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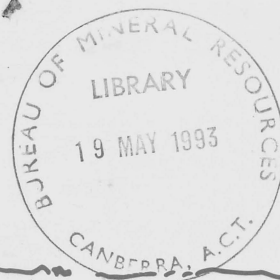
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Record 1991/80

# Petroleum exploration and development in Australia

—activity and results, 1989



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**BMR Record 1991/80**

**Petroleum exploration and development in Australia  
- activity and results, 1989**

**Prepared by the Petroleum Resource Assessment Branch  
of the Petroleum and Marine Geoscience Group,  
Bureau of Mineral Resources, Geology and Geophysics, Canberra**



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## INTRODUCTION

This report has been prepared by staff of the Petroleum Resource Assessment Branch of BMR. The functions of the Branch include monitoring petroleum exploration and development activity, preparation of estimates of petroleum reserves and resources and their availability through time, and provision of technical advice in relation to Commonwealth legislation and policies concerning petroleum exploration, development and production.

The report provides a summary of petroleum exploration and development activity in Australia during 1989. It also summarises BMR's assessments of Australia's identified petroleum resources (reserves) and undiscovered petroleum resource potential.

The report summarises activity in 1989 in each of the major onshore and offshore sedimentary basins, and includes a summary of the number of wells and metres drilled to the end of 1989, a table of discoveries of petroleum in 1989, and a list of the major events in the history of the Australian petroleum industry.

## 1989 IN RETROSPECT

Expenditure on both petroleum exploration and development in Australia increased in 1989 compared with 1988. The number of onshore exploration wells declined substantially to just over half the number in 1988, but exploration wells drilled offshore increased. There were also increases in the numbers of development wells, both onshore and offshore. Seismic survey activity declined markedly onshore, particularly in South Australia, but rose substantially offshore, with an overall rise to its highest level in 4 years.

The highest proportion of exploration wells continued to be drilled in the Eromanga Basin and its infrabasins - the Adavale, Cooper and Galilee Basins. Other onshore basins which were actively explored were the Amadeus, Bowen/Surat, Canning, Carnarvon, Georgina, McArthur, Otway and Perth Basins. Most offshore exploration wells were in the Bonaparte and Gippsland Basins: exploration wells were also drilled in the offshore Carnarvon and Browse Basins. Onshore seismic surveys were mainly in the Cooper/Eromanga and Bowen/Surat Basins, and offshore surveys were mainly in the Gippsland, Bonaparte and Carnarvon Basins.

Forty-one oil, gas and condensate discoveries were made during 1988; 22 oil, 6 gas, and 3 gas/condensate discoveries were made onshore, and 5 oil, 3 oil and gas and 2 gas/condensate discoveries were made offshore. Additions to demonstrated resources resulting from discoveries were insignificant compared to upward revisions of resources in known fields, and to changes resulting from production.

Development wells completed onshore were mainly in the Cooper/Eromanga Basins, but development wells were also drilled in the Carnarvon Basin (Barrow Island), Bowen/Surat and Amadeus Basins. Most offshore development wells were in the Gippsland Basin: drilling continued at the Bream field (9 wells), with drilling also at the Whiting and Perch fields.

Elsewhere, development wells were drilled at the Saladin, Chervil, South Pepper and North Rankin fields in the offshore Carnarvon Basin and the Jabiru and Challis fields in the Bonaparte Basin.

Several major offshore development projects were completed to production/operation stage during 1989. The second phase of the North West Shelf gas project began production, and production commenced from the Talisman and Saladin oil fields. Proposals to develop the nearby Wanaea, Cossack, Yamaderry and Cowle oil fields were made. Development of the Skua field is also planned.

Onshore, gas pipelines from the Denison Trough and Walumbilla field to Gladstone, and from Port Pirie to Whyalla were opened in November and May respectively.



## PETROLEUM GEOLOGY, RESOURCES AND PRODUCTION

## Geology

Sedimentary rocks ranging in age from Proterozoic to Cainozoic underlie about 4.3 million km<sup>2</sup> or about one half of the land area of Australia, and about another 2 million km<sup>2</sup> of the continental shelf (Fig. 1). Forty-eight sedimentary basins are presently recognised, 20 of which lie wholly or partly offshore.

Proterozoic and early-mid Palaeozoic basins occur mainly in the central and western parts of the continent and in some places extend offshore. Basins that have developed during the late Palaeozoic and Mesozoic underlie large areas of eastern Australia, and extend onshore and offshore around the continental margins. Tertiary strata overlie many of the older basins. The Tertiary basins, and basins that continued to develop into the Tertiary, are mostly distributed along the southern coastline.

Australia's petroleum reservoirs range in age from Precambrian to early Tertiary. Most of the oil resources discovered so far are in offshore early Tertiary reservoirs in the Gippsland Basin. The petroleum reservoirs in the Carnarvon and Browse Basins are Mesozoic, and both Mesozoic and Permian reservoirs exist in the Bonaparte Basin. Onshore, petroleum occurs in Jurassic and Cretaceous reservoirs in the Eromanga Basin, and Jurassic reservoirs in the Surat Basin. The reservoirs are of Permian and Triassic age in the Perth, Bowen, and Cooper Basins, and in the Canning and Adavale Basins which are of Permian and Devonian, and Devonian age respectively. Late Precambrian to late Ordovician reservoirs occur in the Amadeus Basin.

The early-mid Palaeozoic reservoirs in the Amadeus and Adavale Basins are in shallow-marine sedimentary sequences. However, most of Australia's petroleum resources have been discovered in Tertiary, Mesozoic, and late Palaeozoic sequences that were deposited in marginal marine or non-marine environments and which commonly contain extensive coal measures.

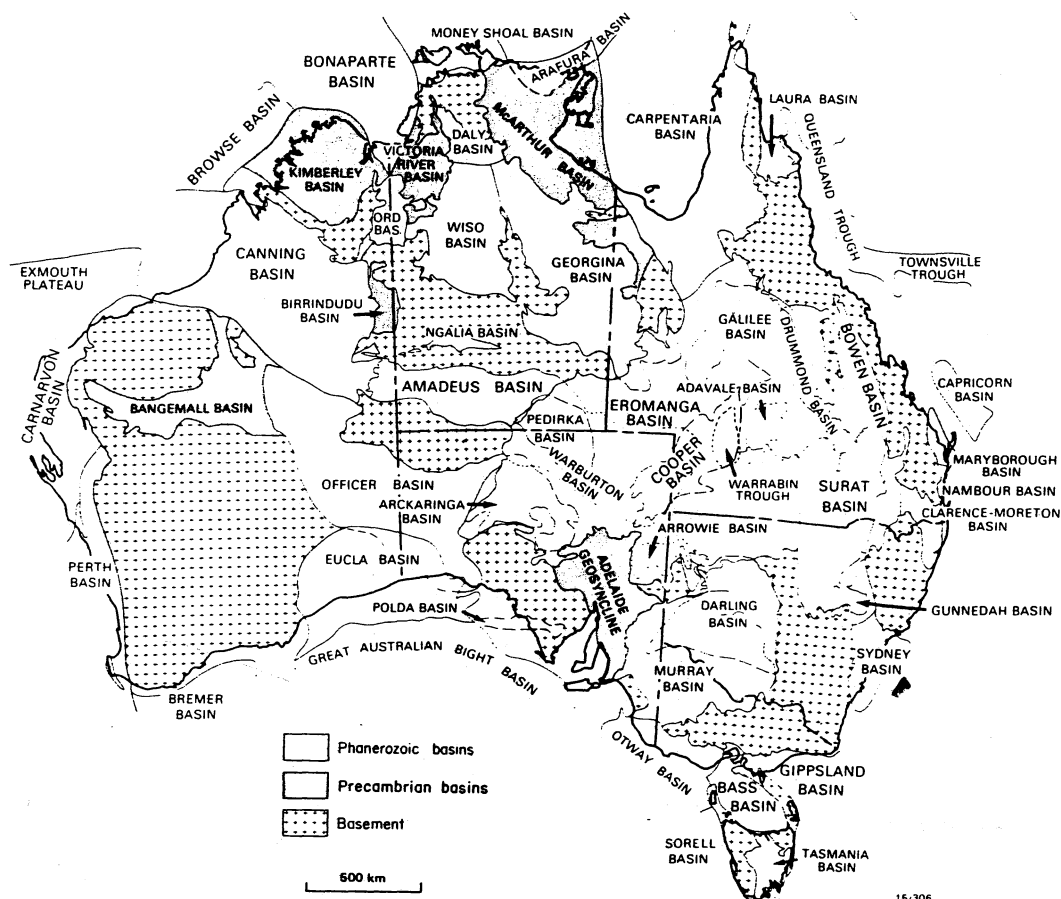
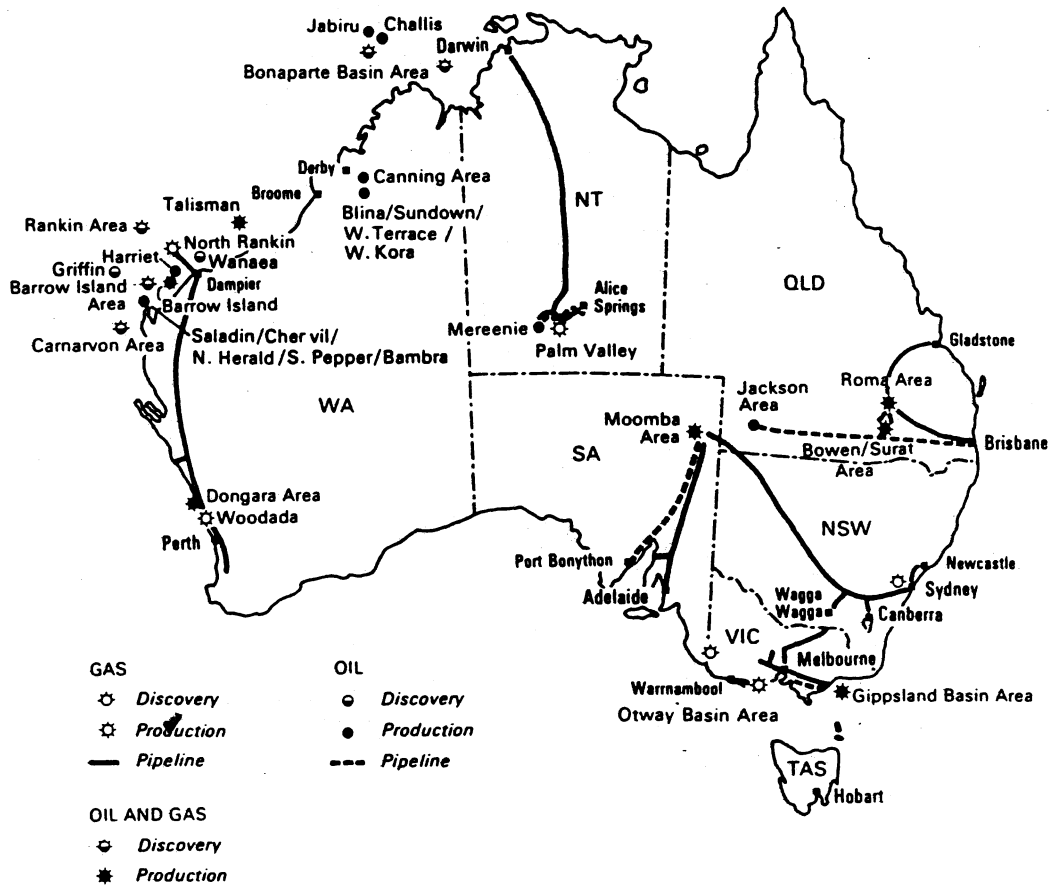


Fig. 1. Australia's sedimentary basins. Basement denotes regions generally unprospective for petroleum - mainly areas underlain by crystalline rocks or by tightly folded or metamorphosed strata. The dashed lines are boundaries of concealed basins; locally relationships are complex, e.g. the Galilee Basin overlies the Adavale Basin and underlies the Eromanga Basin.



### FIELD DISCOVERIES IN 1989

#### OFFSHORE

##### Bonaparte/Browse Basin Area

- Talbot 1
- Kalyptea 1

##### Carnarvon Area

- Wanaea 1
- ★ Chinook 1
- Cowle 1

##### Gippsland Basin Area

- Anemone 1
- Angler 1
- Blackback 1
- Mulloway 1
- Sweetlips 1

#### ONSHORE

##### Moomba Area

- Alwyn 1
- Amyema 1
- Arrakis North 1
- Atreides 1
- Lycium 1
- Marsilea 1
- Mettika 1
- Spencer West 1

##### Jackson Area

- Bowen 1

- Corrella 1

- Endeavour 1

- Gidgee 1

- Mahl 1

- Maxwell South 1

- Muthero 1

- North Ipundu 1

- Pinaroo 1

- Wandilo 1

##### Otway Basin Area

- Ladbroke Grove 1

Fig. 2.

Location of oil and gas production, pipelines and discoveries in 1989.

## Resources

Most of Australia's identified resources of crude oil occur in the Gippsland Basin (Fig. 2, Table 1); smaller amounts exist in the Amadeus, Bonaparte, Carnarvon, Cooper, and Eromanga Basins. Most identified resources of natural gas occur in the Bonaparte, Carnarvon (inc. Exmouth Plateau), Cooper and Gippsland Basins. Gas has been discovered in all basins known to contain resources of crude oil and additionally in the Adavale, Bass, Browse and Otway Basins.

Estimates of Australia's recoverable resources of crude oil, condensate, liquefied petroleum gas (LPG), and sales gas are shown in Tables 1 & 2 (see also Figure 3). Table 1 and 2 are based on the Traditional Petroleum Industry classification, which subdivides resources into two categories based on current commercial viability. Categories 1 and 2 are defined in Table 1.

## Exploration Potential

BMR assessed Australia's undiscovered crude oil and sales gas resources in 1986. An assessment of undiscovered condensate was made in 1987 and revised in 1988.

The assessment of petroleum resources indicates an 80 percent chance of finding at least another  $190 \times 10^6 \text{ m}^3$  ( $1200 \times 10^6$  barrels) of crude oil and a 20 percent chance of finding more than another  $460 \times 10^6 \text{ m}^3$  ( $2900 \times 10^6$  barrels). The average of the estimate is  $380 \times 10^6 \text{ m}^3$  ( $2400 \times 10^6$  barrels) of crude oil. The gas assessment indicates an 80 percent chance of finding at least another  $400 \times 10^9 \text{ m}^3$  (14 TCF) of sales gas and a 20 percent chance of finding more than another  $820 \times 10^9 \text{ m}^3$  (29 TCF). The average of the assessment is  $650 \times 10^9 \text{ m}^3$  (23 TCF).

The latest condensate assessment indicates an 80 percent chance of finding at least another  $50 \times 10^6 \text{ m}^3$  ( $320 \times 10^6$  barrels) of condensate and a

20 percent chance of finding more than another  $100 \times 10^6 \text{ m}^3$  ( $630 \times 10^6$  barrels). The average of the assessment is  $80 \times 10^6 \text{ m}^3$  ( $500 \times 10^6$  barrels).

The assessments refer to the oil and gas resources, remaining to be discovered in Australia's Phanerozoic sedimentary rocks, that could be brought into production within the next 20 to 25 years. They exclude new pool discoveries that may be made in Australia's identified fields and accumulations that may occur in deep-water or remote areas along parts of Australia's southern margin and in the offshore territories.

