

# 50<sup>th</sup> Anniversary Of Santos Wilkatana Petroleum Exploration Drilling

Elinor Alexander and Bernard O'Neil

**Elinor Alexander, Petroleum Geology Branch Manager, PIRSA Petroleum Group**  
**Bernard O'Neil, O'Neil Historical & Editorial Services, PO Box 2, Klemzig, SA 5087.**

Fifty years ago, on 11 June 1956, South Australia Northern Territory Oil Search (Santos) finished drilling its first exploration well, Wilkatana 1, north of Port Augusta (Figure 1). The well encountered oil shows in Cambrian carbonates of the Arrowie Basin. This indicated to local, national and international sceptics that South Australia was indeed prospective for petroleum.

In the early 1950s, the Mines Department remained cautious about South Australia's oil potential. However, two private promoters, leading Adelaide businessman John Bonython and Robert Bristowe (a former King's Messenger who used to fly between Persia and Moscow) formed Santos, with Sir Douglas Mawson, Professor of Geology at the University of Adelaide (who recommended adding 'Northern Territory' to its name). Santos (South Australian Northern Territory Oil Search) was incorporated as a private company in March 1954, floated as a public company in that October and commenced trading on the Stock Exchange in February 1955. After discussions with Messrs Bonython and Bristowe, Reg Sprigg had resigned from the Mines Department in February 1954. He registered Geosurveys of Australia Pty Ltd less than a week before Santos was incorporated. Geosurveys and Santos aspired to acquire all of north eastern SA for the long-term and, in November 1955, their tenements OELs 6 and 7 totalled 507,397 km<sup>2</sup> (Figure 1). They were not the only companies interested in 'the good oil': five Oil Exploration Licences were issued in 1954 compared with the same number in the previous 14 years, and more than half the State was held under licence. But they acquired what became the pick of the State for successful oil and gas exploration.

In 1955 Geosurveys and Santos investigated the Wilkatana area, where a trace of subsurface oil had been discovered two decades before. Messrs Sprigg, Bonython and Bristowe visited Wilkatana and noted spots of oil on a water bore. Twenty-four wells were then drilled for Santos between mid-1955 and 1957 by the Mines Department's diamond drill and percussion rigs and a Failing 1500 from the BMR. The Mines Department also ran a seismic refraction survey at Wilkatana for Santos in 1955.

Minor traces of oil were recovered in dolomitised Early Cambrian limestones in several wells (Sprigg, 1958). Though the Wilkatana oil discovery was uneconomic,



'Oil Oil Oil!' Poster

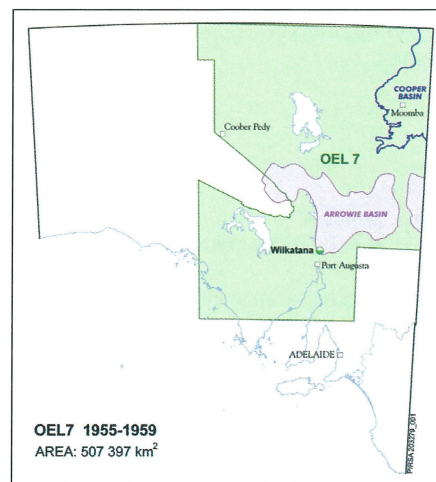
it attracted much interest, especially from Premier Sir Tom Playford and Minister Sir Lyell McEwin, who were enthusiastic about resource development. This caused a shift in thinking by key personnel in the Mines Department: if the Premier wanted oil found then there would have to be a very good excuse for it not to be!

One result of the drilling and seismic surveys at Wilkatana was that the Mines Department expanded its role in geophysics and implemented regional geological mapping, aerial photography and geophysical survey programs, which provided and is still providing great assistance to oil and mineral exploration companies. While there has not been a commercial discovery to date in the frontier Arrowie Basin, oil shows were recorded in another exploration well, Moorowie 1, in 1983 and anecdotal evidence suggests the presence of gas in water bores. Prospective parts of the basin, including the Wilkatana area, are currently under application for Petroleum Exploration Licences.

The visit of the world-renowned American petroleum geologist Dr A.I. Levorsen (of Tulsa, Oklahoma) to Australia in early 1957, at the invitation of Bonython, proved vital in promoting petroleum exploration in the State. At a meeting with Santos on 8 February in Adelaide where data obtained at Wilkatana, elsewhere in OEL 7, and from tenements in the Amadeus Basin and Melville Island were presented, Levorsen was not overly impressed with the results and reputedly remarked that Santos 'would need the Bank of England to fund the work at Wilkatana' which had the potential for 'Fords and Chevies', whereas the proven anticlines in the Great Artesian Basin

meant the 'Cadillacs and champagne' were further north (Gibbs, 1988; Wilkinson, 1988; Wopfner, pers. comm. 1998). He recommended that Santos increase its holdings and focus its attention there and in southwest Queensland. This positive support for the likelihood of oil in that vast region provided a fresh impetus to exploration.

Santos then refocused activity on what we now know as the Cooper Basin in South Australia where it has operated over 1070 exploration, development and appraisal wells, with their joint venture partners. The potential exists for the number of wells to be doubled over the next 5 years by Santos and others exploring for and producing petroleum in the South Australian Cooper Basin. Santos and their joint venture partners continue to invest in the vicinity of \$400 million in the Basin each year. The cumulative petroleum royalty paid in South Australia since 1970 totals \$1.48 billion in today's dollars, and cumulative sales total an estimated \$25.32 billion in today's dollars – the bulk of which originates from the Cooper Basin.



## References

- Gibbs, R.M., 1988. Bulls, bears and wildcats: a centenary history of the Stock Exchange of Adelaide. Peacock Publications, Adelaide.
- Sprigg, R.C., 1958. Petroleum prospects of western parts of the Great Australian Artesian Basin. AAPG Bulletin, 42(10):2465-2491.
- Wilkinson, R., 1988. A thirst for burning: the story of Australia's oil industry. David Ell Press, Sydney.
- Wopfner, H., 1998, Personal communication with B. O'Neil. ■