



64 V.2 Syd. Kapisillit: A new geological 1:100 000 map sheet in the Nuuk area, SW Greenland

Emma F. Rehnström (compiler)

Dept. of Petrology and Ore Geology, Geological Survey of Denmark and Greenland (GEUS) Ø. Voldgade 10, 1350 København K, Denmark (emr@geus.dk)

This map sheet is the last of a series of 1:100 000 geological map sheets covering SW Greenland from 60° N to 65° N.

The Kapisillit map sheet (Rehnström, 2011) is based on GEUS field campaigns between 2003 and 2007, with additional observations included from earlier fieldwork in 1976 and 1987. It has been made compatible with surrounding map sheets, in clockwise order: Kangiata Nuna, Qorqût and Ivisaartoq.

The geology in the area consists of several phases of tonalite-trondhjemite-granodiorite (TTG)-gneisses of Eo- and Meso-Archaean ages. They are associated with amphibolite, aluminous schist and gneisses, anorthosite and other intrusive rocks. The youngest major map unit is the 2.5 Ga Qorqût Granite Complex, which is present in the western part of the map area. The map area consist of several geologically distinct domains, yet very similar lithological units make up these domains and therefore an extensive geochronological program was performed, primarily to establish TTG gneiss protolith ages and regional metamorphic overprints. The geological map is complemented by two inset maps; one depicting the areal distribution of the major phases of TTG gneiss protolith formation ages, the other one showing the youngest metamorphic event in the different domains. The major phases of TTG-gneiss protolith formation are at 3.8-3.6 Ga, ~3.0 Ga, ~2.85 Ga, ~2.8 Ga and 2.75 Ga, and the main metamorphic events picked up in the region are at: 2.85 Ga, ~2.78 Ga, 2.7 Ga and 2.65 Ga. Some of the boundaries between protolith ages coincide with major mylonite zone and shear zone systems and areas with distinct metamorphic ages. Such may be interpreted as major boundaries between different crustal blocks.

Rehnström, E.F. 2011: Geological map of Greenland 1:100 000, Kapisillit 64 V.2 Syd. Copenhagen. Geological Survey of Denmark and Greenland.