SPARTAN MT

SPARTAN MT Case Histories

SPARTAN MT applications

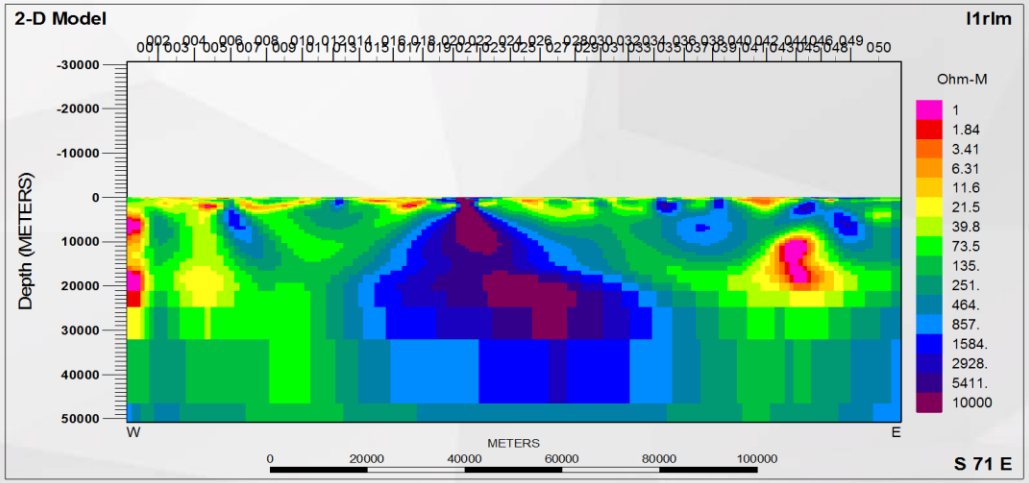
- Deep terrain-scale structural mapping
- Regional potential target evaluation
- Targeting of TITAN surveys
- Basin mapping (depth of cover)
- Crustal studies

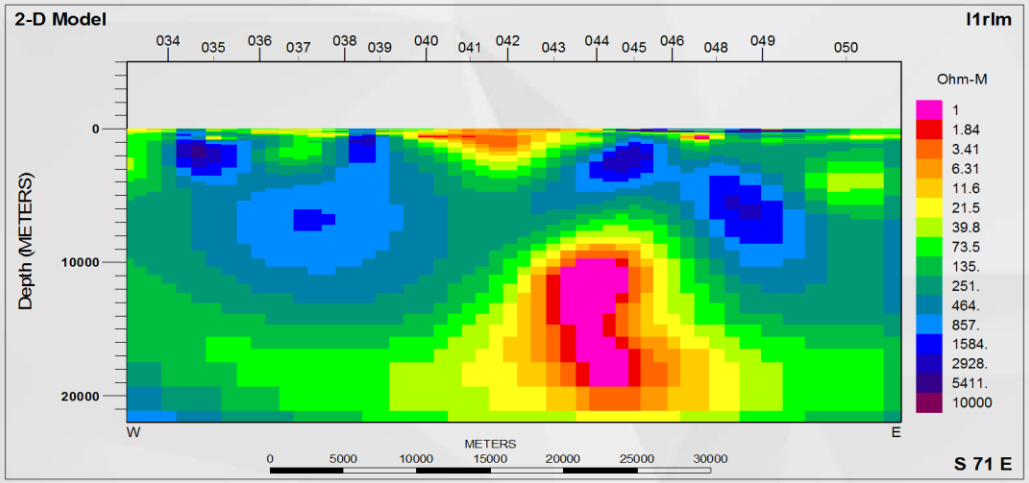
- Geothermal exploration- effective at mapping structures, cap rock, and reservoir morphology.

- Oil & gas exploration - augment ambiguous seismic results. Volcanic cover and permafrost can limit the effectiveness of seismic data. SPARTAN MT readily penetrates through this type of geology. For best results, SPARTAN data should be integrated with other data types to develop a whole earth model.

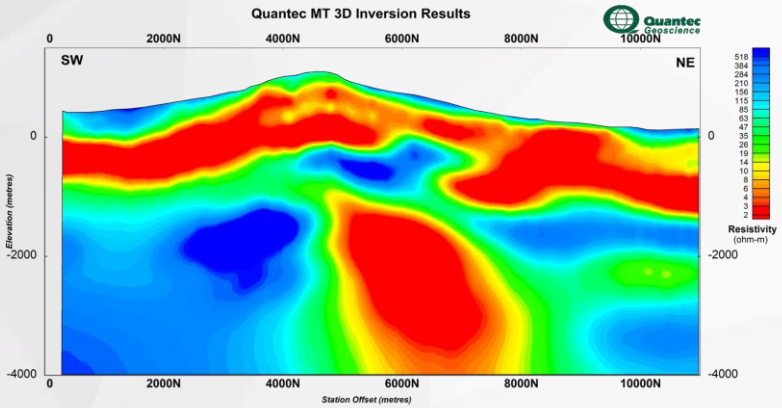
SPARTAN MT

Sample SPARTAN MT results





Regional study, USA, depth to top 10 km



Portable, excellent tool for remote imaging, example geothermal exploration (4km depth)