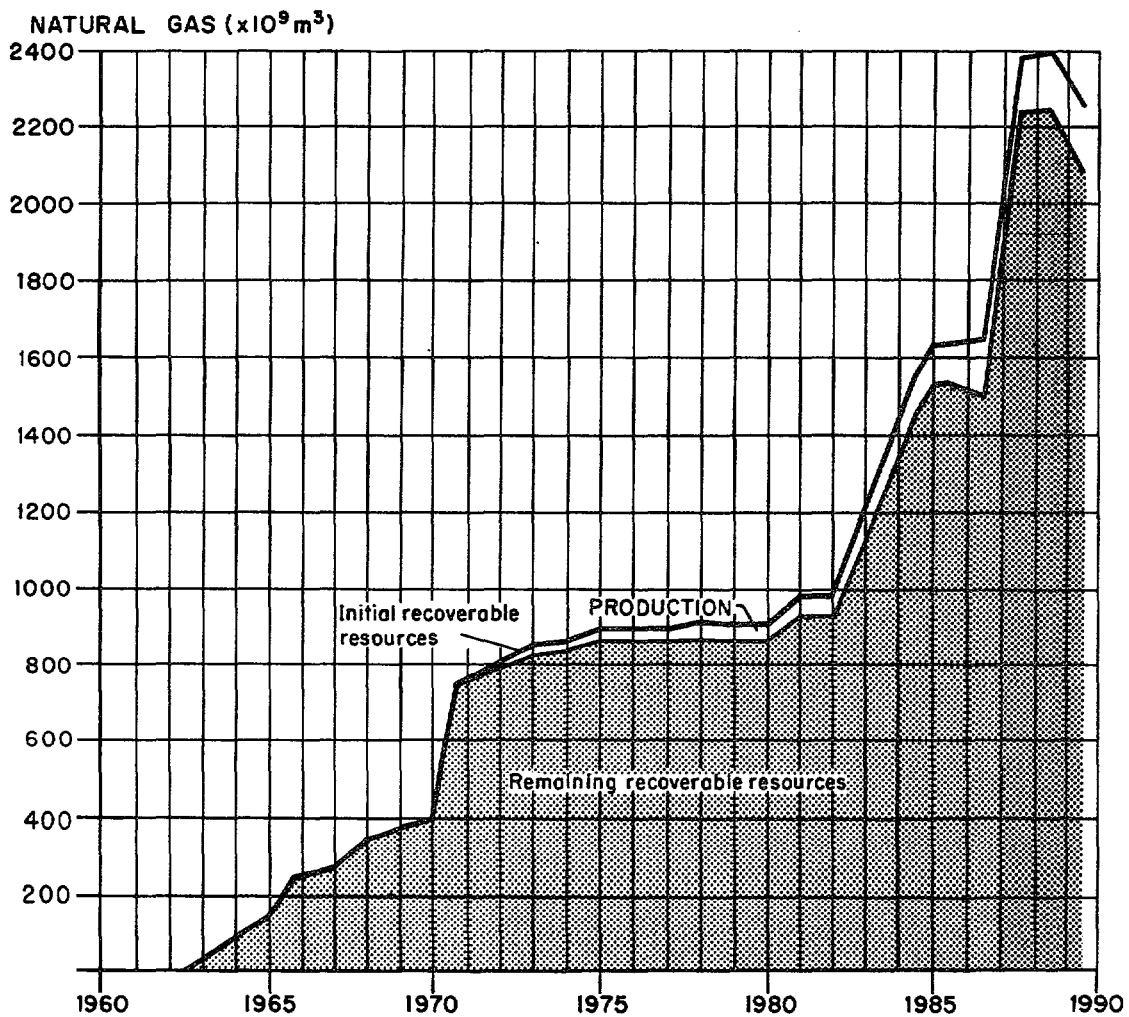
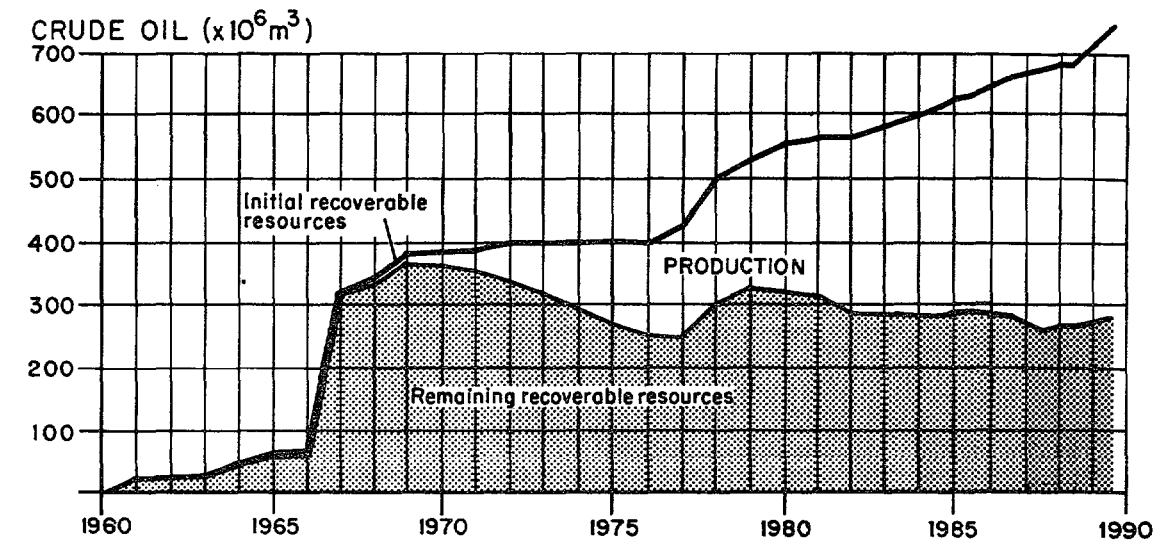
### Production

Commercial production of oil began in Australia in 1964, from the Moonie field in the Surat Basin (Fig. 1, Table 2). Production from Barrow Island (Carnarvon Basin) began in 1967, and from Bass Strait (Gippsland Basin) in 1969. The Gippsland Basin is the major source of petroleum liquids in Australia and with the completion of a liquids pipeline from Moomba to Stony Point in 1982 and the Jackson to Moonie pipeline in 1983, the Cooper/Eromanga Basins are presently the nation's second largest producer of liquids.

Natural gas was first delivered to Brisbane, Melbourne, and Adelaide in 1969 from the Surat, Gippsland, and Cooper Basins respectively. In 1983 the Palm Valley field in the Amadeus Basin began supplying gas to the Alice Springs power station, and in 1984 North West Shelf gas reached the Perth market to supplement the gas from the Dongara field (Perth Basin) which first supplied gas to Perth in 1971. Since 1976 Sydney has received gas from the Moomba and adjoining fields (Cooper Basin). Other major centres, particularly in Victoria and New South Wales, have also been connected to gas supplies. A 1600 km gas pipeline from Palm Valley supplies gas to the Channel Island power station at Darwin, to Tennant Creek, and to Katherine (Fig. 2).

In 1988-89, Australia's crude oil and condensate production was  $28.3 \times 10^6 \text{ m}^3$  ( $177 \times 10^6$  barrels), corresponding to an average rate of about  $77\,500 \text{ m}^3/\text{d}$  ( $487\,000 \text{ bbls/d}$ ); this was 9 percent less than production for the previous year. Production from the Bass Strait fields decreased from 73 percent in the previous year to 66 percent of Australia's total production. This is a reflection of the continuing depletion of the Kingfish and Halibut fields and increases in production from the Jabiru and Challis fields in the Bonaparte Basin, and from fields in the Carnarvon Basin.

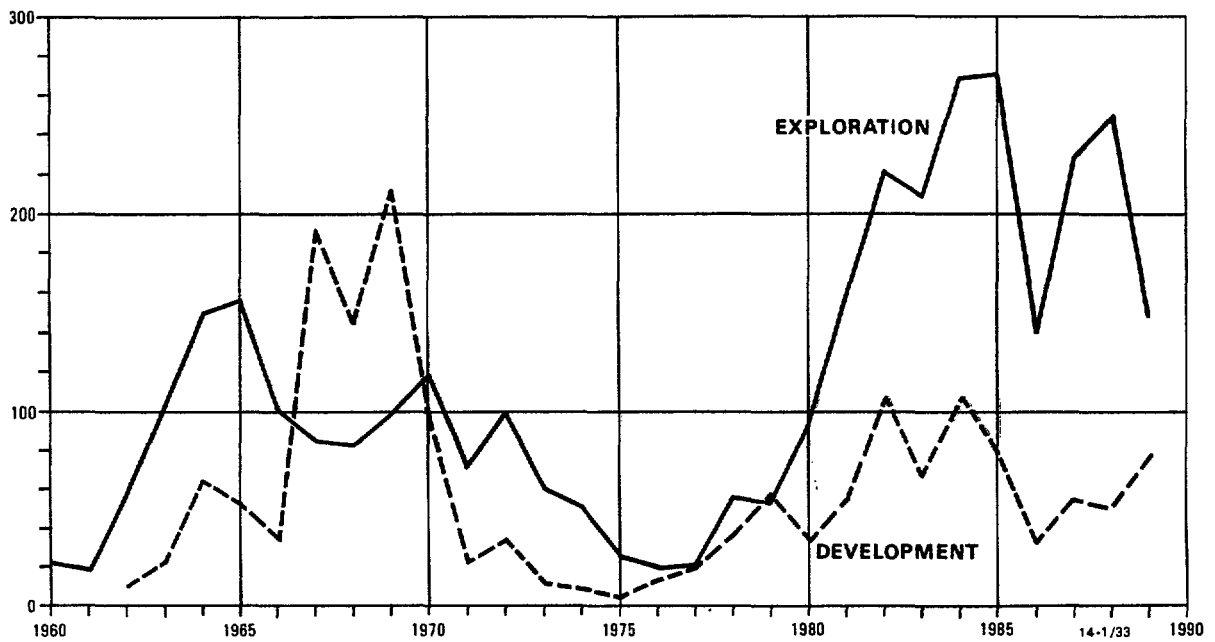
Australia's production of sales gas increased by nearly 3 percent compared to the preceding year while the production of LPG decreased marginally.



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Fig. 3. Australia's demonstrated recoverable resources of crude oil and natural gas. Remaining recoverable resources at 30 June 1989 were: crude oil  $3284 \text{ million m}^3$ ; (natural gas) sales gas  $2082 \text{ billion m}^3$ .

Number of wells



Number of wells

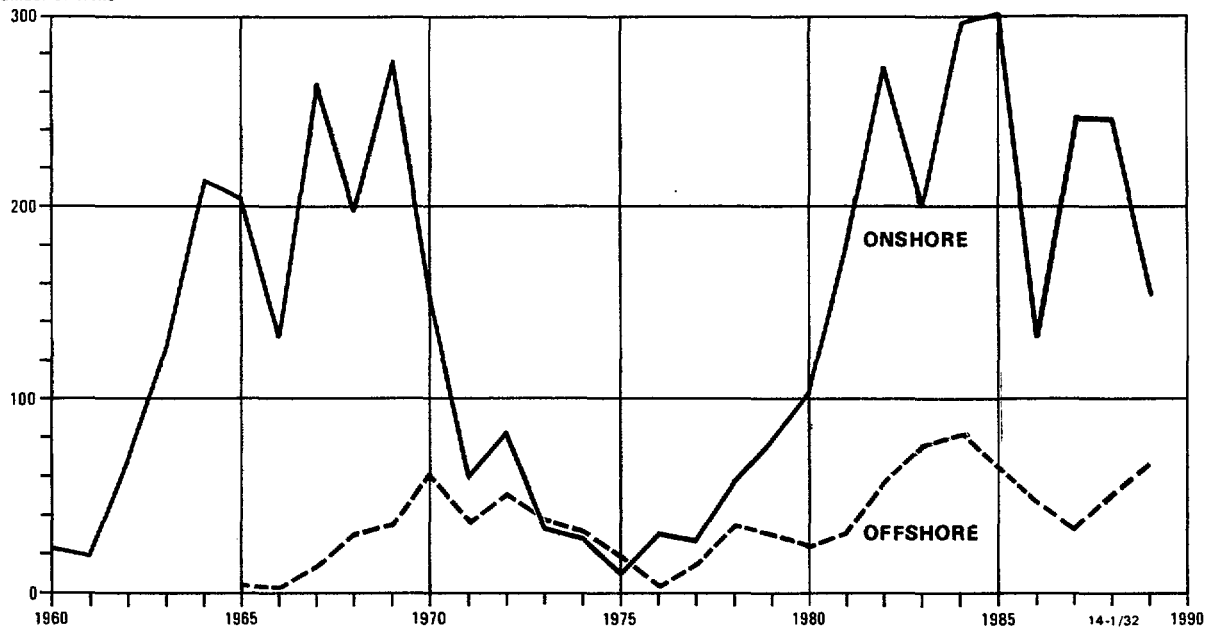


Fig. 4. Petroleum exploration and development, onshore and offshore wells drilled in Australia 1960-1989.



## SUMMARY OF PETROLEUM EXPLORATION IN 1989

About \$560 million was spent on exploration in 1989 compared with \$503 million in 1988 and \$353 million in 1987. A total of 224 wells were drilled in 1989 of which 148 were exploration wells. Onshore, 109 wells were drilled of which 60 were new field wildcat wells. Offshore drilling accounted for 39 wells, of which 28 were new field wildcat wells.

Onshore exploration drilling was concentrated in the Eromanga Basin and its infrabasins, mainly the Cooper Basin, in which 73 of the onshore exploration wells (77 percent) were drilled. Other onshore exploration wells were drilled in the Amadeus (1 well), Bowen/Surat (20 wells), Canning (2 wells), Carnarvon (2 wells), Georgina (1 well), McArthur (3 wells), Otway (5 wells) and Perth (2 wells) Basins. Onshore exploration drilling resulted in 16 oil discoveries, 6 gas discoveries and 3 gas/condensate discoveries. Extensions to known fields in the Amadeus, Bowen/Surat, Cooper/Eromanga, Otway and Perth Basins were proved by appraisal drilling programs.

The Cooper/Eromanga and its infrabasins were again the most active onshore exploration areas in 1989 and accounted for 23 of the 25 onshore petroleum discoveries. Thirteen of these discoveries were in Queensland and 10 in South Australia. Two onshore petroleum discoveries were in the Otway Basin of South Australia.

Offshore exploration drilling was carried out in the Bonaparte (19 wells), Carnarvon (7 wells), Gippsland (12 wells) and Browse (one well) Basins. Offshore exploration drilling resulted in 5 oil, 3 oil & gas and

2 gas/condensate discoveries. Appraisal drilling was carried out in the Bonaparte Basin at the East Swan, Jabiru and Skua accumulations; Carnarvon Basin at the Avocet, Chervil and Turtle fields; Gippsland Basin at the Blackback and Bream fields. Appraisal drilling at the Jabiru field has confirmed the southwest extent of the field after intersecting a 47 metre oil column.

Statistics relating to petroleum exploration and development activity in recent years are given in Figure 4 and the appendices.

Discoveries of petroleum in 1989 are listed in Table 4.

## SUMMARY OF PETROLEUM DEVELOPMENT IN 1989

The level of development drilling activity increased substantially in 1989 compared with 1988, a total of 76 development wells was drilled - 47 onshore and 29 offshore. Development and production expenditure was \$1378 million.

Of the 47 onshore development wells drilled, 24 were in the Cooper/Eromanga Basins, 9 in the Bowen/Surat Basins, 13 in the Carnarvon Basin and 1 in the Amadeus Basin. Offshore, the 29 development wells comprised 18 in the Gippsland Basin, 9 in the Carnarvon Basin and 2 in the Bonaparte Basin (Timor Sea area).

