



GUINEA
West Africa



Mineral Exploration Case Study

Interpretation of airborne geophysical data

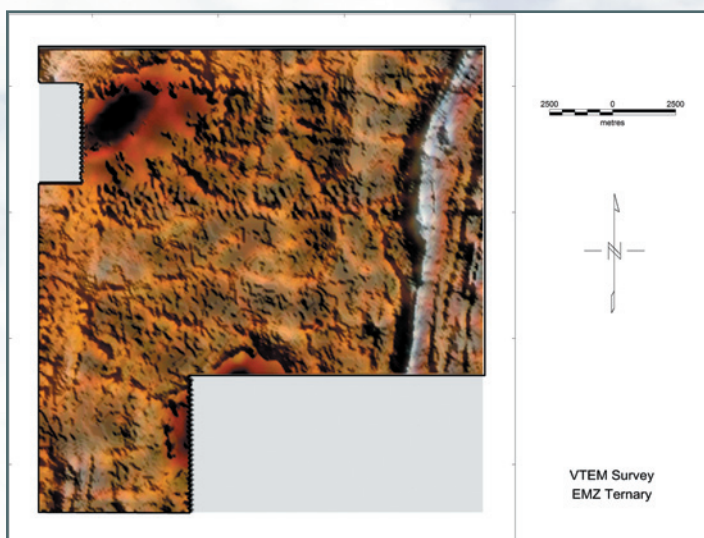
In 2011, Arrow Geophysics interpreted an airborne TEM (transient electromagnetic) dataset collected as part of a regional gold exploration programme in north-eastern Guinea.

The dataset was collected using the VTEM system at a line spacing of 200 metres and a nominal transmitter / receiver terrain clearance of 53 metres. Magnetic and radiometric data were also collected.

To assist with feature interpretation, Arrow Geophysics created several derived images from the supplied TEM data.



VTEM system
(image courtesy of Geotech Airborne Ltd)



Electromagnetic ternary image, showing regional and localised changes in lithology and structure

These derived images included:

- ▶ Channel amplitude grids (the signal amplitudes in individual channels)
- ▶ Time constant grids (the change in signal amplitudes between successive channels)
- ▶ Principal component grids (used to emphasise regional trends and common signatures)
- ▶ Ternary images (used to emphasise different electromagnetic facies)

From subsequent inspection of these images, and the related magnetic and radiometric datasets, an enhanced litho-structural map was provided to the client, enabling the creation of a prioritised list of ground follow-up targets.

Arrow Geophysics combines world-class technical expertise with real-world field experience to provide pragmatic geophysical solutions to mineral exploration professionals across Africa, Europe and the Middle East.

If you would like to discuss a project similar to this case study, or to enquire about the technical and commercial benefits of geophysics for your current exploration programme, then please do not hesitate to contact us.

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