SPARTAN MT

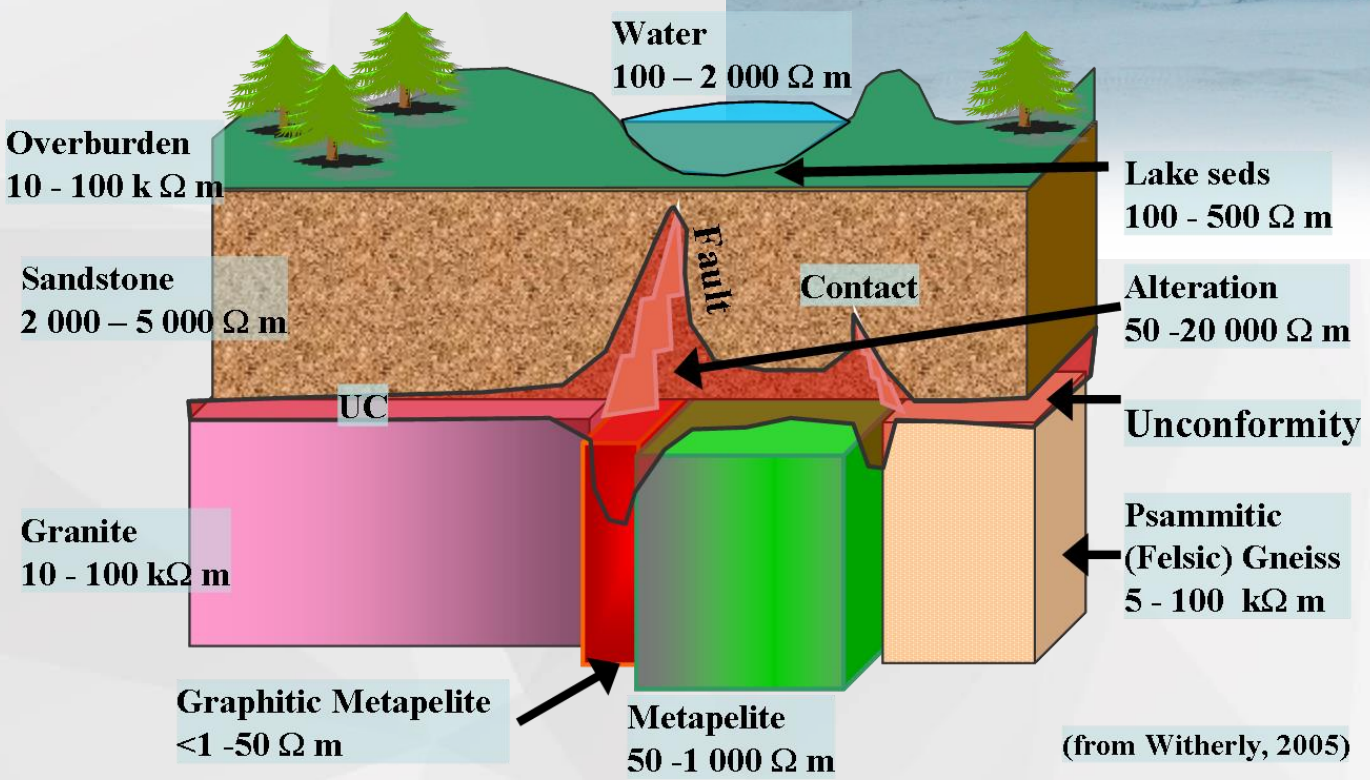
SPARTAN MT

Golden Valley Mines, Athabasca Basin Beartooth Island: Uranium

Golden Valley Mines Ltd.
Mines de la Vallée de l'Or ltée

Exploration Objectives

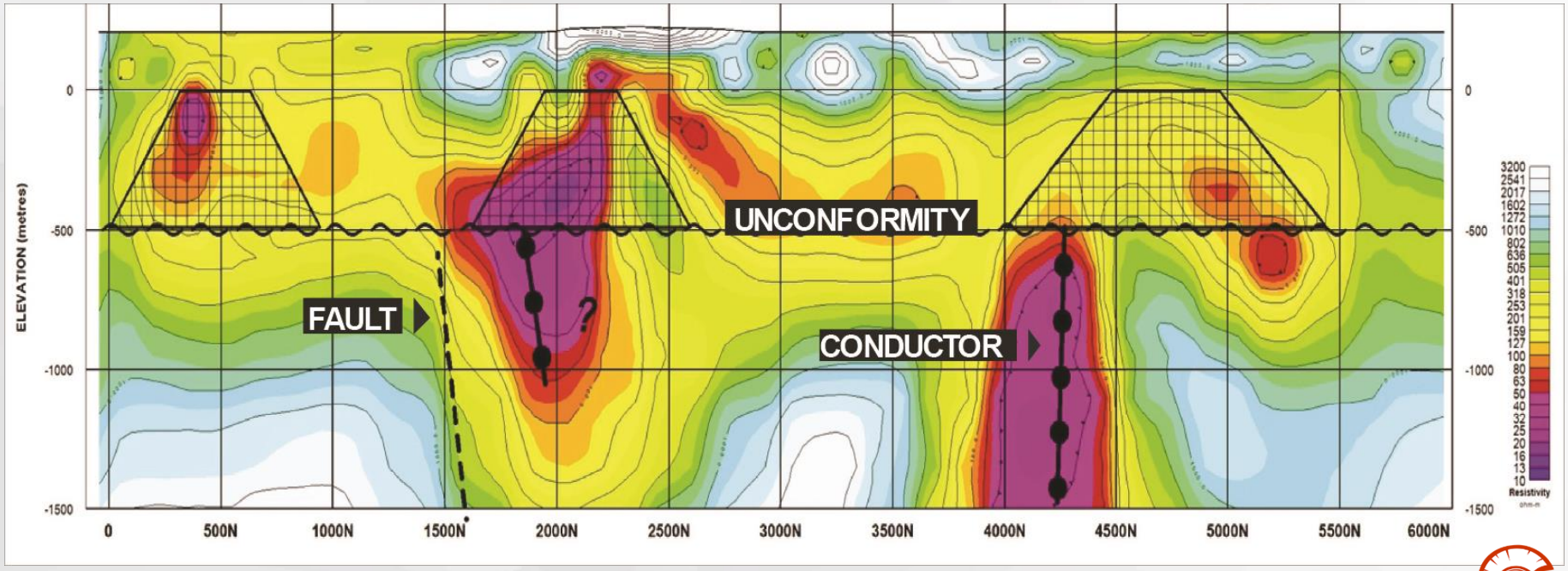
- Penetrate below the thick conductive Wolverine Point sediments to delineate at depth (> 600m) geophysical signatures associated with possible unconformity type uranium deposits, specifically graphitic conductors and fault structures in the basement, as well as alteration zones within the overlying Athabasca sandstones.



