

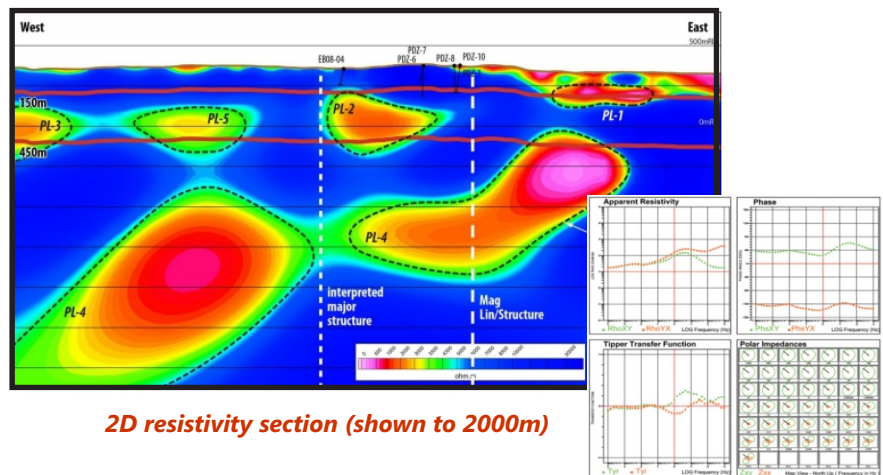


Technology for Discovery

Geophysical Surveys

SPARTAN MT is flexible means to survey for deeper exploration. It is one of the most sophisticated and accurate deep resistivity imaging surveys. Excellent for small scale, regional and hard to access areas.

- Deep structural imaging
- Accurate target delineation
- Property and deposit scale imaging
- Deep regional surveys
- From surface to depths of 5000+ metres



MT data

Overview

SPARTAN MT is a broadband MT geophysical survey designed to provide deeper information for large scale regional programs, remote geological environments and where deeper local investigations are required near deposits.

SPARTAN MT is a full-tensor audio-magnetotelluric technology that acquires data in the 10 kHz to 0.001 Hz frequency band. MT data are collected using Quantec's 24-bit, data acquisition systems (RT-160 – full frequency surveys or RT-130 – low frequency surveys).

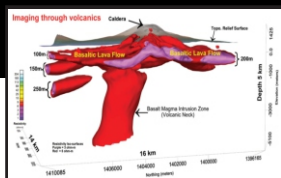
MT APPLICATIONS:

- Regional target mapping
- Structural mapping
- Deep drill targeting
- Crustal studies
- Near mine evaluation
- Geothermal exploration
- Oil & gas exploration

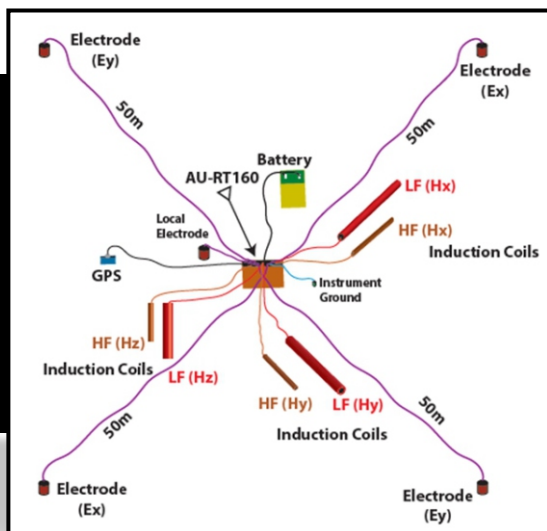




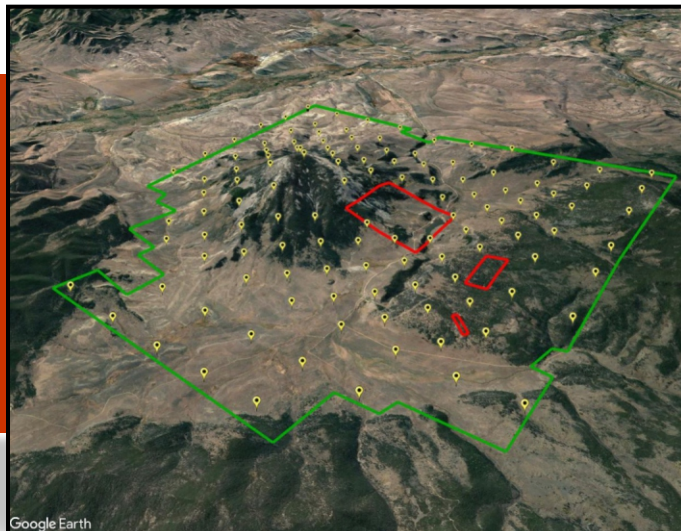
MT



3D resistivity models



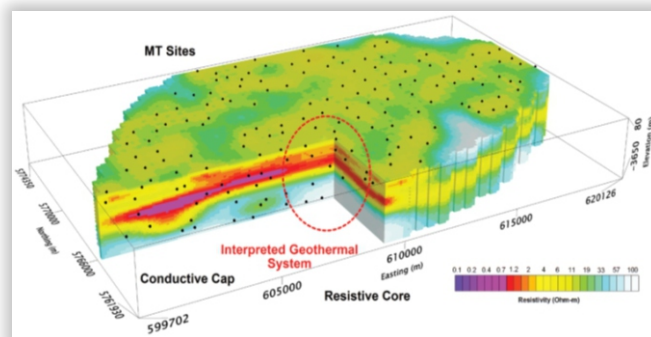
SPARTAN MT system layout



Survey plan showing 500m & 1000m station placement

SPARTAN Benefits

- Not limited to lines, customized survey design and random locations help accommodate harsh topography, geology, culture etc.
- Depth of exploration from surface to 5 km and more (acquisition dependent).
- High quality data – full-tensor measurement provides sensitivity and accuracy.
- Easily integrated with other data types to enhance interpretations.
- Ability to image where seismic is difficult to acquire, prohibited, inconclusive or hampered by volcanic cover or with permafrost.



Site deployment and resulting 3D Resistivity model
(shown from surface to 3500m).

What is MT?

Magnetotellurics (MT) is an frequency domain EM geophysical method that infers the earth's subsurface electrical properties from measurements of natural electric and magnetic variations at the earth's surface. Investigation depth ranges from near surface down to 5 km and deeper. The measured data are inverted with current software into resistivity and then presented as 1D, 2D and 3D models for further interpretation and targeting.

SPARTAN MT specifications:

- Bandwidth – 10 kHz to 0.001 Hz – application dependent.
- Data acquisition – streaming at up to 48 kHz.
- Magnetic field sensors – dual tuned coils for added sensitivity.
- Data output – EDI (Electronic Data Interchange) format.
- 100 site survey typically takes 12 days using 11 SPARTAN systems and 3 crews of 3.

