

MARCH MEETINGS

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THE IMPACT OF 3-D SEISMIC ON EXPLORATION

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Traditionally (if one can generate a tradition within a mere 15 years) 3D seismic has been used for the detailed analysis of known hydrocarbon accumulations. Its ability to assist in the prediction of reservoir extent, hydrocarbon saturation and porosity to name a few parameters has taken the role of seismic to previously unimaginable heights.

Today a standard field evaluation will almost always involve a major 3D survey as part of the appraisal process. In the appraisal/production domain 2D seismic is fast becoming a dinosaur.

During the last few years the 3D technique has been challenging it's 2D brother on it's home ground. Many companies now choose to acquire 3D seismic in the Exploration stage of a permit, preferring to defer drilling until the best structural and stratigraphic image of the subsurface is available.

Arguments against early acquisition of 3D have usually hinged on the great expense associated with the process. Technology advances, particularly in the development of newer more powerful seismic vessels, have to some extent offset this argument as 3D can now be acquired quicker and more cheaply using vessels with multiple streamer and source configurations.

A comparison of the costs associated with inappropriately locating a well and the cost of obtaining an accurate geophysical picture soon persuade even the most adamant non-believer that 3D seismic is the way of the future.

Shoot first and ask questions sooner must surely be the best exploration philosophy.