

## PROOF LAKE

Areas of the map symbolized as 'Unconsolidated sand and gravel deposits (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 data stations collected by the authors are plotted using GPS-based coordinates. This map also incorporates pre-GPS field data collected by Nunn (1993). 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. Where coverage from the map area is from the Newfoundland and Labrador Geological Survey's Mineral Occurrence Database System (MODS) (<https://gis.gov.nl.ca/canvondms.asp>), and from unpublished assessment reports, the locations of most of these are dependent on initial plotting accuracy. MODS occurrences that were verified by the authors and new mineral indications were located using GPS-based geographic coordinates.

The map is augmented by follow-up examination of staked rock sites, 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 polygons 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 description' during the 'Locality' grid in the digital database. Correspondence in rock names applied to field outcrops versus those interpreted from staked sites or this section may have not been reconciled in the digital database. Differences may be due to non-representative of the sample and/or the section may not be representative of the source material.

The present map incorporates field data collected by Nunn (1993). Field work in 2012 by T. van Nieuwenhuijzen and G. Corcoran.

**Recommended citation**  
van Nieuwenhuijzen, T.  
2023. Geology of the Proof Lake map area (NTS 13L/06), central Labrador. Scale 1:50 000. Geological Survey, Department of Industry, Energy and Technology, Government of Newfoundland and Labrador. Map 2023-25, Open File 13L/06/0155.

Geology compiled by T. van Nieuwenhuijzen and G. Corcoran.

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

The digital topographic database map NTS 13L/06 used here is available from the Survey General Branch, Natural Resources, Canada. Magnetic declination at centre of map is 20°23' West (March 31, 2023).

Universal Transverse Mercator (UTM) Grid Zone 20, North American Datum (NAD) 27.

Elevations are in metres above sea level. Contour interval is 20 m.

Open File 13L/06/0155

T. van Nieuwenhuijzen, Regional Geologist, Geological Survey, Department of Industry, Energy and Technology, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NL, A1B 4J8, Canada.

Email: [tim.vannewhuijzen@gov.nl.ca](mailto:tim.vannewhuijzen@gov.nl.ca)

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 descriptions and the legends (see van Nieuwenhuijzen and Corcoran, 2013).

Map 2023-25 is twelve of twenty (20) maps on the geology of the Seal Lake Group, including adjacent rocks of older tectonic provinces in central Labrador.

Document available: <https://open.can.ca/geology>  
Geological Survey website: <https://www.gov.nl.ca/earthminesgeoscience>  
CMLP: <https://open.can.ca/geology>

**References**  
Kilb, G.  
2008. Compilation of colour-shaded relief images generated from airborne magnetic data flown by the Geological Survey of Canada from 1960 through 1972. Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, unpublished map, scale 1:250 000.

Nunn, G.A.G.  
1993. Geology of the northern Smallwood Reservoir (NTS map area 13L/06), Labrador. Government of Newfoundland and Labrador, Department of Mines and Energy, Geological Survey Branch, Report 93-3, 140 pages.

