



VTEM™

VERSATILE TIME-DOMAIN
ELECTROMAGNETIC SYSTEM

Geotech's exclusive and industry-leading VTEM™ (Versatile Time-Domain Electromagnetic) system has surveyed more than two million line-kilometres with confirmed results in many different deposits and host geologies for various industries. We operate more than 30 VTEM™ systems globally.



FEATURES

- Highest signal to noise ratio in the industry providing superior depth of investigation
- In-loop transmitter-receiver geometry to provide a symmetric response to allow for intuitive conductor interpretation
- Low noise receiver and in-loop transmitter-receiver geometry provides for high spatial resolution
- Low base operating frequency - standard is 30 Hz or 25 Hz to penetrate through conductive overburden
- Long on-pulse to detect and resolve high conductance targets
- Easily deployable to all parts of the world

BENEFITS

VTEM™ is easily transportable. It can be disassembled for packaging in relatively small units for shipping to surveys around the world. In the event of damage to the EM bird in-flight or while being transported between survey sites, the unique design allows the easy replacement of any part of the system in the field.

VTEM™ has been designed to detect and discriminate between moderate to excellent conductors using a low base frequency and long pulse width.

VTEM™ has produced superior results over the same test areas flown by competing airborne EM survey companies. The results have demonstrated that VTEM™ provides the industry's highest signal to noise ratio and conductor spatial resolution.



TRANSMITTER

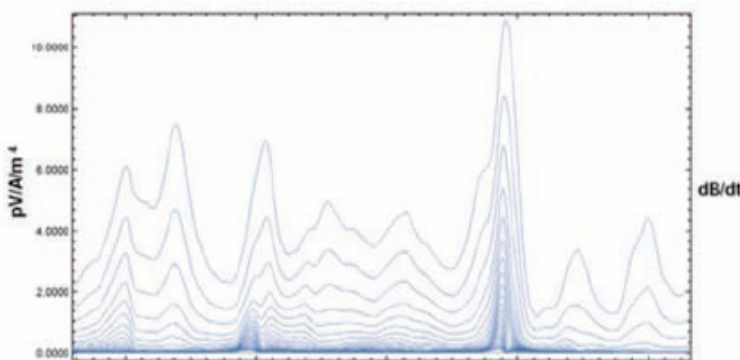
Transmitter-receiver geometry	In-loop, vertical dipole
Transmitter coil	Octagon shape - vertical axis, 17.4 m diameter
Base frequency	Standard 30 Hz or 25 Hz depending on powerline frequency
Pulse shape	Polygonal
Pulse width	3.4 - 7 ms in length
Peak dipole moment	Up to 240,000 NIA
Peak current	Up to 250 Amperes

RECEIVER

Coils	Z only
Sample rate	192 kHz over entire waveform
Bandwidth	Up to 50 kHz
Spheric noise rejection	Digital
Industrial noise rejection	60 Hz or 50 Hz

MECHANICAL

Nominal survey speed	90 km/hr
EM transmitter/receiver ground clearance	30 m
Operating temperature	-45°C to 45°C
Power requirements	From helicopter, auxiliary power not required
Shipping	Standard packaging (longest piece - 2.5 m)
Installation/assembly time	One day typically



An example of VTEM™ dB/dt data is shown.