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

LEGEND

PLEISTOCENE

Predominantly till blanket

UNDIFFERENTIATED

14 Diabase and fine grained gabbro dykes

MIDDLE PROTEROZOIC

13 Seal Lake Group (circa 1300 - 1250 Ma): terrestrial conglomerate, arenite and minor shale interbedded with fragmental, mafic tuffaceous rocks

12 Syenitic plutonic complex: 12c, K-feldspar-porphyritic to -megacrystic granite; 12b, K-feldspar-megacrystic syenite and quartz syenite; 12a, fine grained, equigranular, felsic (± K-feldspar-porphyritic), dioritic and metabasic rocks

11 Harp Lake complex (> 1450 Ma): 11c, anorthosite and minor leuconorite and leucogabbro; 11b, anorthosite and minor leucotroctolite and leuconorite; 11a, troctolite, leucotroctolite and ? gabbronorite

10 Michikamau Intrusion (> 1460 Ma): 10e, Transgressive Group - ferrogranodiorite and ferromonzogranite; 10d, Upper Border Zone - leucogabbro and gabbro; 10c, Anorthosite Zone - anorthosite containing rare leucogabbro layers; 10b, Layered Series - 10b2, leucotroctolite containing anorthosite and rare dunite and gabbroic layers, 10b1, troctolite; 10a, undifferentiated Border zone - olivine gabbro and pyroxene troctolite.

MIDDLE PROTEROZOIC OR OLDER

9 Lac Ramusio pluton: K-feldspar- ± plagioclase-porphyritic syenogranite

LOWER PROTEROZOIC OR OLDER

8 8a, locally gneissic, intercalated granitoid and metabasic rocks; 8b, meta-ultramafic rock

7 Layered anorthositic to ultramafic rocks, mainly gabbroic anorthosite (colour index 10-25)

6 Foliated plutonic rocks: 6b, K-feldspar-porphyritic granite; 6a, metagabbro

5 Hornblende- ± pyroxene-bearing K-feldspar-megacrystic granite

4 Diffusely biotite-banded, clinopyroxene- ± orthopyroxene-bearing, white monzogranite containing grey, tonalitic gneiss enclaves (?Unit 2)

3 Enderbitic plutonic rocks: 3b, non-migmatitic equivalents of subunit 3a; 3a, pyroxene-bearing, commonly brown-weathering, migmatitic plutonic rocks ranging from diorite or metabasic rock to charnockite

ARCHEAN

2 Sail Lake intrusive suite (circa 2690 - 2660 ma): 2b, tonalite to granite sheets intercalated with units 1 and 7; 2a, tonalite to granodiorite gneiss

1 Predomiantly supracrustal gneiss: 1c, basic gneiss and carbonate-bearing (10-60 percent) basic gneiss and minor leucoamphibolite layers; 1b, plagioclase-hornblende or plagioclase - clinopyroxene ± orthopyroxene basic gneiss and metagabbro; 1a, garnet - biotite paragneiss and minor quartz-rich and quartzofeldspathic layers and lenses.

Notes:

Lesser and minor units or subunits are separated from the main rock type by commas and shown in order of decreasing abundance.

Intimate mixtures or interlayering of units or subunits are shown with the major lithotype first.

Question marks denote uncertainty in the subsequent information.

Granitoid terminology follows IUGS recommendations (Streckeisen, A., 1976; Earth Science Reviews, Volume 12, pages 1-33.

Fieldwork costs for Nunn and assistants were financed under the Canada - Newfoundland Co-operative Mineral Development Agreement (1990-1994).

This preliminary bedrock geology map is based primarily upon field observations. In areas of poor control, contacts have been extrapolated through drift-covered terrain. This map was compiled at 1:50 000 scale and photographically reduced, and is subject to revision and correction.

Elevation in metres above mean sea level.

