SKYTEM Airborne surveys worldwide

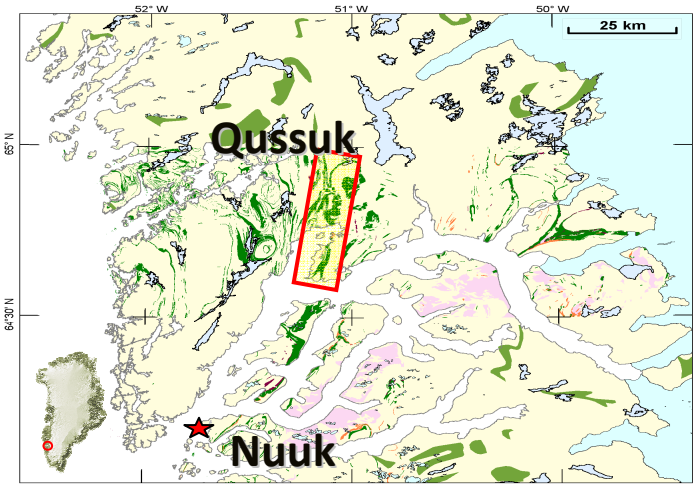
Prospecting for Gold-Copper mineralizations in Archean Greenstone, Qussuk, Greenland

Introduction

The Qussuk gold-copper project operated by the Greenlandic prospecting company NunaMinerals is located near the Qussuk bay in West Greenland 60 km North-East of the Greenlandic capital, Nuuk.

Combined geochemical and geophysical exploration located at least five exploration targets within a 20-km belt of altered volcanic rock. Several of the geophysical anomalies match known gold- and copper bearing zones.

Surface samples contain up to 35.8 g/t gold and 1.3% copper. Visible gold was first found in this area in 2007.

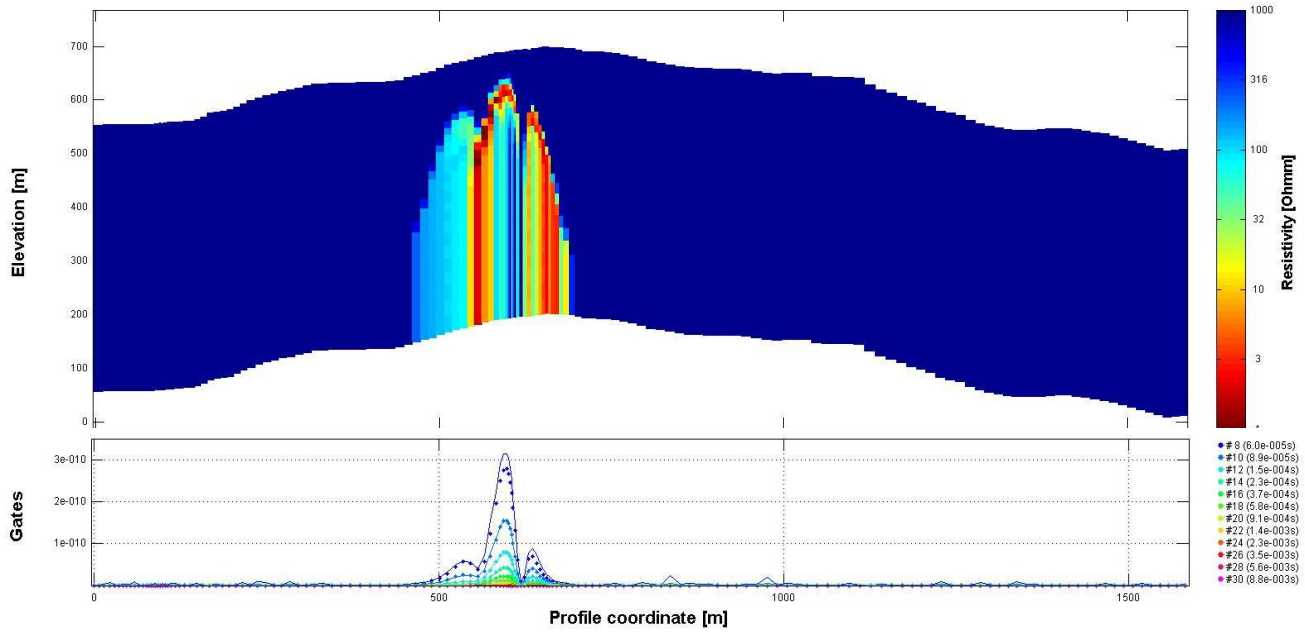


SkyTEM Survey

In 2007, a combined TDEM and magnetic SkyTEM survey was performed at the Qussuk project covering 48 km² at a line spacing of 100 meters. The survey was flown with a peak moment of 130 kAm² (high moment only) and with two receivers recording the response from both the z-and the x-component. Flight height was 20-60 meters and flight speed was relatively low, 30-50 km/h, due to the rapidly changing topography.

