VECON™

2D & 3D VSP and Surface Seismic
Modeling and Survey Design

EASY | FAST | ADVANCED

GeoTomo
Earth Modeling and Imaging Solutions

www.geotomo.com

VECON

Technology & Experience at Work for You

DISTINGUISHING FEATURES

- Handles VSP and Surface Seismic Geometries
- Fast, Accurate, Intuitive, and Easy-to-Use
- Builds Layer and Grid Models with Interfaces, Objects, and Faults
- Imports a Variety of Model and Data Formats
- 2D/3D Wavefront Raytracers for Direct Waves, Reflections, and Conversions
- Outputs include Traveltimes, Raypaths, and SEGY Files
- 2D Acoustic, Elastic, and Anisotropic Finite Difference Modeling
- 3D Isotropic and Anisotropic Raytracer (TTI, VTI, HTI)
- 3D Acoustic Finite Difference Modeling
- Interpolates Across Irregular/ Incomplete/Non-Uniform/Empty Cells in SEGY Input Models
- Survey Design Attribute Analysis
- Parallel Computation for Workstations and Clusters
- Designed for Windows and Linux Systems

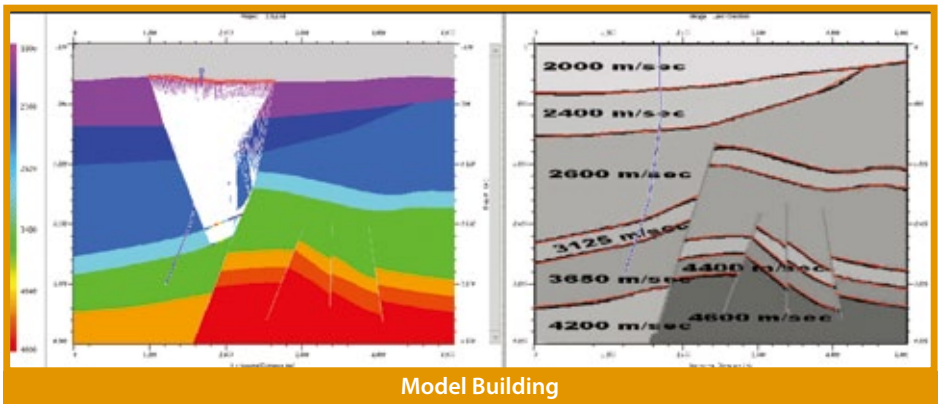
2D & 3D VSP and Surface Seismic Modeling and Survey Design

VECON is an interactive 2D & 3D vertical seismic profiling (VSP) and surface seismic survey design and modeling software package. The software is designed for use by any level of geologists, geophysicists, engineers, and marketing managers. Its overall ease of use, simple and robust model building concepts, and integration with the most advanced wavefront raytracing technologies distinguish it from other seismic survey design and modeling products.

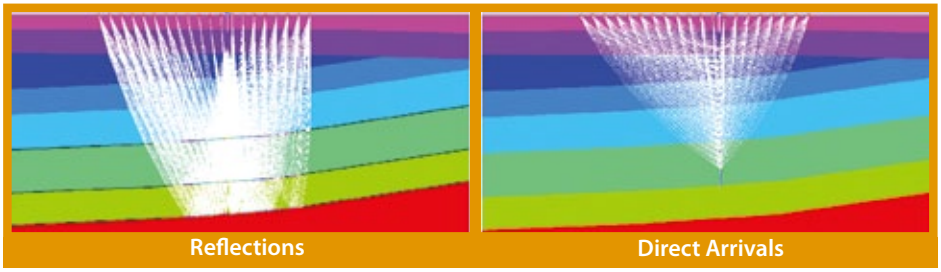
VECON Applications

- **VSP Acquisition Planning:** VECON offers advanced 2D/3D raytracing and finite difference modeling methods. By comparing different source/receiver configurations and incorporating the well location and the geological model, you can determine whether a particular VSP arrangement of sources and receivers will be able to image the target of interest.
- **VSP Modeling:** VECON provides a bridge between geology and geophysics, allowing geoscientists to use their surface depth-calibrated stack for determining VSP data, as well as, convert their seismic time horizons to a geological depth model.
- **What-If Scenarios:** Once you have built a velocity model, VECON allows you to easily change and test various geological structures, lithologies, and survey configurations to determine how they affect the final results.
- **Seismic Processing: VECON** can be used to test seismic processing or imaging techniques or algorithms. It can convert a 2D/3D interface model to grid model for tomography and migration tests. You may design a velocity model and generate synthetic traces to simulate data used in processing.

VECON imports velocity models in a variety of other program formats. Seismic sections or any structure images can be displayed as a base reference for building velocity models. Structure building features include layers and objects, which are all interactive for editing.

