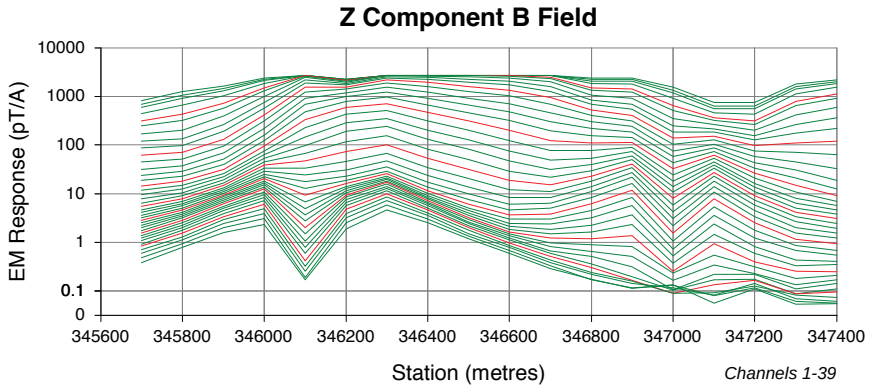
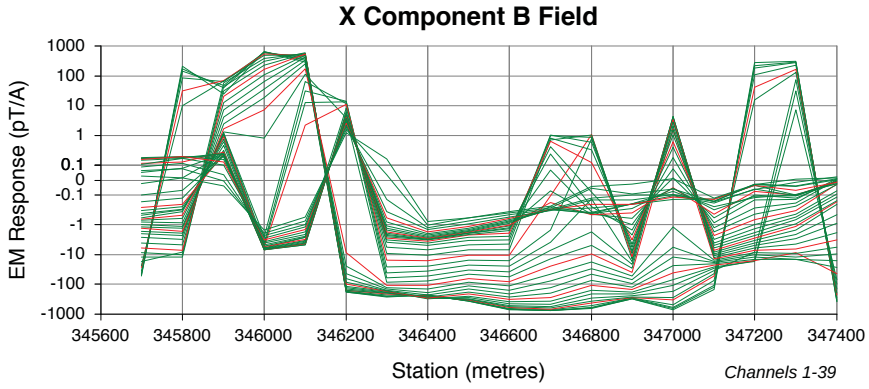
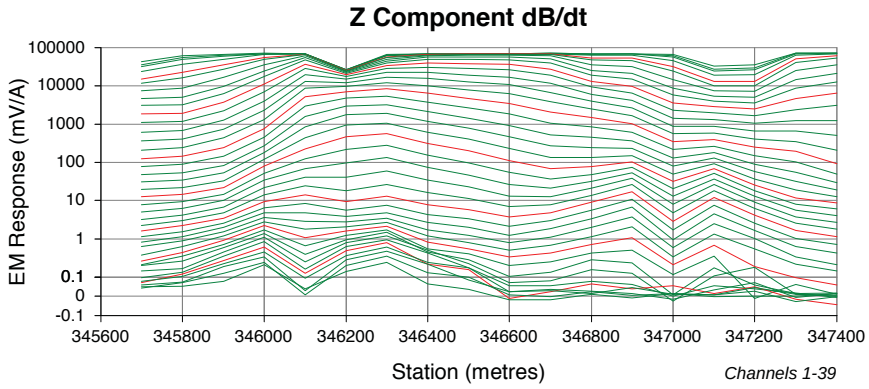
GROUND ELECTROMAGNETICS

GPX SURVEYS

Airborne & Ground Geophysics







TEM (Time Domain Electromagnetic) surveys involve induction of electromagnetic (EM) fields in the sub-surface via a square or rectangular transmitter loop which has no electrical connection with the earth. In turn, the sub-surface EM fields induce secondary EM fields in a receiver coil and a receiver attached to this coil measures a transient decay which is diagnostic of ground conditions.

Due to the physics of the technique it is inherently better at detecting conductors in resistive environments rather than resistors in conductive environments.

Applications

Mineral Exploration
Detection and mapping of sub-surface electrical conductors such as a massive sulphide ore body.

Groundwater
Detecting and mapping groundwater that is more conductive than its host.

Environmental
Location of buried hazards and groundwater contaminants.

Techniques

Fixed Loop
Moving Loop
Slingram

Equipment

GPX use SmarTEM receivers manufactured by Electromagnetic Imaging Technology.

These are used with a variety of transmitters depending on the depth of penetration required.

Data can be collected using 3 component B Field sensors and/or dB/dt coils.

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