

STRUCTURAL AND STRATIGRAPHIC INTERPRETATION OF MARINE 3-D DATA

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Three dimensional seismic surveys are usually conducted not for general exploration purposes but over known features with the objectives of providing information for a development programme. These surveys typically provide ten to twenty times as many seismic traces per unit area as a conventional seismic survey. The interpreter thus has a vast amount of data at hand.

Several techniques have been developed to aid interpretation. A well established method is to generate not only vertical seismic sections but also horizontal sections or *Seiscrops. These sections are often made into 70 mm movies to allow rapid appraisal of the data. Such displays are valuable for the purposes of structural interpretation, but stratigraphic interpretation usually requires a more detailed study of the data volume.

The seismic sections may be additionally processed to provide seismic interval velocity sections by inversion and these sections can help in the recognition of subtle traps. Such processing is not unique to 3-D surveys.

For 3-D surveys presentations have been prepared which attempt to separate structural effects from stratigraphic ones. The key to this separation is a preliminary structural interpretation so that horizons can be flattened to enable displays to be made of horizontal seismic sections with gross structure removed.

The paper presents examples of these various displays made from a 3-D survey collected in the Gulf of Thailand.

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