

# Petroleum exploration opportunities – *2005 Acreage Release*

**The 2005 offshore acreage release offers explorers new opportunities to build on recent successes that have significantly increased known oil and gas reserves.**

Interest in offshore exploration for oil and gas is rising, with 15 of the 35 areas offered in 2003 awarded and others still under consideration. This uptake rate is underpinning increases in associated exploration expenditure.

Commercial interest in the 2004 offshore acreage release is just as encouraging, with bids received on nine of the eleven areas offered in the first closing round. New entrants to the Australian exploration scene include Canadian companies Avery Resources and Vermillion Energy Trust, the UK's Paladin Resources and the French super major Total. Six permits in the 2004 acreage release will attract a 150% tax uplift as an incentive for oil exploration in frontier areas. Several permits in the 2005 acreage release will also receive this tax uplift, subject to approval by the Minister for Industry, Tourism and Resources, the Hon. Ian Macfarlane.

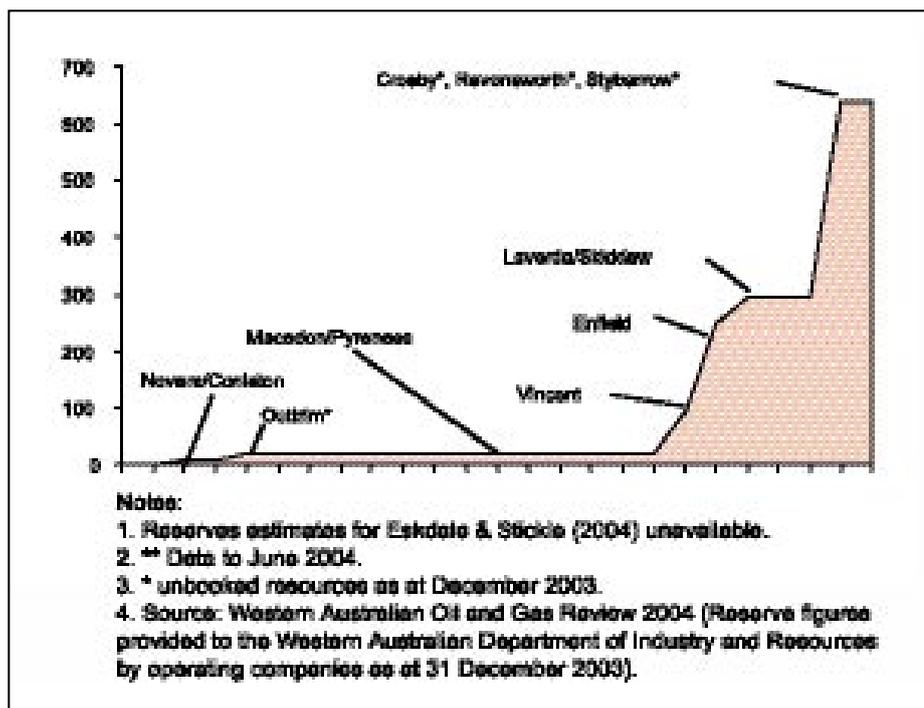
## Gas: giant discoveries and accelerating development

The reputation of Australia's North West Shelf as a world-class gas province was confirmed in 2000 by the discovery of two super giant gas accumulations—Jansz in the Carnarvon Basin, and the Brewster-Ichthys complex in the Browse Basin.

The Jansz accumulation of 20 trillion cubic feet is the largest gas field yet found in Australia; more importantly, the gas is found in a type of structure very different from those previously explored for. The gas is reservoirised in Late Jurassic channel sands rather than in a Triassic fault block—the usual habitat of major fields on the North West Shelf. The success of Wheatstone-1, drilled by ChevronTexaco in August 2004, demonstrates that more large gas discoveries remain to be made.

Well-established LNG export markets for Australian gas are growing in Japan, Korea and China. The North West Shelf Joint Venture's fourth production train commenced operation in September 2004, and there are plans for a fifth train in 2005. Construction has begun on the Darwin LNG project, which will develop the Bayu/Undan gas/condensate field in the Timor Sea. Other giant gas fields being considered for development to supply export markets are Greater Gorgon and Scarborough in the Carnarvon Basin, Scott Reef and Brecknock in the Browse Basin, and Evans Shoal in the Bonaparte Basin.