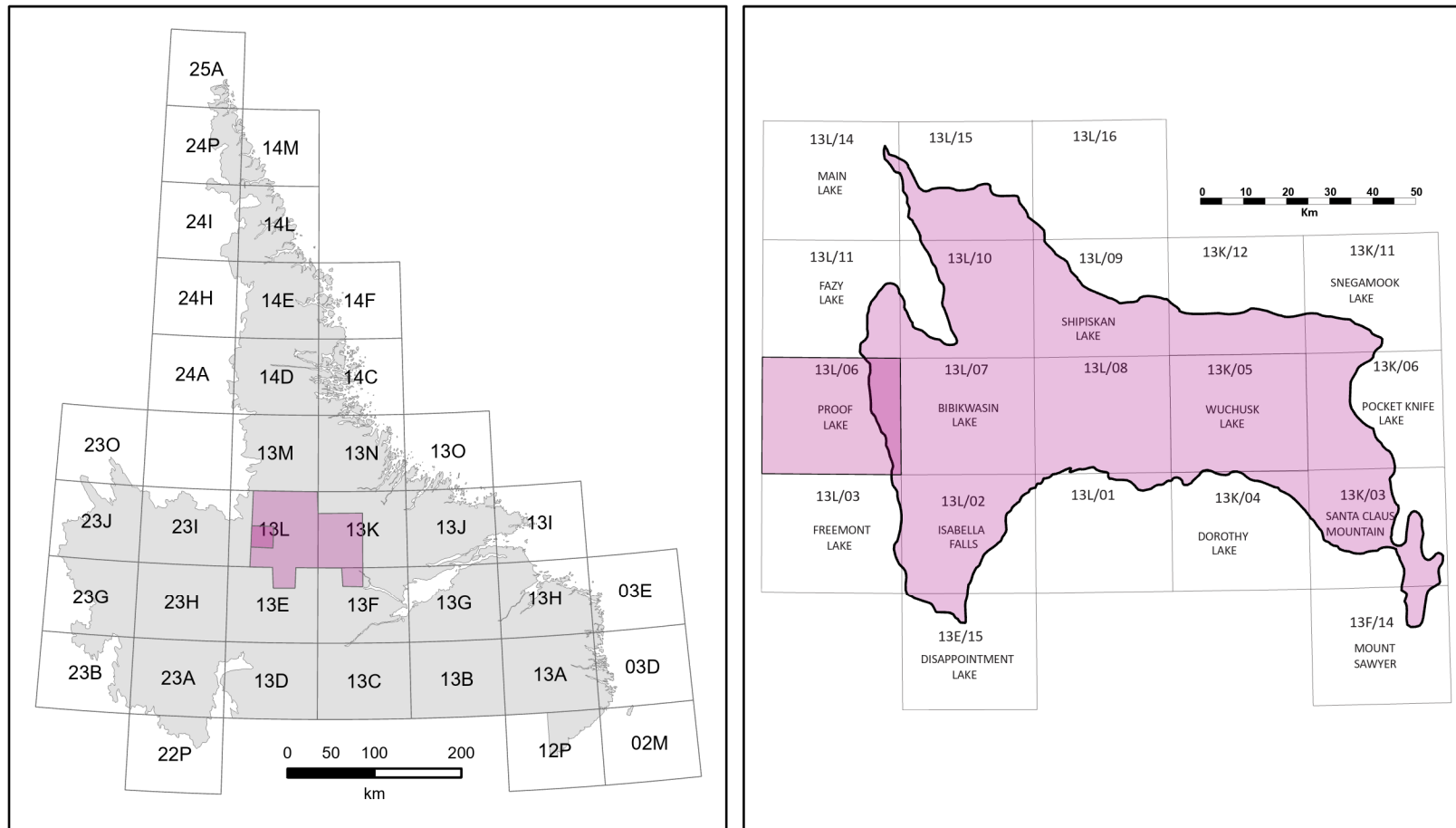
Rosscoe, S.M. and Embley, R.F.  
1979. Keweenaw Lake (East half), Newfoundland - Quebec. Geological Survey of Canada, "A" Series Map 1342A, 1:250 000 scale.

van Nieuwenhuijzen, T. and Corcoran, G.  
2013. Geology of the western Mesoproterozoic Seal Lake Group, central Labrador (including all of NTS map areas 13L/2 and 7 and parts of 13L/3, 3, 8, 9, 10, 11, 12, 13 and 14 and 13C/14 and 15). In Current Research. Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Report 13-1, pages 301-326.

