

Hunting for the Alida with New Arrows: A Shear Wave Case Study

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The technology of multicomponent seismic recording has undergone nearly twenty years of development, but has now begun a commercially viable stage. In capturing the seismic wavefield more completely than conventional geophones, it produces not only the conventional compressional wave image but also additional shear wave data.

Certainly there has existed in the industry a conservative reluctance to jeopardise the quality of conventional recording in order to obtain this additional information.

In this paper we demonstrate that there is no data quality penalty in using this technology versus conventional geophones. Furthermore, the shear wave data has the potential to confirm or even augment the interpretation of conventional data. We did this by simultaneously recording a 2D line in the Arcola area with three sets of geophones: Vectorseis shear wave phones, conventional single geophones, and conventional array phones. We discuss briefly the recording, processing and interpretation methodologies that lead to this conclusion.