## Queensland

A total of 20 development wells was drilled in 1989, the highest number for over 10 years. Santos continued development drilling in several Eromanga basin oilfields and AGL, CSR and Bridge continued oil and gas development drilling in Surat Basin oil and gas fields. Production from the Taylor field through permanent production facilities commenced in October 1989.

The pipeline from the Denison Trough and the Wallumbilla field to Gladstone was completed in November 1989. Gas was available for flow to Gladstone in December 1989. An extension of this pipeline to Rockhampton is proposed. Approval in principle has been given for the supply of 300 petajoules of natural gas to South Australian markets from fields in southwest Queensland.

The viability of commercial extraction of methane gas from coal seams in the northern Bowen basin is being examined. Exploration and production testing are continuing.

#### South Australia

All 13 development wells drilled were onshore. Two each were at the Gidgealpa oil/gas/condensate field and the Jena and Tirrawarra oil fields. Three were in the Spencer oil field and one each in the Merrimelia, Pelican, Sturt and Sturt East fields.

A pipeline supplying natural gas to Whyalla from Port Pirie was officially opened in May 1989.

Following the Katnook gas discovery, proposals to supply the Mt Gambier and possibly the Adelaide markets with gas are being investigated.

#### Victoria

In 1989, 18 development wells were drilled, the highest number since 1984. Development drilling in the Bream oil and gas field continued with nine additional wells. Two wells were redrilled from the Fortescue platform to new targets. The Perch-3 well and the five Whiting mini-platform wells were also drilled from the Maersk Giant jackup rig.

#### Western Australia

A total of 22 development wells was drilled in Western Australia in 1989. Of these, 13 were oil wells on Barrow Island. Offshore, 9 wells were drilled: 3 in the Saladin oil field, 2 in the Chervil oil field, 1 in the South Pepper oil field and 3 in the North Rankin gas/condensate field.

Phase 2 (the LNG export phase) of the North West Shelf project began production in July 1989 and will produce up to 7 million tonnes per year of LNG for sale to Japan.

Talisman field production commenced in July 1989 from the Talisman-1 subsea completion to the Acqua Blu floating production facility. A second Talisman producing well is being planned.

The feasibility of gas gathering from the Harriet, Bamba, Campbell and Rosette discoveries is being evaluated.

Production from the Saladin oilfield commenced in November 1989 and Yamaderry and Cowle developments are under review for startup in 1991.

WAPET have recommended drilling and workovers in the Dongara field. Design of facilities for the Tubridgi field is proceeding with a startup date of July 1991 planned.

Development of the Wanaea and Cossack oil fields is being planned.

#### **Northern Territory**

Three development wells were drilled: 1 gas well in the Palm Valley field and 2 wells offshore, 1 each in the Challis and Jabiru oil fields.

Production rates from the Jabiru and Challis fields increased during the year and the area now is now the third largest producing province of Australia.

Skua development is being planned for production to a floating facility.

## MAJOR ACTIVITIES IN 1989

## Onshore Basins (including WA Territorial Sea)

## Amadeus Basin (NT)

Gosses Bluff No. 2, the second well in the Gosses Bluff comet impact structure, was a dry hole. One development well was drilled in the Palm Valley gas field.

## Bowen/Surat Basins (Qld, NSW)

Both exploration and development drilling continued at about the levels of 1988. Ten new field wildcat wells were drilled, but all were dry. Only one of these was in the Denison Trough.

Nine appraisal and 9 development wells were drilled. Development and appraisal drilling on the Taylor field continued, but only two of the 6 wells drilled were completed for production. Taylor No. 11 was completed as an oil and gas producer from the Showgrounds Sandstone.

The conclusion of a gas purchase agreement between Queensland Alumina Limited and Denison Trough Joint Venturers AGL Petroleum Operations Pty Ltd and Oil Company of Australia NL is expected to result in new exploration activity in the Denison Trough to increase reserves. Potential for production from the Reids Dome Beds by fracture stimulation of tight gas reservoirs is also planned for investigation.

## Canning Basin (WA)

Two exploration wells, Cudalgarra North No. 1 and Setaria No. 1, were plugged and abandoned as dry holes.

### Carnarvon Basin (WA)

Four exploration wells were drilled onshore in the Carnarvon Basin. One well, Cowle No. 1, drilled 5 km south of the Saladin oilfield in WA Territorial Sea, was a major oil and gas discovery. The well flowed at a rate of  $1015.4 \text{ m}^3/\text{d}$  (6390 bbls/d) of oil, and  $55217.9 \text{ m}^3/\text{d}$  ( $1.95 \times 10^6 \text{ ft}^3/\text{d}$ ) of gas from a production test in the top of the Barrow Group. The well has been suspended.

Rivoli No. 1, located approximately 20 km southeast of North West Cape, encountered a 17 m thick reservoir section in the Cretaceous Birdrong Sandstone. Testing confirmed a 10 m gas column, and the well was plugged and abandoned. Two other wells, Somelim No. 1 and Tent Hill No. 1, were both plugged and abandoned as dry holes.

### Cooper/Eromanga Basins (SA, Qld)

Exploration and development activity declined in the Cooper and overlying Eromanga Basins in 1989, a total of 73 wells being drilled. Extensive floods during the year disrupted field operations and led to deferral of planned programs. The number of exploration wells in South Australia was about the same as in Queensland, but the number of appraisal wells in South Australia was nearly four times greater than in Queensland.

Of the 37 exploration wells drilled, a total of 19 new field discoveries was made. The discovery rate of 1:2 is slightly improved on the discovery rate of 1:2.5 in 1988. The discoveries were mainly oil accumulations in the Eromanga Basin sequence in Queensland. Hydrocarbons were found in more than one formation in several fields.

Drilling in the Eromanga Basin sequence in Queensland was directed mainly towards Hutton Sandstone targets in anticlinal traps, southwest of the Jackson field. A test of Wandilo No. 1 recovered 42 barrels of oil at top

Hutton level, while an open hole drill stem test over a basal Hutton sandstone flowed oil and water to the surface at  $15 \text{ m}^3/\text{d}$  (96 bbls/d). Bowen No. 1 encountered oil at four stratigraphic levels in the Eromanga sequence. Tests were carried out on the Namur, Hutton and Adori Sandstones and the Westbourne Formation. The Adori Sandstone, in which the well was completed as an oil producer, flowed 49 API oil at  $540 \text{ m}^3/\text{d}$  (3400 bbls/d) in an open hole drill stem test.

A number of wells had targets in the basal Jurassic and deeper sections. Gidgee No. 1, west of the Munro field, discovered in 1988, recorded hydrocarbon shows in the Murta Member, Hutton Sandstone and Patchawarra Formation, but was completed as an oil producer in the Hutton Sandstone. The Gidgee and Munro fields are the most southerly in the Eromanga Basin in Queensland, lying close to the basin margin. Mahl No. 1 was designed to test the Early Permian Tirrawarra Sandstone north of the Pepita trend in a fault trap. The target sandstone was water saturated, but an open hole drill stem test recovered 221 m of oil and oil cut mud from a sandstone within the Triassic Tinchoo Formation. Mahl No. 1 was plugged and abandoned. Naccowlah South No. 12, a Hutton Sandstone development well, was deepened into the Permian to further evaluate the basal Jurassic and Toolachee sections. A drill stem test of a new basal Jurassic pool flowed 45.9 API oil to the surface at an average rate of  $76 \text{ m}^3/\text{d}$  (480 bbls/d). In addition, an oil leg to the previously defined Toolachee dry gas accumulation was discovered following a drill stem test which flowed  $16 \text{ m}^3/\text{d}$  (104 bbls/d) of 33.3 API oil in addition to  $181 \times 10^3 \text{ m}^3/\text{d}$  ( $1.6 \times 10^6 \text{ ft}^3/\text{d}$ ) of gas. This oil discovery in the Toolachee gas reservoir has further enhanced prospects of Permian oil along the Jackson-Naccowlah- Pepita trend. Naccowlah South No. 12 was completed as a dual Hutton/basal Jurassic oil producer.



In the Cooper Basin in South Australia, exploration drilling was concentrated in areas in the southwest of the basin, and near the Queensland border in the east. A number of new gas fields were discovered in the Patchawarra Formation in the eastern area (Mettika, Amyema, Marsilea). Mettika No. 1 and Amyema No. 1 flowed small amounts of condensate with gas during testing. Arrakis North No. 1 and Atreides No. 1, drilled on the western margin of the Nappamerri Trough, tested gas in the Epsilon Formation and Patchawarra Formation respectively.

In the Eromanga sequence in South Australia, Spencer West No. 1 flowed oil from the Namur Sandstone at the rate of  $273 \text{ m}^3/\text{d}$  (1717 bbls/d) during drill stem testing; oil was recovered from the Birkhead Formation. Appraisal drilling on the Jena field resulted in the discovery of a new oil pool in the Coorikiana Sandstone, but the well was completed for production from the Murta Member. Alwyn No. 3 was a new pool discovery in the McKinlay Member and was completed as an oil producer in both the Murta and McKinlay members.

#### Gippsland Basin (Vic)

No wells were drilled in the onshore Gippsland Basin in 1989.

#### McArthur Basin (NT)

Stratigraphic drilling continued in the central McArthur Basin to evaluate the petroleum potential of the Middle Proterozoic sequence.

#### Otway Basin (SA, Vic)

Four new field wildcat wells and two appraisal wells were drilled in the onshore Otway Basin in 1989.

Activity onshore was concentrated in the Gambier Embayment where the 1987 Katnook gas field discovery in the Penola Trough in South Australia has acted as a spur to exploration. The successful Katnook No. 3 appraisal well flowed gas from the Lower Cretaceous Pretty Hill Sandstone at a rate of nearly  $0.72 \text{ m} \times 10^6 \text{ m}^3/\text{d}$  ( $25.4 \times 10^6 \text{ m}^3/\text{d}$ ) in a production test, a record for an Australian onshore well. The four new field wildcat wells were also located in the Gambier Embayment. Ladbroke Grove No. 1 located some 2 km south of the Katnook field, discovered gas in the Pretty Hill Sandstone, but most production tests were inconclusive due to mechanical problems. Laira No. 1, drilled some 12 km to west of the Katnook field, recorded gas shows in the main objective (? Pretty Hill Sandstone), but production tests showed the zone to be water wet. Bool Lagoon No. 1, also drilled in the South Australian area of the Gambier Embayment, was a dry hole. McEachern No. 1, located in Victoria, was in progress at the end of 1989, and subsequently plugged and abandoned as a dry hole. Windermere No. 2, located in Victoria in the Tyrendarra Embayment, was an unsuccessful appraisal well for the 1987 Windermere No. 1 oil discovery in the Lower Cretaceous section. Production tests in Windermere No. 2 were disappointing and the well was plugged and abandoned as a dry hole.

#### **Pedirka Basin (SA)**

Three drill stem tests were run in the Poolawanna Formation in Poolawanna No. 3, but only minor gas was recovered. The well was plugged and abandoned.

#### **Perth Basin (WA)**

No exploration drilling took place in the Perth Basin in 1989.

Development drilling continued on the Mt Horner field.

## Offshore Basins

### Bonaparte/Browse Basins (WA, NT)

Twelve new field wildcat wells were drilled in the Bonaparte/Browse Basins, but only one significant discovery was made. Talbot No. 1, in the eastern part of the Vulcan Sub-basin, discovered oil in the Challis Formation. The well flowed oil at a rate of  $792 \text{ m}^3/\text{d}$  (4981 bbls/d) accompanied by  $105 \times 10^6 \text{ m}^3/\text{d}$  ( $3.7 \times 10^6 \text{ ft}^3/\text{d}$ ) of gas. Oil was encountered in Kalyptea No. 1, in the northern Browse Basin, but the well was plugged and abandoned.

Barnett No. 2, an appraisal well on the Barnett structure, intersected a 26 m oil column and was completed as an oil producer. Barnett No. 1, the first well on the structure, found only minor oil shows in the target the Kulshill Group. Barnett No. 2 tested the updip potential of the structure.

Production drilling continued on the Jabiru and Challis fields.

### Carnarvon Basin (WA)

Five exploration wells were drilled in the offshore part of the Carnarvon Basin during 1989, resulting in two significant oil discoveries. Chinook No. 1, located 7 km northwest of Hilda No. 1A, was drilled to test Cretaceous Barrow Group, and top Triassic sands. The well intersected a significant oil column in the top Barrow Group, which flowed at a rate of 1019 kl (6412 barrels) per day of light (52 API) oil, with a gas cap in the overlying Mardie Greensand, which flowed at a rate of  $122\,000.5 \text{ m}^3/\text{d}$  ( $4.3 \times 10^6 \text{ ft}^3/\text{d}$ ).

The other major discovery was in the Wanaea No. 1 well, which was located on the Madeleine Trend in the northern part of the Dampier Sub-basin, 25 km east of the North Rankin "A" gas production platform. The well intersected a 100 m oil column in Late Jurassic to Early Cretaceous sands,

which flowed at a rate of  $874 \text{ m}^3/\text{d}$  (5500 bbls/d) from a production test. Reserves have been estimated to be as much as 40 million  $\text{m}^3$  (250 million barrels), the largest oil discovery in Australia since the Fortescue field in 1978, and the most significant in the Dampier Sub-basin - which up until now has been regarded by many explorationists as gas prone.

Three other exploration wells, Alpha North No. 1, Cygnus No. 1 and Montebello No. 1 were plugged and abandoned as dry holes.

#### Gippsland Basin (Vic)

Eleven new field wildcat wells were drilled in the offshore part of the Gippsland Basin, all with targets in the Latrobe Group. Several significant, but not major discoveries were made.

Oil was discovered in the northwestern area of the basin in Mullaway No. 1. The well, which lies west of the Barracouta field and the 1985 Whiptail oil discovery, has been plugged and suspended. Sweetlips No. 1, also located in the northern half of the basin, north of the Snapper field, encountered an oil and gas bearing zone at the top of the Latrobe Group, but was plugged and abandoned.

Angler No. 1 and Anemone No. 1, located southeast of the Kingfish field in 274 m and 231 m water depth respectively, discovered gas and condensate in the intra-Latrobe Group Upper Cretaceous section. Blackback No. 1, sited east of the Mackerel field, in 298 m of water, was an appraisal well and deep pool test on the Hapuku structure. Production tests at 2891-2918.8 m resulted in flows of oil and gas at rates of up to  $239.7 \text{ m}^3/\text{d}$  (1508 bbls/d) and  $50 \times 10^3 \text{ m}^3/\text{d}$  ( $1.9 \times 10^6 \text{ ft}^3/\text{d}$ ) respectively, and formation tests recovered oil and gas or gas/condensate from several zones in the deeper section. The Anemone, Blackback and Angler wells, were

terminated at 4775 m, 4401 m and 4337 m respectively, making them the deepest wells drilled to date in the Gippsland Basin.

No significant hydrocarbons were encountered in the six remaining offshore wells (Harlequin No. 1, Conger No. 1, Trumpeter No. 1, Admiral No. 1, Shark No. 1, Judith No. 1).

**TABLE 1. PETROLEUM RESERVES**

A summary of estimates of recoverable primary and secondary reserves of petroleum in Australia as at 30 June 1989 is given below.

