



MULTICOMPONENT PROCESSING global expertise and personalized service

During seismic exploration, P-waves (also known as primary or compressive waves) penetrate downward into the earth. When a P-wave hits an interface at an angle, part of the energy is converted to a reflected S-wave that travels back upward to the surface. Unlike P-waves, converted S-waves are unaffected by the presence of fluids, meaning they can image events that are distorted or even completely obstructed on P-wave datasets. Another useful characteristic of these converted S-waves is their polarization by anisotropic media making them useful when mapping fractures and stress regimes. The additional information provided by the converted waves can also help differentiate between sandstone, shale and carbonate.

Unconventional tools and a careful, thoughtful approach to processing are needed to successfully produce interpretable multicomponent products. Absolute Imaging has developed the specialized algorithms and expertise to effectively process these unique datasets.

- Polarization filtering, and other specialized pre stack noise suppression techniques
- Field orientation analysis and vertical orientation rotation
- Horizontal rotation to radial/transverse or P-S1/P-S2 orientation
- Solving the shear wave receiver statics problem
- Multicomponent moveout – Slotboom NMO
- A layer stripping approach to shear-wave splitting estimation and compensation
- Common Conversion Point (CCP) binning





CONTACT US

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- **Land, Marine & Transition Zone Processing 2D, 3D & 4D**
- **Multicomponent Processing**
- **Environmental Near Surface Imaging**
- **Depth Imaging | Diffraction Imaging**
- **Reservoir Characterization**
- **Seismic Data Services**