SPARTAN MT

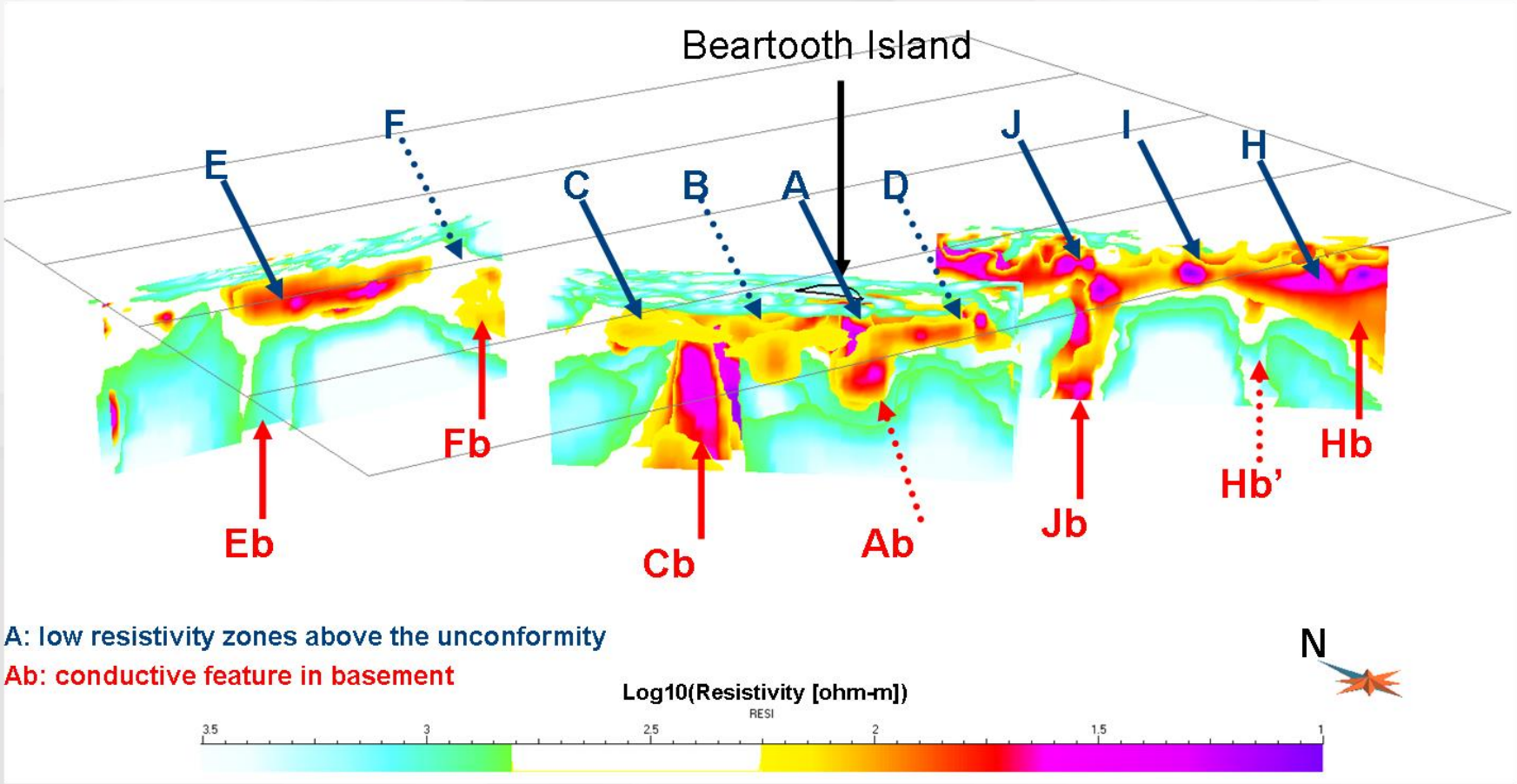
Beartooth Island- Survey Results

- Several near vertical basement conducts were detected below the Athabasca unconformity.
- Mapped the unconformity at depths of approximately 700m.
- Identification of LOW RESISTIVITY zones in the sandstone sediments and CONDUCTIVE structures in the basement.



SPARTAN MT

Beartooth Island- Survey Results



SPARTAN MT

SPARTAN MT

Seabridge Gold, British Columbia
Kerr-Sulphurets-Mitchell Property: Porphyry

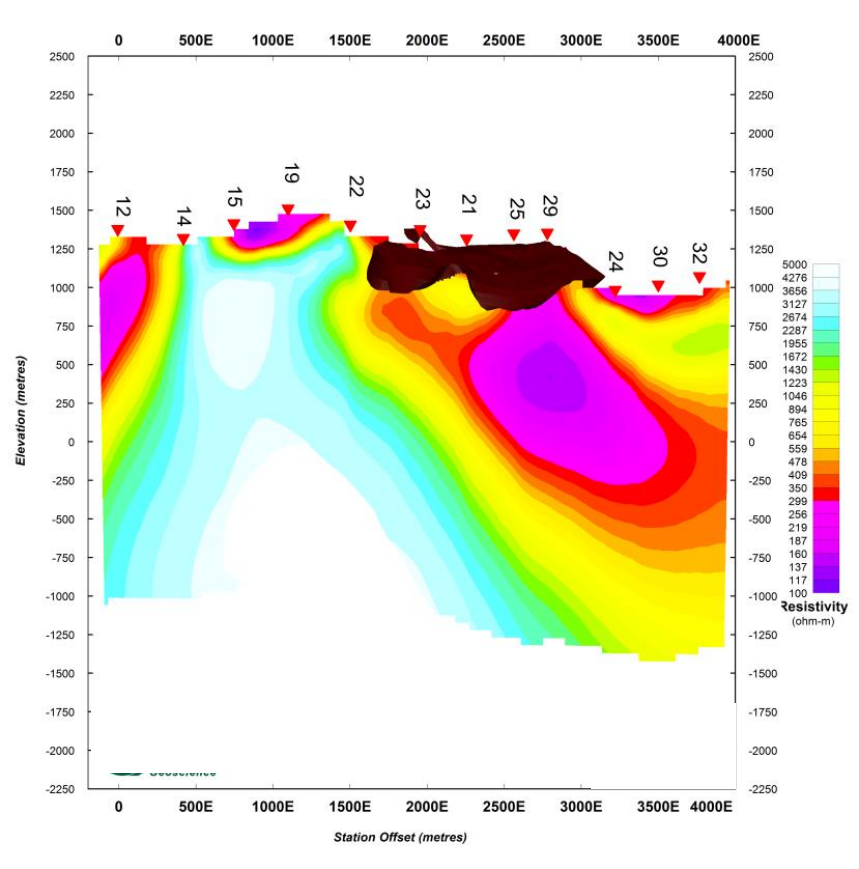
SEABRIDGE GOLD

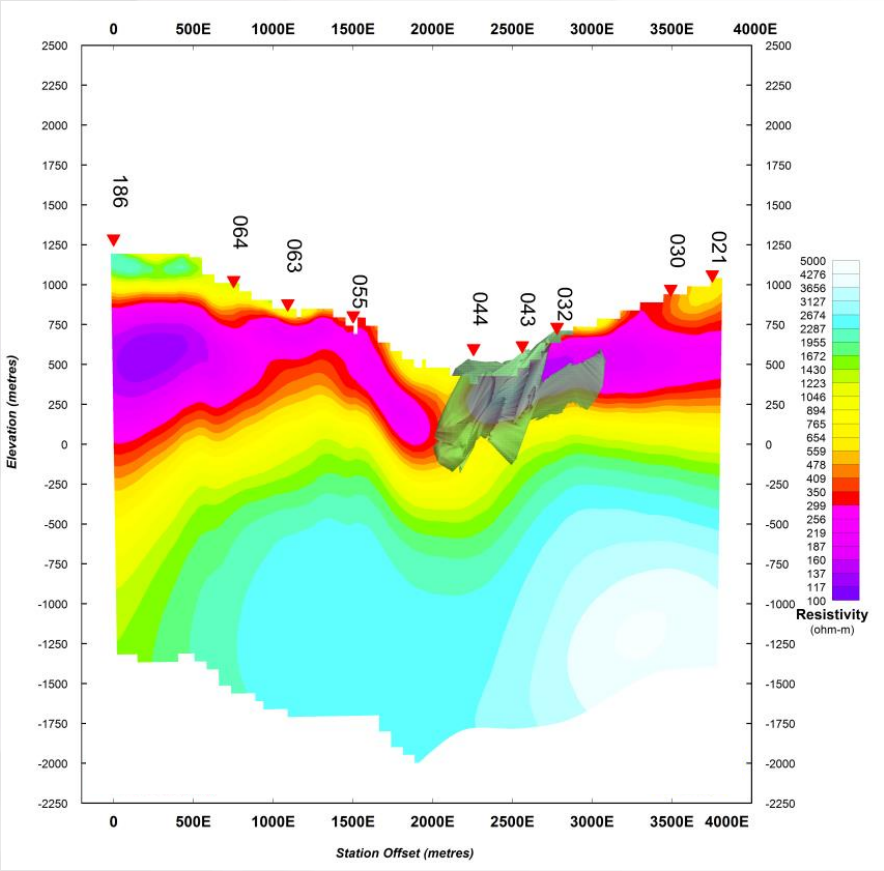
Exploration Objectives

- Map potential targets to depths of 2000m and greater with increased resolution.
- Establish an understanding of the geological system and fluid pathways to great depth within the KSM survey area.
- Detect porphyry rich mineralization and/or associated alteration zones to depth for drill targeting.
- Complete an orientation survey to identify additional conductive zones or 'blind' conductors in the area.