New domestic gas developments are well advanced in southeastern Australia, in the offshore Bass and Otway basins. First gas has flowed this year from the Bass Gas project's Yolla field, and from the Otway Basin Minerva development. In northern Australia, the Blacktip gas field in the Bonaparte Basin is slated for development, with the building of a pipeline across the Northern Territory to the Gove alumina refinery.



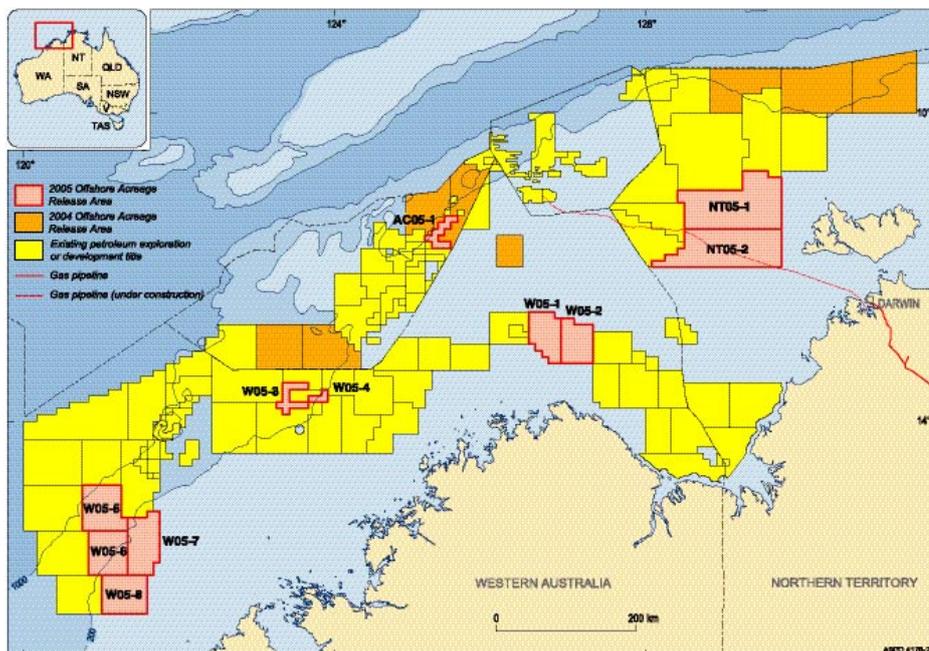
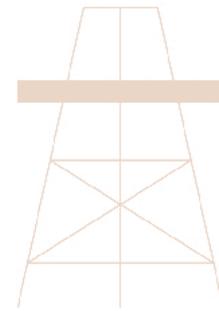
▲ **Figure 1.** Cumulative oil reserves, Exmouth Sub-basin. Source: Oil and Gas Resources of Australia 2003, Geoscience Australia.

## Oil: new discoveries in the north, west and east

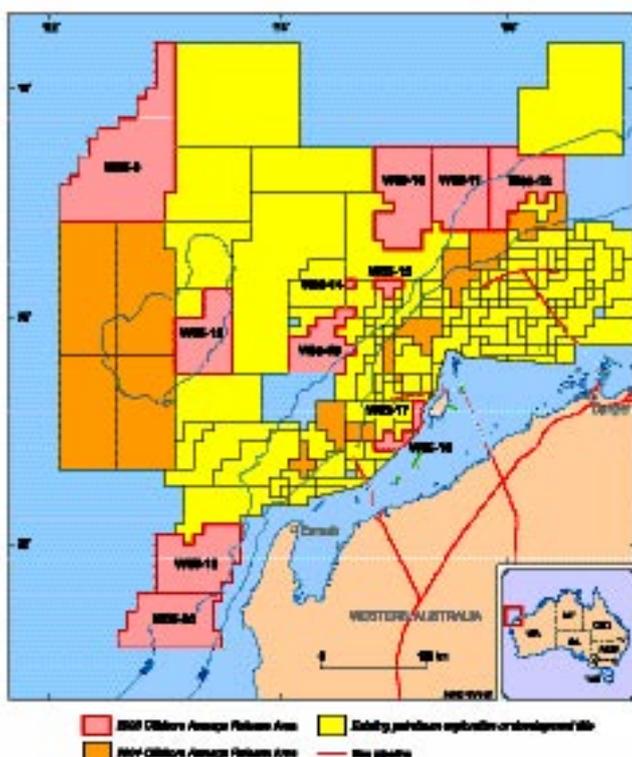
Several significant new oil discoveries inboard of the giant gas fields in the Carnarvon Basin have extended known oil reserves to both the north and the south.

