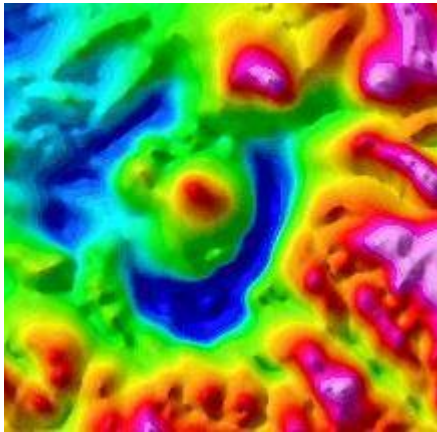


Aeromag 1999

Description of an aeromagnetic survey in Greenland 1999

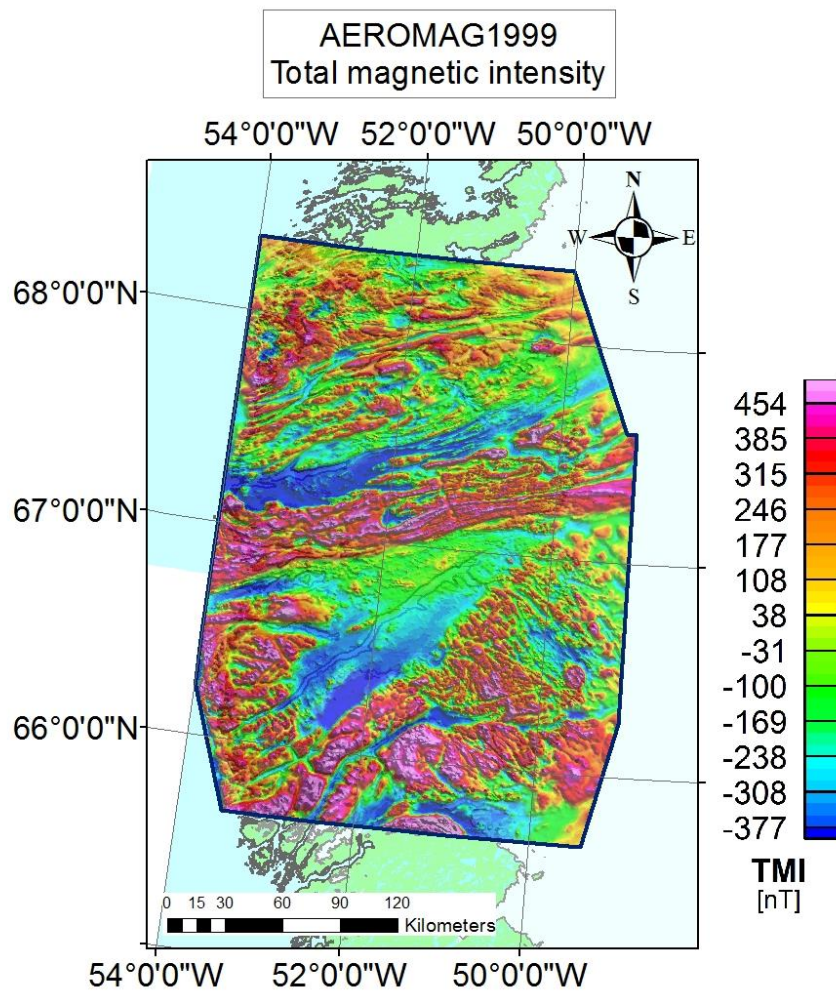


The type-anomaly from the Sarfartoq carbonatite complex. The centre of the complex is marked by a high magnetic field caused by the presence of magnetite. The surrounding magnetic low is caused by hydrothermal alteration of the host rocks.

The Aeromag 1999 survey covered the southern West Greenland, from 65°40'N to 68°20'N and from the coast to the Inland Ice (size: 61 292 km²). Data are collected and processed by Sanders Geophysics Ltd. and the survey was financed by the Government of Greenland. The regular line direction was north-south with orthogonal tie-lines. The regular lines had a separation of 500 metres whereas the tie-lines were flown with a spacing of 5000 metres.

The Aeromag 1999 survey covers an area consisting of Archaean and Proterozoic crystalline rocks, including the southern part of the Nagssugtoqidian orogen and its southern foreland. The Nagssugtoqidian orogen consists mostly of reworked Archaean gneisses with supracrustal rock sequences and Palaeoproterozoic intrusives. All rocks of the orogen were metamorphosed under upper amphibolite to granulite facies, while the Archaean foreland rocks escaped the Nagssugtoqidian metamorphic overprint and have preserved their Archean granulite facies mineralogy. Prior to the Nagssugtoqidian orogenesis the foreland and the southern part of the orogen were intruded by the mafic Kangâmiut dyke swarm.

The region covered by Aeromag 1999 project has lately been in focus with respect to diamond and base metal exploration.



Total magnetic intensity map from the Aeromag 1999 survey in southern West Greenland from 65°40'N to 68°20'N.

Data compilations can be directly downloaded from [Greenland Portal](#) by entering "Geophysics – individual surveys" and selecting this survey. To order hardcopies of map sheets, please contact Geus by email bhm@geus.dk.

Selected references:

- Rasmussen, T.M. & van Gool, J.A.M. 2000: Aeromagnetic survey in southern West Greenland: project Aeromag 1999. *Geology of Greenland Survey Bulletin* **186**, 73-77
- O'Connor, K. 1999: Project report. High-resolution aeromagnetic survey, Southern West Greenland, 1999. Unpublished report available from GEUS, 26 pp., 8 app. + data vol.