SPARTAN MT

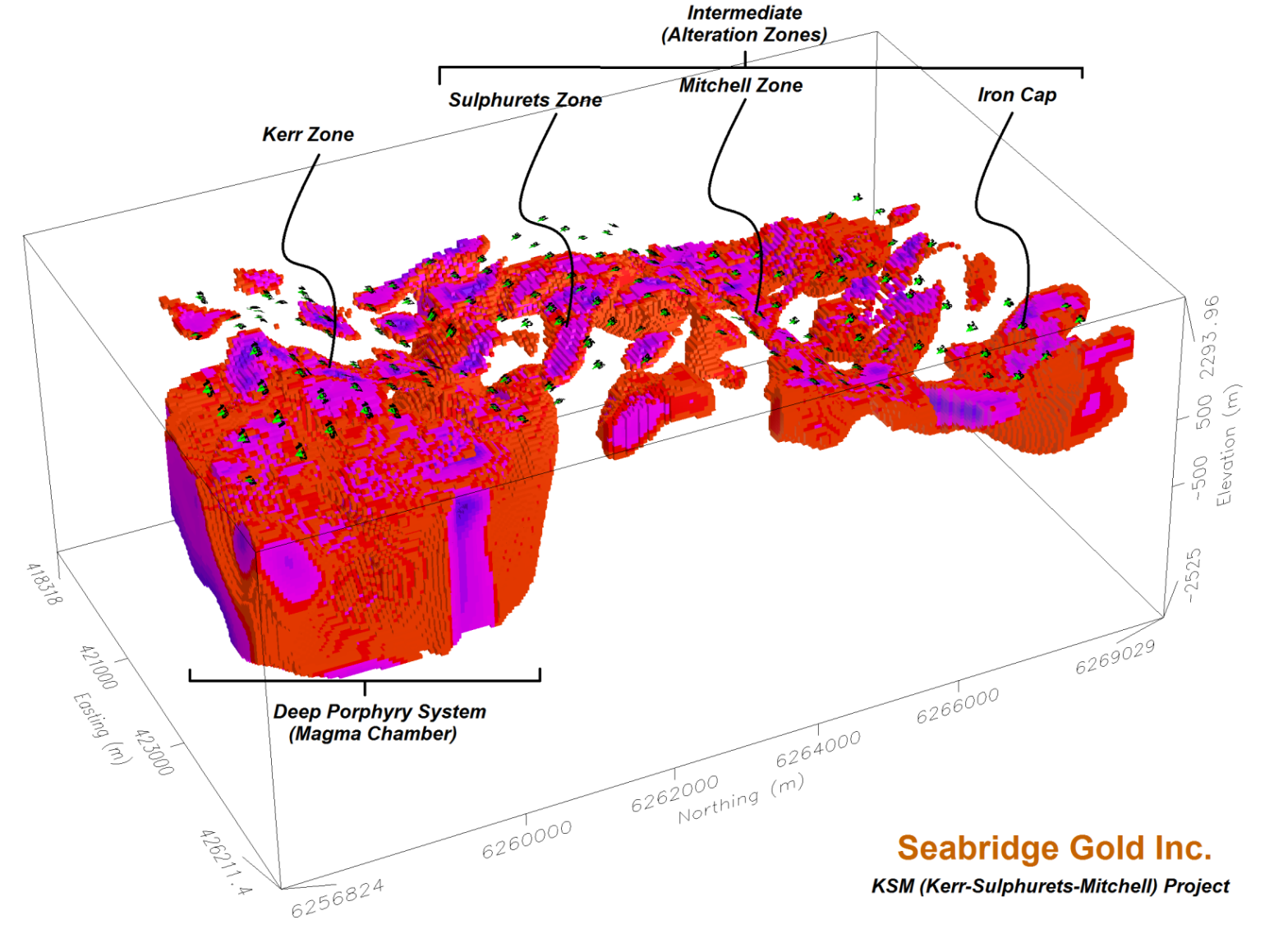
Seabridge Gold- SPARTAN MT Results





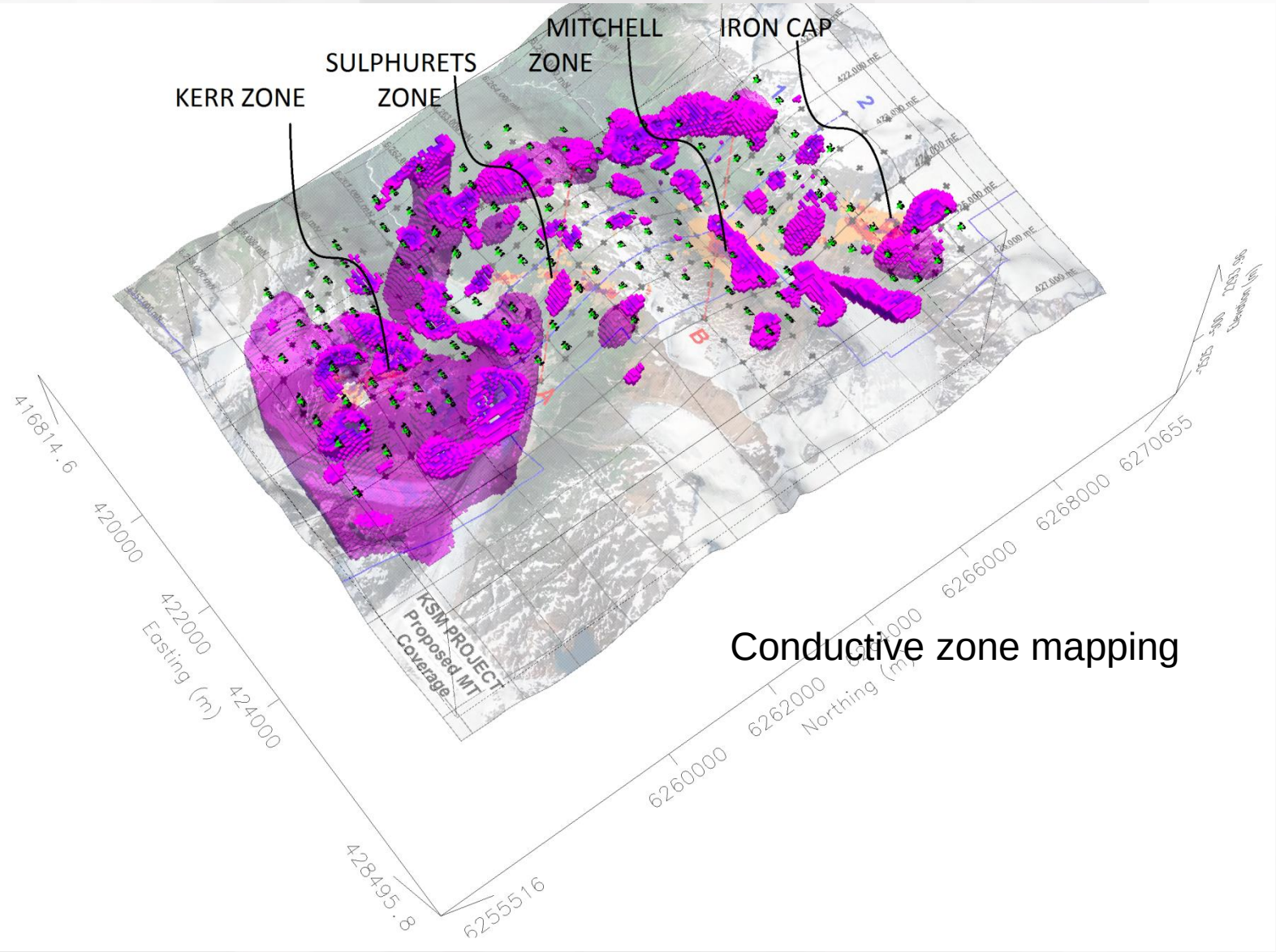
SPARTAN MT

SPARTAN MT resistivity results



SPARTAN MT

Excellent correlation



SPARTAN MT

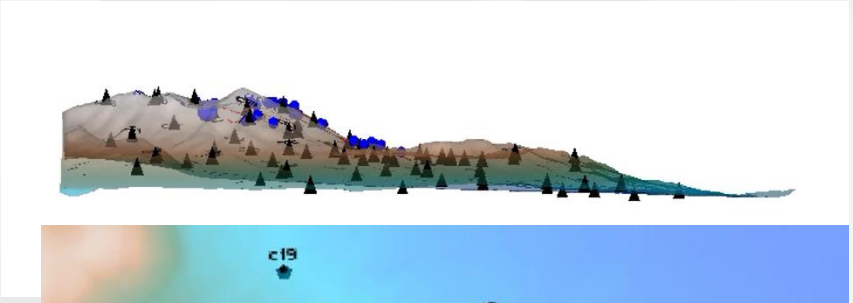
Seabridge Gold- SPARTAN MT Results

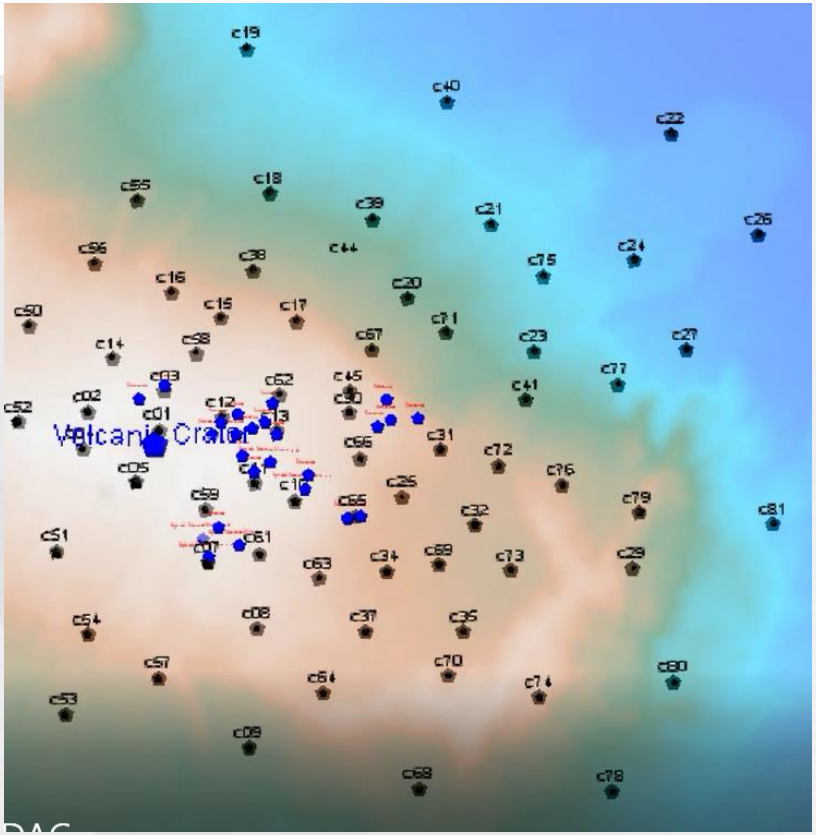
- Spartan MT successfully identified at least three high priority targets with the potential for significant massive sulphide porphyry copper mineralization. Situated in the vicinity of the Kerr and Sulphurets zones, these targets show high resistivity gradient areas consistent with faults and shear zones.

- Three low priority target zones were mapped in the northern half of the property. The thickness of these zones varies significantly and suggests alteration zones with geologically and structurally controlled mineralization.

