

# Application of Multicomponent Data in Lithology and Fluid Discrimination

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## Abstract/Excerpt

For the past twenty-five years, seismic shear-wave data have been sparingly applied in the petroleum exploration, development and production industry. Theoretically, converted-wave data should add significant information to the conventional P-wave interpretation. In practice, it is often difficult to use the converted-wave information directly in an integrated interpretation because of the registration of events between the P-wave and converted wave datasets. Even when this is successfully accomplished it is often hard to assess the direct contribution of the converted wave data to the final interpretation.

There is lots of discussion about the application of multicomponent data, and how they can be incorporated into interpretation. Presently, some 500 published application examples are accessible through browsers focused on either interpretive applications (objectives) or by historical and geographic projects (Tatham, R.H., 2006). In this paper we present one of the applications of multicomponent data, that being lithology and fluid discrimination based on  $V_p/V_s$  ratios derived directly from the jointly inverted PP and PS (registered in PP time) information. The point is that for every project the processing of a multicomponent survey should be followed by joint interpretation of the PP and PS data.