

AEM Greenland 1995

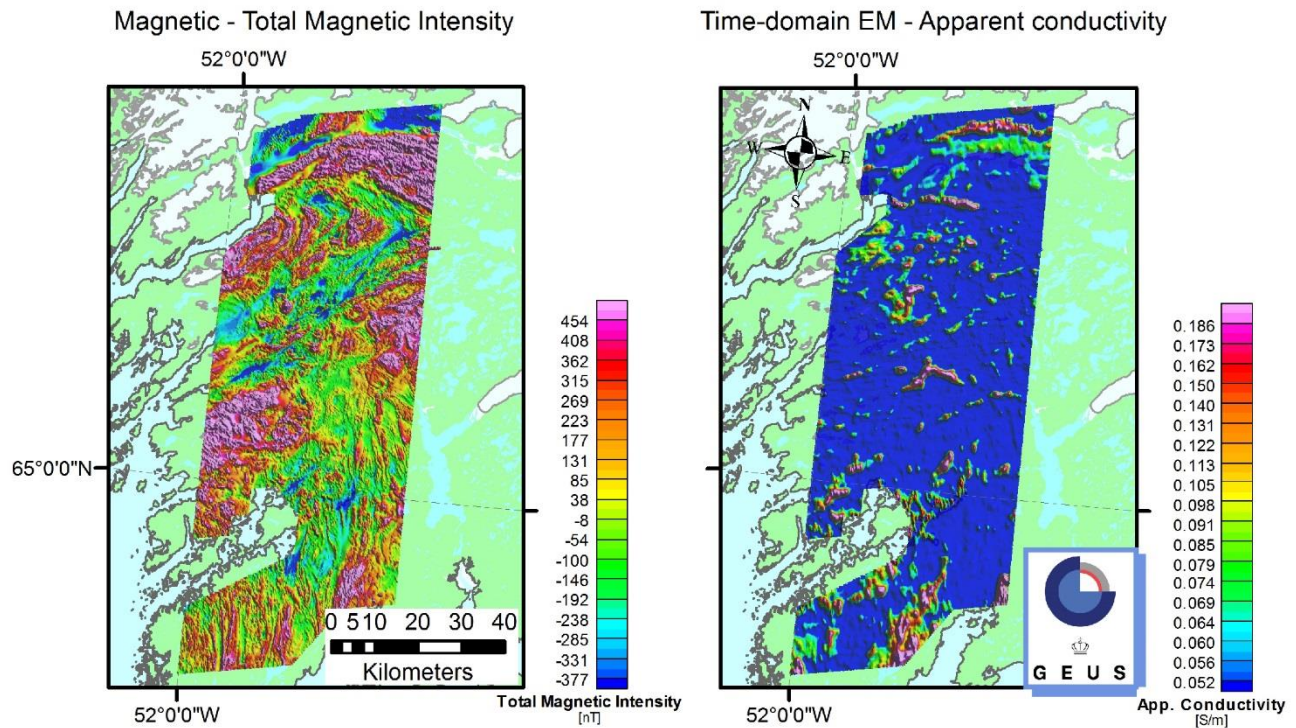
Description of an airborne combined electromagnetic and magnetic survey in Greenland 1995

The survey area is located in the Maniitsoq-Nuuk area of southern West Greenland, in the northern part of the Archaean gneiss complex of West Greenland. Measurements included acquisition of controlled source electromagnetic data (GEOTEM - time domain EM) and total field magnetic data. The survey (size of 5235 km²) was collected by Geoterrex Ltd. and financed by the Government of Greenland with a contribution from Cominco Ltd. Nominal flight line spacing is 400 metres with 200 metres spacing in the norite belt and kimberlite test area. Control lines were correspondingly spaced at four kilometres and two kilometres intervals.

The AEM Greenland 1995 project had four main objectives:

- Detailed exploration of the "norite belt", to locate massive sulphide targets
- Detailed exploration over a portion of the survey area to locate possible kimberlite pipes and dikes
- Locate massive sulphide targets within the Archaean greenstone belts
- Enhancement of the geological database of the Maniitsoq-Nuuk area

The geophysical data have been used by GEUS and by exploration companies for exploration of kimberlites and various commodities and several more refined follow-up geophysical investigations have been performed for mining exploration in this area afterwards.



Total magnetic intensity map (left) and apparent conductivity map (right) from the AEM Greenland 1995 survey in the Maniitsoq-Nuuk area (West Greenland). The apparent conductivity is determined from the z-coil on-time channel 20 of the GEOTEM system.

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:

- Sharp, B. 1996: Logistics and processing report of the airborne magnetic & GEOTEM electromagnetic multicoil survey over Maniitsoq-Nuuk area of southern west Greenland for Geological Survey of Denmark and Greenland. Geoterrex Ltd. January 1996. Unpublished report available from GEUS, vol. 1
- Stemp, R.W. 1996: Airborne electromagnetic and magnetic survey of the Manniitsoq-Nuuk area, southern West Greenland. Results from project AEM Greenland 1995. Geological Survey og Denmark and Greenland Report **1996/11**, 34 pp.
- Stemp, R.W. 1996: Airborne geophysical surveys applied to diamond exploration in Greenland. Some results from Project AEM Greenland 1995. Danmarks og Grønlands Geologiske Undersøgelse Rapport **1996/84**, 21pp.