l} M_{3m} M_{3n} M_{3o} M_{3p} M_{3q} M_{3r} M_{3s} M_{3t} M_{3u} M_{3v} M_{3w} M_{3x} M_{3y} M_{3z}

M_{3a} Brown- to red-weathering, thin-bedded to laminated slate, arenite, siltstone and subordinate calcareous rocks and chert.

M_{3b} Maroon-weathering, thin-bedded to laminated slate. Occurs predominantly as thin lenses and layers.

Wachuk Lake Formation

M_{4a} M_{4b} M_{4c} M_{4d} M_{4e} M_{4f} M_{4g} M_{4h} M_{4i} M_{4j} M_{4k} M_{4l} M_{4m} M_{4n} M_{4o} M_{4p} M_{4q} M_{4r} M_{4s} M_{4t} M_{4u} M_{4v} M_{4w} M_{4x} M_{4y} M_{4z}

M_{4a} 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- and m-scale amounts of siltstone, mudstone and calcareous rocks.

M_{4b} Brown- to tan-weathering, fine-grained, thin-bedded to laminated siltstone. Also contains thin quartz arenite, arenite, chert, and calcareous layers.

M_{4c} Fine-grained, red- to brown-weathering mudstone, grading to shale and silt and having a weak to strongly developed S- and/or SE-trending cleavage.

M_{4d} Black- to grey-weathering, fine-grained shale interbedded with siltstone and quartz arenite units. Exhibits localized and interbedded elevated radioactive signatures (recorded by rockhopper on rockchip samples).

M_{4e} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4f} Green-grey, brown- to red-weathering, fine- to medium-grained gabbroic-siltite-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_{4g} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4h} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4i} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4j} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4k} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4l} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4m} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4n} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4o} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4p} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4q} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4r} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4s} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4t} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4u} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4v} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4w} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4x} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4y} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4z} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4aa} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4ab} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4ac} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4af} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4ah} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4al} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4aq} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4ar} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4as} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4at} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4ba} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4bb} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

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M_{4bl} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4bm} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.

M_{4bn} Brown- to grey-weathering, fine- to medium-grained, well-bedded to massive limestone. Occurs as m to 10s of m-scale layers and beds interbedded with other sedimentary rock units.