

**SYMBOLS**

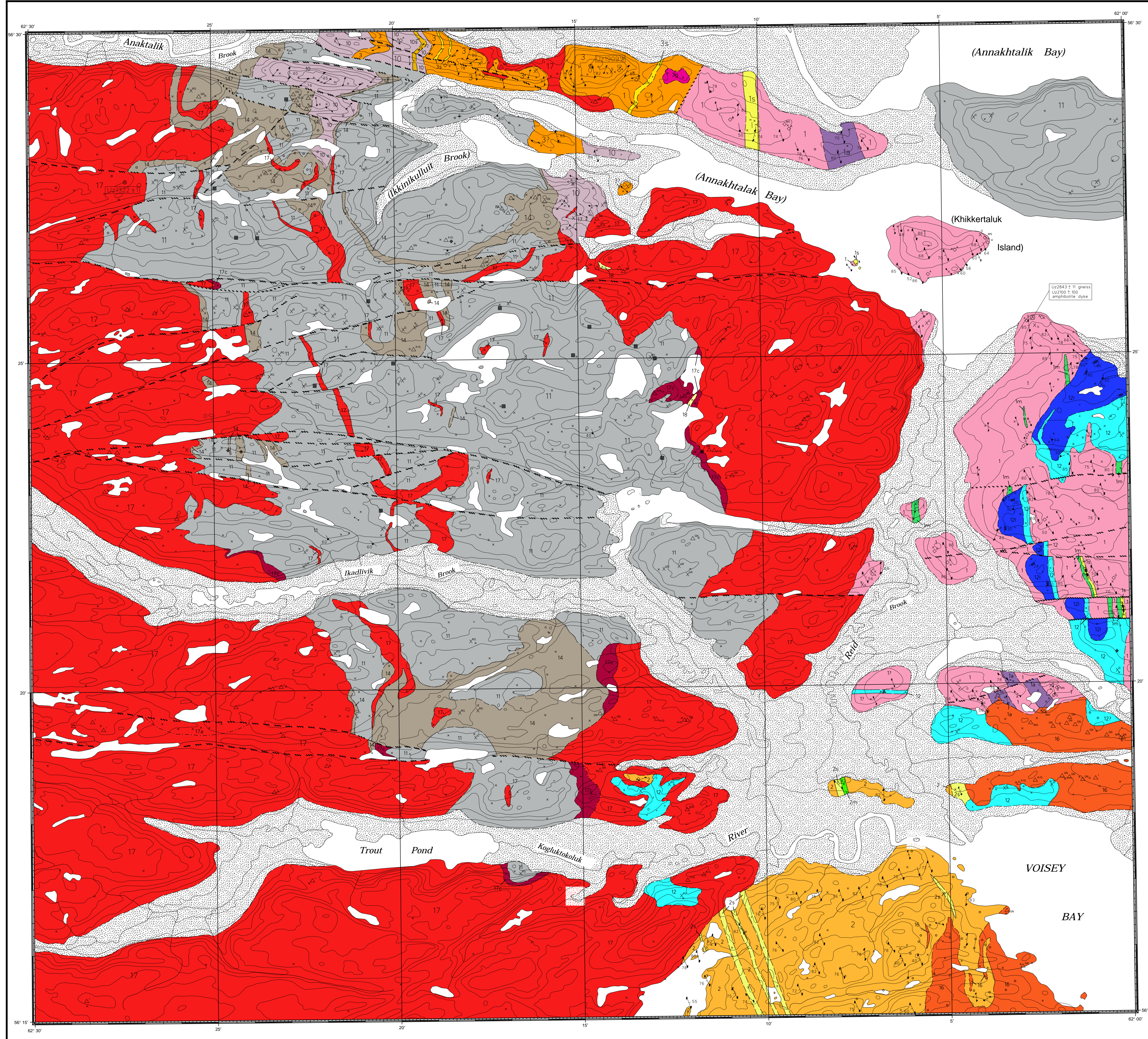
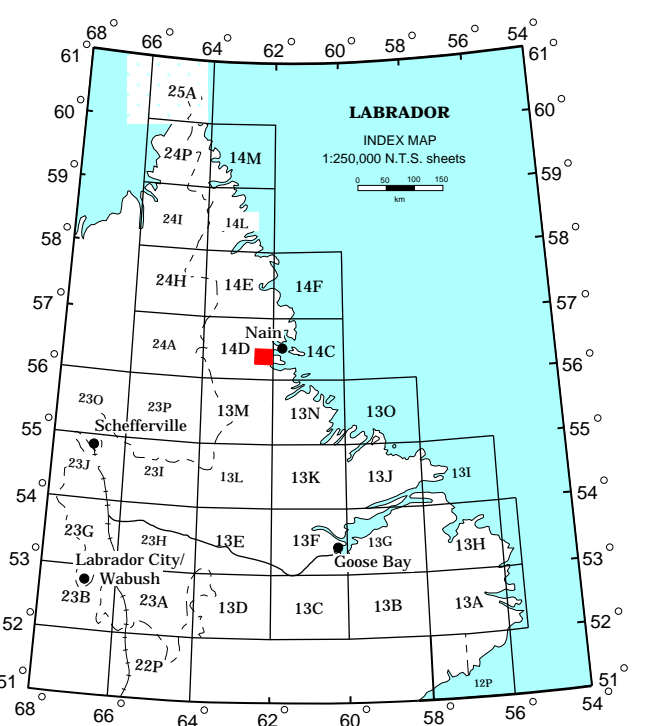
- Geological contact (defined, approximate, gradational, assumed)..... / / / / /  
 Ground observation and/or data station..... +  
 Aerial or binocular observations..... - - - - -  
 Outcrop data compiled from another source (See note 3)..... o  
 Gneissic foliation (horizontal, inclined, vertical, dip unknown).....   
 Igneous layering or mineral lamination: tops known.....   
 Igneous layering: tops unknown (inclined, horizontal, dip unknown).....   
 Mineral lineation, with plunge.....   
 Fault (defined, approximate, assumed).....   
 Narrow shear zones, with dip.....   
 Small rafts or lenses of one gneiss in another.....   
 Q = quartzite; A = amphibolite, mafic granulite (may be metamorphosed mafic dykes in some cases); MS = rusty garnetiferous metasediments; HG = hypersthene gneiss, enderbite; BG = biotite-rich gneiss.  
 Inclusions in plutonic rocks.....   
 GN = various country-rock gneisses; MA = meta-anorthositic gneiss; AG = anorthositic and related gabbroic rocks; I = intermediate (monzogabbroic and monzonitic) rocks; FA = foliated anorthosite of uncertain affinity  
 Marble and calc-silicate units.....   
 Many veins and dykes of younger plutonic material.....   
 G = granite of unspecified age and origin; RG = rapakivi granite; I = intermediate (monzogabbroic, monzonitic) rocks; A = aplite; WG = white hornblende-biotite granite  
 Uranium-lead age determination on zircon (in Ma).....   
 Uncertainty in designation of unit.....   
 Diabase dyke, absolute age unknown.....   
 Areas with extensive glacial overburden.....   
 Ilmenite occurrence.....   
 Gossan zone.....   
 Nodular graphite occurrence (in rapakivi granite).....   
 Labradorite occurrence.....

