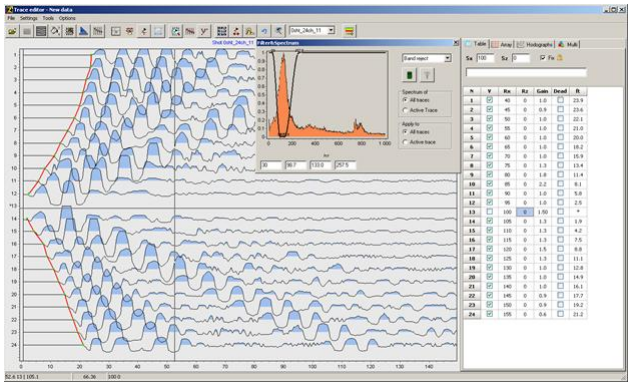
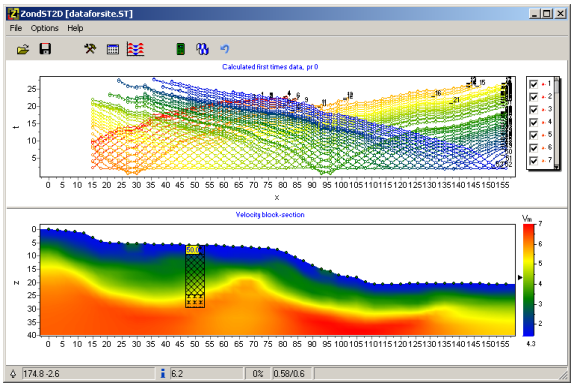
ZondST2D
Seismotomography 2D Data Interpretation





ZondST2D is designed for 2D data processing and interpretation of seismic tomography by method of refracted waives. There are several options:

- Ground profiles;
- Water surface;
- Downhole;
- Crosshole.

Software is divided into two main modules. The first module is used to determine the travel time (correlation). The second module is used to solve direct and inverse problems of seismic tomography.

For processing of seismograms, special interface was developed which is designed to simplify and automate the process of determining the travel time. Foundation focuses on a variety of ways to visualize and access to frequently used functions.

To solve the direct problem of ray tracing a special algorithm of graph theory is used (Shortest path's method). This algorithm is fast and has controlled accuracy of calculations.

ZondST2d uses a simple and understandable data format that allows to easily combine different observation systems, including various options for setting topography and other supporting information. Also, supported are well-known data formats.

Since the main objective is to restore the parameters of velocity profile, ZondST2d provides several options for solving the inverse problem, the most important of which are: the smoothing inversion - for smooth, block for block and focusing, for piecewise smooth distribution of the velocity parameters with depth.

During software development the special focus was put on the integration of apriori information. Due to the equivalence of inverse geophysical problems, the quality of the results depends on the amount of apriori data. In ZondST2d there are options for weights measurements, fixing and setting limits to the changes of individual cell’s properties, using a priori model as reference for the inversion. In addition, the program has implemented robust evaluation framework of the noise component. It is also possible to import and display the results of measurements by other methods and borehole data, which contributes to a more integrated approach to data interpretation.

162 Oakdale Rd., North York, Ontario, M3N 2S5, Canada
Tel: 1(416)747-8800 Fax: 1(416)747-5761
info@agcos.ca www.agcos.ca