



GEOLOGY OF THE ARCHEAN ASHUANIPI COMPLEX IN WESTERN LABRADOR: MAP 1

SCALE 1:100,000 ÉCHELLE
Miles 0 1 2 3 4 5
Kilometres 0 1 2 3 4 5

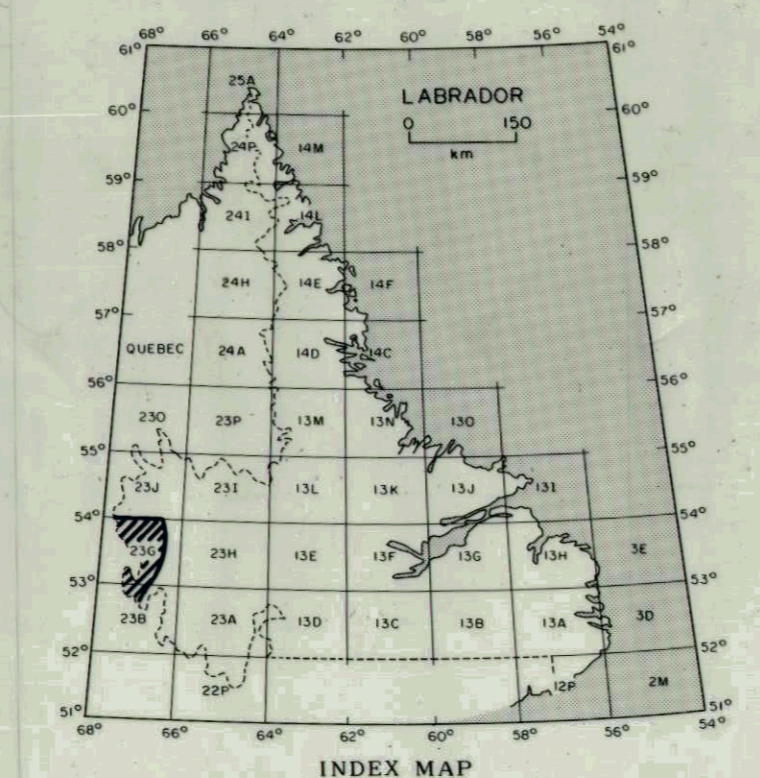
- LEGEND**
- MIDDLE PROTEROZOIC**
- 15 Shabogamo Gabbro
- LOWER PROTEROZOIC**
- KNOB LAKE GROUP (LABRADOR TROUGH)**
- 14 Memhek Formation
 - 13 Sokoman Formation
 - 12 Wishart Formation
 - 11 Denault Formation
 - 10 Attikamagen Formation
- ARCHEAN**
- ASHUANIPI COMPLEX (SUPERIOR PROVINCE)**
- 9 Unsubdivided Ashuanipi Complex: 9a, unstratified Ashuanipi Complex; 9b, variably strained, reworked and retrogressed (to greenschist facies) rocks from units 1 to 8 that occur within Grenvillian thrust sheets bound by, and containing, Lower Proterozoic Knob Lake Group rocks
 - 8 Walsh River granite: 8a, white to locally pink granite containing biotite, and commonly, massive blue quartz; 8b, pink, biotite granite; 8c, granite containing abundant gneissic inclusions. The Walsh River granite is variably foliated, recrystallized and sheared. The most highly strained granite contains muscovite which grows along the high-strain fabrics
 - 7 Granite: variably foliated to isotropic, pink monzogranite and syenogranite containing biotite and accessory magnetite
 - 6 Diatexite: white to brown weathering, medium to coarse-grained and variably foliated granodiorite and monzogranite containing orthopyroxene and biotite. The unit contains inclusions of units 1 to 5. Homogeneous diatexite contains less than 25 percent inclusions, whereas inhomogeneous diatexite contains between 25 and 50 percent inclusions. 6a, homogeneous diatexite containing orthopyroxene + garnet; 6b, inhomogeneous diatexite containing orthopyroxene + garnet; 6c, homogeneous diatexite containing orthopyroxene; 6d, inhomogeneous diatexite containing orthopyroxene
 - 5 Metaproxenite: black and dark-green metaproxenite dykes consisting of clinopyroxene, orthopyroxene and minor amounts of olivine
 - 4 Granitoid gneiss: pink and grey granitoid gneiss and migmatite. The unit contains common occurrences of variably recrystallized and deformed sheets and dykes of white and pink leucogranite. 4a, granitoid gneiss and migmatite; 4b, granitoid gneiss and migmatite containing abundant enclaves of metasedimentary migmatite (unit 1)
 - 3 Metatonalite: foliated metatonalite commonly containing coarse-grained orthopyroxene, metatonalite migmatite, and minor amounts of metadiorite and gabbro
 - 2 Mafic supracrustal gneiss: a typically well-layered, black-weathering mafic gneiss and migmatite that is interlayered with metasedimentary migmatite (unit 1). Rocks consist of variable amounts of hornblende, pyroxene, biotite, plagioclase and minor amounts of quartz
 - 1 Metasedimentary migmatite: biotite metasedimentary migmatite that contains variable amounts of white, K-feldspar-bearing leucosome. The unit contains minor amounts of interlayered mafic supracrustal gneiss (unit 2), amphibolite dykes, and metatonalite and granite dykes. 1a, biotite + garnet migmatite; 1b, orthopyroxene-bearing migmatite; 1c, unstratified metasedimentary migmatite and metatonalite (unit 3)
- Note: The legend for the Lower Proterozoic Knob Lake Group is incomplete and includes only the formations that occur in the areas shown in maps 1 and 2. A complete legend for the Knob Lake Group is shown on maps by Rivers (1985a, b, c).