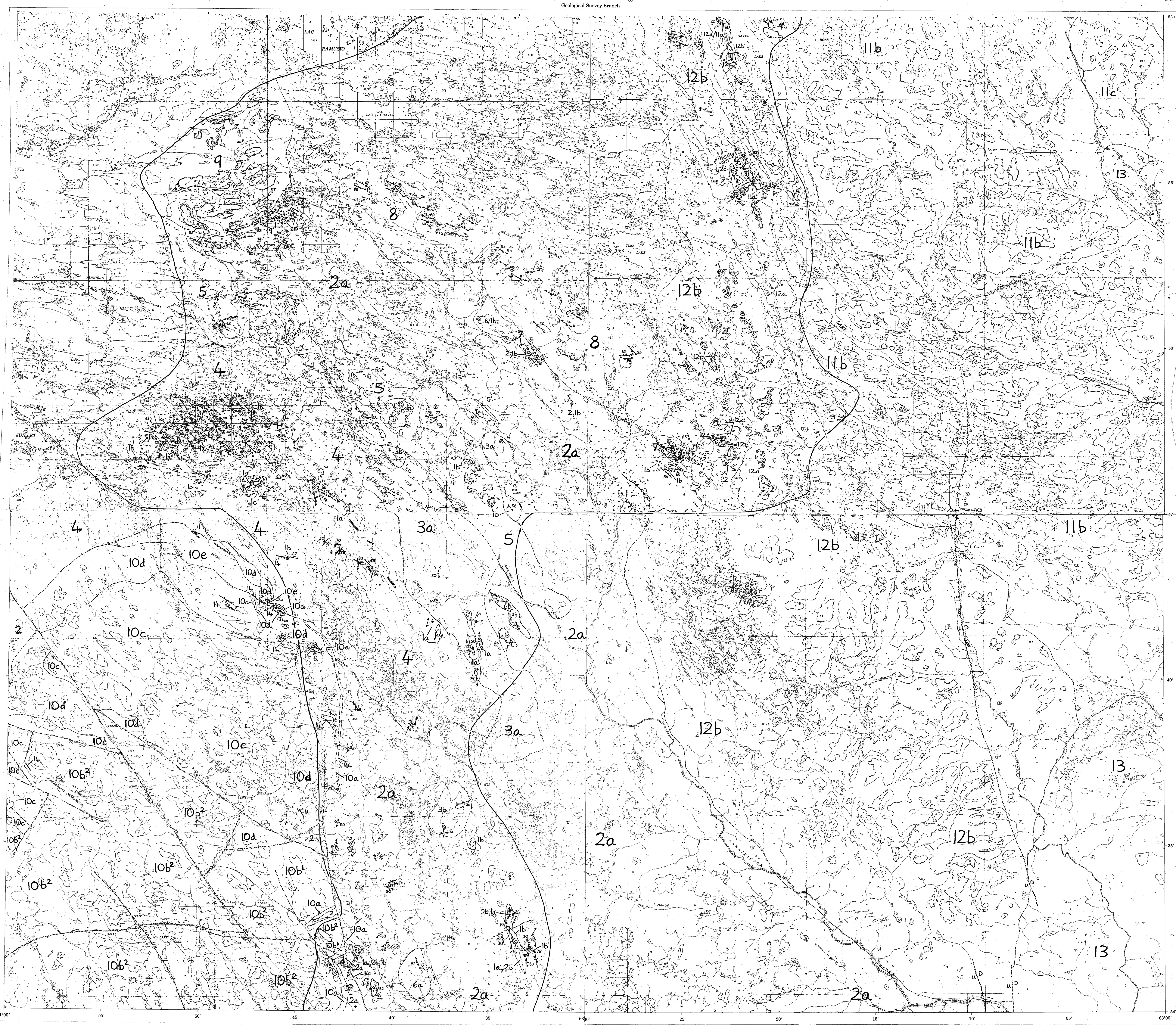
Approximate magnetic declination, 1985, was 29°07'W at the centre of the map area; decreasing 7.6' annually.

Compiled by G.A.G. Nunn, 1994, with major contributions from the published work of R.F. Emslie (1964, 1970, 1980). Additions to the latter works by the compiler outside of his "limits of mapping" are purely interpretative. Field assistance was supplied by D. Lyver and T. Rice.

Copies of this map may be obtained from the Publications and Information Section, Geological Survey Branch, Department of Mines and Energy, P.O. Box 8700, St. John's, Newfoundland, A1B 4J6.

Base maps at 1:50 000 published in 1978 (NTS 13L/13,14) and 1984 (NTS 13L/11,12) by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa (contours at 10 metre intervals).

MAP 94-122
by G.A.G. Nunn



Bedrock geology of the Kanairiktok River headwaters,
NTS area 13L/NW, Labrador
scale 1:100 000

SYMBOLS

Outcrops (visited, not visited, large area of abundance, with contact)

Geological boundary (defined, approximate, assumed)

Fault, ± sense of movement (inferred)

Igneous layering - tops unknown (inclined, vertical, dip direction unknown)
- tops known (inclined)

Igneous lamination (inclined, dip direction unknown)

Dykes, veins and sheets (inclined, vertical, subhorizontal, sinuous)
- with unit designations
- unassigned (gabbro, amphibolite, mafic or basic; granite, aplite, pegmatite)

Planar structure (see notes)

Gneissosity - Ss (inclined, vertical, subhorizontal, dip direction unknown)

Foliation - S1 (inclined, vertical, subhorizontal, subvertical, undulating dip, undulating strike)
- S2 (inclined, vertical, subhorizontal, dip direction unknown)
- S3 (inclined, vertical, dip direction unknown)
- S4 (inclined, vertical and undulating)
- S5 (inclined, vertical, undulating, dip direction unknown)