An example of multilayer fast approximate inversion is shown below. SkyTEM TDEM data have been inverted with a 1D multi-layer model of 30 layers.

A conductive anomaly is seen with the usual pant legs appearing in 1D inversion of electromagnetic data from 3D bodies. Note, that based on the 1D inversion the lateral location can be trusted but depth and target orientation is only indicative.



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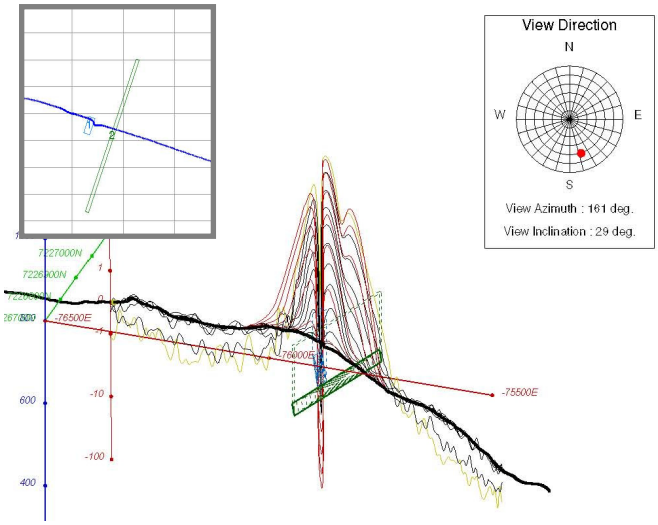

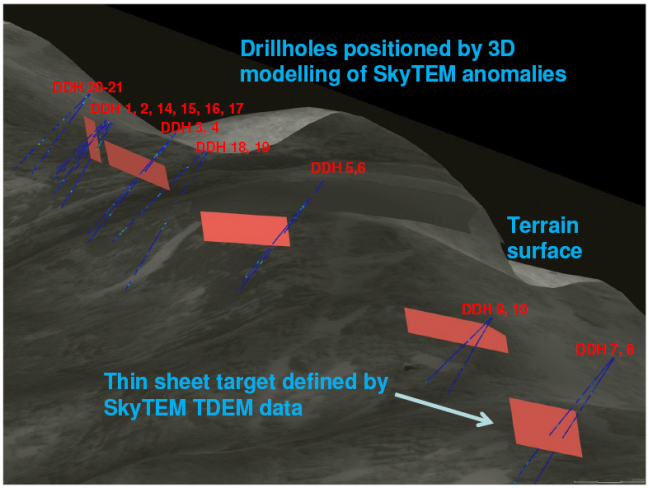

3D modelling and target definition

To support a follwing drilling program, a number of SkyTEM TDEM anomalies defined by gate values as well as the 1D multilayer inversion were chosen and modelled in 3D using the Maxwell software package by EMIT Electromagnetic Imaging Technology.

By 3D modelling the full benefit of the high resolution SkyTEM TDEM data can be obtained and drill targets very detailed defined.

Based on preliminary information released by Nuna-Minerals the 3D modelling has shown to be highly credible and the drilling program succesfully increased the understanding of the mineralizations and geological structures in the Qussuk area.

Benefits from SkyTEM airborne system setup

- The high peak moment secures large penetration depth (>400 m below terrain surface) and the well defined wave-form ensures good resolution of the detected anomalies.
- The two-component reciever system gives a high degree of infomation on the shape and orientation of the recognized conductors and provide a solid basis for 3D modelling.

SkyTEM system takes off for survey area Qussuk after assembly in Nuuk Airport.

SkyTEM gratefully acknowledges NunaMinerals for the permission to publicize the survey results in this flyer.

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