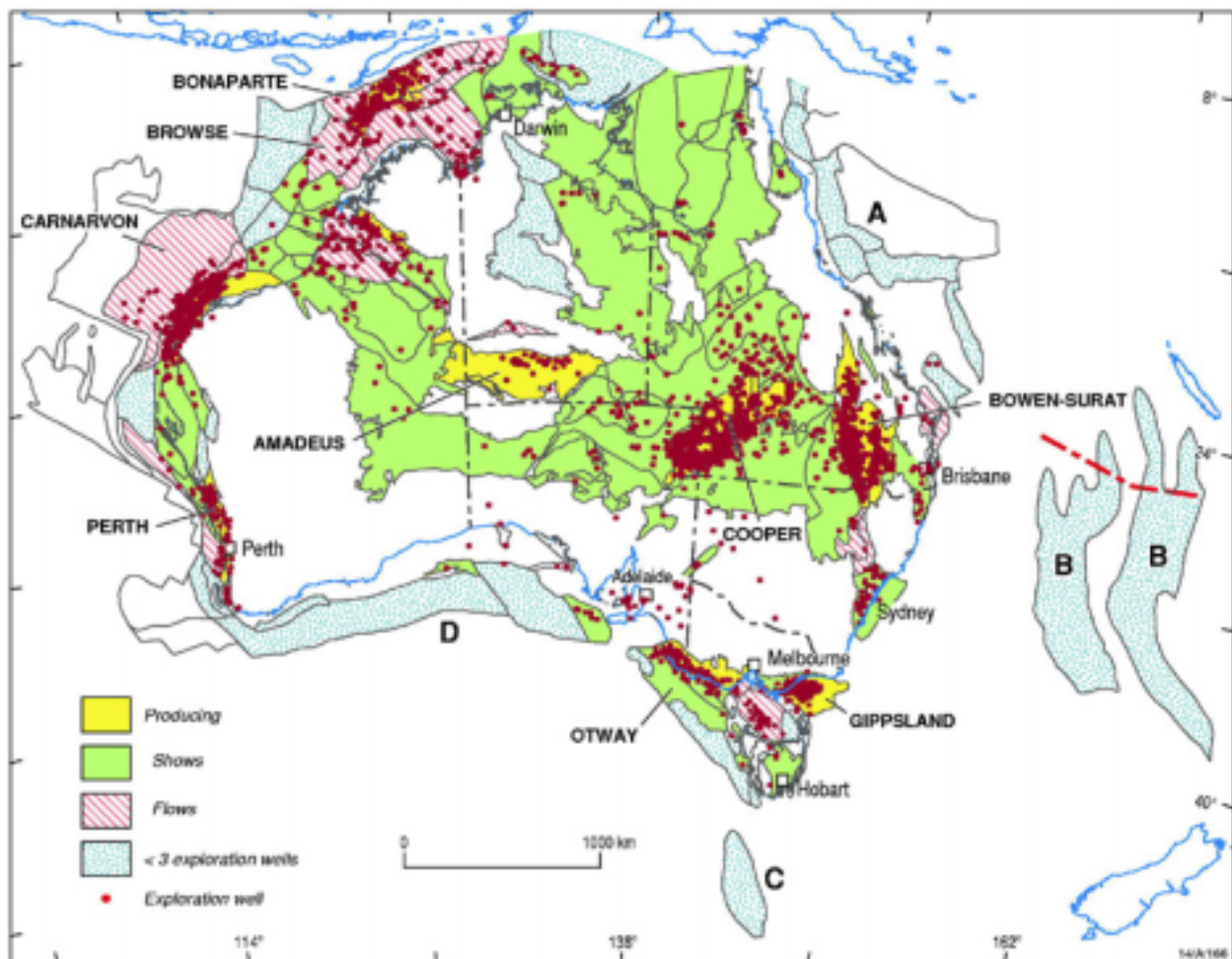


Hydrocarbon Basins of Australia

Across onshore Australia and its offshore marine jurisdiction more than 200 sedimentary basins have been identified. These basins cover in excess of 10 million km² and range in age from Proterozoic to Recent. Some 7500 exploration and development wells have been drilled over the years, or about one well for every 1300km² of sedimentary basin. This low well density reinforces the fact that Australia (and particularly many of its offshore areas) is under-explored by international standards.

Although hydrocarbon exploration in Australia commenced in the 19th Century, it was not until 1962 that the first commercial field was discovered. Since that time, exploration successes have included the discovery of major oil and gas fields in the offshore Gippsland Basin in 1963 (with the first production in 1969), the discovery of the giant Barrow Island oil field in the Carnarvon basin in 1964 (first production 1967), and the discovery of the first of a series of major gas fields off NW Australia in 1971 (North Rankin, first production in 1984). Most of the hydrocarbon reserves discovered and developed to date are located within the Gippsland, Northern Carnarvon, Bonaparte and Cooper/Eromanga Basins (98% of the developed reserves, Longley et al. 2001).

However, exploration of many of the offshore basins is only at a reconnaissance stage, and advances in technology mean that deep-water areas that were previously dismissed as exploration targets are now worthy of serious consideration. To assist this exploration, the Federal Australian Government earmarked A\$33.3 million over 4 years to promote exploration and identify new oil zones in frontier areas. This work was undertaken at Geoscience Australia in three large regional projects - [East and Southeast](#), [North and Northwest](#), and [South and Southwest](#).



Map of the exploration maturity of Australian basins showing producing basins, those with flows and shows and unexplored areas. A—Northeast Queensland Basins—Capricorn, Papuan, Queensland and Townsville; B—Area with sediments thicker than 2,000 m on and adjacent to the Lord Howe Rise (Stagg et al, 1999); C—Area of the Ninene Basin with sediments estimated at thicker than 2,000 m, South Tasman Rise (Exon et al, 1997); D—Southern Margin Basins.

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