

AEROTEM

ADVANCED HELICOPTER-BORNE TIME DOMAIN ELECTROMAGNETICS

AeroTEM is an innovative approach to geophysical surveying with its original concept of a concentric coil helicopter-borne time domain EM system.

Aeroquest has developed 3 generations of AeroTEM systems and has been continuously refining the designs as an exploration tool that is optimized to provide the maximum amount of information on the target application. The combination of resolution, conductance discrimination, and geometric information results in a system with a wide applicability.

Features

- Focused footprint
- Multiple axis receiver coils, "Z" and "X"
- True On-time and Early Off-time measurements
- Depth of exploration to 500 metres
- High resolution magnetometers

Advantages

- Highly focused EM footprint provides outstanding delineation and characterization of subsurface conductors
- Portable system for quick deployment to almost any geographic location
- Rigid platform provides excellent results even in rugged terrain
- Target responses are independent of bird heading, and show no herring-bone effect across flight lines
- Direct drilling facilitated by high spatial resolution and dual component recording
- Exceptional early off-time performance for the detection of weakly conductive targets
- Full suite of interpretive products and services



Common Applications

AeroTEM has become, for many, the system of choice for mapping and exploration programs. To date, AeroTEM has been instrumental in the following applications:

- Copper
- Silver
- Ground Water
- Gold
- Uranium
- UXO
- VMS
- Diamonds
- Aggregates Mapping
- Nickel-Copper-PGE
- Oil Sands Mapping

Specifications

	AeroTEM II	AeroTEM III	AeroTEM IV
Base operating frequency:	125/150 Hz (optional 75/90 Hz)	75/90 Hz (optional 25/30 Hz)	25/30 Hz (optional 75/90 Hz)
Transmitter waveform:	Bipolar triangular pulse, 20 to 50% duty cycle		
Transmitter coil:	Vertical dipole		
Receiver coils:	Vertical Z axis and horizontal X axis (along flight line)		
Transmitter dipole moment:	40,000 Am ²	Up to 230,000 Am ²	Up to 340,000 Am ²
Data output:	16 on-time channels plus 17 off-time channels for X and Z components available full waveform streaming data		
Output sampling rate:	10 per second - selectable		
Tow cable:	40 m	50 m	60 m
System Size (diameter):	5 m	10 m	12 m
Magnetometers:	Geometrics G823A high-sensitive Cesium sensor (.001 nT) sampled @ 10 Hz		

Waveforms and Channel Positioning (90 Hz example)

