AEM Greenland 1994

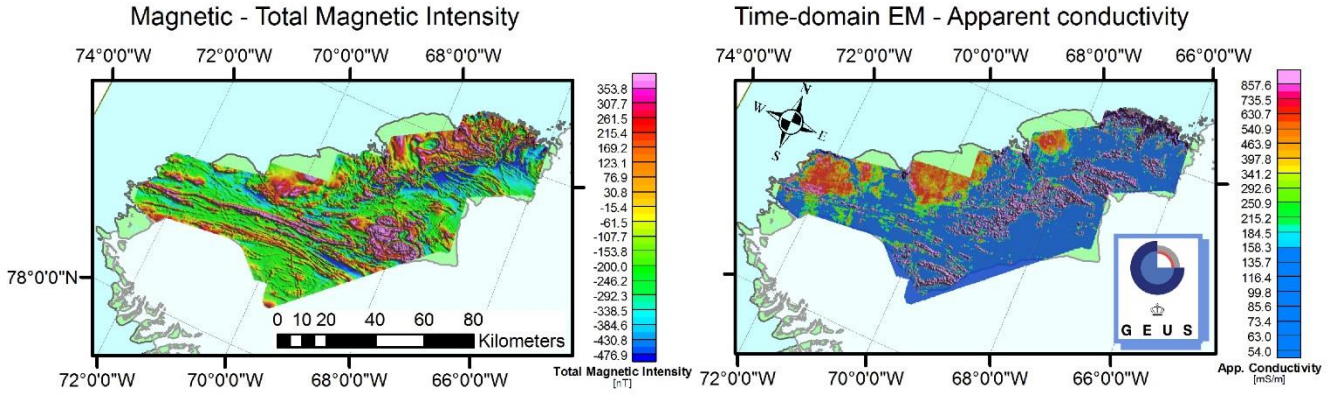
Description of an airborne combined electromagnetic and magnetic survey in Greenland 1994

The area for the AEM Greenland 1994 project is located in Inglefield Land, North-West Greenland. The measurements included acquisition of controlled source electromagnetic data (GEOTEM - time domain EM) and total field magnetic data. The survey across the ice-free onshore area (size of 6493 km^2) is collected by Geoterrex Ltd. and financed by the Government of Greenland. The main flight lines are oriented north-south and spaced at 400 metres intervals with a set of orthogonal tie-lines at 4000 metre intervals.

The area is underlain by an Early Proterozoic (and possibly Archaean) crystalline basement which traditionally has been subdivided into three main units:

- Etah group of metasedimentary supracrustal rocks
- Etah meta-igneous complex
- Variable gneisses

The basement is overlain by a succession of younger platform strata (Proterozoic to Cambrian age) in a number of coastal regions.



Total magnetic intensity map (left) and apparent conductivity map (right) from the AEM Greenland 1994 survey in Inglefield Land (North West Greenland). The apparent conductivity is determined from on&off-time channels of the GEOTEM system (horizontal receiver coil).

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:

- Stemp, R. W. & Thorning, L. 1994: A new airborne electromagnetic and magnetic survey of Inglefield Land, North-West Greenland: Project AEM Greenland 1994-1998. The Geological Survey of Greenland Report **165**, 64-68.
- Stemp, R. W. & Thorning, L. 1995: Airborne electromagnetic and magnetic survey of Inglefield Land, North-West Greenland. The Geological Survey of Greenland Open File Series **95/1**, 45 pp.