- The topographic base map for this area was compiled from aerial photographs which were taken when snow covered the western two-thirds of the area. Hence, geographic features, such as ponds, are in many cases shown with inaccurate outlines, many ponds are not shown, and some ponds are shown which do not exist; many of these photos interpreted pond outlines are shown as dashed lines on the topographic base. These inaccuracies are particularly common in areas with subdued relief. The poor ground-control has meant that some station localities and contacts between units in such low-relief areas may be misplaced by hundreds of metres.
- The contact between the granitoid plutons and the country-rock gneisses is, in some cases, an arbitrary one, because large rafts of gneiss are abundant in the border zones of the plutons and numerous dykes of the granitoid pervade the gneisses up to 1.5 km from the main body of the pluton. These zones constitute intrusive megabreccias and do not allow delineation of a sharp intrusive boundary.
- Other sources of outcrop data used in the compilation of this map:  
 Wheeler, E.P., II  
 1955. Adamelite intrusive north of Davis Inlet, Labrador. Bulletin of the Geological Society of America, Volume 66, pages 1031-1060.  
 1972. Anorthosite-adamelite-basement relations in the Ikkinkulluit drainage basin. In The Nain Anorthosite Project, Labrador. Field Report 1972. Edited by S.A. Morse. Contribution No. 11, Geology Department, University of Massachusetts, Amherst, Mass., pages 65-70.  
 1973. Plutonic and metamorphic rocks of Ikkinkulluit headwaters. In The Nain Anorthosite Project, Labrador. Field Report 1973. Edited by S.A. Morse. Contribution No. 13, Geology Department, University of Massachusetts, Amherst, Mass., pages 45-62.
- Names in parentheses are unofficial, and refer to features and/or follow orthography given in:  
 Wheeler, E.P., II  
 1953. List of Labrador Eskimo Place Names, National Museum of Canada, Bulletin 131, 105 pages.