**Category 1** indicates the reserves and cumulative production from those fields which have been declared commercially viable and indicates that at 30 June 1989 petroleum production and remaining reserves in this category amounted to:

|                     | <b>Cumulative Production</b>            | <b>Remaining Reserves</b>               |
|---------------------|---|---|
| Crude Oil           | 462.54 x 10 <sup>6</sup> m <sup>3</sup> | 197.62 x 10 <sup>6</sup> m <sup>3</sup> |
| Condensate          | 19.47 x 10 <sup>6</sup> m <sup>3</sup>  | 51.12 x 10 <sup>6</sup> m <sup>3</sup>  |
| LPG                 | 59.11 x 10 <sup>6</sup> m <sup>3</sup>  | 74.92 x 10 <sup>6</sup> m <sup>3</sup>  |
| Natural (Sales) Gas | 170.78 x 10 <sup>9</sup> m <sup>3</sup> | 437.10 x 10 <sup>9</sup> m <sup>3</sup> |

**Category 2** indicates the reserves which have not yet been declared commercially viable and are subject to major revision. Reserves in this category are estimated to be:

|                     | <b>Remaining Reserves</b>                |
|---------------------|--|
| Crude Oil           | 86.04 x 10 <sup>6</sup> m <sup>3</sup>   |
| Condensate          | 115.05 x 10 <sup>6</sup> m <sup>3</sup>  |
| LPG                 | 91.34 x 10 <sup>6</sup> m <sup>3</sup>   |
| Natural (Sales) Gas | 1642.81 x 10 <sup>9</sup> m <sup>3</sup> |

**Changes to Australia's petroleum reserves** in Categories 1 & 2 since 31 December 1988 are as follows:

|  | <b>Remaining<br/>reserves<br/>as at<br/>31 .12.1988</b> | <b>Addition<br/>from<br/>discoveries</b> | <b>Revisions<br/>to<br/>existing<br/>fields</b> | <b>Production<br/>during<br/>period</b> | <b>Remaining<br/>reserves<br/>as at<br/>30.6.1989</b> |
|--|---|--|---|---|---|
| Crude Oil (x10 <sup>6</sup> m <sup>3</sup> )           | 283.76  | 9.09                                     | 3.24  | 12.43                                   | 283.66  |
| Condensate (x10 <sup>6</sup> m <sup>3</sup> )          | 166.88  | 0.57                                     | -0.03   | 1.28                                    | 166.14  |
| LPG (x10 <sup>6</sup> m <sup>3</sup> )                 | 167.98  | 0  | 0   | 1.74                                    | 166.26  |
| Natural (Sales) Gas (x10 <sup>9</sup> m <sup>3</sup> ) | 2081.46   | 4.09                                     | 1.34  | 6.98                                    | 2079.91   |

Summaries of estimates of initial reserves, cumulative production (where applicable), current (remaining) reserves, and the names of individual fields are included in following table.

**TABLE 2. SUMMARY OF ESTIMATES OF THE RECOVERABLE PROVED PLUS PROBABLE, PRIMARY AND SECONDARY  
PETROLEUM RESERVES AS AT 30.6.89**

| BASINS                          | INITIAL RESERVES  |                           |               |   | CUMULATIVE PRODUCTION   |                           |              |   | CURRENT (REMAINING) RESERVES                            |                           |              |   |
|---------------------------------|---|---------------------------|---------------|---|---|---------------------------|--------------|---|---|---------------------------|--------------|---|
|                                 | Hydrocarbon liquids (x 10 <sup>6</sup> m <sup>3</sup> ) |                           |               | Natural                                   | Hydrocarbon liquids (x 10 <sup>6</sup> m <sup>3</sup> )                               |                           |              | Natural                                   | Hydrocarbon liquids (x 10 <sup>6</sup> m <sup>3</sup> ) |                           |              | Natural                                   |
|                                 | Crude   | Natural Gas Liquids (NGL) |               | (Sales)                                   | Crude   | Natural Gas Liquids (NGL) |              | (Sales)                                   | Crude   | Natural Gas Liquids (NGL) |              | (Sales)                                   |
|                                 | Oil   | Condensate                | LPG           | Gas<br>(x10 <sup>9</sup> m <sup>3</sup> ) | Oil   | Condensate                | LPG          | Gas<br>(x10 <sup>9</sup> m <sup>3</sup> ) | Oil   | Condensate                | LPG          | Gas<br>(x10 <sup>9</sup> m <sup>3</sup> ) |
| <b>CATEGORY 1</b>               |   |                           |               |   |   |                           |              |   |   |                           |              |   |
| AMADEUS & BONAPARTE             | 26.84   | 0.22                      | 1.17          | 9.04                                      | 5.23  | -                         | -            | 0.73                                      | 21.61   | 0.22                      | 1.17         | 8.31                                      |
| BOWEN                           | 0.53  | 0.76                      | 0.72          | 4.67                                      | 0.30  | 0.41                      | 0.29         | 2.86                                      | 0.23  | 0.35                      | 0.43         | 1.81                                      |
| CANNING                         | 0.57  | -                         | -             | -   | 0.26  | -                         | -            | -   | 0.31  | -                         | -            | -   |
| CARNARVON                       | 55.20   | 23.04                     | 17.31         | 192.86                                    | 39.85   | 2.84                      | 1.01         | 12.27                                     | 15.35   | 20.20                     | 16.30        | 180.59                                    |
| COOPER/EROMANGA                 | 27.28   | 11.46                     | 18.75         | 128.21                                    | 15.52   | 4.49                      | 8.68         | 56.13                                     | 11.76   | 6.97                      | 10.07        | 73.08                                     |
| GIPPSLAND                       | 544.70  | 34.80                     | 95.90         | 247.40                                    | 397.07  | 11.56                     | 49.05        | 80.50                                     | 147.63  | 23.24                     | 46.85        | 166.90                                    |
| OTWAY                           | -   | 0.02                      | -             | 0.44                                      | -   | 0.00                      | -            | 0.04                                      | -   | 0.02                      | -            | 0.40                                      |
| PERTH                           | 0.72  | 0.06                      | -             | 17.22                                     | 0.18  | 0.05                      | -            | 12.47                                     | 0.54  | 0.01                      | -            | 4.75                                      |
| SURAT                           | 4.09  | 0.17                      | 0.18          | 5.71                                      | 3.90  | 0.04                      | 0.08         | 4.45                                      | 0.19  | 0.13                      | 0.10         | 1.26                                      |
| <b>TOTAL CATEGORY 1</b>         | <b>659.93</b>   | <b>70.53</b>              | <b>134.02</b> | <b>606.55</b>                             | <b>462.31</b>   | <b>19.41</b>              | <b>59.10</b> | <b>169.45</b>                             | <b>197.62</b>   | <b>51.12</b>              | <b>74.92</b> | <b>437.10</b>                             |
| <b>CATEGORY 2</b>               |   |                           |               |   |   |                           |              |   |   |                           |              |   |
| ADAVALE                         | -   | -                         | -             | 0.59                                      |   |                           |              |   |   |                           |              |   |
| AMADEUS                         | -   | 0.21                      | 0.38          | 9.53                                      |   |                           |              |   |   |                           |              |   |
| BONAPARTE                       | 11.27   | 6.84                      | 14.00         | 156.62                                    |   |                           |              |   |   |                           |              |   |
| BOWEN                           | 0.02  | 0.15                      | 0.23          | 5.25                                      |   |                           |              |   |   |                           |              |   |
| BROWSE                          | -   | 31.80                     | 23.30         | 489.00                                    |   |                           |              |   |   |                           |              |   |
| CARNARVON                       | 33.08   | 65.40                     | 43.88         | 866.20                                    |   |                           |              |   |   |                           |              |   |
| COOPER/EROMANGA                 | 0.31  | 2.57                      | 4.84          | 36.49                                     |   |                           |              |   |   |                           |              |   |
| GIPPSLAND & BASS                | 41.35   | 8.08                      | 4.70          | 73.17                                     |   |                           |              |   |   |                           |              |   |
| PERTH                           | 0.01  | -                         | -             | 0.01                                      |   |                           |              |   |   |                           |              |   |
| SURAT                           | -   | -                         | 0.01          | 0.13                                      |   |                           |              |   |   |                           |              |   |
| <b>TOTAL CATEGORY 2</b>         | <b>86.04</b>  | <b>115.05</b>             | <b>91.34</b>  | <b>1642.81</b>                            |   |                           |              |   |   |                           |              |   |
| <b>TOTAL CATEGORY 1 + 2</b>     | <b>745.97</b>   | <b>185.65</b>             | <b>225.36</b> | <b>2249.36</b>                            | <b>NOTE. Discrepancies between totals and sums of components are due to rounding.</b> |                           |              |   |   |                           |              |   |
| <b>TOTAL REMAINING RESERVES</b> |   |                           |               |   |   |                           |              |   |   |                           |              |   |
| <b>CAT 1 + RES CAT 2</b>        | <b>283.66</b>   | <b>116.17</b>             | <b>166.29</b> | <b>2079.91</b>                            |   |                           |              |   |   |                           |              |   |

TABLE 3. (a) COMMERCIAL PRODUCTION OF PETROLEUM IN AUSTRALIA

1988 - 1989 (a)

| BASIN           | CRUDE OIL<br>( $\times 10^6 \text{ m}^3$ ) (c) | CONDENSATE<br>( $\times 10^6 \text{ m}^3$ ) (c) | LPG<br>( $\times 10^6 \text{ m}^3$ ) (c) | NATURAL GAS (b)<br>( $\times 10^9 \text{ m}^3$ ) (c) |
|-----------------|--|---|--|--|
| AMADEUS         | 0.10   | -   | -  | 0.26   |
| BONAPARTE       | 2.43   | -   | -  | -  |
| BOWEN/SURAT     | 0.12   | 0.07  | 0.10                                     | 0.54   |
| CANNING         | 0.03   | -   | -  | -  |
| CARNARVON       | 2.03   | 1.13  | -  | 3.91   |
| COOPER/EROMANGA | 2.93   | 0.68  | 0.98                                     | 5.41   |
| GIPPSLAND       | 17.90  | 0.80  | 2.69                                     | 5.48   |
| OTWAY           | -  | -   | -  | 0.02   |
| PERTH           | 0.01   | -   | -  | 0.15   |
| <b>TOTAL</b>    | <b>25.57</b>                                   | <b>2.68</b>                                     | <b>3.76</b>                              | <b>15.77 (d)</b>                                     |

Source: Department of Primary Industries and Energy. (Preliminary)

(a) Fiscal year ending 30 June 1989.

(b) Commercial sales plus field and plant usage.

(c)  $1 \text{ m}^3 = 6.29 \text{ barrels (liquids), } 35.315 \text{ ft}^3 \text{ (gas).}$ (d) Production of sales gas was  $14.29 \times 10^9 \text{ m}^3$ .

TABLE 3. (b) CUMULATIVE COMMERCIAL PRODUCTION OF PETROLEUM IN AUSTRALIA

TO 30 JUNE 1989

| BASIN           | CRUDE OIL<br>( $\times 10^6 \text{ m}^3$ ) (c) | CONDENSATE<br>( $\times 10^6 \text{ m}^3$ ) (c) | LPG<br>( $\times 10^6 \text{ m}^3$ ) (c) | NATURAL GAS (a)<br>( $\times 10^9 \text{ m}^3$ ) (c) |
|-----------------|--|---|--|--|
| AMADEUS         | 0.68   | -   | -  | 0.72   |
| BONAPARTE       | 4.54   | -   | -  | -  |
| BOWEN/SURAT     | 4.20   | 0.46  | 0.48                                     | 7.19   |
| CANNING         | 0.26   | -   | -  | -  |
| CARNARVON       | 39.85  | 3.46  | 0.06                                     | 17.75  |
| COOPER/EROMANGA | 15.75  | 4.73  | 7.06                                     | 58.99  |
| GIPPSLAND/OTWAY | 396.91   | 11.57   | 48.77                                    | 79.70  |
| PERTH           | 0.18   | 0.06  | -  | 12.61  |
| <b>TOTAL</b>    | <b>462.55</b>                                  | <b>20.28</b>                                    | <b>56.37</b>                             | <b>176.96</b>  |

Source: Department of Primary Industries and Energy. (Preliminary)

(a) Commercial sales plus field and plant usage.



TABLE 4. DISCOVERIES OF PETROLEUM - 1989 (a)

| BASIN<br>WELL NAME | OPERATOR  | STATE | NATURE OF<br>DISCOVERY | PRODUCING<br>FORMATION | CLASSI-<br>FICATION | REMARKS   |
|--------------------|-----------|-------|------------------------|------------------------|---------------------|---|
| <b>OFFSHORE</b>    |           |       |                        |                        |                     |   |
| <b>BONAPARTE</b>   |           |       |                        |                        |                     |   |
| TALBOT 1           | Santos    | NT    | Oil                    | Unknown Fm             | NFD                 | Flowed oil at 795m <sup>3</sup> /d and gas at 108Mm <sup>3</sup> /d. Average rate 684m <sup>3</sup> /d oil. Cased and suspended as a future oil producer. |
| <b>BROWSE</b>      |           |       |                        |                        |                     |   |
| KALYPTEA 1         | BHP       | NT    | Oil                    | Unknown Fm             | NFD                 | Recovered 95 m <sup>3</sup> of oil and 1.8m <sup>3</sup> gas. Plugged and abandoned.  |
| <b>CARNARVON</b>   |           |       |                        |                        |                     |   |
| CHINOOK 1          | BHP       | WA    | Oil, Gas               | Barrow Gp              | NFD                 | Flowed oil at 1019m <sup>3</sup> /d and gas at 121 762.5m <sup>3</sup> /d. Cased and suspended as a future oil producer.                                  |
| COWLE 1            | WAPET     | WA    | Gas, Oil               | Flacourt Fm            | NFD                 | Flowed oil at 1 016m <sup>3</sup> /d and gas at 55 217m <sup>3</sup> /d. Cased and suspended as a future oil producer.                                    |
| WANAEA 1           | Woodside  | WA    | Oil                    | Unknown Fm             | NFD                 | Flowed oil at 874m <sup>3</sup> /d. Cased and suspended as a future oil producer.   |
| <b>GIPPSLAND</b>   |           |       |                        |                        |                     |   |
| ANEMONE 1          | Petrofina | Vic   | Gas, Cond              | Latrobe Gp             | NFD                 | Plugged and abandoned as a gas/condensate discovery.  |
| ANGLER 1           | Petrofina | Vic   | Gas, Cond              | Latrobe Gp             | NFD                 | Plugged and abandoned as a gas/condensate discovery.  |
| BLACKBACK 1        | Esso      | Vic   | Oil                    | Latrobe Gp             | NPD                 | Recovered 2.96m <sup>3</sup> oil. Plugged and abandoned.  |
| MULLOWAY 1         | Esso      | Vic   | Oil                    | Latrobe Gp             | NFD                 | Recovered 20.5m <sup>3</sup> oil. Cased and suspended as a future oil producer.   |
| SWEETLIPS 1        | Esso      | Vic   | Gas,Oil                | Latrobe Gp             | NFD                 | Plugged and abandoned as a gas/condensate discovery.  |

