

Reconditioning Marine Seismic Data for Interactive Interpretation

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Abstract

The historical interpretation approach is based upon time and amplitude. Using the modern interpretive workstation, the full range of the seismic attributes can be examined in varying color and spatial distribution. Examples of traditional seismic data displayed using conventional methods are shown before and after workstation manipulation, with striking results.

The paper will also address procedures for the economical collection of additional data which will reinforce older available data, as well as planning cost effective acquisition of new data.

Porosity from Seismic Data, A Geostatistical Approach

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Abstract

A geostatistical modelling technique called cokriging is used to describe the lateral variations of porosity, ϕ , in a synthetic and a real reservoir. Using this method, an error-qualified porosity model is estimated for each of the two reservoirs from sparse well porosity measurements and seismically derived velocities.

The method capitalizes on the high spatial density of the seismic measurements and on their correlation with ϕ . Compared with conventional reservoir models derived solely from sparse well control, the seismically consistent models are better spatially constrained and, hence, provide more detailed and accurate reconstructions of the porosity variations.