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Approaching Risk Reduction Through Applications of Visualization and Seismic Classification

Seismic interpreters generally have access to large amounts of data, especially in mature and partially mature basins.

Evaluating this data correctly and in a time and cost efficient fashion is a major challenge.

The goal of the evaluation process could be reasonably summarised in the concept of 'risk reduction,' either for prospects of more advanced projects.

In approaching the evaluation, the interpreter can also select from the large - and constantly expanding - array of commercial and proprietary technology based 'interpretation tools' which are potentially available for use.

The key to a successful evaluation is to marry the appropriate interpretation tool to the identified exploration problem/risk. Furthermore, it is critical to have a complete understanding of the interpretation model and a sound understanding of the processes at work within the technology, in order that the results can be correctly interpreted.

The 'model' as used in this context, is a broad concept encompassing many elements and represents the link between the technology output and the real geology.

In this paper we briefly review some technology applications on an existing North Sea prospect and attempt to provide a qualitative assessment of their impact on the perceived risks.

The technologies reviewed include the Visualization domain, for prospect definition and reservoir continuity, and Seismic Classification for reservoir fluids. It is the authors view, that in the correct circumstances, modern technologies can impact risk and may allow the detection of very subtle hydrocarbon indicators.