

Volume interpretation in the Malay Basin: how to leverage the value of 3D data by using state of the art technologies to better understand stratigraphical plays

CHRISTOPHE GONGUET¹ AND MIKE AINSWORTH²

¹SMEP, Sarawak Shell Berhad
Locked Bag No. 1
98009 Lutong, Sarawak, Malaysia

²Carigali Shell Mutiara Petroleum Sdn. Bhd.

Increasingly, exploration and subsequent development is focusing on subtle stratigraphical plays which have hitherto proved difficult and complex to model. This poster demonstrates how, by integrating conventional seismic interpretation techniques with state-of-the-art multi-attribute volume interpretation tools an exhaustive inventory can be made of stratigraphical features (bodies) and a classification of their acoustic response. In turn, this allows a full inventory of leads and discrimination of the most attractive prospects.

It must be stressed that these tools are not meant to be strictly stand-alone and that best results are achieved when this valuable information is carefully integrated with all structural, stratigraphical, sedimentological, lithological, petrophysical and geophysical elements derived from well data, regional studies and other investigations.

This approach is valid both for exploration prospect screening and for production development, in particular with regards to the ability of certain techniques, such as spectral decomposition, to improve on conventional seismic resolution and highlight previously sub-seismic geometrical features.