TABLE 4. DISCOVERIES OF PETROLEUM - 1989 (a) (cont'd)

| BASIN<br>WELL NAME | OPERATOR | STATE | NATURE OF<br>DISCOVERY | PRODUCING<br>FORMATION | CLASSI-<br>FICATION | REMARKS   |
|--------------------|----------|-------|------------------------|------------------------|---------------------|---|
| ONSHORE            |          |       |                        |                        |                     |   |
| COOPER/EROMANGA    |          |       |                        |                        |                     |   |
| ALWYN 3            | Santos   | SA    | Oil                    | McKinlay Mbr           | NPD                 | Recovered 4.5m3 oil from McKinlay Mbr. Completed as an oil producer in Murta Mbr and McKinlay Mbr.  |
| AMYEMA 1           | Santos   | SA    | Gas, Cond              | Patchawarra Fm         | NFD                 | Flowed gas at 198 200m3/d and condensate at 13.4m3/d. Completed as a gas producer.  |
| ARRAKIS<br>NORTH 1 | Santos   | SA    | Gas                    | Epsilon Fm             | NFD                 | Flowed gas at 326 000m3/d. Cased and suspended as a future gas producer.  |
| ATREIDES 1         | Santos   | SA    | Gas                    | Patchawarra Fm         | NFD                 | Flowed gas at 41 909m3/d. Cased and suspended as a future gas producer.   |
| BOWEN 1            | Delhi    | Qld   | Oil                    | Namur Sst              | NFD                 | Recovered 3.2m oil from Namur Sst, 10.5m oil from Westbourne Fm and 423m oil from Hutton Sst. Flowed oil at 541m3/d from Adori Sst. Cased and suspended as a future oil producer. |
|                    |          |       | Oil                    | Westbourne Fm          | NFD                 |   |
|                    |          |       | Oil                    | Adori Sst              | NFD                 |   |
|                    |          |       | Oil                    | Hutton Sst             | NFD                 |   |
| CORELLA 1          | Delhi    | Qld   | Oil                    | Hutton Sst             | NFD                 | Recovered 1 423m oil. Cased and suspended as a future oil producer.   |
| ENDEAVOUR 1        | Ampol    | Qld   | Oil                    | Birkhead Fm            | NFD                 | Flowed oil at 54.4m3/d. Cased and suspended as a future oil producer.   |
| GIDGEE 1           | Delhi    | Qld   | Oil                    | Hutton Sst             | NFD                 | Flowed oil at 163.4m3/d. Cased and suspended as a future oil producer.  |
| JENA 5             | Santos   | SA    | Oil                    | Cooikiana Sst          | NPD (b)             | Recovered 9m oil. Cased and suspended as a future Murta Mbr oil producer.   |
| KEENA 2            | Santos   | SA    | Cond, Gas              | Patchawarra Fm         | NPD                 | Flowed gas at 209,000m3/d and condensate at 4.5m3/d. Completed for gas in Toolachee Fm and Patchawarra Fm.  |
| LYCIUM 1           | Santos   | SA    | Oil                    | Patchawarra Fm         | NFD (b)             | Recovered 206m oil. Plugged and abandoned.  |
| MAHL 1             | Delhi    | Qld   | Oil                    | Triassic               | NFD (b)             | Recovered 122m oil. Plugged and abandoned.  |

TABLE 4. DISCOVERIES OF PETROLEUM - 1989 (a) (cont'd)

| BASIN<br>WELL NAME     | OPERATOR | STATE | NATURE OF<br>DISCOVERY | PRODUCING<br>FORMATION       | CLASSI-<br>FICATION | REMARKS   |
|------------------------|----------|-------|------------------------|------------------------------|---------------------|---|
| ONSHORE (cont'd)       |          |       |                        |                              |                     |   |
| COOPER/EROMANGA (cont) |          |       |                        |                              |                     |   |
| MARSILEA 1             | Santos   | SA    | Gas                    | Patchawarra Fm               | NFD                 | Flowed gas at 308.7m <sup>3</sup> /d. Cased and suspended as a future gas producer  |
| MAXWELL<br>SOUTH 1     | Command  | Qld   | Oil                    | Murta Mbr                    | NFD                 | Recovered 0.4m oil. Cased and suspended as a future oil producer.   |
| METTIKA 1              | Santos   | SA    | Cond, Gas              | Patchawarra Fm               | NFD                 | Flowed gas at 246m <sup>3</sup> /d and condensate at 13.4m <sup>3</sup> /d. Cased and suspended as a future gas/condensate producer.                                  |
| MUTHERO 1              | Command  | Qld   | Oil<br>Oil             | Murta Mbr<br>Birkhead Fm     | NFD<br>NFD          | Flowed oil at 162.5m <sup>3</sup> /d from Murta Mbr and 0.13m <sup>3</sup> /d from Birkhead Fm. Cased and suspended as a future Murta Mbr/ Birkhead Sst oil producer. |
| NACCOWLAH 2            | Delhi    | Qld   | Oil                    | Murta Mbr                    | NFD                 | Recovered 851m oil. Cased and suspended as a future oil producer.   |
| NACCOWLAH<br>SOUTH 12  | Santos   | Qld   | Gas                    | Basal Jurassic               | NPD                 | Flowed gas at 76.3m <sup>3</sup> /d. Cased and suspended as a future Basal Jurassic Fm/Toolachee Fm oil producer.   |
| NORTH<br>IPUNDU 1      | Ampol    | Qld   | Oil                    | Murta Mbr                    | NFD                 | Recovered 232m oil. Cased and suspended as a future oil producer.   |
| ORIENTOS 2             | Delhi    | Qld   | Oil                    | Murta Mbr                    | NFD                 | Recovered 5.83m <sup>3</sup> oil. Cased and suspended as a future oil producer.   |
| PINAROO 1              | Delhi    | Qld   | Oil<br>Oil             | Hutton Sst<br>Poolowanna Fm  | NFD<br>NFD (b)      | Flowed oil at 156m <sup>3</sup> /d from Hutton Sst and 3.5m <sup>3</sup> /d from Poolawanna Fm. Completed in Hutton Sst only.   |
| SPENCER<br>WEST 1      | Santos   | SA    | Oil                    | Namur Sst Mbr<br>Birkhead Fm | NFD<br>NFD (b)      | Flowed oil at 273m <sup>3</sup> /d from Namur Sst Mbr. Recovered 851m of oil from Birkhead Fm. Completed in Namur Sst Mbr only.                                       |
| WANDILO 1              | Delhi    | Qld   | Oil<br>Oil             | Poolowanna Fm<br>Hutton Sst  | NFD (b)<br>NFD      | Flowed oil at 15.4m <sup>3</sup> /d from Poolawanna Fm. Recovered 964m oil from Hutton Sst. Completed in Hutton Sst only.   |

TABLE 4. DISCOVERIES OF PETROLEUM - 1989 (a) (cont'd)

| BASIN<br>WELL NAME  | OPERATOR | STATE | NATURE OF<br>DISCOVERY | PRODUCING<br>FORMATION | CLASSI-<br>FICATION | REMARKS   |
|---------------------|----------|-------|------------------------|------------------------|---------------------|---|
| ONSHORE (cont'd)    |          |       |                        |                        |                     |   |
| OTWAY               |          |       |                        |                        |                     |   |
| LADBROKE<br>GROVE 1 | Ultramar | SA    | Gas                    | Pretty Hill            | NFD                 | Flowed gas at 155 740m <sup>3</sup> /d. Cased and suspended as a future gas producer. |
| KATNOOK 2           | Ultramar | SA    | Gas                    | Pretty Hill            | NPD                 | Flowed gas at 463 832m <sup>3</sup> /d. Cased and suspended as future gas producer.   |

(a) Preliminary subject to revision.

(b) Not completed for production formation.

**NOTE:** A discovery is defined here as a well from which any measureable amount of oil or gas has been recovered; no consideration of commerciality is implied. In previous years some discoveries which recovered only small amounts of hydrocarbons were not included in this table.

TABLE 5. SEISMIC SURVEY ACTIVITY BY STATE - 1989

| OPERATOR        | CONTRACTOR      | BASIN            | SURVEY NAME         | PERMIT     | KM SHOT | STATUS     |
|-----------------|-----------------|------------------|---------------------|------------|---------|------------|
| ONSHORE         |                 |                  |                     |            |         |            |
| QUEENSLAND      |                 |                  |                     |            |         |            |
| AGL             | South Eastern   | Bowen/Surat      | AA-89               | ATP337P    | 26      | Completed  |
| AGL             | Velseis         | Bowen/Surat      | AB-89               | ATP337P    | 14      | Completed  |
| AGL             | South Eastern   | Bowen/Surat      | AR-89               | ATP336P    | 79      | Continuing |
| AGL             | Seispros Clough | Bowen/Surat      | Bundaburra          | ATP337P    | 116     | Completed  |
| Ampolex         | Halliburton GSI | Adavale          | Swan Vale           | ATP268P    | 190     | Completed  |
| Bridge          | South Eastern   | Bowen/Surat      | Beechwood           | ATP145P    | 207     | Completed  |
| Bridge          | South Eastern   | Bowen/Surat      | Lynrock             | PL15       | 47      | Completed  |
| Cluff Resources | South Eastern   | Bowen/Surat      | Merinda             | ATP350P    | 113     | Completed  |
| Comalco         | Halliburton     | Carpentaria      | Burketown           | ATP373P    | 227     | Completed  |
| Comalco         | Halliburton     | Carpentaria      | Oliver River        | ATP373P    | 156     | Completed  |
| Comalco         | Halliburton     | Carpentaria      | Weipa               | ATP373P    | 698     | Completed  |
| Command         | South Eastern   | Bowen/Surat      | Alton West          | ATP377P    | 50      | Completed  |
| Command         | Petty Ray       | Cooper/Eromanga  | Dilwin              | ATP267P    | 36      | Completed  |
| Crusader        | Halliburton     | Cooper/Eromanga  | Kalpower            | ATP368P    | 116     | Completed  |
| Crusader        | South Eastern   | Bowen/Surat      | Rock Wells          | ATP251P    | 12      | Completed  |
| Crusader        | South Eastern   | Bowen/Surat      | Smith Creek         | ATP258P    | 66      | Completed  |
| Delhi           | Halliburton     | Cooper/Eromanga  | Cameron             | ATP259P    | 992     | Completed  |
| Hartogen        | South Eastern   | Bowen/Surat      | Basketyard Creek    | APT145P    | 93      | Completed  |
| Hartogen        | South Eastern   | Bowen/Surat      | Bendiboi Creek      | ATP212P    | 165     | Completed  |
| Ladd Pacific    | Halliburton     | Adavale/Eromanga | Aureole             | ATP265P    | 47      | Completed  |
| Lasmo           | South Eastern   | Bowen/Surat      | Avalon Phase 2      | ATP257P    | 21      | Completed  |
| Lasmo           | Petty Ray       | Cooper/Eromanga  | Eden                | ATP299P    | 45      | Completed  |
| Mosaic          | South Eastern   | Bowen/Surat      | AK-89               | ATP336P    | 103     | Completed  |
| OCA             | Seispros        | Bowen/Surat      | R-89                | ATP349P    | 5       | Completed  |
| Phoenix         | Geosystems      | Cooper/Eromanga  | McIntyre            | ATP303P    | 70      | Completed  |
| Santos          | Halliburton     | Cooper/Eromanga  | PPL25/26            | ATP259P    | 42      | Completed  |
| Shell           | Petty Ray       | Cooper/Eromanga  | Eromanga Central    | ATP267P    | 355     | Completed  |
| Shell           | Halliburton     | Cooper/Eromanga  | S-89E               | ATP267P    | 357     | Completed  |
| NEW SOUTH WALES |                 |                  |                     |            |         |            |
| Hartogen        | Halliburton     | Gunnedah         | Quinn               | PEL238     | 88      | Completed  |
| VICTORIA        |                 |                  |                     |            |         |            |
| Beach           | Halliburton     | Otway            | Heatherfield Detail | PEP119     | 63      | Completed  |
| Beach           | Halliburton     | Otway            | Peterborough        | PEP104     | 79      | Completed  |
| Beach           | Halliburton     | Otway            | Vogel               | PEP104,108 | 106     | Completed  |
| Crusader        | Halliburton     | Gippsland        | Stringbark          | PEP123     | 34      | Completed  |
| Phoenix         | Geosystems      | Otway            | Shamrock            | PEP101     | 103     | Completed  |
| TCPL            | Halliburton     | Gippsland        | East Sale           | PEP107     | 24      | Completed  |

TABLE 5. SEISMIC SURVEY ACTIVITY BY STATE -1989 (Cont'd)

| OPERATOR                | CONTRACTOR          | BASIN           | SURVEY NAME               | PERMIT        | KM SHOT | STATUS    |
|-------------------------|---------------------|-----------------|---------------------------|---------------|---------|-----------|
| ONSHORE (Cont'd)        |                     |                 |                           |               |         |           |
| TASMANIA                |                     |                 |                           |               |         |           |
| No Geophysical Activity |                     |                 |                           |               |         |           |
| SOUTH AUSTRALIA         |                     |                 |                           |               |         |           |
| Santos                  | Halliburton         | Cooper/Eromanga | Stuart                    | PEL5,6        | 1627    | Completed |
| Santos                  | Halliburton         | Cooper/Eromanga | PPL25,26                  | PPL25,26      | 35      | Completed |
| WESTERN AUSTRALIA       |                     |                 |                           |               |         |           |
| Ampol                   | Geosystems          | Perth           | 1989 Detail               | EP41          | 181     | Completed |
| Ampol                   | Geosystems          | Perth           | Cypress Hill Experimental | EP321         | 10      | Completed |
| Ampol                   | Geosystems          | Perth           | Goonderoo                 | EP100         | 150     | Completed |
| Ampol                   | Geosystems          | Perth           | Goonderoo Phase 2         | EP100         | 52      | Completed |
| Barrack                 | Western Geophysical | Perth           | Coomallo Hill             | EP320         | 76      | Completed |
| Barrack                 | Western Geophysical | Perth           | Coorey                    | EP320         | 80      | Completed |
| Barrack                 | Geosystems          | Perth           | Dempster                  | EP100         | 85      | Completed |
| Barrack                 | Western Geophysical | Perth           | Duggan                    | EP323         | 146     | Completed |
| Barrack                 | Western Geophysical | Perth           | Erregulla West            | EP23          | 48      | Completed |
| Barrack                 | Western Geophysical | Perth           | Georgina                  | EP23,PL7      | 68      | Completed |
| Barrack                 | Western Geophysical | Canning         | Moorak Detail             | EP330         | 100     | Completed |
| Barrack                 | Geosystems          | Perth           | South Wulmulla            | EP100         | 86      | Completed |
| Barrack                 | Western Geophysical | Perth           | Table Top                 | EP96          | 51      | Completed |
| Barrack                 | Western Geophysical | Perth           | Tomkins                   | EP320         | 78      | Completed |
| Barrack                 | Western Geophysical | Perth           | Yardanoga                 | EP320         | 97      | Completed |
| Bridge                  | Geosystems          | Canning         | Gee Gully Creek           | EP175         | 86      | Completed |
| Kufpec                  | Geosystems          | Canning         | 1989 Fitzroy              | EP101         | 198     | Completed |
| Metana                  | Geosystems          | Carnarvon       | Rakrani                   | EP201         | 40      | Completed |
| OCA                     | Geosystems          | Canning         | Pindan                    | EP231         | 122     | Completed |
| SRL Exploration         | Geosystems          | Carnarvon       | Sandalwood                | EP106         | 150     | Completed |
| WAPET                   | Western Geophysical | Perth           | Dongara 3 (463)           | PL1,2         | 179     | Completed |
| WAPET                   | Western Geophysical | Perth           | Dongara Experimental      | PL1,2         | 7       | Completed |
| WAPET                   | Western Geophysical | Carnarvon       | Barrow Deep 466           | L-1-H         | 24      | Completed |
| WMC                     | Western Geophysical | Canning         | Elsa                      | EP335,336     | 153     | Completed |
| WMC                     | Geosystems          | Perth           | Walcott                   | EP23          | 130     | Completed |
| NORTHERN TERRITORY      |                     |                 |                           |               |         |           |
| Pacific Oil and Gas     | Geosystems          | Georgina        | 1989 Georgina             | EP10,11,12,13 | 241     | Completed |
| Pacific Oil and Gas     | Geosystems          | Daly            | Nutwood Downs             | EP23,24       | 320     | Completed |
| Pacific Oil and Gas     | Geosystems          | Amadeus         | EP26                      | EP26          | 115     | Completed |

