

## Observations of Azimuthal Anisotropy in Prestack Seismic Data

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### Abstract/Excerpt

A method for displaying prestack seismic data that highlights azimuthal anisotropy is shown. Observations of azimuthal anisotropy in prestack seismic data using this and other methods make it clear that azimuthal anisotropy is observed in all types of seismic data, land, marine and multicomponent and it is widespread, from the shallowest to the deepest reflectors. Consequently, anisotropy must be accounted for in processing and interpretation of all seismic data.

Visualizing anisotropy in prestack seismic data has been difficult. Cheadle et al (2001) describe a means of displaying prestack offset and azimuth data as a 3D cube. Henceforth, this will be referred to as a COCA (Common-Offset, Common-Azimuth) Cube. Todorovic-Marinic (unpubl. results) came up with a way to view these cubes in 2D that allows a more intuitive understanding of the anisotropic variation in conjunction with the AVO variation in the data. This and more conventional methods are used to demonstrate the large degree of azimuthal anisotropy in both land and marine prestack P-wave seismic data.