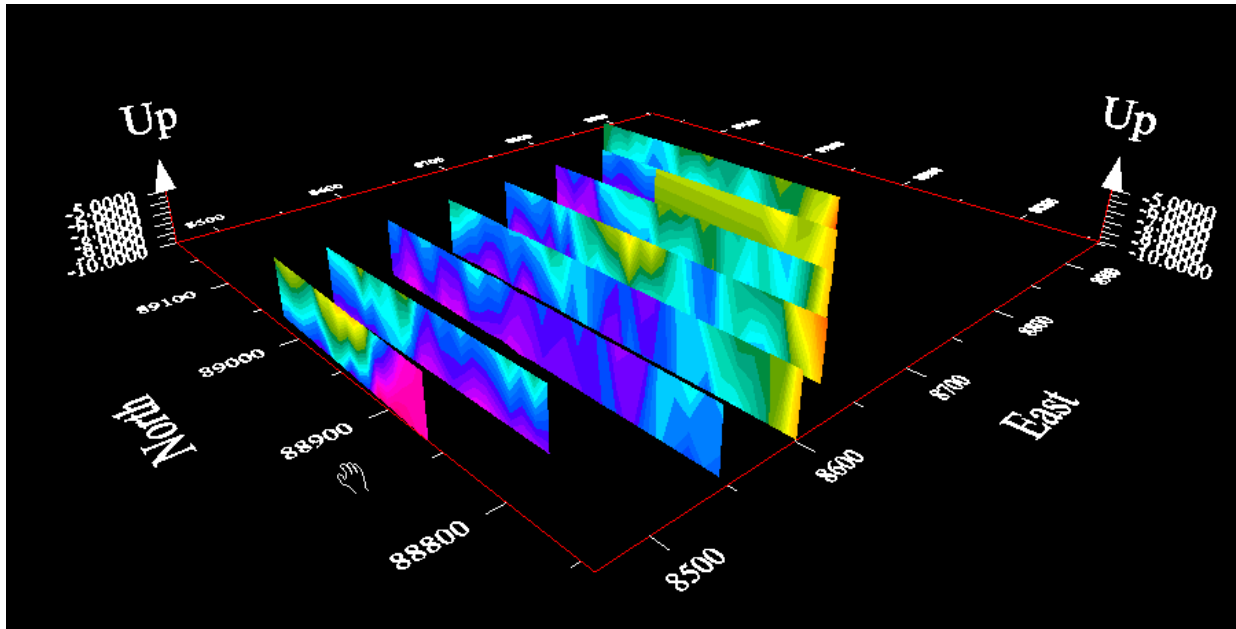


EMIGMA for Resistivity/IP



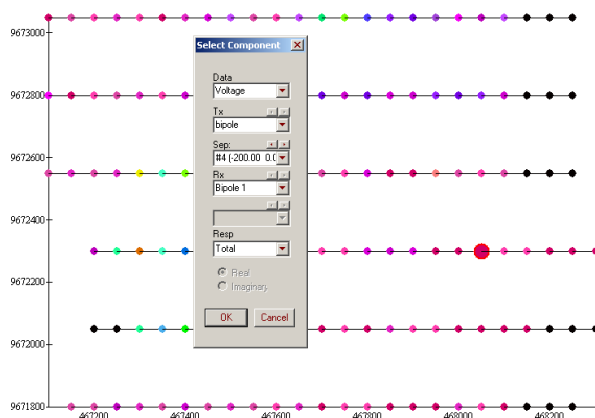
The Resistivity/IP package is available as part of EMIGMA Premium or Professional Complete, as a standalone product or an add-on to other EMIGMA licenses. It allows for various survey configurations (dipole-dipole, pole-dipole, gradient, borehole, cross-hole, Schlumberger, Wenner) and with 3D Inversion it offers a full range of functionalities required for the successful interpretation of IP/Resistivity data.

Includes functionality for MIP and MMR.

Cross-hole and surface to borehole are available as extensions.

**Unlimited survey size with Premium!  
50,000 points with Professional!**

**DATA IMPORT**



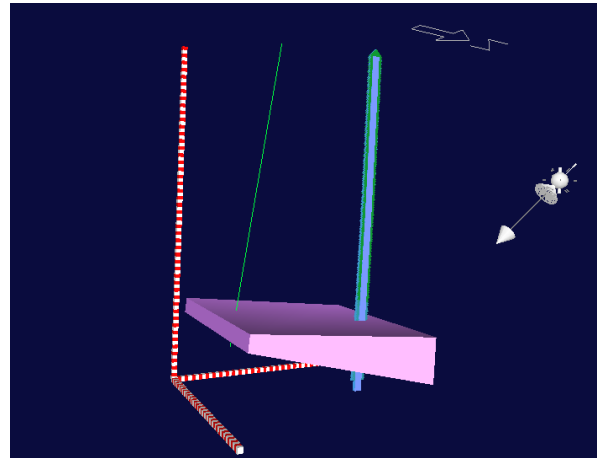
- Time Domain IP (ELREC6 , Scintrex formats or as a generic ASCII text format)
- Frequency Domain IP (Zonge or ASCII text format)
- Resistivity Data (Zonge, SYSCAL, generic ASCII XYZ)

## DATA PROCESSING AND CORRECTION

- 1D digital and spatial filters - Mean, Median, Gaussian and Sovitzky-Golay
- Smoothing and Decimation
- Data Corrector tool combining dynamic spreadsheets and a line plotter for data cleaning, missing data interpolation and simultaneous plotting of different data channels for fast cross-analysis
- Survey merging

## 3D MODELING

EMIGMA's tools for 3D modeling of both Resistivity and IP are exceptional. The solutions are stable for electrodes near or inside anomalies; they are fast and accurate and on the IP side include many of the physical effects unavailable in other applications. With EMIGMA, you can model the so-called EM effects, off-time or out-of-phase resistivity contrast effects and you can also obtain MIP solutions.