TABLE 5. SEISMIC SURVEY ACTIVITY BY STATE - 1989 (Cont'd)

| OPERATOR                 | CONTRACTOR          | BASIN        | SURVEY NAME     | PERMIT      | KM SHOT | STATUS     |
|--------------------------|---------------------|--------------|-----------------|-------------|---------|------------|
| <b>OFFSHORE</b>          |                     |              |                 |             |         |            |
| <b>QUEENSLAND</b>        |                     |              |                 |             |         |            |
| Phoenix Oil              | Western Geophysical | Carpentaria  | Q21P            | Q/21P       | 800     | Completed  |
| <b>NEW SOUTH WALES</b>   |                     |              |                 |             |         |            |
| No Geophysical Activity  |                     |              |                 |             |         |            |
| <b>VICTORIA</b>          |                     |              |                 |             |         |            |
| Cultus                   | Western Geophysical | Gippsland    | GC89A           | Vic/P23     | 300     | Completed  |
| Esso                     | Western Geophysical | Gippsland    | G89A            | Vic/P24     | 2230    | Continuing |
| South Eastern            | Western Geophysical | Gippsland    | GSE-89          | Vic/P25     | 500     | Completed  |
| <b>TASMANIA</b>          |                     |              |                 |             |         |            |
| Amoco                    | Halliburton         | Bass         | Bass Basin      | T/14,18,22  | 435     | Completed  |
| <b>SOUTH AUSTRALIA</b>   |                     |              |                 |             |         |            |
| No Geophysical Activity  |                     |              |                 |             |         |            |
| <b>WESTERN AUSTRALIA</b> |                     |              |                 |             |         |            |
| Ampol                    | Halliburton         | Browse       | Enneidra        | WA-212P     | 2564    | Completed  |
| Ampol                    | Halliburton         | Carnarvon    | Katrina         | WA-203P     | 390     | Completed  |
| Ampol                    | Halliburton         | Browse       | Loretta         | WA-206P     | 341     | Completed  |
| Arco                     | Halliburton         | Carnarvon    | Cygnus          | WA-202P     | 14      | Completed  |
| Aust Seismic Brokers     | Halliburton         | Bonaparte    | SPA 5 SL/88-90  | Vacant      | 3012    | Completed  |
| Bond                     | Halliburton         | Carnarvon    | B89 & B89H      | TP8         | 1276    | Completed  |
| Elf Aquitaine            | Halliburton         | Bonaparte    | SPA 2SL/89-90   | Vacant      | 685     | Completed  |
| GSI                      | GSI                 | Perth        | SPA 9SL/88-89   | Vacant      | 1588    | Completed  |
| GSI                      | GSI                 | Bonaparte    | SPA 3SL/88-90   | Vacant      | 2218    | Completed  |
| GSI                      | GSI                 | Bonaparte    | SPA 2SL/88-89   | Vacant      | 1644    | Completed  |
| Lasmo                    | Digicon             | Exmouth Gulf | Chelonina       | EP342       | 519     | Continuing |
| APET                     | Halliburton         | Carnarvon    | Rosily Shoals   | TP3,7       | 36      | Completed  |
| WAPET                    | Halliburton         | Carnarvon    | Barrow 12 (459) | L10,TP2     | 98      | Completed  |
| WAPET                    | Halliburton         | Carnarvon    | Gorgon 3 (465)  | WA-25,192P  | 1515    | Completed  |
|                          |                     |              |                 | WA-205,241P |         |            |
| WAPET                    | Halliburton         | Carnarvon    | Saladin Detail  | TP3         | 42      | Completed  |
| WAPET                    | Halliburton         | Carnarvon    | Vlaming (467)   | WA-213P     | 644     | Completed  |

TABLE 5. SEISMIC SURVEY ACTIVITY BY STATE - 1989 (Cont'd)

| OPERATOR                   | CONTRACTOR          | BASIN            | SURVEY NAME             | PERMIT         | KM SHOT | STATUS     |
|----------------------------|---------------------|------------------|-------------------------|----------------|---------|------------|
| OFFSHORE (Cont'd)          |                     |                  |                         |                |         |            |
| WESTERN AUSTRALIA (cont'd) |                     |                  |                         |                |         |            |
| WMC                        | Halliburton         | Bonaparte        | Bobbie                  | WA-128P,TP5    | 484     | Completed  |
| WMC                        | Halliburton         | Carnarvon        | Jacqueline              | WA-15,149,214P | 875     | Completed  |
| WMC                        | Halliburton         | Carnarvon        | Jacqueline Experimental | WA-149P        | 35      | Completed  |
| WMC                        | Halliburton         | Bonaparte        | Kaye                    | WA-147P        | 528     | Completed  |
| WMC                        | Halliburton         | Carnarvon        | Peta                    | TP7            | 50      | Completed  |
| WMC                        | Western Geophysical | Bonaparte        | Roxanne                 | WA-211P        | 441     | Completed  |
| Woodside                   | Western Geophysical | Carnarvon        | Angel/Wanaea            | WA-28P         | 79      | Continuing |
| NORTHERN TERRITORY         |                     |                  |                         |                |         |            |
| BHP                        | Halliburton         | Browse           | HA-5                    | AC/P7          | 1097    | Completed  |
| BHP                        | Halliburton         | Browse           | HA88A                   | NT/P41,42      | 2190    | Completed  |
| BHP                        | Halliburton         | Browse           | HA88B                   | NT/P41         | 2125    | Completed  |
| BHP                        | Halliburton         | Arafura          | HA89A                   | NT/P42         | 1450    | Completed  |
| BHP                        | Halliburton         | Arafura          | HA89B                   | NT/P42         | 1200    | Completed  |
| BHP                        | Halliburton         | Browse           | HB2,Phase 2             | AC/P6          | 862     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | HH6                     | AC/P3          | 482     | Completed  |
| BHP                        | Halliburton         | Browse           | HJ10                    | AC/P4          | 403     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | HJ-10, Phase 3          | AC/P4          | 92      | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | HJ11                    | AC/L3          | 400     | Completed  |
| BHP                        | Halliburton         | Browse           | HV7                     | AC/P10         | 933     | Completed  |
| BHP                        | Halliburton         | Browse           | HV8                     | AC/P2          | 315     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | HV9                     | AC/P           | 250     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | XB-3                    | AC/P6          | 129     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | XJ-12                   | AC/P4          | 529     | Completed  |
| BHP                        | Halliburton         | Browse/Bonaparte | XV-10                   | AC/P2          | 55      | Completed  |
| BP                         | Halliburton         | Browse/Bonaparte | AC/P5                   | AC/P5          | 385     | Completed  |
| Elf Aquitaine              | Halliburton         | Browse           | 8801                    | AC/P1          | 311     | Completed  |
| Elf Aquitaine              | Halliburton         | Bonaparte        | B88                     | NT/P28         | 410     | Completed  |
| Elf Aquitaine              | Halliburton         | Bonaparte        | B-89                    | NT/P28         | 500     | Completed  |
| TCPL                       | Halliburton         | Browse           | T89A                    | AC/P13         | 6879    | Completed  |
| TCPL                       | Halliburton         | Browse           | TR89A                   | AC/P13         | 4474    | Completed  |
| Santos                     | Halliburton         | Browse           | Anderdone               | AC/P10,12      | 6350    | Completed  |
| Santos                     | Halliburton         | Browse           | Woodbine                | AC/P10         | 4706    | Completed  |
| WMC                        | Halliburton         | Browse           | Eva                     | AC/P11         | 1224    | Completed  |



TABLE 6. PETROLEUM EXPLORATION AND DEVELOPMENT DRILLING RIG ACTIVITY

AS AT 31.12.89

| OPERATOR/<br>(OWNED BY)            | OPERATORS<br>RIG NO. | DRAW WORKS               | OPERATED<br>FOR | STATUS AT 31-12-89               | STATE/<br>TERR. |
|------------------------------------|----------------------|--------------------------|-----------------|----------------------------------|-----------------|
| ONSHORE                            |                      |                          |                 |                                  |                 |
| ATCO-APM                           | Rig 1                | National 610E            | -               | Idle                             | SA              |
| AUST PTY LTD                       | Rig 2                | Mid-Cont. U-36A          | Ultramar-       | Drilling ahead at Katnook 3.     | Qld             |
|                                    | Rig 3                | Cabot 1287               | -               | Idle                             | Qld             |
|                                    | Rig 4                | Franks Cabot 300         | Santos          | Workovers                        | SA              |
|                                    | Rig 5                | Franks Cabot 300         | -               | Idle                             | Qld             |
|                                    | Rig 6                | Franks Cabot 300         | Santos          | Workovers                        | Qld             |
|                                    | Rig 7                | Troy 600                 | -               | Idle                             | Qld             |
|                                    | Rig 8                | Franks Cabot 300         | Santos          | Workovers                        | SA              |
| BARRACK ENERGY                     | Rig 1                | Cardwell KM250           | -               | Idle                             | WA              |
|                                    | Rig 2                | Bourne 5000              | -               | Idle                             | WA              |
| CENTURY DRILLING                   | Rig 1                | Ideco BIR Rambler        | Santos          | Suspending Bowen 1.              | Qld             |
|                                    | Rig 2                | Ideco                    | -               | Idle                             | SA              |
|                                    | Rig 3                | Ideco BIR Rambler        | Santos          | Drilling ahead at Jena 6.        | SA              |
|                                    | Rig 5                | Cooper LTD 750           | -               | Idle                             | WA              |
|                                    | Rig 11               | Cooper LTD 750           | -               | Idle                             | Qld             |
|                                    | Rig 16               | Brewster Skytop          | -               | Idle                             | SA              |
|                                    | Rig 18               | Superior 700M            | -               | Idle                             | Qld             |
| DRILLCORP                          | Rig 24               | Franks Cabot             | Adelaide Pet.   | Preparing to drill Etingimbra 1  | NT              |
|                                    | Rig 25               | TSM 6000                 | -               | Idle                             | Qld             |
|                                    | Rig 29               | Ideco H44 Rambler        | -               | Idle                             | Qld             |
| FLETCHER DRILLING                  | Rig 1                | Gardner Denver<br>2500DD |                 | Idle                             | WA              |
| GEARHART DRILLING                  | Rig 1                | Kremco 750T              |                 | Idle                             | Qld             |
|                                    | Rig 2                | Superior 700E            | Gas and Fuel    | Drilling ahead at McEachern 1.   | Vic             |
|                                    | Rig 3                | Oilwell 840E             | -               | Idle                             | WA              |
|                                    | Rig 4                | Houston 5000             | -               | Idle                             | NT              |
|                                    | Rig 5                | National T-32            | -               | Idle                             | SA              |
|                                    | Rig 6                | Kremco K 600 T           | -               | Idle                             | WA              |
| GEOLOGICAL SURVEY<br>OF QUEENSLAND | -                    | Failing 2500             | GSQ             | Drilling ahead at GSQ Maneroo 1. | Qld             |
| MEREENIE JOINT<br>VENTURE PARTERNS | -                    | OIME 750SL               | -               | Idle                             | NT              |

TABLE 6. PETROLEUM EXPLORATION AND DEVELOPMENT DRILLING RIG ACTIVITY (Cont'd)

AS AT 31.12.89

| OPERATOR/<br>(OWNED BY)                       | OPERATORS<br>RIG NO. | DRAW WORKS          | OPERATED<br>FOR   | STATUS AT 31-12-89              | STATE/<br>TERR. |
|---|----------------------|---------------------|-------------------|---------------------------------|-----------------|
| <b>ONSHORE (cont'd)</b>                       |                      |                     |                   |                                 |                 |
| <b>OIL DRILLING &amp;<br/>EXPLORATION LTD</b> | Rig 5                | Ideco JR Super 7-11 | Santos            | Suspending Tirrawarra 65.       | SA              |
|   | Rig 12               | Ideco H725          | Santos            | Drilling ahead at Deparangie 1. | SA              |
|   | Rig 18               | Ideco H725          | Delhi             | Drilling ahead at Mooliampah 3. | Qld             |
|   | Rig 19               | Kremco K-600-H      | -                 | Idle                            | Qld             |
|   | Rig 20               | Kremco K-600-H      | -                 | Idle                            | Qld             |
|   | Rig 21               | Ideco H725          | -                 | Idle                            | WA              |
|   | Rig 22               | National 610E       | -                 | Idle                            | SA              |
|   | Rig 23               | Ideco 900E          | -                 | Idle                            | SA              |
|   | Rig 24               | National 610        | -                 | Idle                            | Qld             |
|   | Rig 27               | National 370        | -                 | Idle                            | WA              |
|   | Rig 28               | National 80UE       | -                 | Idle                            | WA              |
|   |                      |                     |                   |                                 |                 |
| <b>ROCKDRIL<br/>CONTRACTORS<br/>PTY LTD</b>   | Rig 20               | Stratigraphic Core  | Pacific Oil & Gas | Preparing to drill Baldwin 1.   | NT              |
|   | Rig 21               | Bourne 4000         | -                 | Mineral development drilling.   | Qld             |
|   | Rig 22               | RD Heli 2           | -                 | Idle                            | Qld             |

**SUMMARY OF ONSHORE RIGS**

|               |           |
|---------------|-----------|
| <b>ACTIVE</b> | <b>13</b> |
| <b>IDLE</b>   | <b>29</b> |
| <b>TOTAL</b>  | <b>42</b> |

**Notes:**

Century Drilling Rig 14 left for Indonesia in June.

Rockdril Contractors Rig 22 returned from Papua New Guinea in June.

\* Rigs which became idle just prior to 31-12-89.