- SYMBOLS**
- Geological contact (defined, approximate, inferred)
 - Archean - Proterozoic unconformity
 - Outcrop
 - Igneous layering
 - Main penetrative foliation
 - Gneissosity
 - Protomylonite, mylonite and ultramylonite
 - Mineral elongation lineation
 - Mineral elongation lineation in shear zone
 - Minor fold axis
 - Minor fold axis and sense of asymmetry (S-fold, Z-fold)
 - Fold axis in high-grade shear zone
 - Grenvillian high-strain zone (reverse fault)
 - Overturned back thrust (dip on down-dip side)
 - Shear zone or fault
 - Archean structures are decorated with one dip or plunge indicator. The inferred Grenvillian structures are decorated with two dip or plunge indicators, e.g.
 - Archean foliation
 - Grenvillian foliation
- Geology of the Ashuanipi Complex by D.T. James and D.M. Stephenson in 1991 (James and Stephenson, 1992), and by D.T. James in 1992 (James and Mahoney, 1993). Geology of the Knob Lake Group is taken from a compilation by van Gool (1992) and based on geology by Rivers (1985a, b, c) and van Gool (1992), and from interpretation of magnetic anomaly maps by D.T. James.
- Figure 1. Index map of Labrador. The study area is located in NTS maps 23G and 23B (shaded area).
- Figure 2. Index and reliability map for NTS 23G. The Ashuanipi Complex study area (patterned area) was covered by ground traverses and a minor number of helicopter traverses (shaded area), and helicopter traverses (diagonal lines).
- Figure 3. Generalized geological map of the Superior Province showing the principal tectonic elements (modified after Card and Ciesielski 1986). The study area is located in the southeastern part of the Ashuanipi Complex.