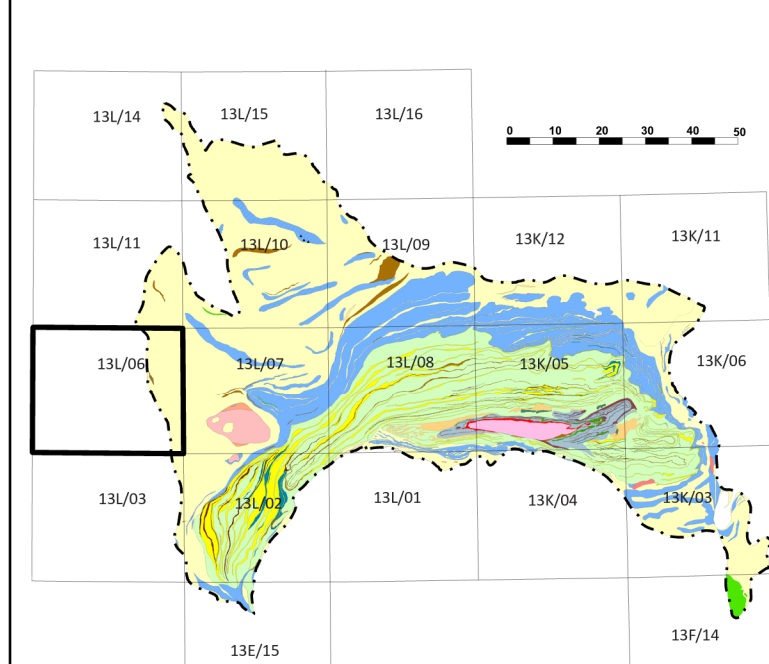
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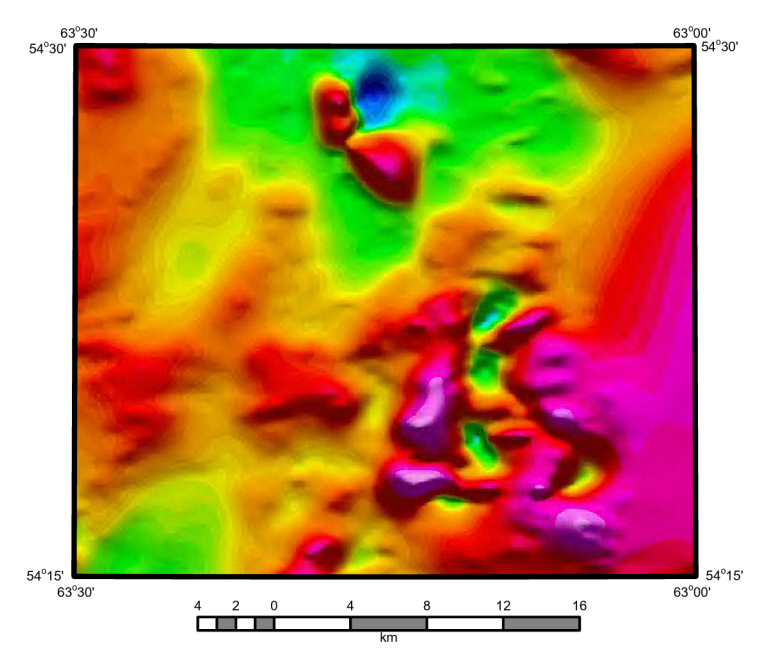
## INDEX MAPS



## REGIONAL GEOLOGY MAP



## NTS 13L/06 AEROMAGNETIC MAP



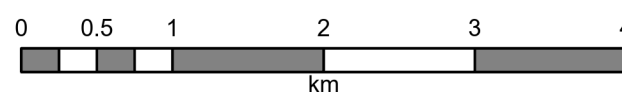
This map displays regional geological patterns.

NTS 13L/06 Aeromagnetic map, G. Kilb (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 2023-25  
GEOLOGY OF THE  
PROOF LAKE  
MAP AREA  
(NTS 13L/06)  
OPEN FILE 13L/06/0155  
Scale 1:50 000



## LEGEND

### MIDDLE MESOPROTEROZOIC

Seal Lake Group (1270-1225 Ma)

Upper Red Quartzite Formation

Maq

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 slate and siltstone, particularly in the lower levels of the formation.

Maq

Fire-grained, medium-weathering slate and siltstone. Occur as cm- to 10s of m-thick layers and lenses interbedded with quartzite and are rare near the base of the formation.

Adeline Island Formation

Upper Member

Maq

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 slate.

Maq

Maq

Green- to purple-weathering, fine-grained slate.

Maq

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.

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### EARLY MESOPROTEROZOIC

Harp Lake Intrusive Suite (ca. 1490 Ma)

Maq

Grey- to grey-white-weathering, medium- to coarse-grained, massive to layered, orthopyroxene-megacrystic hornblende anorthositic, megacrystic and megacrystic. The predominant rock type is megacrystic hornblende anorthositic, locally gradational to gabbro.

Maq

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

Maq

Unassigned intrusions

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