TABLE 6. PETROLEUM EXPLORATION AND DEVELOPMENT DRILLING RIG ACTIVITY (Cont'd)

AS AT 31.12.89

| OPERATOR/<br>(OWNED BY)    | UNIT NAME<br>OWNERS REF | RIG TYPE  | OPERATED<br>FOR | STATUS AT 31-12-89                  | STATE/<br>TERR. |
|----------------------------|-------------------------|-----------|-----------------|-------------------------------------|-----------------|
| <b>OFFSHORE</b>            |                         |           |                 |                                     |                 |
| ATWOOD OCEANICS            | Margie                  | Semisub   | Woodside        | Drilling ahead at Cossack 1.        | WA              |
| AUST PTY LTD               | Continental             | Platform  | Esso            | Drilling ahead at Bream A26.        | Vic             |
|                            | Vicksburg               | Jackup    | WMC             | South Pepper production.            | WA              |
| DIAMOND M<br>GENERAL       | Diamond M General       | Semisub   | BHP             | Drilling ahead at Maple 1.          | NT              |
| GLOBAL MARINE<br>DRILLING  | Robert F Bauer          | Drillship | Norcen          | Drilling ahead at Keeling 1.        | NT              |
| MAERSK PTY LTD             | Maersk Valiant          | Jackup    | WAPET           | Drilling ahead at Roller 1.         | WA              |
|                            | Maersk Voyager          | Jackup    | -               | Idle                                | WA              |
| MARETECH<br>OCEAN SERVICES | Energy Searcher         | Drillship | BHP             | Drilling ahead at Griffin 1.        | WA              |
| SEDCO-FOREX                | Sedco-708               | Semisub   | BHP             | Completion at Jabiru 8A.            | NT              |
| SOUTH SEAS<br>DRILLING CO  | Southern Cross          | Semisub   | Esso            | Workovers at Tarwhine.              | Vic             |
| WOODSIDE<br>PETROLEUM      | Oilwell E2000           | Platform  | Woodside        | Drilling ahead at North Rankin A19. | WA              |
| ZAPATA<br>OFFSHORE CO      | Zapata Arctic           | Semisub   | Cultus          | Drilling ahead at Copa 1.           | SA              |

## SUMMARY OF OFFSHORE RIGS

|        |    |
|--------|----|
| ACTIVE | 10 |
| IDLE   | 2  |
| TOTAL  | 12 |

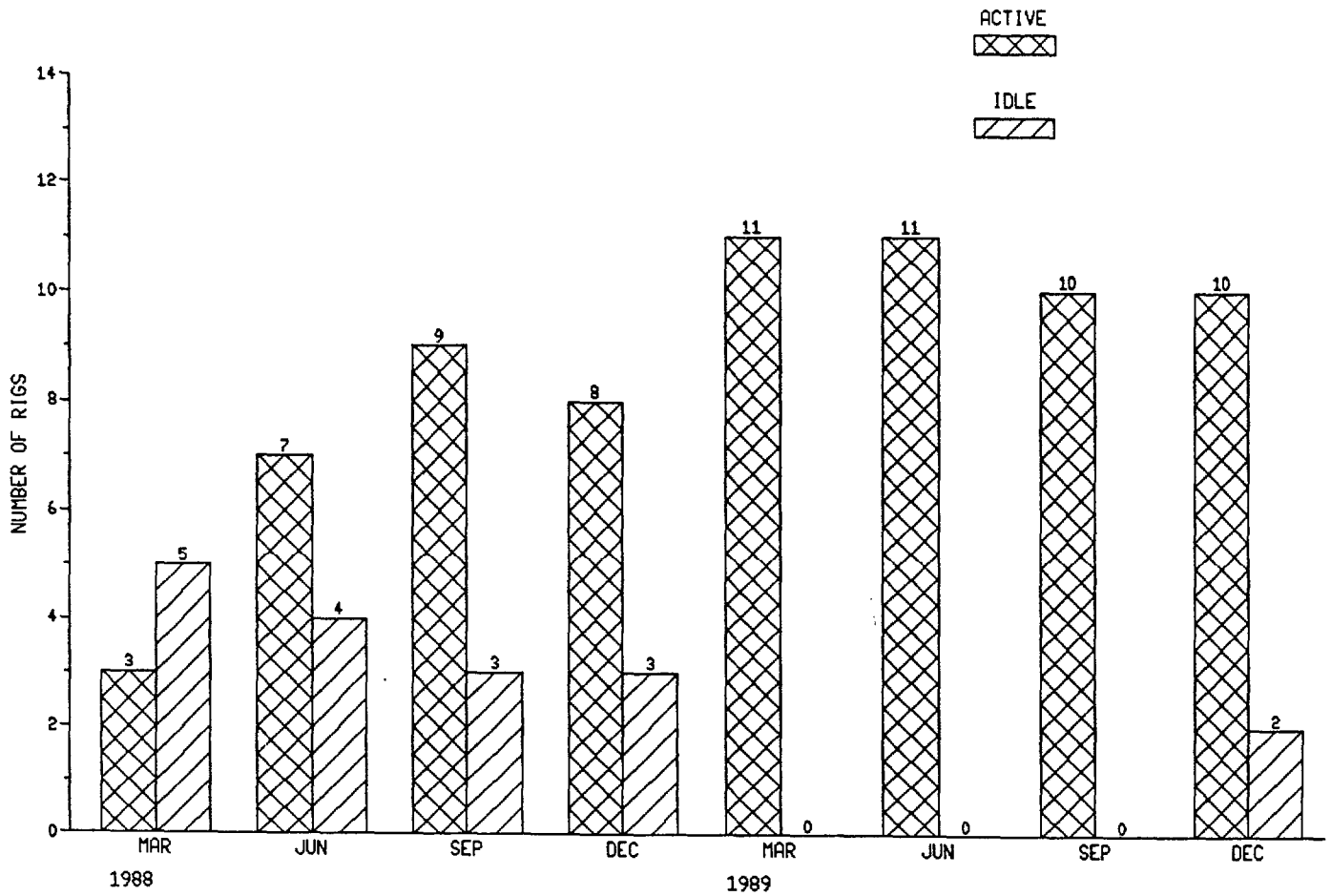
## Notes:

Maersk Giant commenced work for Esso in Gippsland Basin in June and completed in November.

Presently stacked at Cliffy Island, Bass Strait.

TABLE 6. (Cont'd)

## OFFSHORE DRILLING RIG ACTIVITY - BY QUARTER 1988 TO 1989



## ONSHORE DRILLING RIG ACTIVITY BY QUARTER 1988 TO 1989

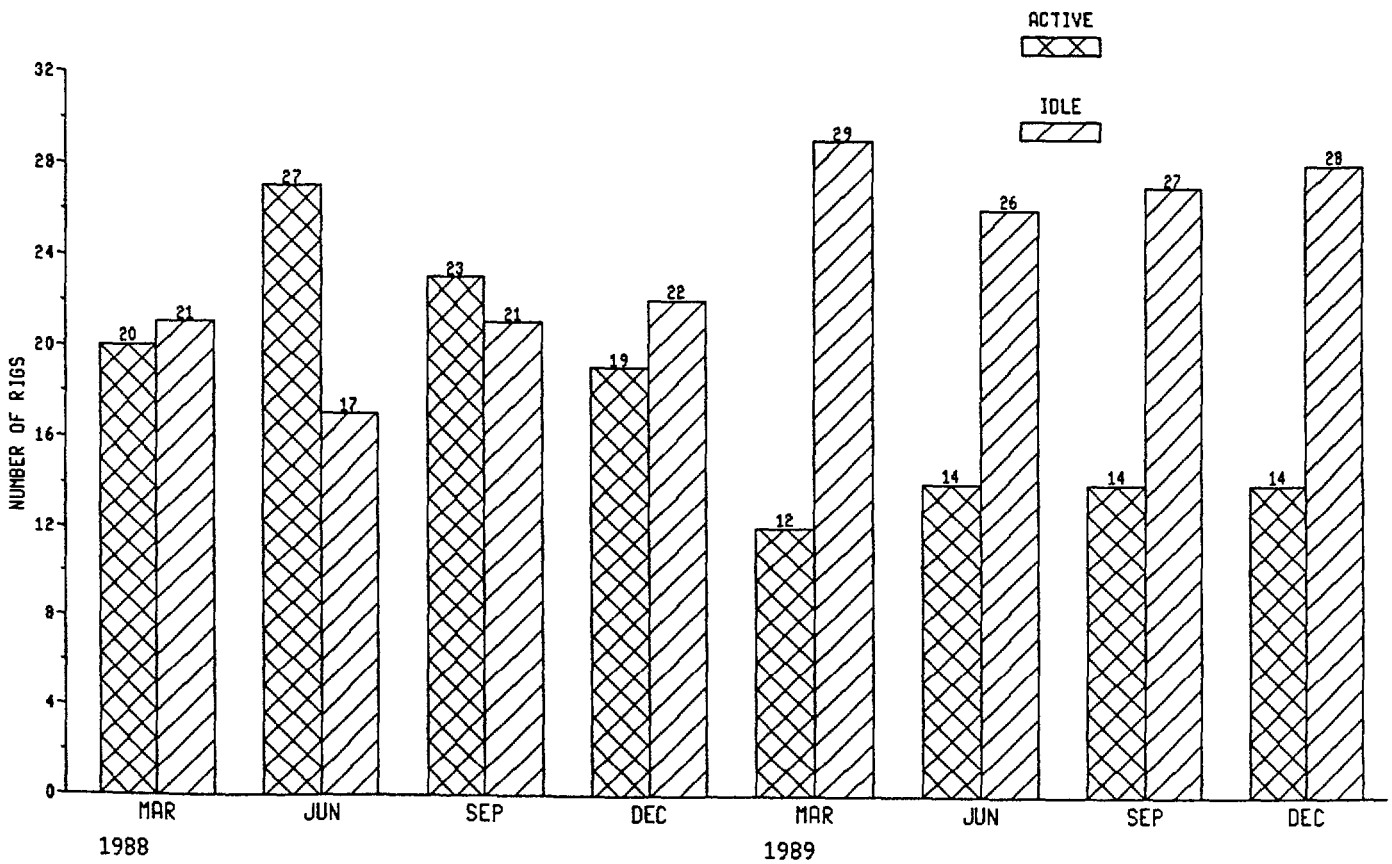


TABLE 7. SUMMARY OF ONSHORE AND OFFSHORE WELLS DRILLED - 1989

| State<br>or<br>Territory | Spudded         |                | Status at 31.12.89                 |     |          |                  |                         |     |     |          |                  |   | DA <sup>3</sup> | Susp <sup>4</sup> |
|--------------------------|-----------------|----------------|------------------------------------|-----|----------|------------------|-------------------------|-----|-----|----------|------------------|---|-----------------|-------------------|
|                          | Other<br>Period | This<br>Period | Completed<br>or C & S <sup>1</sup> |     |          |                  | Abandoned<br>or secured |     |     |          |                  |   |                 |                   |
|                          |                 |                |                                    |     |          |                  |                         |     |     |          |                  |   |                 |                   |
|                          |                 |                | Oil                                |     |          | Oil              |                         |     |     |          |                  |   |                 |                   |
|                          |                 |                | Oil                                | Gas | &<br>Gas | Ser <sup>2</sup> | Dry                     | Oil | Gas | &<br>Gas | Unspec-<br>ified |   |                 |                   |
| Exploration Wells        |                 |                |                                    |     |          |                  |                         |     |     |          |                  |   |                 |                   |
| Queensland               | -               | 49             | 17                                 | 3   | 1        | -                | 26                      | 1   | -   | -        | -                | - | 1               |                   |
| New South Wales          | -               | -              | -                                  | -   | -        | -                | -                       | -   | -   | -        | -                | - | -               |                   |
| Victoria                 | -               | 14             | 1                                  | -   | -        | -                | 7                       | 1   | 3   | 1        | -                | 1 | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -        | -                | -                       | -   | -   | -        | -                | - | -               |                   |
| South Australia          | 2               | 49             | 6                                  | 21  | -        | -                | 21                      | 1   | -   | -        | -                | 2 | -               |                   |
| Western Australia        | 1               | 18             | 4                                  | -   | -        | -                | 13                      | -   | -   | -        | -                | 2 | -               |                   |
| Northern Territory       | 4               | 19             | 3                                  | -   | -        | -                | 16                      | 2   | -   | -        | -                | 2 | -               |                   |
| Total                    | 7               | 149            | 31                                 | 24  | 1        | -                | 83                      | 5   | 3   | 1        | -                | 7 | 1               |                   |
| Development Wells        |                 |                |                                    |     |          |                  |                         |     |     |          |                  |   |                 |                   |
| Queensland               | 1               | 20             | 10                                 | 6   | 1        | -                | 2                       | 1   | -   | -        | -                | 1 | -               |                   |
| New South Wales          | -               | -              | -                                  | -   | -        | -                | -                       | -   | -   | -        | -                | - | -               |                   |
| Victoria                 | 1               | 18             | 16                                 | -   | -        | 2                | -                       | -   | -   | -        | -                | 1 | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -        | -                | -                       | -   | -   | -        | -                | - | -               |                   |
| South Australia          | 1               | 13             | 8                                  | 2   | -        | -                | 3                       | -   | -   | -        | -                | 1 | -               |                   |
| Western Australia        | 3               | 20             | 18                                 | 3   | 1        | -                | -                       | -   | -   | -        | -                | 1 | -               |                   |
| Northern Territory       | -               | 3              | 2                                  | 1   | -        | -                | -                       | -   | -   | -        | -                | - | -               |                   |
| Total                    | 6               | 74             | 54                                 | 12  | 2        | 2                | 5                       | 1   | -   | -        | -                | 4 | -               |                   |

1: Cased and suspended. 2: Service well, classification applicable only to Development Wells..

3: Drilling Ahead. 4: Suspended temporarily, to resume drilling at a future date.

TABLE 7. (Cont'd) SUMMARY OF ONSHORE WELLS DRILLED - 1989

| State<br>or<br>Territory | Spudded         |                | Status at 31.12.89                 |     |          |                  |     |                         |     |          |                  |   |                 |                   |
|--------------------------|-----------------|----------------|------------------------------------|-----|----------|------------------|-----|-------------------------|-----|----------|------------------|---|-----------------|-------------------|
|                          | Other<br>Period | This<br>Period | Completed<br>or C & S <sup>1</sup> |     |          |                  |     | Abandoned<br>or secured |     |          |                  |   | DA <sup>3</sup> | Susp <sup>4</sup> |
|                          |                 |                | Oil                                |     |          |                  |     | Oil                     |     |          |                  |   |                 |                   |
|                          |                 |                | Oil                                | Gas | &<br>Gas | Ser <sup>2</sup> | Dry | Oil                     | Gas | &<br>Gas | Unspec-<br>ified |   |                 |                   |
|                          |                 |                |                                    |     |          |                  |     |                         |     |          |                  |   |                 |                   |
| Exploration Wells        |                 |                |                                    |     |          |                  |     |                         |     |          |                  |   |                 |                   |
| Queensland               | -               | 49             | 17                                 | 3   | 1        | -                | 26  | 1                       | -   | -        | -                | - | 1               |                   |
| New South Wales          | -               | -              | -                                  | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| Victoria                 | -               | 2              | -                                  | -   | -        | -                | -   | -                       | 1   | -        | -                | 1 | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| South Australia          | 2               | 48             | 6                                  | 21  | -        | -                | 21  | 1                       | -   | -        | -                | 1 | -               |                   |
| Western Australia        | -               | 6              | 1                                  | -   | -        | -                | 5   | -                       | -   | -        | -                | - | -               |                   |
| Northern Territory       | 1               | 4              | -                                  | -   | -        | -                | 5   | -                       | -   | -        | -                | - | -               |                   |
| Total                    | 3               | 109            | 24                                 | 24  | 1        | -                | 57  | 2                       | 1   | -        | -                | 2 | 1               |                   |
| Development Wells        |                 |                |                                    |     |          |                  |     |                         |     |          |                  |   |                 |                   |
| Queensland               | 1               | 20             | 10                                 | 6   | 1        | -                | 2   | 1                       | -   | -        | -                | 1 | -               |                   |
| New South Wales          | -               | -              | -                                  | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| Victoria                 | -               | -              | -                                  | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| South Australia          | 1               | 13             | 8                                  | 2   | -        | -                | 3   | -                       | -   | -        | -                | 1 | -               |                   |
| Western Australia        | 2               | 11             | 13                                 | -   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| Northern Territory       | -               | 1              | -                                  | 1   | -        | -                | -   | -                       | -   | -        | -                | - | -               |                   |
| Total                    | 4               | 45             | 31                                 | 9   | 1        | -                | 5   | 1                       | -   | -        | -                | 2 | -               |                   |

1: Cased and suspended. 2: Service well, classification applicable only to Development Wells..

3: Drilling Ahead. 4: Suspended temporarily, to resume drilling at a future date.

