

SUMMARY

The Bridge Bass 1990 Seismic Survey recorded 1103 surface km of multifold marine seismic data in November of 1990 in the southern half of the Tasmanian exploration permit T/15P. The survey was designed to detail existing leads for drillsite selection in the Bark Sub-basin and to infill and extend the data grid in the Boobyalla Sub-basin.

Recent work conducted by Bridge Oil has greatly improved the hydrocarbon prospectivity of the permit. Analysis of side wall cores and drill cutting samples from Durroon-1 have confirmed a relationship between the Durroon Mudstone of Durroon-1 and the Golden Beach Formation of the Otway and Gippsland Basins. This relationship has been translated into a revised interpretation of the sediments that directly overlie the Otway Group in the three sub-basins of the Durroon Basin (Baillie and Pickering, 1991).

This survey has provided increased control in the Bark Sub-basin where fault dependent structural traps associated with large volumes of near-by source rock are interpreted to exist. The bulk of the programme was recorded in the Boobyalla Sub-basin where large north plunging structural anticlines are interpreted. The availability of source rock to these features is unknown.

Bridge Oil has adopted a unique depositional model for this part of the Bass Strait that incorporates the following ideas:

- the Otway Group was deposited in a linear southward dipping depression. (Edgerley and Taylor, 1990)
- the eastern half of Tasmania, the Bassian Rise and the islands of the Furneaux Group were probably buried under 3 to 4 km of sediments Otway time. (Dumitru et al, 1991)
- Uplift and subsequent erosion of these sediments from 100 to 80 Ma provided the material infill for the sub-basins.
- The sediments of 100 to 80 Ma are related to the Golden Beach Formation of the Kippers Gas Field in the Gippsland Basin. (Morgan, 1991; Lowry, 1987)
- There is scant evidence that indicates there may have been one of more marine incursions into the Durroon Basin during the Tasman Rift period. (Morgan, 1991)
- The Boobyalla Sub-basin underwent extension during the late stages of the Tasman Rift period. (Edgerley, Appendix VI this report)

Most of the interpreted leads discussed in this report require further definition in order to classify them as valid drilling targets. Approximately 360 km of new seismic data are required to achieve this status.