Geology by B. Ryan and D. Lee, July-August, 1985. Additional outcrop data compiled from sources given in Note 3. This is a provisional geological map and any additional data would be appreciated by the Department of Natural Resources. This version of the map was computer generated by combining the geological data from the original black-line Open File Map (85-18) with base topography derived from 1:250 000 digital data. The fit between some geological data and the topography may be slightly mismatched, e.g. faults may not follow linear or valleys, outcrops are shifted relative to hillslopes, etc.

GIS cartography by T. Leewood, additional cartography and topographic names by T. Paltanavage. Supersedes earlier map for same area - Geology of the Reid Brook map area (N.T.S. 14D/8) by B. Ryan and D. Lee, July-August, 1985. Scale 1:50 000. Department of Mines and Energy, Government of Newfoundland and Labrador, Mineral Development Division, Map 95-17, Open File 014D/08/0051.

Copies of this map may be obtained from the Publications and Information Section, Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NF, A1B 4X6.



**LEGEND**

Note: Legend is part of a common legend for sheets 14D/1 (Makavineh Lake) and 14D/8 (Reid Brook). Units which appear only on 14D/1 (Units 4-9, 13 and 15) have been removed from the legend.

- MIDDLE PROTEROZOIC (AND YOUNGER?)**
- 15 White-weathering hornblende-biotite tonalite and granodiorite  
 Many of the smaller dykes (shown schematically) in the other rocks of the area are of this type.
- MIDDLE PROTEROZOIC (ELSONIAN PLUTONIC SUITE)**
- 11 Dominantly pink- to orange-brown-weathering, coarse-grained, hornblende (+/- olivine +/- clinopyroxene) quartz monzonite and granite; marginal phase is fine-grained and porphyritic in places; white-weathering hornblende-biotite granite predominates southwest of Trout Pond. This intrusion is characterized by ovoidal potassium feldspar megacrysts, mantled by a rind of plagioclase containing concentric zones of mafic mineral inclusions (rapakivi texture). The unit is generally very deeply weathered, giving rise to friable outcrops with a rusty-brown surficial crust and rubby talus accumulations. The outer contact is steeply dipping, although shallow in places, but the inner contact with Unit 11 is subhorizontal.
  - 17a - aplitic zones and dykes
  - 17c - a border facies of densely porphyritic clinopyroxene-olivine quartz monzonite characterized by abundant plagioclase feldspar megacrysts and aggregates of megacrysts in a dark olivine-rich groundmass ("clot porphyry")  
 The feldspars may show preferred orientation. North of Reid Brook the clot porphyry is intimately interlayered with olivine-free, fine-grained gabbro.
  - 18 Medium- to coarse-grained, grey-white- to rusty-weathering, hornblende-quartz monzonite to hornblende granite, locally contains fayalite and/or augite and/or their alteration products. Quartz commonly has a blue opalescent colour and potassium feldspars are locally ovoidal.
  - 19 Rusty brown-weathering, medium- to fine-grained, locally porphyritic, gabbroic to quartz monzogabbroic, tabular to ovoidal plagioclase feldspar phenocrysts (and xenocrysts?), commonly comprising aggregates of smaller equant grains and interstitial quartz; locally contains hornblende and biotite; poikilitic orthopyroxene and hornblende
  - 20 Black- to purplish-grey-weathering, clinopyroxene-bearing troctolite and norite  
 Stellate texture, defined by radiating plagioclase prisms, is well-displayed by this unit east of Reid Brook.
  - 21 Well-layered, rusty-brown to orange-weathering troctolite, olivine gabbro and olivine gabbroic norite, locally with comb-layering
  - 22 Pale grey- to white-weathering norite, leuconorite and anorthosite; variable grain size; textural variations range from subophitic (pyroxene has an homogeneous distribution) to biotitic (pyroxene concentrated in ovoid spongy clots enclosing plagioclase)  