Minor shear zone - sense of movement unknown (inclined, vertical)
- sense of movement known (sinistral, dextral, downthrow)

Fracture fabric - SF (inclined, dip direction unknown)

Parallel structures - layering + S1 (inclined)
- layering + S5 (inclined)
- lamination + S5 (inclined)
- SS + S1 (inclined, vertical)
- SS + S2 (inclined)

Minor folds - isoclines, S (open, tight), Z (open, tight), M

Minor fold axes - inclined (F1, F2, mullions; see notes)

Lineations - inclined (L1, L2, L4, L5); horizontal (L1)

Parallel structures - inclined (L + F1, L + F2, L1 + mullions)

Combined structures (see above) - down dip (L5 on S5)
- oblique pitch (L1 on S1, L1 on S1, L1 on SS, L1 on SS + S1)
(L1 in shear zone, L2 on S2, L5 on S5, L5 on S5)

Glacial lineations - striae (direction known, unknown)
- roche moutonée

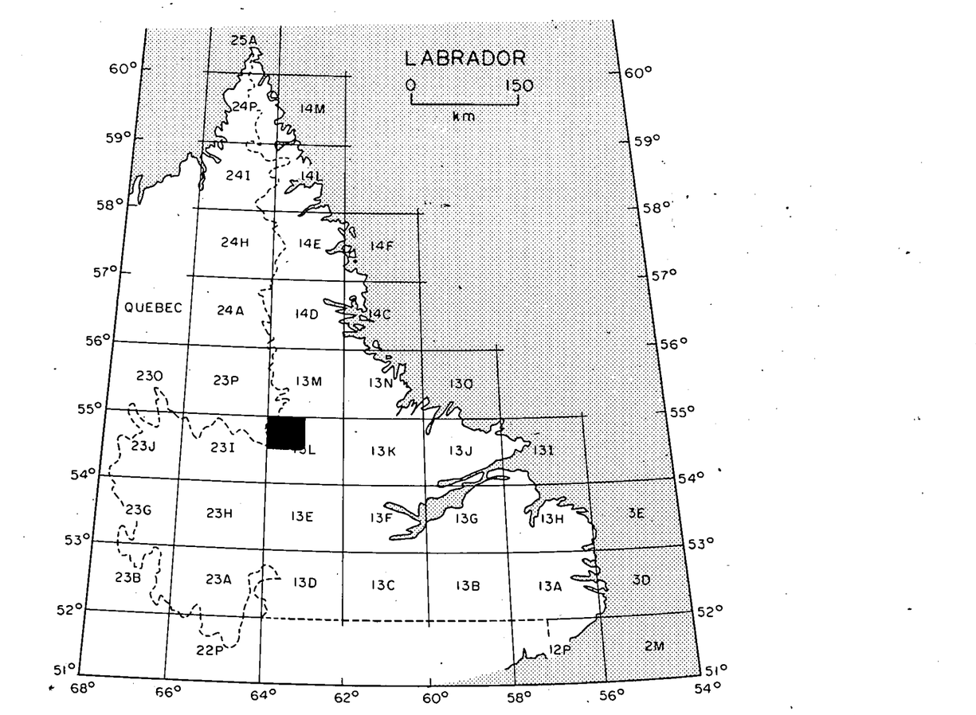
Combined glacial features - striae + roche moutonée

Notes:

g, m, and s respectively denote gentle, moderate and steep estimated readings. Wavy strike lines and dip ticks denote generalized measurement of undulating structures.

Planar Structures: Ss and S1/L1 are probably Late Archean (Nunn, 1990) but S1/L1 could be younger, particularly in Unit 8. S2/L2 developed under upper amphibolite to granulite facies conditions, postdate Ss, may be equivalent to or younger than S1/L1 and could be Late Archean or Lower Proterozoic. S3 developed in the amphibolite facies and is probably Lower Proterozoic. S4/L4 are mylonitic structures developed in glassy and/or porphyroclastic rocks that may relate to juxtaposition of the Mistinibi - Raude Domain (Unit 8) with the Orma Domain (units 1 and 2) and could be Late Archean to Middle Proterozoic. In Unit 9, S5/L5 could be related to S4/L4 but in units 11 and 12 it is Middle Proterozoic and probably relates to consolidation and emplacement processes in the Elsonian plutonic rocks. SF could be any age that postdates the unit in which it occurs but is probably one of the youngest structures.

Other structures: shear zones and F1 minor fold axes are generally synchronous with the main foliation in the unit in which they occur; F2 relates to folding of the main foliations.



INDEX MAP

Western and eastern "limits of mapping", 1993 field season