At the northern end, the Exeter field in the Dampier Sub-basin was discovered in 2002. Together with the 1998 Mutineer discovery, this province has some 120 million barrels which is expected to be brought into production in 2005. In the Exmouth Sub-basin at the southern end of the oil trend, discoveries over the past five years include Vincent, Enfield, Laverda, Stybarrow, Ravensworth, Crosby, and Stickle. This significant new oil province with several hundred million barrels of reserves is expected to begin production by 2006 (figure 1).

Explorers have also enjoyed success in areas beyond the North West Shelf. The Cliff Head discovery, drilled in December 2001, is the first major oil find in the offshore Perth Basin, where there have been recent onshore oil and gas discoveries. Development plans are well underway, and production is planned to start this year.



▲ Figure 2. 2005 offshore release areas in northwest Australia.



◀ Figure 3. 2005 offshore release areas in north Western Australia.

In Bass Strait, development drilling of the Yolla gas field intersected an oil leg and the exploration well Trefoil 1 recovered significant condensate. The most recent oil discovery has been in the Vulcan Sub-basin, where OMV's Katandra well identified a seven-metre oil column. This well, located on the Jabiru trend, is significant for assessment of the 2005 new acreage release area.

## New acreage for petroleum exploration

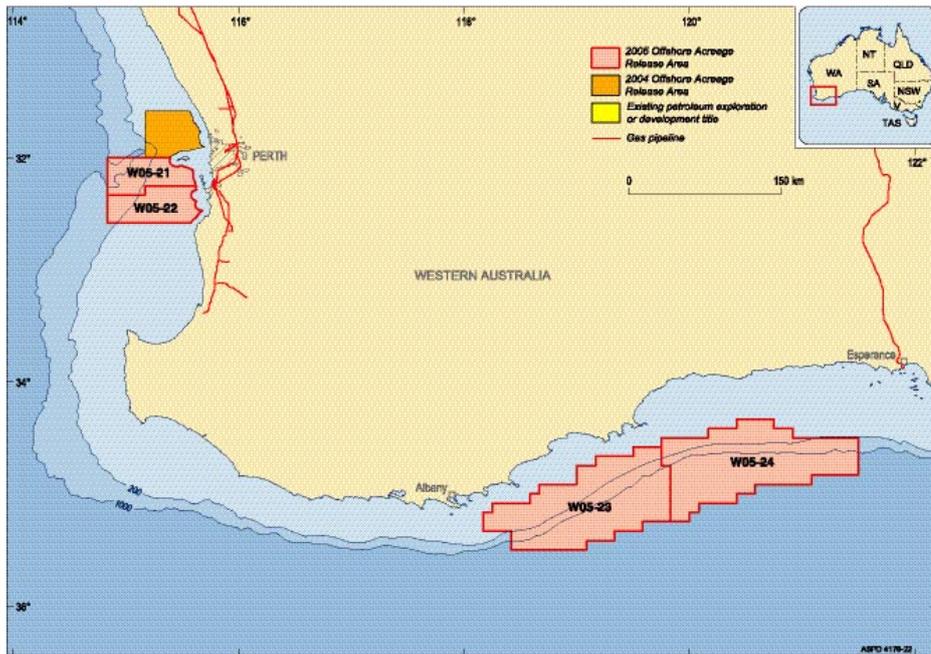
Australia's Offshore Petroleum Exploration Acreage Release for 2005 was announced on 11 April. Twenty-nine areas are available in 13 different regions (see figures 2–5). Areas on offer include:

- large frontier blocks in the Outer Exmouth Plateau, Bremer Sub-basin and Otway Basin (figures 3, 4 and 5)
- moderate to smaller blocks in the midst of large gas accumulations in the Northern Browse Basin and the Carnarvon Basin (figures 2 and 3)
- moderately sized blocks under various water depths in the immature to sub-mature basins of the Northern Exmouth Plateau, the Barcoo Sub-basin, the Southern Exmouth Sub-basin and the Vlaming Sub-Basin (figures 2, 3 and 4)
- shallow water blocks over the Darwin Shelf and Londonderry High (figure 2) and Otway Basin (figure 5).

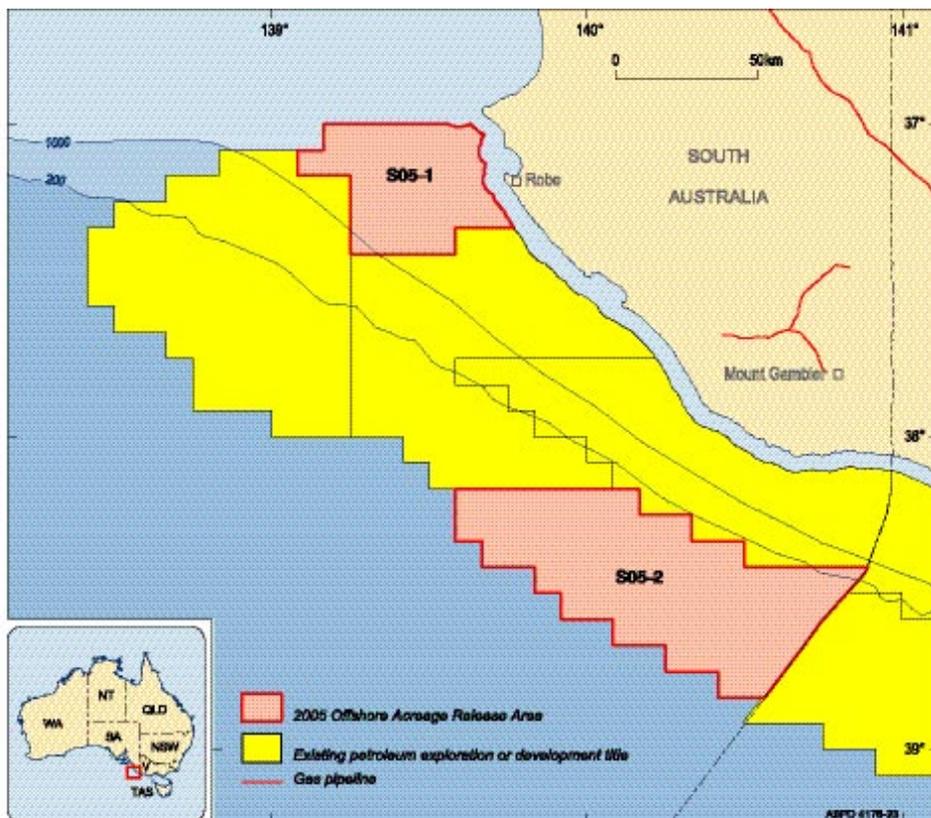
All areas are available for bidding through a work program bidding system. Closing dates for bids will be October 2005 and April 2006, depending on the size and relative exploration maturity of the areas.

**Geoscience Australia has a number of products that could help explorers to review potential acreage. For more information on these products or services, or about the offshore acreage release, phone Jenny Maher on +61 2 6249 9111 (email [jenny.maher@ga.gov.au](mailto:jenny.maher@ga.gov.au)) or visit our website at [www.ga.gov.au](http://www.ga.gov.au)**

**Information on the 2005 Release of Offshore Petroleum Exploration Areas can also be obtained from the Department of Industry, Tourism and Resources website at [www.industry.gov.au/petexp](http://www.industry.gov.au/petexp)**



◀ **Figure 4.** 2005 offshore release areas in south Western Australia.



◀ **Figure 5.** 2005 offshore release areas in South Australia.