 These rocks are locally layered and show evidence of being the result of more than one intrusive episode. Adjacent to younger plutonic rocks, the pyroxene is replaced by actinolite, chlorite, epidote and carbonate, and plagioclase is altered ("bleached") to sericite, epidote and chlorite.
- EARLY PROTEROZOIC (AND ARCHEAN?) (CHURCHILL PROVINCE)**
- 23 Rusty-weathering, friable, granitic-pyroxene-hornfels facies, cordierite-rich gneiss; unit comprises alternating layers of mafic composition and quartzofeldspathic layers containing lenticular, somewhat anastomosing, aggregates of blue to purple cordierite; also locally contains osunite or its breakdown products; contains narrow mafic granulite layers  
 It is intruded by dykes and layer-parallel sheets of adjacent gabbroic norite (Unit 14). This unit may be an intensely contact-metamorphosed equivalent of Unit 2. Cordierite is secondary, due to contact metamorphic replacement of garnet by cordierite + hypersthene and of sillimanite by cordierite + spinel.
  - 24 10s - graphite- and sulphide-rich paragneiss
  - 25 Mainly pale-brown- to yellowish-brown-weathering, massive to lineated enderbite (orthopyroxene tonalite) to enderbite gneiss but locally varying in composition to gabbroic norite and mangeritic; elongate, monomineralic, orthopyroxene lenses characterize the unit in many places.  
 In its northernmost exposures, the unit is transected in many places by a network of dark-green pyroxene veins and white granitic dykes; some of the latter emanate from the rapakivi granite, which intrudes the enderbite in this area.
  - 26 3s - rusty graphitic paragneiss
  - 27 3p - buff- to white-weathering, hypersthene-bearing granite
  - 28 White- to slightly rusty-weathering, granulite facies, garnet + quartz + feldspar + biotite +/- sillimanite gneiss; characterized by a lenticular quartz (mylonitic) fabric, that locally defines a gently-plunging lineation; red to lavender garnet is up to 5 cm in diameter and prismatic sillimanite is up to 3 cm in length  
 The unit contains numerous nebulous screens and schlieren of rusty paragneiss and discrete, migmatized, graphitic paragneiss. Mafic and intermediate granulite lenses are present locally. This gneiss unit, as a whole, has been affected by a pyroxene-hornfels thermal overprint from the adjacent plutons, such that garnet is variably replaced by a grey-weathering, cordierite + hypersthene (+/- plagioclase +/- olivine) assemblage and sillimanite is replaced by a black-weathering, cordierite + spinel assemblage.
  - 29 2s - rusty-weathering, garnet + sillimanite + graphite + biotite + quartz + feldspar paragneiss and minor mafic granulite; white garnetiferous granite sheets are intruded subparallel to the gneissosity
  - 2m - mafic and intermediate granulite
- ARCHEAN (NAIN PROVINCE)**
- 30 Grey- to white-weathering, quartz-feldspar-biotite gneiss, containing abundant parallel layers and pods of mafic gneiss  
 These rocks exhibit granulite-, retrogressed granulite- and amphibolite-facies mineral assemblages. Some of the mafic gneiss is derived from diabase dykes emplaced following an early period of migmatization, but predating the imposition of a laminar, somewhat mylonitic fabric with a steeply plunging lineation. Locally, the quartzofeldspathic gneiss has other isolated lenses and pods of massive to layered mafic gneiss of diverse origin, quartzite and biotite-rich metasedimentary gneiss.
  - 1s - biotite-rich, cordierite-bearing metasedimentary schist and gneiss, garnet-bearing locally; associated with minor intercalated marble and calc-silicate rock, and grey to pink calcareous quartzite
  - 1m - dark-green- to dark-grey-weathering, massive to banded, mafic gneiss
  - 1a - white-weathering, foliated and metamorphosed, gabbro, leucogabbro and anorthosite, locally containing dark-grey relics of igneous plagioclase  
 These are intrusive into and contain rafts of adjacent migmatites, and are locally characterized by mafic layers that may be metamorphosed dykes.

MAP 95-17  
**GEOLOGY OF THE REID BROOK AREA**  
 (NTS 14D/8)  
 Scale 1:50 000