SPARTAN MT

SPARTAN MT SURVEY PLAN

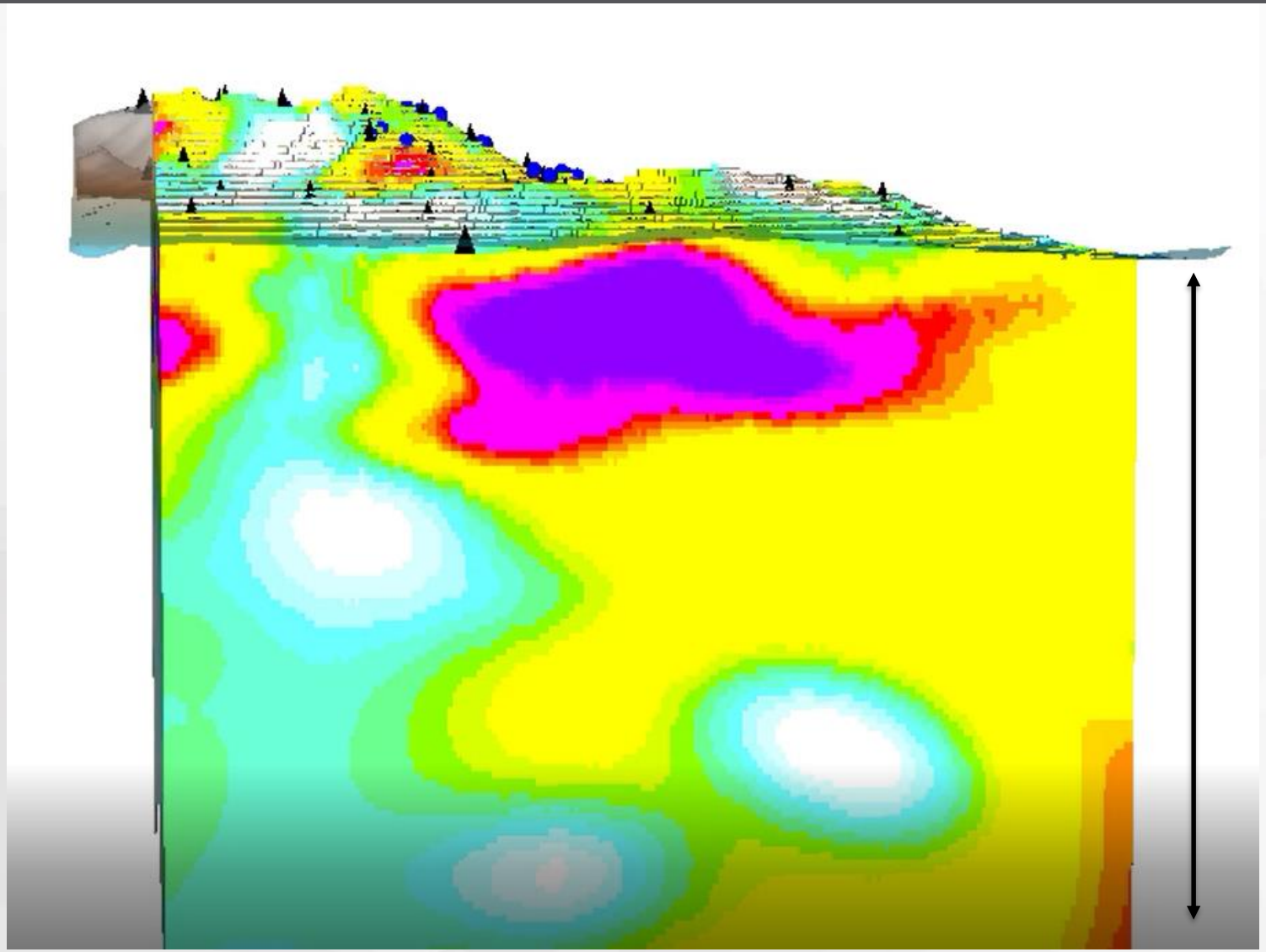




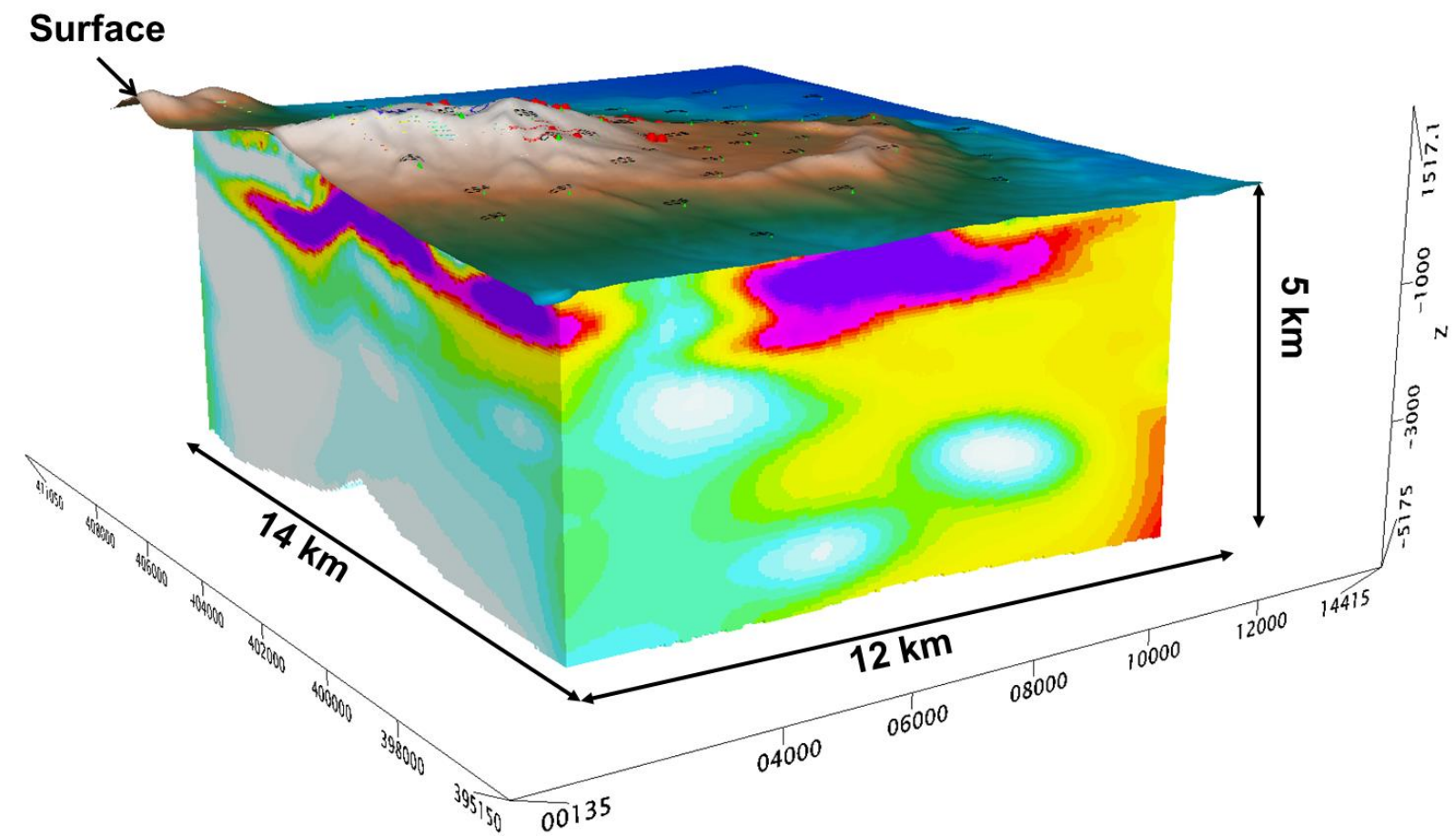
14 KM

12 KM

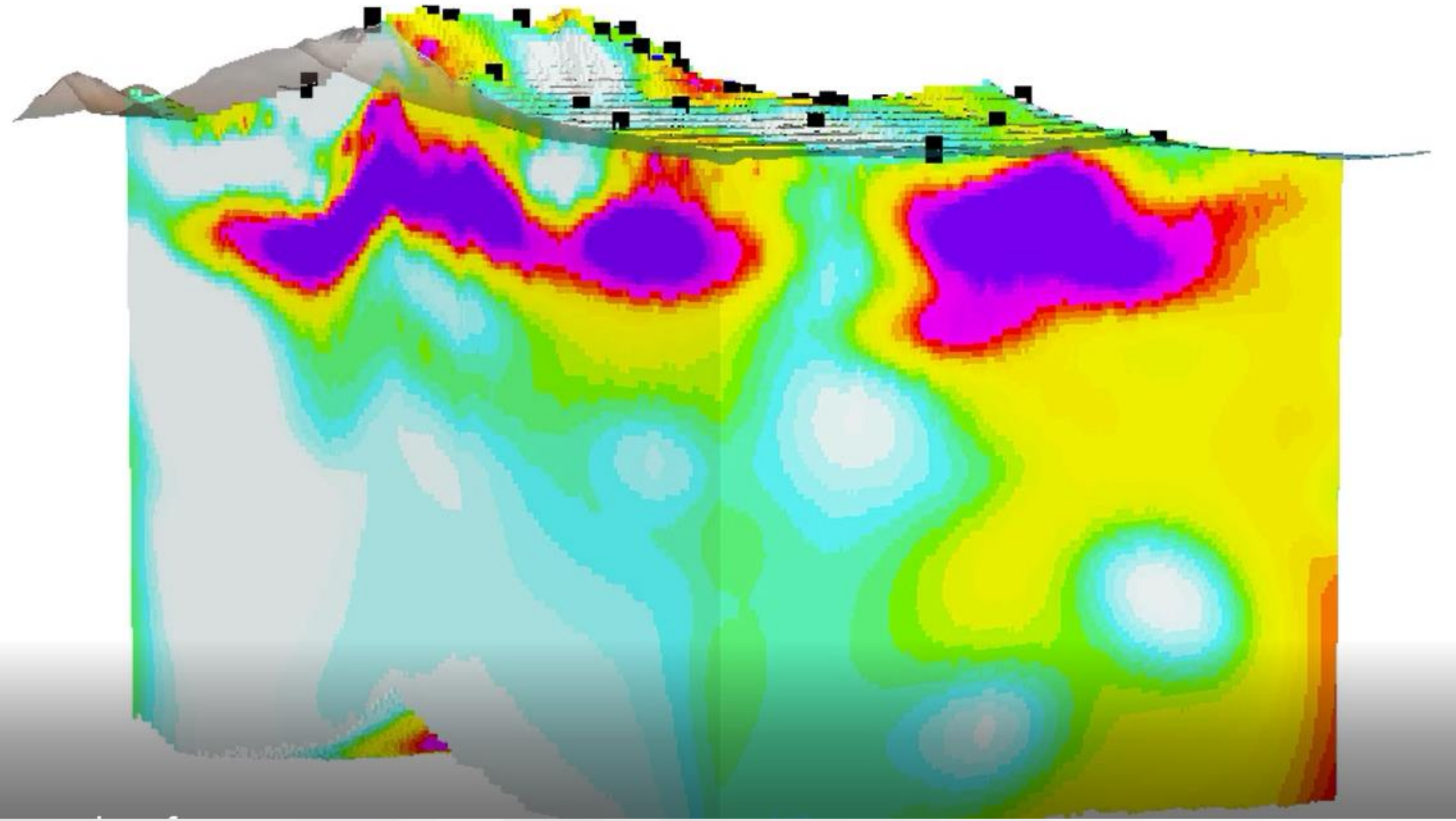
