EMIGMA for CSAMT

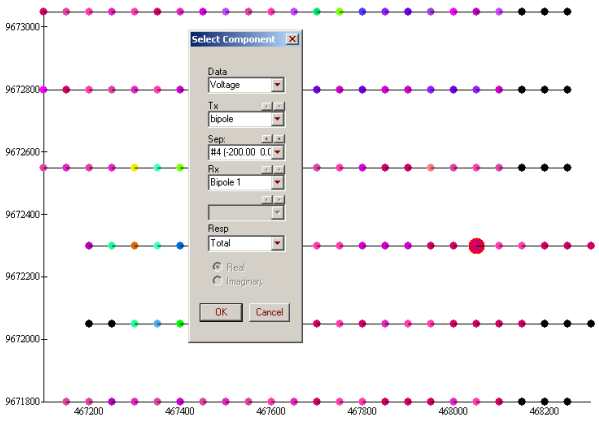
The CSAMT package is available as part of EMIGMA Premium Complete or EMIGMA EM for Oil and Gas, as a standalone product or an add-on to other EMIGMA licenses. The most important aspect of EMIGMA for CSAMT as that data interpretation is treated as a controlled source technique utilizing the geometry of your source wire and injections.

Thus, there is **NO NEED TO CONSIDER ONLY THE FAR-FIELD**! With EMIGMA, the user may work in the Near Field, the Far-Field and the intermediate zone. Additionally, you may work with your electric fields, your magnetic fields, or both as fields or as a ration (impedances).

The user of impedances for CSAMT is historically based on 2 issues. Proper transmitter/receiver control not allowing E and H to be used independently and lack of software to treat as a controlled source.

Unlimited survey size with Premium!

DATA IMPORT



- ASCII and QCTool imports
- Native Zonge and Phoenix imports

DATA PROCESSING AND CORRECTION

- All of our processing and data correction tools are available for CSAMT surveys.

3D MODELING

EMIGMA's tools for 3D modeling of CSAMT are excellent. The solutions are stable for electrodes near or inside anomalies; they are fast and accurate and also allow the important abilities to include IP effects, inductive effects of the current along the wire and several important magnetic effects.

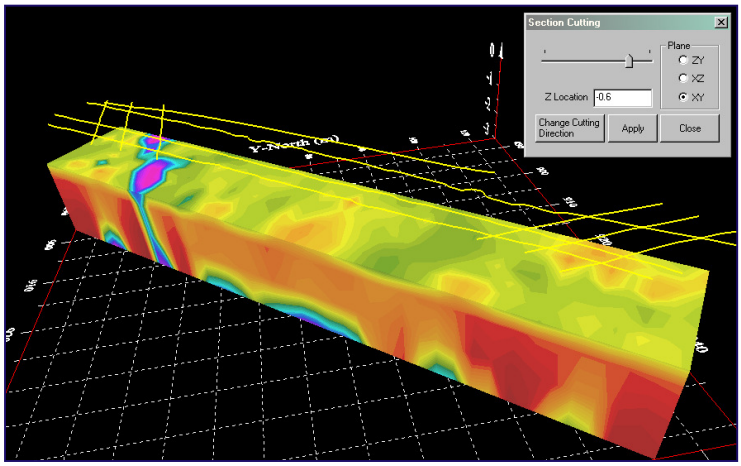
- Fast and accurate 3D simulations: model suite generation and batch mode
- Unlimited prism, plate and polyhedra targets
  Polyhedra: pipes (hollow cylinders with or without lids), ellipsoids, shells, bullets, landmines, drums, spheres, general polyhedra...
- Multiple body interactions
- Modeling of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

3D CSAMT INVERSION

- We are presently working on our 3D inversion for CSAMT
  And expect to release prior to summer 2012.

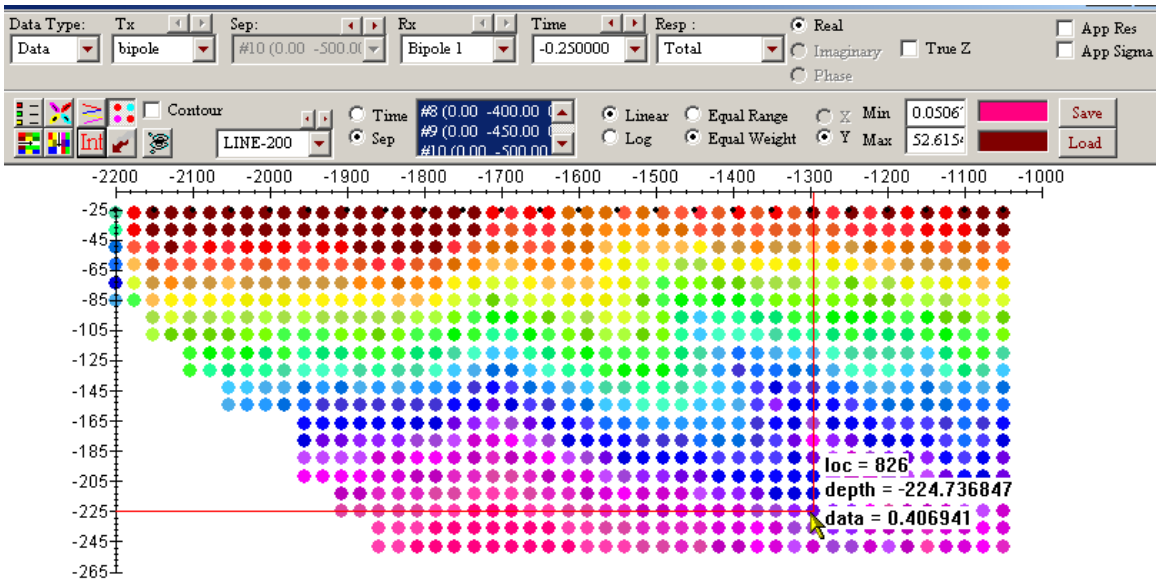
1D Resistivity INVERSION

- Utilization of the 3D source characteristics,
- Inversion for E, H or Z
- Smooth Occam technique with fixed layer thickness
- Underparametrized Marquardt technique with full resistivity and thickness constraints
- User defined starting model and inversion parameters



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 1D 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

For more detailed data display capabilities, see EMIGMA Complete