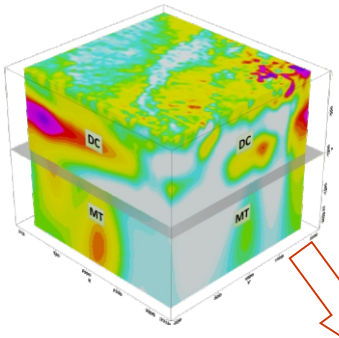
ORION 3D

Technology for Discovery

Geophysical Surveys

ORION 3D provides the most sophisticated and accurate electrical imaging of the subsurface available.

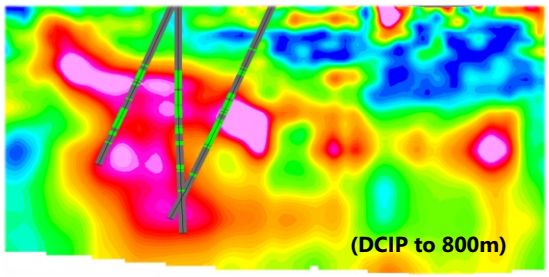


(2 x 2 x 2 km)

Full 3D data acquisition of DCIP & MT for True 3D results in complex geological environments.

- Highlighted cross structures
- Detailed structural imaging
- Accurate target delineation
- From surface to depths of 2000+ metres
  (DCIP to 750m, MT to 2000m)
- Property and deposit scale imaging prior to drill programs for improved planning and enhanced targeting

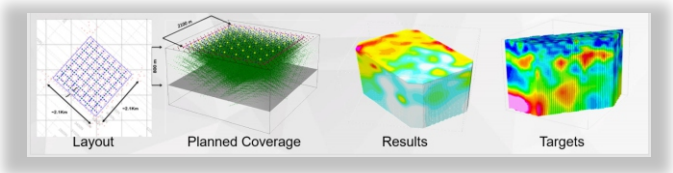
Better targets



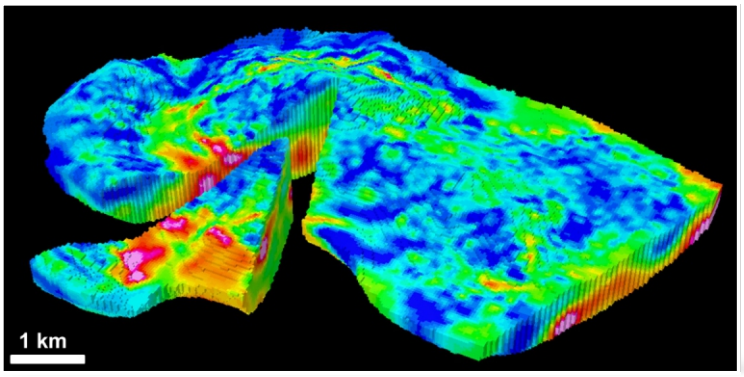
Overview

ORION 3D is a multi-parameter geophysical technology providing DC resistivity, IP chargeability and deep MT resistivity, designed to provide detailed information in complex geological environments.

ORION **3D** is based on proven methods of DC Resistivity, IP Chargeability and MT Magnetotellurics and is an extension of the technology behind the successful 2D **TITAN 24** system. **ORION 3D** is designed to collect data in true 3D. By measuring in an omni-directional fashion all the nuances of the subsurface are captured. This yields the best possible images of the subsurface.



From design to targeting



Highest Resolution

- The high data volume and accurate measurements contribute to the overall resolution of the survey through better inversions and enhanced understanding of the subsurface.
- A typical setup can use up to 294 receiver dipoles coupled with 450 current transmits. This generates over 130,000 unique data measurements. This is a 100 fold increase over conventional approaches to DCIP surveys.
- In addition, an array of MT stations is recorded over the duration of the survey within the ORION3D grid to increase the depth of investigation of the survey.

Web: www.quantecgeo.com • **Contact**: info@quantecgeoscience.com • **Head Office**: Toronto Ontario 416 306 1941

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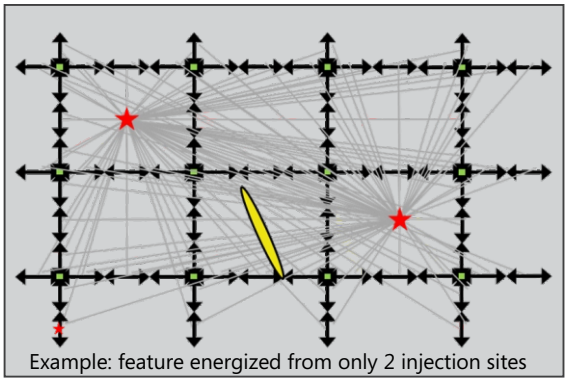
Unique advantages of an **ORION 3D** survey

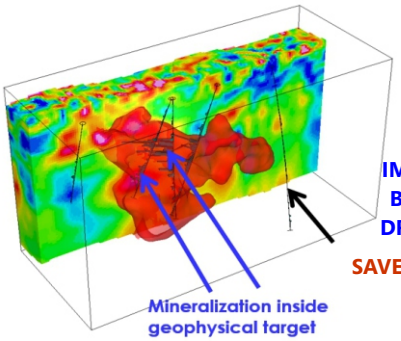
OMNI-DIRECTIONAL CURRENT PATH
provides best coupling with all features in subsurface



Simultaneous measurements at distributed receivers for every current injection

Setup *(* Coverage from as small as 1 x 1 km)*

- Flexible dipole lengths from 300m to 10m
- Current injections throughout the grid
- Flexible survey designs - can be set up around surface obstacles
- Orthogonal receiver dipoles deployed across the entire survey area
- Survey plan includes estimate of 3D coverage



High Signal to Noise

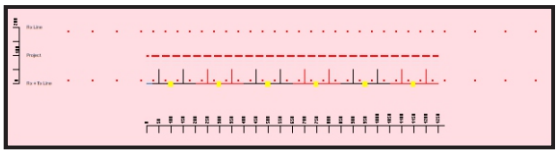
- Full time series data acquisition for processing optimisation and noise cancellation
- All transmitter signal is recorded and de-convolved from the recorded data to highlight subsurface responses
- Telluric cancellation available for IP

Flexible layouts and configurations

Quantec can design a survey to fit your exploration objectives.
Our QRT-160 data receivers, at the heart of the ORION system, are key to vast flexibility in survey design.

ORION SWATH

Technology configured on a 2D grid but providing 2.5 D results.
Utilizes cross line dipoles for better 3D coupling.



ORION PLUS

Utilise existing boreholes to energize the sub surface from below.
Adding subsurface energy improves inversion results at depth.