

3D Pre-stack Depth Migration

To meet today's needs for more accurate and true depth seismic imaging, Seitel offers both Emerson Kirchhoff and EarthStudy™ 360 (ES360) Depth Migrations using velocity models derived through an iterative process of grid or model-based Reflection Tomography and Anisotropic Welltie Tomography.

This process is traditionally used to resolve complex structural problems but is increasingly used in non-structurally complex areas where velocities vary significantly both laterally and vertically over a thin reservoir. This can aid in well steering within thin layers, but these layers are often poorly represented by time imaging (PSTM). Pre-Stack Depth (PSDM) gathers form an ideal input for interpretation and further analysis.

Kirchhoff Depth Migration

- Offset Gathers
- OVT Gathers

EarthStudy 360 Depth Migration

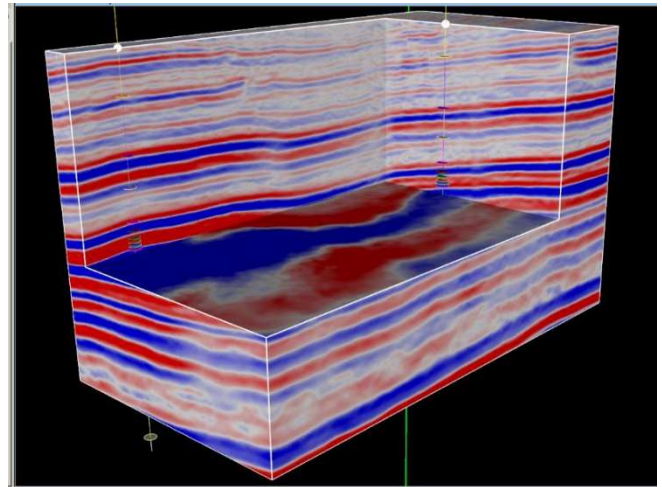
- CRAM Gathers
- Angle-Azimuth Gathers
- Directional Gathers
- Specular and Diffraction Gathers
- Orthorhombic Migration

Velocity Model Building

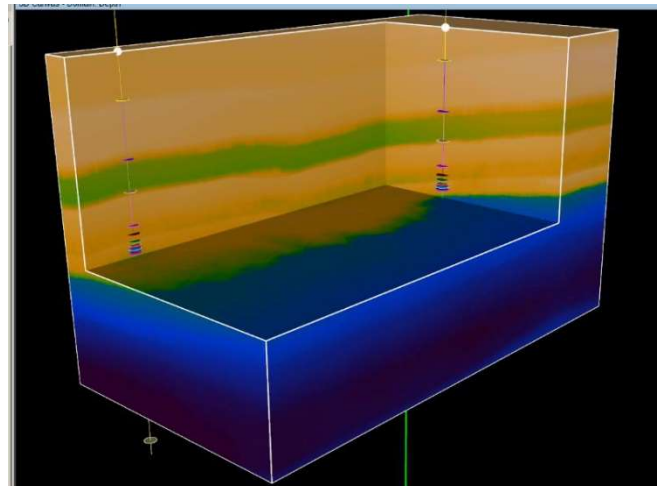
- Isotropic Velocity
- Anisotropic (Vertical) Velocity
- Delta & Epsilon Volumes

Input for further processing and analysis

- Gather Conditioning
- Coherency & Curvature Cubes
- HTI Analysis
- Fracture Mapping



ES360 Depth Stack



Anisotropic Velocity Model

An ES360 Reflection Angle Depth Stack and Anisotropic Vertical Velocity Model. Depth migration uses travel time computation via ray-tracing through the velocity volume in addition to Epsilon, Delta, Dip/Azimuth, and other volumes required by VTI, TTI, and Orthorhombic migration.