

# Cooper Basin Milestone Reached

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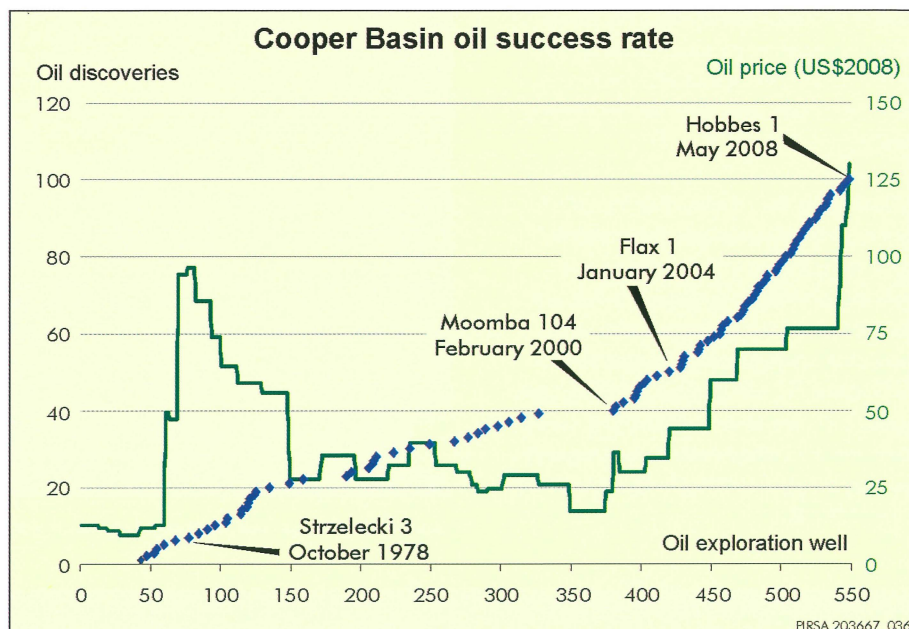
The number of oil discoveries in the South Australian Cooper Basin reached 100 in May 2008 with the Santos' Hobbes-1 oil discovery. A total of 548 wells targeting oil have been drilled in the region since exploration commenced in the 1950s.

PIRSA Petroleum and Geothermal Group assess each well drilled in the Cooper Basin region after drilling using standard hydrocarbon show criteria to determine its classification and whether it is a new oil or gas discovery. Results are summarised in the graph to the right.

Moorari-1 drilled in 1971 in South Australia made the first Permian oil discovery in the Cooper Basin region. The initial Cooper Basin oil discoveries in the region languished until the discovery of Eromanga Basin oil in 1978 when Strzelecki-3 discovered the first commercial Eromanga Basin reservoir oil in South Australia. This new oil play was aggressively targeted to prove sufficient reserves for the massive Liquids Scheme infrastructure investment – the newly constructed Port Bonython plant and loading facility and a liquids pipeline to the Moomba Plant. The first oil was produced from Strzelecki in 1982 and the first oil and condensate was exported from Port Bonython in 1983.

The discovery of oil in the Eromanga Basin prompted a sharp increase in oil exploration and the success rate. The other variations in success rates can be correlated with variations in the world oil price. The most striking correlation occurs over the last five years as new explorers focus on oil exploration and the world oil price increases to record levels.

Tirrawarra oil field, discovered in 1971, remains the largest oil field discovered in the region. Santos determined the original oil in place as 297 MMbbl 2P (proved and probable), 30 MMbbl of which is 2P ultimate recoverable oil. Jackson oil field in southwest Queensland has the highest ultimate recoverable oil in the region with 49 MMbbl 2P recoverable from an original oil in place of



115.5 MMbbl 2P (Dr Phil Plummer, Santos Ltd. pers com. April 2008).

Current high exploration activity levels in the South Australian Cooper Basin originate from the state government's management of the 1999 expiry of long-held and extensive exploration licenses through phased acreage releases in 1998-2000. This acreage turnover irrevocably changed both the petroleum licence map and the face of Australia's exploration industry with a number of 'company-making' oil discoveries. Recent high oil prices have directed most of the new entrant exploration focus firmly onto oil plays.

Since January 2002 through to end April 2008, 116 exploration wells and 39 appraisal/development wells have been drilled by the new explorers in the Cooper Basin. Most have targeted oil; however both oil and gas have been discovered. The new entrants found new pools in 55 of these wells (47% technical success rate) and 49 were cased and suspended as future producers (42% commercial success rate).

Large areas on the flanks of the Cooper Basin remain under explored. In the core Cooper region, high resolution seismic data will

inevitably reveal attractive conventional drilling targets as well as new oil and gas plays. Both the new entrant explorers and the incumbent Santos joint venture has significant inventories of good targets still to explore and South Australian Cooper Basin remains very rewarding, attractive destination for petroleum exploration investment.

The South Australian Cooper Basin region is also a hot bed for geothermal exploration, and Geodynamics Limited is leading the way with its Habanero project near Innamincka. In addition to geothermal and petroleum exploration and production, the region could also become a hub for the storage of CO<sub>2</sub> as proposed by Santos Limited last year.

Acreage turn over is continuing in South Australian, and the first round of mandated partial relinquishments of Cooper Basin exploration licences commenced in October 2006. The relinquished acreage is being consolidated into blocks for a major new acreage release early in 2009 totalling 19,150 km<sup>2</sup>. It is hoped that the acreage turn over will attract further new explorers to the Cooper Basin and stimulate more exploration and discoveries into the future. ■