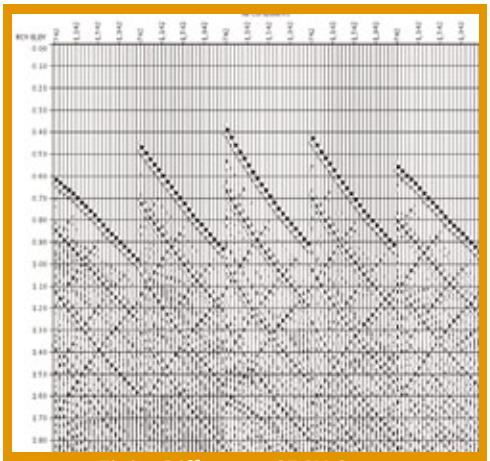


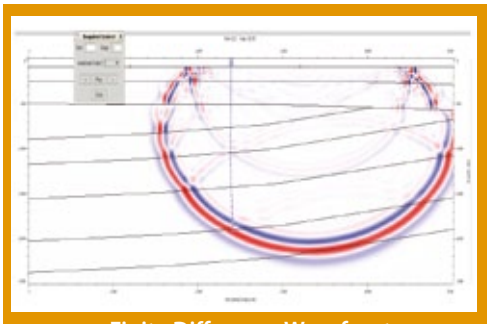
Model Building

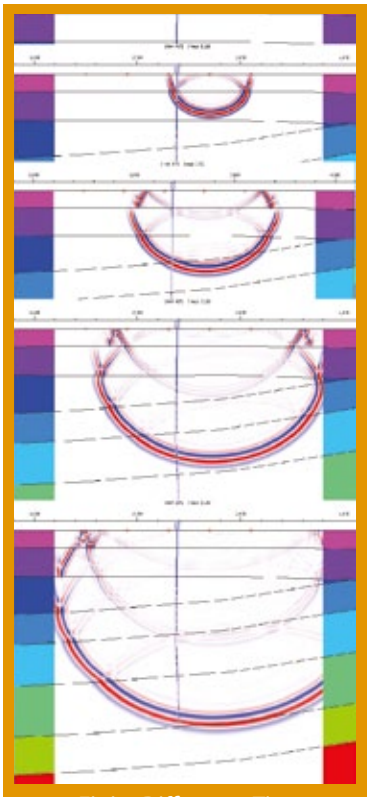

Reflections

Direct Arrivals

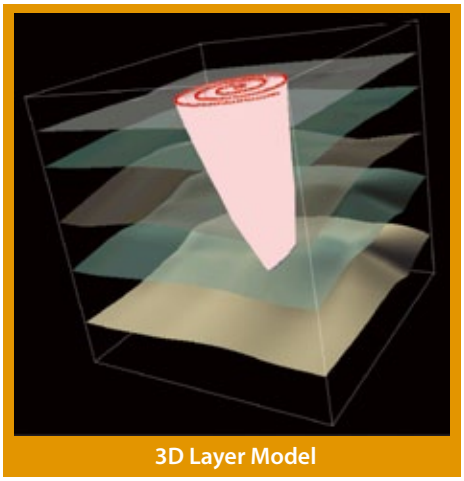
Using VECON, you can build complex subsurface models in a couple of minutes, and shoot rays in seconds. A 2D & 3D full wavefield finite difference method is available for acoustic, elastic, and anisotropic media.


Finite Difference SEGY Output

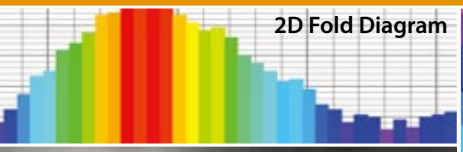

Finite Difference Wavefront


Finite Difference Time Sequenced Snapshot

VECON provides options for building 3D velocity models from 2D cross-sections, from the layer of objects interface maps supplied by clients or digitizing contours on the plan view. The user can import a 2D project directly into a 3D project or convert a cross-section from a 3D project to a 2D project.


3D Layer Model

VECON 3D raytracing is designed for direct rays, reflections, and converted reflections. Ray coverage and fold plots are provided for survey design analysis.



2D Fold Diagram

3D Fold Map with Area Calculated

2D Fold Map

Surface Seismic Software Products

TomoPlus	TomoStatics Solution
GeoThrust	2D & 3D Data Processing
WaveMAP	3D Wave-Equation Migration

Downhole Seismic Software Products

VECON	Survey Design and Modeling
VISUS	3D Seismic Visualization
TomoXPro	Crosshole Imaging

Geophysical Engineering Software Products

GeoCTI	Field QC refraction tomography
GeoCTII	Full 2D tomography
Tomo3D	Full 3D tomography

GeoTomo USA
Houston, Texas 77079
Tel: 281-597-1429

GeoTomo China
Beijing, P.R. China
Tel: 86-10-64841021

E-mail: info@geotomo.com
www.geotomo.com