

Using AvO to reduce uncertainties in D35 infill drilling

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The D35 oilfield in the Balingian province offshore Sarawak was discovered in 1982. It came on-stream in late 1994 and currently produces around 14 Mstb/d. Another infill development drilling campaign has been planned for late 1997. A multi-disciplinary study of the D35 field, including quantitative interpretation of the seismic for porefill determination, was undertaken to support the development drilling.

A high resolution seismic survey was acquired over the D35 field in 1995. As the seismic data was of reasonably good quality, an AvO study was initiated. True amplitude near and far offset migrated stacks were created, and amplitudes extracted at objective levels. AvO attributes were extracted and their response at the infill target locations was evaluated by comparing the results with that seen at well locations.

The results of this study showed that the brine-bearing and oil-bearing reservoirs have different AvO responses. Thus, the results gave an indication of the porefill at the reservoir level, and this in turn assisted in decision-making of the revisit targets.

In conclusion, application of AvO has shown to be successful in screening drilling targets and for risk management in the D35 study.