2D Resistivity Section

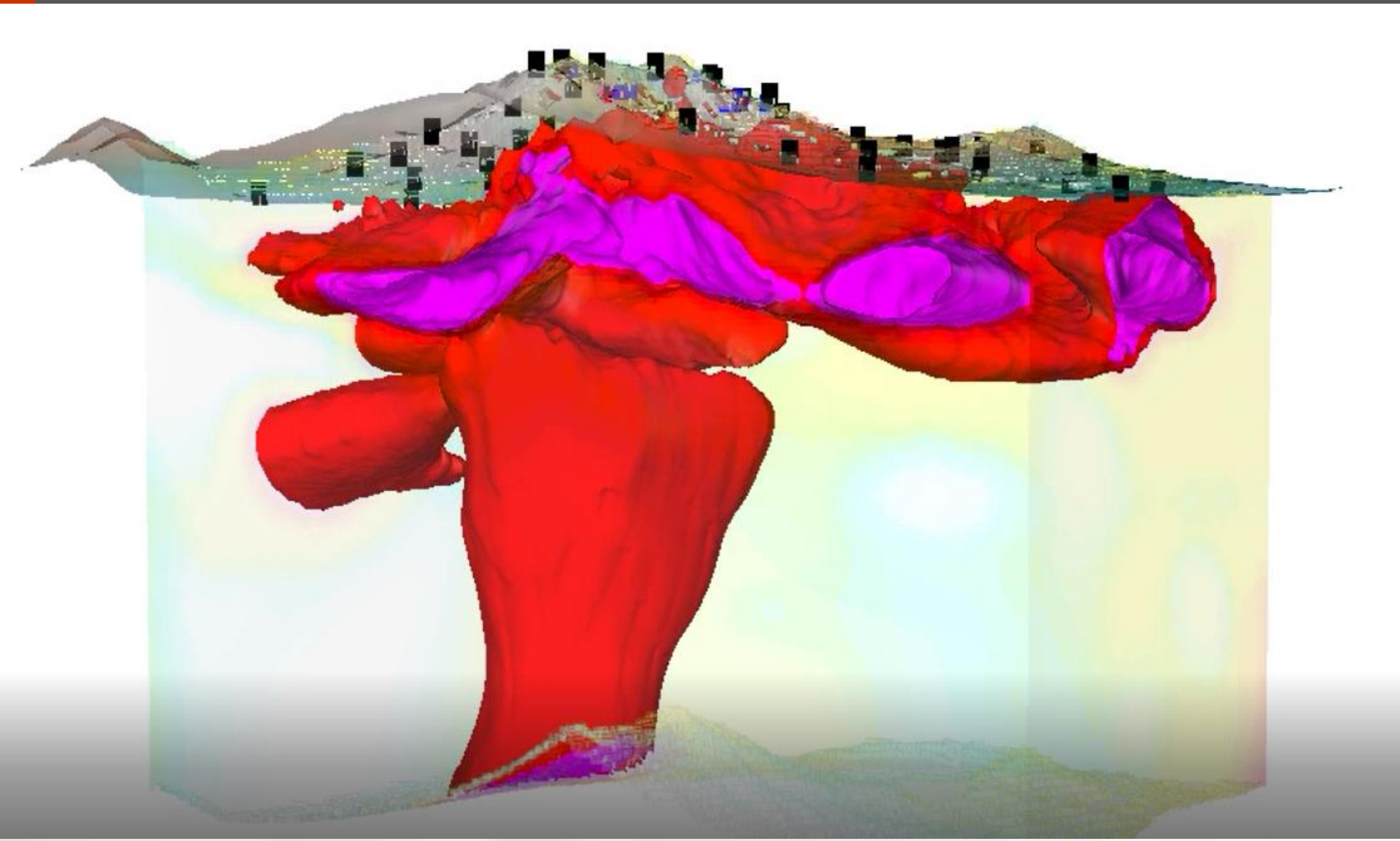


3D Resistivity Inversion Model

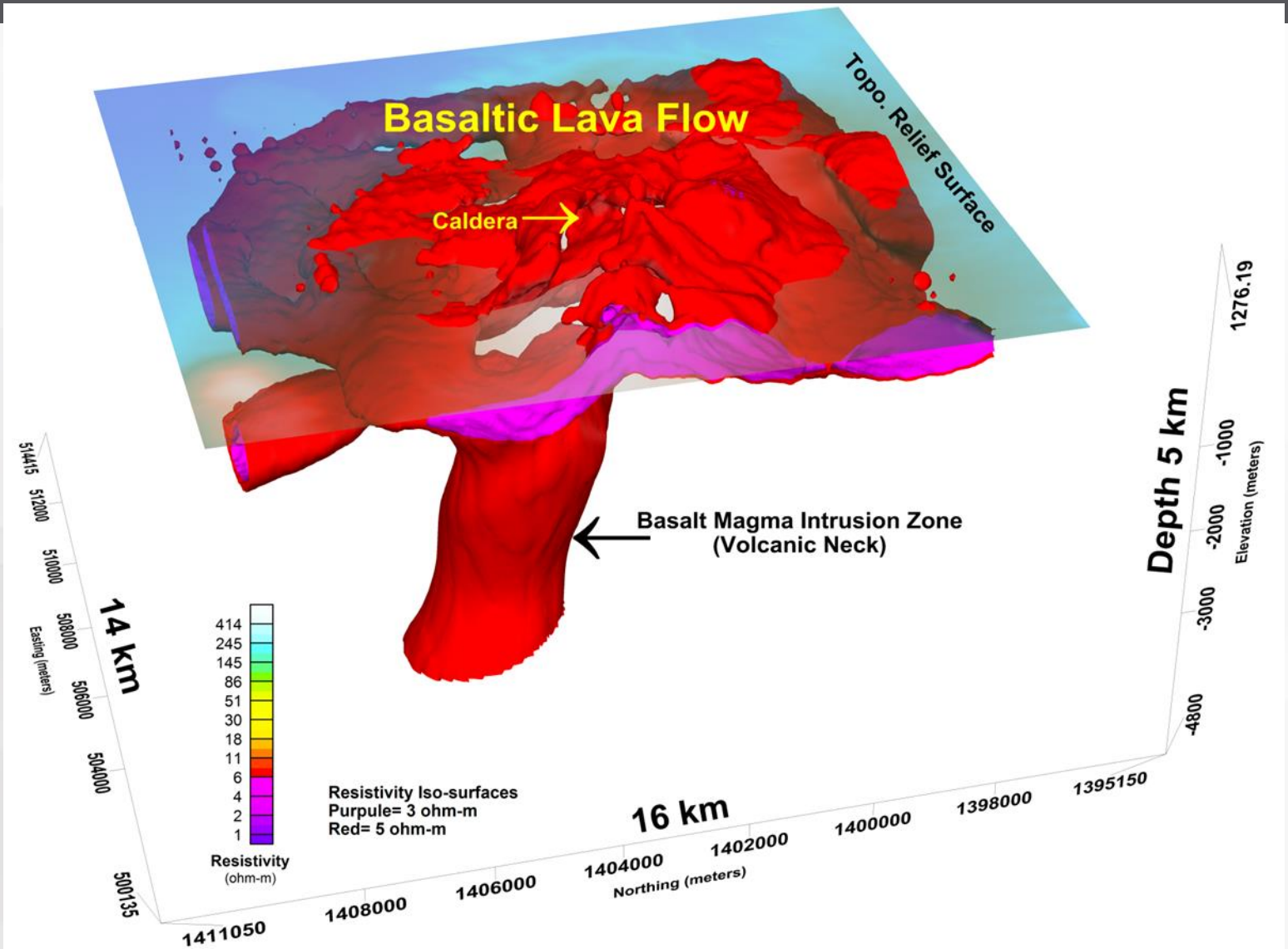


3D Resistivity model

