# Rayfract Software for Seismic Refraction/Borehole Tomography

Import SEG-2, SEGY seismograph trace files

Or import first breaks and geometry from 3rd party file formats

Or write first breaks and geometry to our own file formats and import

Flexible trace display and frequency filtering

Manual or semi-automatic picking of first breaks

Automatically determine smooth starting model from traveltimes with XTV inversion (Wiechert-Herglotz), horizontal averaging of apparent velocities

Or determine apparent/instantaneous velocity section with XTV method

Next run 2D Fresnel Volume Tomography FVT aka Wavepath Eikonal Travel time WET inversion

Vary WET settings to deal with non-uniqueness : wavepath width, number of iterations, size of rectangular smoothing filter etc.

Use uphole shots to constrain interpretation of seismic refraction lines

Interpret crosshole surveys and VSP downhole / multi-offset VSP surveys

Optionally assign traces to refractors, run layer-based refraction inversion methods : Plus-Minus, Wavefront, CMP refraction method

Rayfract calls Golden Software Surfer to plot tomograms and coverage

Build your own subsurface velocity model with Surfer and forward model synthetic traveltimes with our Eikonal solver

Generate 3D fence diagrams with Golden Software Voxler

Windows 32-bit application, runs fine under Windows 64-bit

Uses multiple CPU cores for fast back-projection of residuals along Fresnel volumes with SIRT algorithm

Pro Annual Subscription/Permanent license uses up to 64 GB of RAM