Gap GeoPhysics
Exploration Services

DHEM / DHMMR

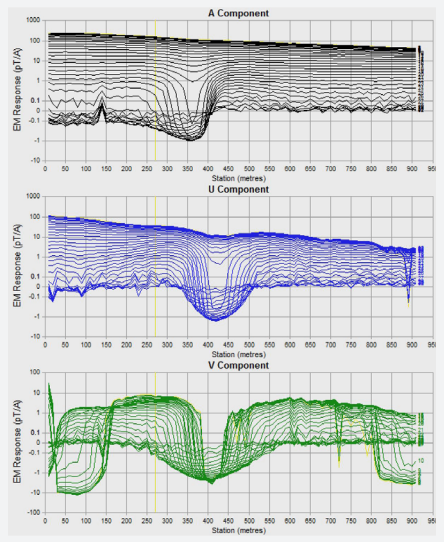
Downhole Technologies

High-powered, deep search technology produces highest quality downhole data.

Gap GeoPhysics' Downhole systems combine Gap GeoPak High Powered EM Transmitters and EMIT DigiAtlantis Probes, resulting in the most powerful downhole EM systems currently available. They are ideally suited to the detection of subtle or deep conductors.

DigiAtlantis System

- 3-component Fluxgate B-field sensor
- Simultaneous acquisition of all components
- Calculation of Downhole magnetics and Hole Trajectory
- Real time viewing of data for improved data quality



High Powered Transmitter System

- High currents produce better quality data
- Rapid acquisition times and reduced survey cost
- Increased detection radius
- Increased depth of investigation

Downhole ElectroMagnetics (DHEM) provides greater spatial resolution of closely spaced conductors than surface or airborne geophysical surveys.

Applications

- The DHEM technique is ideally suited for detecting conductive massive sulphide mineralisation, in particular nickel sulphide bodies.
- The Downhole MagnetoMetric Resistivity (DHMMR) technique is ideally suited for detecting narrow ribbon shaped and/or poorly conducting mineralisation such as sphalerite rich bodies.

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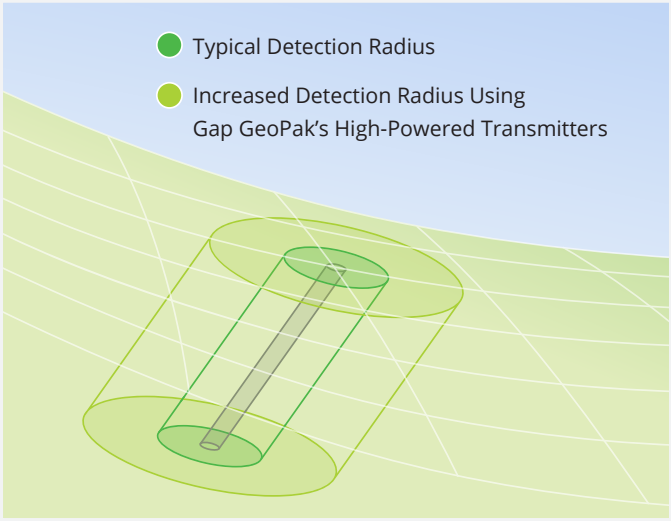

Argent Minerals Limited (ASX: ARD) Managing Director David Busch said, *"On 31 July Argent Minerals reported the success of the downhole MMR trial at Kempfield, which responded very clearly and specifically to known rich lead/zinc mineralisation ..."*

Source: ASX Media Release, 31 July 2014

Specifications

Sensors:	*3-component fluxgate (EMIT DigiAtlantis) or 3-component coil (Geonics BH43-3)*
Winches:	*AusLog 600-4 (600m), AusLog 2000-4 (2000m) or DGRT Laminar (2000m).*
Tx Synchronization:	*GPS 1PPS pulse or clock*
Transmitters:	*Gap GeoPak HPTX-70/80 Transmitters*
Base Frequency:	*Typically 0.125Hz to 2.0Hz*
Current:	*200A for a 600m x 600m loop, 140A for a 1000m x 1000m loop, using 35 mm^2 wire*
Receiver:	*EMIT DigiAtlantis*

Gap Geophysics Australia offers a range of proprietary exploration techniques, with advanced instrumentation and high performance transmitters that enable greater depth of exploration and higher resolution surveys.

KGL Resources: Geophysics Identifies New Targets at Jervois *A DHEM program was conducted at Jervois using a DigiAtlantis sensor with a High Powered Gap GeoPak HPTX-70 transmitter system. Simon Milroy the managing director of KGL Resources comments "These results are very encouraging as copper mineralisation up to about 2% Cu generally presents as a weak conductor. Stronger anomalies like the one we are seeing below RJ169 historically correlate well with much higher grades. That's just what we like to see in these deeper parts of the deposit."* *Source: ASX Media Release 21 November 2014*

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