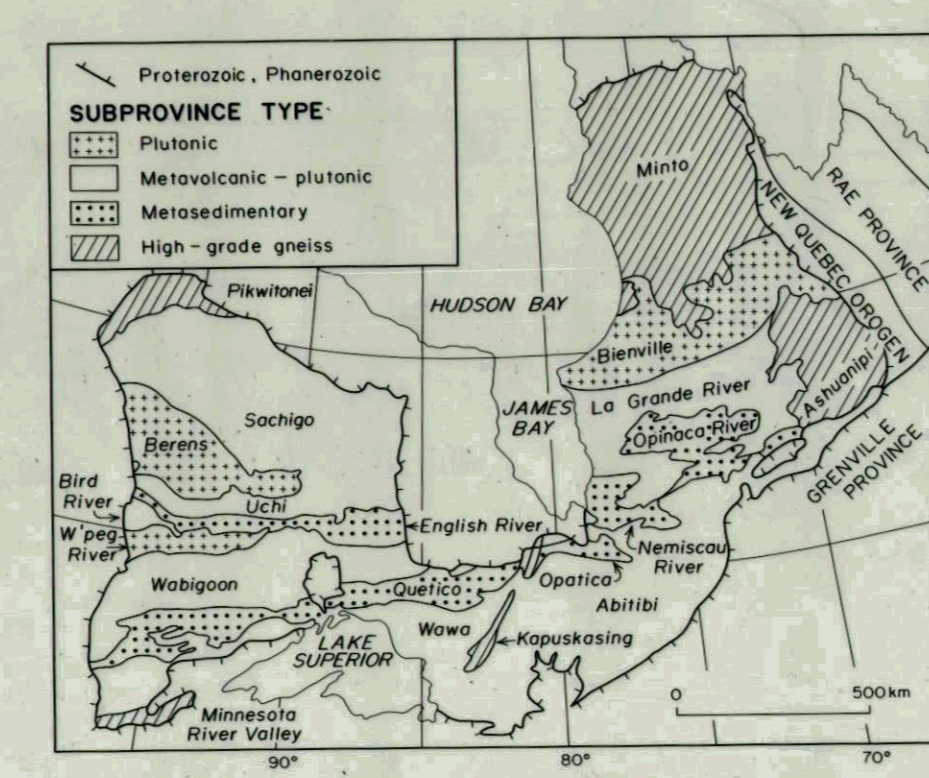
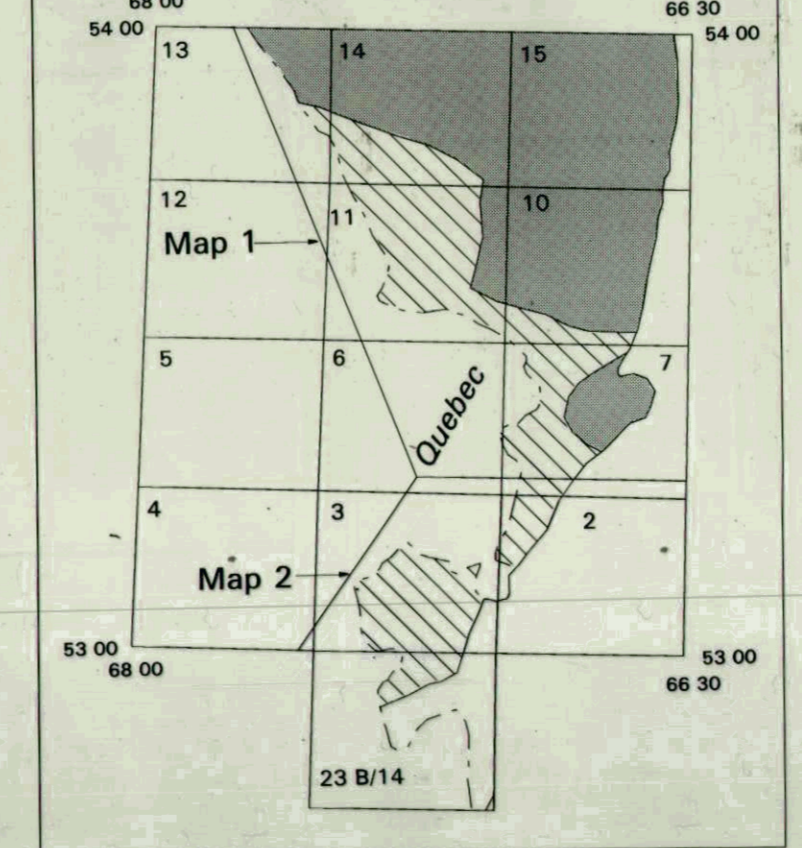
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- Rivers, T. 1985a. Geology of the Wightman Lake area, Labrador - Québec, 23G (SE). Newfoundland Department of Mines and Energy, Mineral Development Division, Map 85-28.
- 1985b. Geology of the Evening Lake area, Labrador (23G NE). Newfoundland Department of Mines and Energy, Mineral Development Division, Map 85-27.
- 1985c. Geology of the Lac Virot area, Labrador - Québec (parts of 23G and 23B). Newfoundland Department of Mines and Energy Map 85-25.
- van Gool, J. 1992. The Grenville Front foreland fold-and-thrust belt in southwestern Labrador: mid-crustal structural and metamorphic configuration of a Proterozoic orogenic thrust wedge. Unpublished Ph.D. Thesis, Memorial University of Newfoundland, St. John's, Newfoundland.

MAP 93-17



Index and Reliability Map for NTS 23G



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