

Paper 7

Overview of AVO Analysis in the Malay BasinLYE YUE CHOONG¹ & M. REZA DANESHVAR²¹Esso Production Malaysia Inc.

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Esso Production Malaysia Inc. has conducted AVO (Amplitude Versus Offset) processing and interpretation of over 1200 km of seismic data since April 1991. The major part of this effort was concentrated in PM-5 and PM-8 blocks where an extensive exploration program is underway. Statistical analysis of the AVO results indicates a 65% chance of observing a favorable AVO response, i.e. an increase of amplitude with offset for hydrocarbon-bearing sands and a decrease for wet sands. Inconsistent AVO responses have been documented to be caused by (a) physical properties of rocks not supporting an AVO anomaly, (b) poor signal to noise ratio, (c) poor processing, and (d) presence of tight streaks. EPMI has also been working on quantifying AVO attributes in an attempt to differentiate between gas and oil DHIs. AVO analysis is mainly used as a risking tool at EPMI.

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