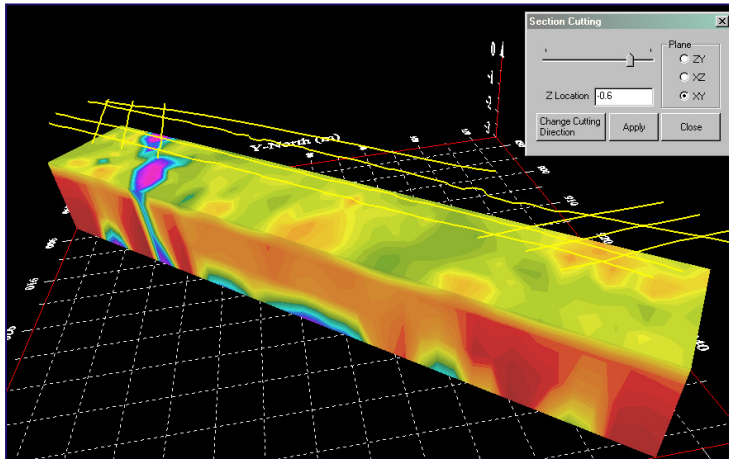
- Fast and accurate 3D simulations: model suite generation and batch mode
- Unlimited prism, plate and polyhedra targets  
*Polyhedra: pipes (hollow cylinders with or without lids), ellipsoids, shells, bullets, landmines, drums, spheres, general polyhedra...*
- Multiple body interactions
- Modeling of topography effects
- Frequency- and time-domain IP
- Magnetic effects in IP/Resistivity data
- Variations in resistivity and Cole-Cole parameters
- Ability to handle full contrast between host and bodies
- Interactive 3D model building tool

## 3D RESISTIVITY INVERSION

- Supports dipole-dipole, pole-dipole and pole-pole surveys
- User defined starting model and inversion parameters
- Output model resistivity constraints

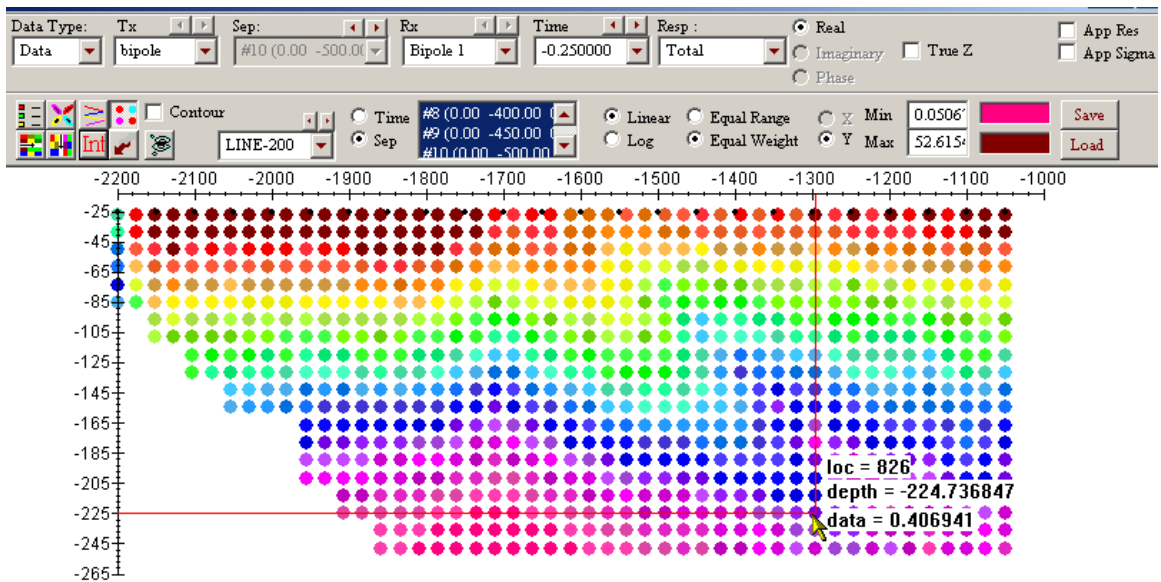
## 1D Resistivity INVERSION

- Resistivity depth inversions and 3D volumes
- Smooth Occam technique with fixed layer thickness
- Underparametrized Marquardt technique with full resistivity and thickness constraints
- User defined starting model and inversion parameters
- Two forward techniques



## DATA DISPLAY AND ANALYSES

- 3D data display as profiles, vectors, true 3D surfaces or contoured surface with 3D structure representation
- Section cutting of 3D model displays in the 3D Visualizer



- Pseudo-sections, depth images

- PEXShow tool - 2D representation of Resistivity inversions with easy-to-switch-to susceptibility and conductivity sections
- PseudoSection tool
- Grids: Natural Neighbor, Delauney Triangulation, Minimum Curvature and Thin-Plate-Splines
- Contours: 2D and 3D surfaces
- Line plots
- Residual plots