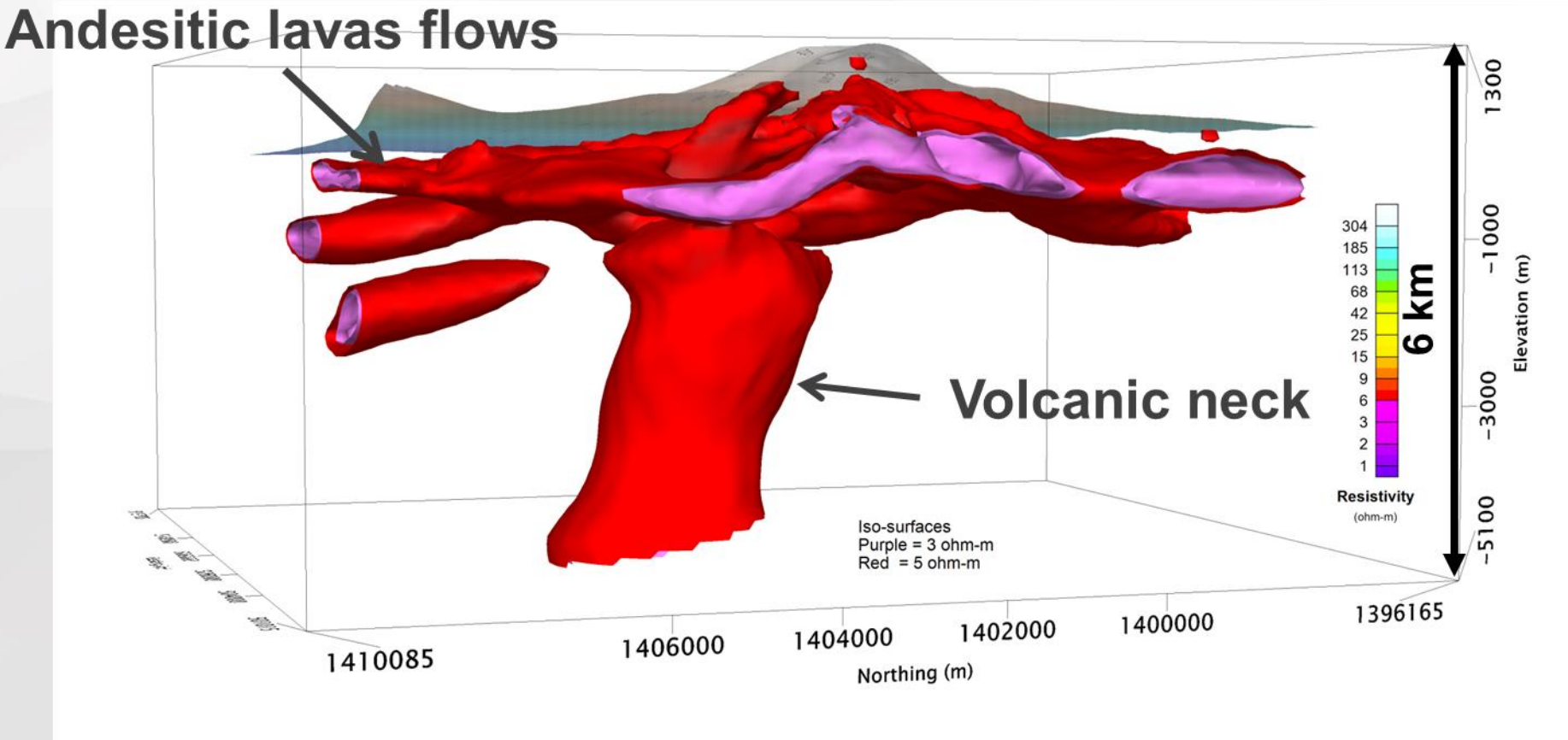




Low resistivty iso-shells (volcanics)



Low resistivty iso-shells (volcanics)



2D Resistivity Section through 3D Model