

PETROLEUM EXPLORATION ACTIVITY
IN QUEENSLAND

R.W. Day
Director Fossil Fuels Branch,
Geological Survey of Queensland

Petroleum exploration activity in Queensland remained at a high level during the 1983-84 financial year. A total of 21,450 km of seismic line was recorded and 118 wells spudded. This represents more than 50% of the onshore seismic carried out in Australia and a little less than 50% of the onshore drilling. The wells comprised 61 classed as exploratory and 57 appraisal and development. Exploratory drilling enjoyed an unprecedented 42% success rate with 26 new field discoveries (11 oil, 10 gas, and 5 oil and gas). Appraisal and development drilling was 82% successful with 38 oil wells and 9 gas wells. Between the end of June and mid-August 1984, 11 additional wells were spudded (8 exploratory, 3 appraisal/development), resulting in the discovery of one new oil field and a new gas field.

Most exploration efforts centred on the Cooper/Eromanga Basin province in southwest Queensland where 78 wells (33 exploratory, 45 appraisal/development) have been spudded since July last year. Delhi Petroleum Pty Ltd was the most active operator in this province (and in the State) with a total of 64 wells (22 exploratory, 42 appraisal/development). This drilling resulted in 7 oil discoveries (Graham 1, Gunna 1, Naccowlah West 1, Pepita 1, Sigma 1, Tinpilla 1, Wilson 1), 5 oil and gas (Bogala 1, Challum 1, Chookoo 1, Naccowlah South 1, Yanda 1), and 2 gas discoveries (Keilor 1 and Munkah 1). Notable oil discoveries were made by 3 of the 8 other operators in the province, namely: Hartogen Energy Limited (Tintaburra 1), Hudbay (Australia) Ltd (Bodalla South 1), and Pancontinental Petroleum Ltd (Nockatunga 1). The prospectivity of the region has been greatly enhanced by the discoveries of the past 14 months, and in particular by discoveries at Bodalla South 1, Tintaburra 1, Pepita 1, and Sigma 1, which have considerably extended both the geographic extent and stratigraphic range of known hydrocarbon occurrences.

The southwest Surat/Bowen Basin in the vicinity of Roma and Surat was the secondmost actively explored area of the State with 26 wells spudded (21 exploratory, 5 appraisal/development). The principal operator in the province, Hartogen Energy Ltd drilled 11 wells (9 exploratory, 2 appraisal/development) making one oil discovery (Samari Plains 1) and 4 gas discoveries (Blackbutt 1, Bloodwood 1, Yambugle 2, Yarrabend 1). Three of 5 other operators in the province were also successful, Sydney Oil Company Ltd discovering oil in Bellbird 1 and Bridge Oil Ltd and BHP Petroleum Pty Ltd making gas discoveries in Roswyn 1 and Broadway 1 respectively. Wet weather hampered exploration in this area for much of the year.

In the Denison Trough portion of the Bowen Basin north of Roma, AAR Limited's remarkable run of success continued with 7 out of a total of 9 wells drilled completed as gas wells. All 3 exploratory wells, Myrtleville 1, Moorooloo 1, and Springton 1, were successful. Planning for a gas pipeline to Gladstone and negotiations to market gas there are at an advanced stage.

The 7 operators who drilled 8 wells (6 exploratory, 2 appraisal/development) in the eastern Surat/Bowen Basin west of Dalby met with mixed success. Eastern Petroleum Australia Pty Ltd completed Cabawin 4 as an oil well, while Coho Exploration Pty Ltd's Tiggrigie Creek 1 and XLX NL's Xyloleum 1 were cased and suspended to allow evaluation of gas shows encountered by those wells.

Elsewhere in the State, Canso Resources Ltd spudded Mogga 1 to test previously unexplored subsurface sediments of the Devonian-Carboniferous Drummond Basin, Queensland Petroleum Pty Ltd completed 2 continuously cored holes in the Jurassic Moreton Basin, and Amoco Minerals Queensland Pty Ltd drilled 2 coreholes in Proterozoic sediments northwest of Mount Isa.

At the end of June 1984 there were 75 current Authorities to Prospect for petroleum over the land area of Queensland. During the year 4 Petroleum Leases (PL 23, PL 24, PL 25, PL 26) were granted to cover the Jackson, Chookoo, and Naccowlah fields in the Cooper/Eromanga Basin. The Jackson-Moonie pipeline was also completed during the year. Future exploration will be fostered by the State's rapidly developing pipeline infrastructure.