



SkyTEM304

Superior High Near-Surface Exploration

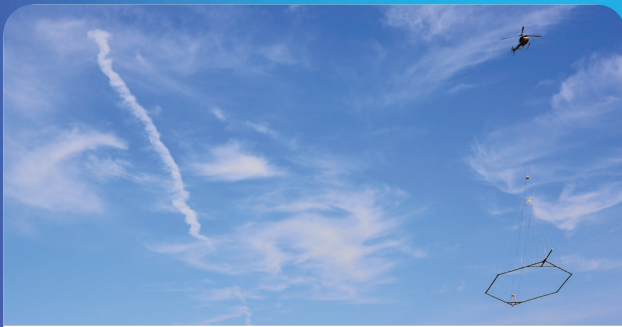
www.skytem.com



SkyTEM304

Next generation SkyTEM systems at a glance

The new generation of SkyTEM systems leverages:



A high power 250A transmitter featuring patented technology for faster current turn-on and turn-off.

The DualMoment current waveform delivers both high resolution of shallow geology and large depth of investigation in one



A fully digital multichannel receiver for continuous sampled and streamed data with advanced and real-time signal gating and measured B-field. Enhanced features include extremely high accuracy due to a 5 MHz sample rate with 36-bit resolution in 3 channels and rejection of high-frequency noise.



The re-engineered receiver coil system offers a five-fold or more reduction in late time noise levels for greater resolution at depth.



Aerodynamically engineered rigid and lightweight carbon fibre carrier frame permits take-off with a full fuel tank maximizing production rates in hot climates and high elevations.



SkyTEM304 – the **ULTIMATE** discriminator in subtle conductivity contrasts

The SkyTEM304 time-domain EM system has built its reputation as THE go-to mapper of near surface geology for geotechnical investigations and mineral and groundwater exploration. The system is specifically designed to resolve small variations in conductivity while still maintaining a robust depth of penetration to deliver detailed images of underlying structure and geology.

SkyTEM304 transformed the exploration industry with the introduction of dual moment technology. This breakthrough in airborne EM is proven to provide the highest quality near surface data concurrently with depth imaging and is highly valued by government agencies, mining and geotechnical firms and regional water authorities worldwide.

Distinct advantages over Frequency EM (FEM), including:

- ◆ A dense dataset well-suited to quantitative interpretation via inversion, unlike the sparse datasets from FEM methods (in-phase and quadrature data at 5 or 6 discrete frequencies)
- ◆ One system and one mobilization for mapping the near surface concurrently with depth.

SkyTEM304 benefits

Near-surface mapping

- ◆ Extraordinary near surface resolution offered by high system bandwidth, fast current turn-off and exceptionally early time gates.
- ◆ Accurate early time gates without bias due to null coupled receiver coils and use of an advanced Primary Field Compensation technique.
- ◆ Accurate modelling results from a fully calibrated system and in-flight measurement of the precise orientation and height of the transmitter and receiver.
- ◆ Seamless integration of adjacent survey blocks owing to the accurate modelling results

High resolution near surface at a glance

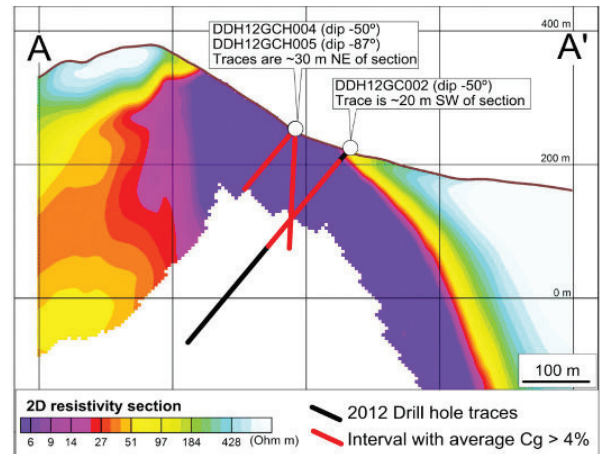
- ◆ System calibration ensures collection of accurate data that is directly comparable with borehole conductivity logs and drilling results.
- ◆ Comprehensive measurement of in-flight system parameters such as altitude and positioning of the rigid frame together with filter parameters and an exceptionally stable transmitter current waveform make rigorous quantitative interpretation possible.



The proof is in the data – accuracy

Graphite One Resources employed SkyTEM304 to map 6,799 hectares on their Graphite Creek property in Alaska. The objective was to map the spatial and depth extent of conductors associated with graphite mineralization to better define the zone of known mineralization.

The calibrated response of SkyTEM304 provides proven and reliable results for mapping the spatial extent of conductive bodies. Note the strong correlation with borehole data below showing that the results can be used to effectively and accurately map the depth extent of conductive bodies. SkyTEM304 successfully mapped conductive bodies coincident with the extent of known graphite mineralization and also detected a significantly larger trend of conductors that led to the discovery of new high grade graphite mineralization.



Discrimination

Upon completion of a SkyTEM304 survey for water resource mapping, Principal Scientist, Richard George, PhD, Department of Agriculture and Food, Western Australia (DAFWA) says “previous drilling involved a hit and-miss technique in which there was just a one-in-five chance of finding water and even less chance of finding water of suitable quality but the airborne electromagnetic surveying has doubled the odds of striking it lucky”.

Of the seventy (70) targets identified, DAFWA located more than thirty (30) sites suitable for production drilling. “We’re running better than a one-in-three success rate of finding sufficient water-bearing sands” Dr. George says. “By finding sites with high yield we can save on energy as we don’t have to pump from such a long way down.” Gascoyne growers worried by an increasingly dry Gascoyne River are already seeing the benefits of the water, using it to bolster declining traditional sources. Dr. George concludes “Our analysis shows that our rate of success for finding groundwater was very high”, and “These excellent results are unprecedented in our experience of groundwater exploration.”

...“the system remains open along strike and depth as defined by the geophysics and mapping, confirming the strength and continuity of this deposit”

*Anthony Huston
President and Director
Graphite One Resources*



Specifications of SkyTEM304

	LM MODE	HM MODE
No. of transmitter turns	1	4
Transmitter area per turn	342 m ²	342 m ²
Transmitter current	~9 Amp	100 - 120 Amp
Peak moment	~3,000 NIA	Up to 150,000 NIA
On time	800 us	5 ms
Off time	1018 us	15 ms
Repetition frequency	275 Hz	25 Hz

