

EM4Soil

Electromagnetic (EM) Processing & Inversion Software

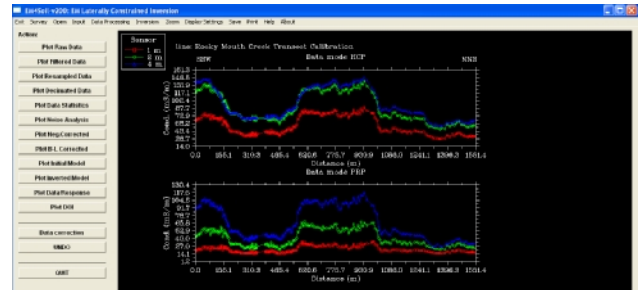
EM4Soil is a software program designed for the processing and inversion (interpretation) of EM data collected with single and multi-frequency instruments. The software was developed for applications in soil characterization, hydrogeology, environmental, and geotechnics. Data processing includes coordinates conversion and correction, data correction, data calibration based on ERT data, resampling, filtering and more.

Inversions include:

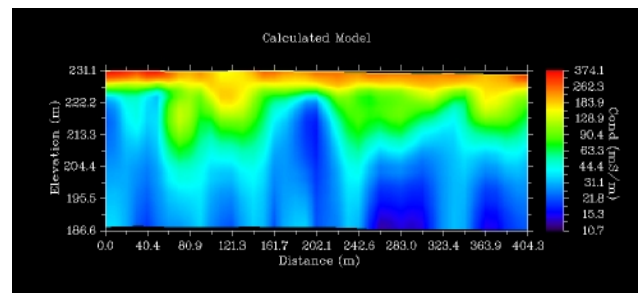
- 1D (layered) inversion of individual EM soundings (data acquired with the instrument at different heights);
- 1D and 1D Laterally Constrained (or quasi-2D, Q2D) Inversion of data acquired in a profile, and Q2D Time Lapse inversion;
- 1D Spatially Constrained (or quasi-3D, Q3D) Inversion of data acquired covering large areas. Linear and nonlinear can be used in forward and derivatives calculations;
- Q2D and Q3D inversions use smooth Occam algorithms; and
- Inversions can be done in terms of conductivity and/or magnetic susceptibility.

Data outputs include ASCII files of all results. These files can be used in several graphical software programs (PNG, JPEG), PS and PDF plots of all results, as well as .KML files of the models.

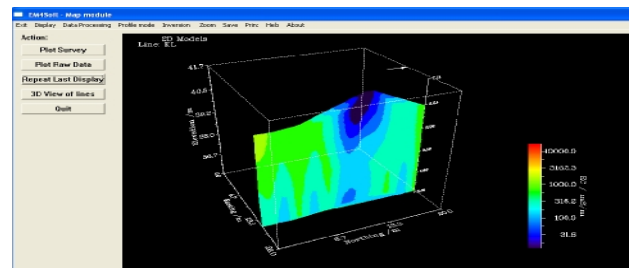
The software runs on the Windows (64 bits) environment.



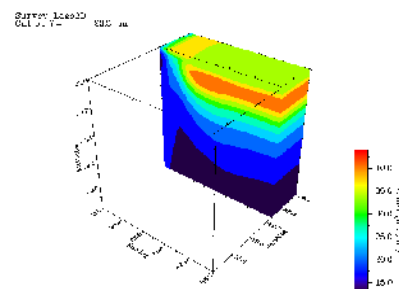
Displaying apparent conductivity data (DUALEM-421S)



Q2D model (GEONICS EM34)



3D view of the Q2D model calculated from one line of a survey



A section of a Q3D model calculated from a survey (DUALEM-421S)