TABLE 7. (Cont'd) SUMMARY OF OFFSHORE WELLS DRILLED - 1989

| State<br>or<br>Territory | Spudded         |                | Status at 31.12.89                 |     |                         |                  |     |     |     |          |                  |   | DA <sup>3</sup> | Susp <sup>4</sup> |
|--------------------------|-----------------|----------------|------------------------------------|-----|-------------------------|------------------|-----|-----|-----|----------|------------------|---|-----------------|-------------------|
|                          | Other<br>Period | This<br>Period | Completed<br>or C & S <sup>1</sup> |     | Abandoned<br>or secured |                  |     |     |     |          | Unspec-<br>ified |   |                 |                   |
|                          |                 |                |                                    |     | Oil                     |                  | Oil |     |     |          |                  |   |                 |                   |
|                          |                 |                | Oil                                | Gas | &<br>Gas                | Ser <sup>2</sup> | Dry | Oil | Gas | &<br>Gas |                  |   |                 |                   |
|                          |                 |                |                                    |     |                         |                  |     |     |     |          |                  |   |                 |                   |
| Exploration Wells        |                 |                |                                    |     |                         |                  |     |     |     |          |                  |   |                 |                   |
| Queensland               | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| New South Wales          | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| Victoria                 | -               | 12             | 1                                  | -   | -                       | -                | 7   | 1   | 2   | 1        | -                | - | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| South Australia          | -               | 1              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | 1 | -               |                   |
| Western Australia        | 1               | 12             | 3                                  | -   | -                       | -                | 8   | -   | -   | -        | -                | 2 | -               |                   |
| Northern Territory       | 3               | 15             | 3                                  | -   | -                       | -                | 11  | 2   | -   | -        | -                | 2 | -               |                   |
| Total                    | 4               | 40             | 7                                  | -   | -                       | -                | 26  | 3   | 2   | 1        | -                | 5 | -               |                   |
| Development Wells        |                 |                |                                    |     |                         |                  |     |     |     |          |                  |   |                 |                   |
| Queensland               | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| New South Wales          | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| Victoria                 | 1               | 18             | 16                                 | -   | -                       | 2                | -   | -   | -   | -        | -                | 1 | -               |                   |
| Tasmania                 | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| South Australia          | -               | -              | -                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| Western Australia        | 1               | 9              | 5                                  | 3   | 1                       | -                | -   | -   | -   | -        | -                | 1 | -               |                   |
| Northern Territory       | -               | 2              | 2                                  | -   | -                       | -                | -   | -   | -   | -        | -                | - | -               |                   |
| Total                    | 2               | 29             | 23                                 | 3   | 1                       | 2                | -   | -   | -   | -        | -                | 2 | -               |                   |

1: Cased and suspended. 2: Service well, classification applicable only to Development Wells..

3: Drilling Ahead. 4: Suspended temporarily, to resume drilling at a future date.

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                   | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
|------------------------------------|---------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| <b>QUEENSLAND</b>                  |                     |                                   |                       |                        |   |   |                     |
| AGL<br>BEAUFORT 7<br>PL3           | Bowen/<br>Surat     | 26°34'44"<br>149°54'56"           | KB 314<br>GL 310      | 20-SEP-89<br>27-SEP-89 | 1179<br>1179                              | Cased and suspended as a<br>future Precipice Sst gas producer.                  | DEV<br>DEV          |
| AGL<br>MT HUTTON 1<br>ATP337P      | Bowen/<br>Surat     | 25°51'32"<br>148°21'25"           | KB 797<br>GL 793      | 21-JUN-89<br>27-JUN-89 | 1177<br>1177                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| AGL<br>SANDY 1<br>PL2              | Bowen/<br>Surat     | 27°58'38"<br>149°21'18"           | KB 220<br>GL 214      | 23-JUN-89<br>05-JUL-89 | 2227<br>2227                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| AGL<br>YELLOWBANK 5<br>ATP337P     | Bowen/<br>Surat     | 25°26'43"<br>148°23'54"           | KB 582<br>GL 578      | 27-AUG-89<br>07-SEP-89 | 1514<br>1514                              | Cased and suspended as a<br>future Aldebaran Sst gas<br>producer.               | DEV<br>DEV          |
| AGL<br>YOOHAPPINNA 1<br>ATP337P    | Bowen/<br>Surat     | 25°13'38"<br>148°25'39"           | KB 713<br>GL 709      | 12-NOV-89<br>29-NOV-89 | 1411<br>1411                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| AMPOL<br>BURGAMOO 1<br>ATP271P     | Cooper/<br>Eromanga | 23°27'23"<br>143°13'6"            | KB 248<br>GL 244      | 14-OCT-89<br>24-OCT-89 | 1670<br>1670                              | Plugged and converted to a<br>water well.                                       | NFW<br>DRY          |
| AMPOL<br>ENDEAVOUR 1<br>ATP299P    | Cooper/<br>Eromanga | 26°47'28"<br>143°22'53"           | KB 191<br>GL 186      | 29-SEP-89<br>06-OCT-89 | 1550<br>1550                              | Cased and suspended as a<br>future Birkhead Fm oil<br>producer.                 | NFW<br>NFD          |
| AMPOL<br>NORTH IPUNDU 1<br>ATP299P | Cooper/<br>Eromanga | 26°55'17"<br>143°18'47"           | KB 177<br>GL 173      | 12-SEP-89<br>22-SEP-89 | 1327<br>1327                              | Cased and suspended as a<br>future Murta Mbr oil producer.                      | NFW<br>NFD          |
| BEACH<br>BINKEY BAY 1<br>ATP374P   | Surat               | 26°25'15"<br>150°14'55"           | KB 340<br>GL 335      | 06-OCT-89<br>10-OCT-89 | 806<br>806                                | Plugged and abandoned, dry.   | NFW<br>DRY          |
| BRIDGE<br>BOXLEIGH 6<br>PL15       | Bowen/<br>Surat     | 27°37'27"<br>149°3'50"            | KB 282<br>GL 227      | 15-MAR-89<br>26-MAR-89 | 1959<br>1959                              | Cased and suspended as a<br>future Showgrounds Sst<br>gas/condensate producer.  | EXT<br>EXT          |
| BRIDGE<br>LYNROCK 2<br>PL15        | Bowen/<br>Surat     | 27°25'27"<br>149°10'5"            | KB 293<br>GL 289      | 22-NOV-89<br>02-DEC-89 | 2165<br>2165                              | Plugged and converted to a<br>water well. Mnr hydrocarbons<br>observed in core. | NFW<br>DRY          |
| BRIDGE<br>TAYLOR 11<br>PL16        | Bowen/<br>Surat     | 27°33'30"<br>149°14'34"           | KB 347<br>GL 342      | 04-JAN-89<br>17-JAN-89 | 2095<br>2095                              | Cased and suspended as a<br>future Showgrounds Sst oil/<br>gas producer.        | EXT<br>EXT          |



Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                | BASIN           | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
|---------------------------------|-----------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| <b>QUEENSLAND (cont'd)</b>      |                 |                                   |                       |                        |   |   |                     |
| BRIDGE<br>TAYLOR 12<br>ATP145P  | Bowen/<br>Surat | 27°36'29"<br>149°14'46"           | KB 311<br>GL 306      | 21-JAN-89<br>02-FEB-89 | 2090<br>2090                              | Plugged and abandoned after<br>encountering no hydrocarbons.                          | EXT<br>DRY          |
| BRIDGE<br>TAYLOR 12A<br>ATP145P | Bowen/<br>Surat | 27°36'30"<br>149°14'46"           | KB 311<br>GL 306      | 05-FEB-89<br>19-FEB-89 | 2046<br>696                               | Cased and suspended as a<br>future Showgrounds Sst oil<br>producer.                   | DEV<br>DEV          |
| BRIDGE<br>TAYLOR 13<br>PL16     | Bowen/<br>Surat | 27°34'27"<br>149°12'24"           | KB 315<br>GL 311      | 06-OCT-89<br>20-OCT-89 | 2089<br>2089                              | Plugged and abandoned after<br>encountering no hydrocarbons.                          | EXT<br>DRY          |
| BRIDGE<br>TAYLOR 13A<br>PL16    | Bowen/<br>Surat | 27°34'27"<br>149°12'24"           | KB 315<br>GL 310      | 22-OCT-89<br>01-NOV-89 | 2089<br>494                               | Plugged and converted to a<br>water well.   | EXT<br>DRY          |
| BRIDGE<br>TAYLOR 14<br>PL16     | Bowen/<br>Surat | 27°32'17"<br>149°13'26"           | KB 330<br>GL 326      | 04-NOV-89<br>15-NOV-89 | 2106<br>2106                              | Plugged and completed as a<br>water well.   | EXT<br>DRY          |
| BRIDGE<br>TINKER 2<br>PL16      | Bowen/<br>Surat | 27°27'4"<br>149°16'20"            | KB 351<br>GL 347      | 22-FEB-89<br>10-MAR-89 | 2236<br>2236                              | Cased and suspended as a<br>future Rewan Fm gas/<br>condensate producer               | EXT<br>EXT          |
| BRIDGE<br>TINKER 3<br>PL16      | Bowen/<br>Surat | 27°27'44"<br>149°16'2"            | KB 324<br>GL 320      | 10-DEC-89<br>20-DEC-89 | 2227<br>2227                              | Cased and suspended as a<br>future Rewan Fm gas/<br>condensate producer.              | EXT<br>EXT          |
| CSR<br>BONY CREEK 18<br>PL10    | Bowen/<br>Surat | 26°44'19"<br>148°57'38"           | KB 315<br>GL 309      | 28-JAN-89<br>03-FEB-89 | 1400<br>1400                              | Cased and suspended as a<br>future Precipice Sst and<br>Showgrounds Sst gas producer. | DEV<br>DEV          |
| CSR<br>GRAFTON RANGE 21<br>PL4  | Bowen/<br>Surat | 26°24'15"<br>148°55'58"           | KB 465<br>GL 459      | 01-JAN-89<br>06-JAN-89 | 1097<br>1097                              | Cased and suspended as a<br>future Precipice Sst gas<br>producer.                     | DEV<br>DEV          |
| CSR<br>PLEASANT HILLS 22<br>PL4 | Bowen/<br>Surat | 26°22'42"<br>148°59'53"           | KB 409<br>GL 403      | 10-JAN-89<br>15-JAN-89 | 1135<br>1135                              | Cased and suspended as a<br>future Precipice Sst gas<br>producer.                     | DEV<br>DEV          |
| CSR<br>PLEASANT HILLS 23<br>PL4 | Bowen/<br>Surat | 26°24'32"<br>149°0'47"            | KB 411<br>GL 405      | 19-JAN-89<br>23-JAN-89 | 1071<br>1071                              | Cased and suspended as a<br>future Showgrounds Sst gas<br>producer.                   | DEV<br>DEV          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |                     |                                   |                       |                     |   |  |                     |
|--|---------------------|-----------------------------------|-----------------------|---------------------|---|--|---------------------|
| OPERATOR<br>WELL   | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
| QUEENSLAND (cont'd)  |                     |                                   |                       |                     |   |  |                     |
| COMMAND<br>DILKERA 2   | Cooper/<br>Eromanga | 27°44'45"                         | KB 105                | 26-JUL-89           | 1484                                      | Cased and suspended as a<br>future Westbourne Fm oil<br>producer.  | EXT                 |
| ATP267P  |                     | 142°37'40"                        | GL 99                 | 02-AUG-89           | 1484                                      |  | EXT                 |
| COMMAND<br>FAIRMOUNT 6   | Bowen/<br>Surat     | 28°1'54"                          | KB 255                | 29-MAR-89           | 2125                                      | Plugged and abandoned, dry.  | EXT                 |
| ATP377P  |                     | 149°19'31"                        | GL 249                | 09-APR-89           | 2125                                      |  | DEV                 |
| COMMAND<br>FAIRMOUNT 6A  | Bowen/<br>Surat     | 28°1'54"                          | KB 253                | 15-APR-89           | 2180                                      | Fairymount 6A is a deviated<br>hole from Fairymount 6 and was<br>cased and suspended as a future<br>oil producer.  | EXT                 |
| ATP377P  |                     | 149°19'31"                        | GL 249                | 26-APR-89           | 770                                       |  | DEV                 |
| COMMAND<br>FAIRMOUNT NORTH 1   | Bowen/<br>Surat     | 28°0'13"                          | KB 228                | 14-MAR-89           | 2071                                      | Plugged and abandoned, dry.  | NFW                 |
| ATP377P  |                     | 149°18'54"                        | GL 222                | 23-MAR-89           | 2071                                      |  | DRY                 |
| COMMAND<br>MAXWELL 3   | Cooper/<br>Eromanga | 27°53'23"                         | KB 128                | 05-AUG-89           | 932                                       | Cased and suspended as a<br>future Murta Mbr oil producer.   | EXT                 |
| ATP267P  |                     | 141°41'29"                        | GL 122                | 10-AUG-89           | 932                                       |  | EXT                 |
| COMMAND<br>MAXWELL SOUTH 1   | Cooper/<br>Eromanga | 27°54'24"                         | KB 119                | 09-SEP-89           | 1201                                      | Cased and suspended as a<br>future Murta Mbr oil producer.   | NFW                 |
| ATP267P  |                     | 142°40'35"                        | GL 113                | 15-SEP-89           | 1201                                      |  | NFD                 |
| COMMAND<br>MUTHERO 1   | Cooper/<br>Eromanga | 27°42'45"                         | KB 130                | 17-AUG-89           | 1451                                      | Cased and suspended as a<br>future Murta Mbr and<br>Birkhead Fm oil producer.                                      | NFW                 |
| ATP267P  |                     | 142°36'34"                        | GL 124                | 25-AUG-89           | 1451                                      |  | NFD                 |
| COMMAND<br>MYRTLEMOUNT 1   | Bowen/<br>Surat     | 27°59'59"                         | KB 239                | 28-FEB-89           | 1991                                      | Plugged and abandoned, dry.  | NFW                 |
| ATP377P  |                     | 149°17'20"                        | GL 234                | 09-MAR-89           | 1991                                      |  | DRY                 |
| COMMAND<br>WINNA 3   | Eromanga            | 27°43'55"                         | KB 129                | 02-SEP-89           | 1076                                      | Cased and suspended as a<br>future Murta Mbr oil producer.   | EXT                 |
| ATP267P  |                     | 142°33'11"                        | GL 124                | 04-SEP-89           | 1076                                      |  | EXT                 |
| DELHI<br>BOWEN 1   | Cooper/<br>Eromanga | 27°54'40"                         | KB 72                 | 20-DEC-89           | 1821                                      | Cased and suspended as a<br>future oil producer from the<br>Namur Sst, Westbourne Fm,<br>Hutton Sst and Adori Sst. | NFW                 |
| ATP259P  |                     | 142°2'56"                         | GL 67                 | 29-DEC-89           | 1821                                      |  | NFD                 |
| DELHI<br>CORELLA 1   | Cooper/<br>Eromanga | 27°48'16"                         | KB 76                 | 16-SEP-89           | 1856                                      | Cased and suspended as a<br>future Hutton Sst oil producer.  | NFW                 |
| ATP259P  |                     | 142°10'7"                         | GL 71                 | 22-SEP-89           | 1856                                      |  | NFD                 |
| DELHI<br>ECHUBURRA NORTH 1   | Cooper/<br>Eromanga | 27°49'34"                         | KB 78                 | 17-OCT-89           | 1839                                      | Plugged and abandoned, dry.  | NFW                 |
| ATP259P  |                     | 142°11'47"                        | GL 73                 | 23-OCT-89           | 1839                                      |  | DRY                 |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |                      |                                   |                       |                        |   |   |                     |
|--|----------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| OPERATOR<br>WELL   | BASIN                | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS                                      | CLASSIFI-<br>CATION |
| QUEENSLAND (cont'd)  |                      |                                   |                       |                        |   |   |                     |
| DELHI<br>GIDGEE 1<br>ATP259P   | Cooper/<br>Eromanga  | 28°31'9"<br>141°8'0"              | KB 117<br>GL 112      | 25-JUL-89<br>31-JUL-89 | 1631<br>1631                              | Cased and suspended as a<br>future Hutton Sst oil producer. | NFW<br>NFD          |
| DELHI<br>GIDGEE 2<br>ATP259P   | Cooper/<br>Eromanga  | 28°30'50"<br>141°7'45"            | KB 117<br>GL 112      | 24-NOV-89<br>02-DEC-89 | 1636<br>1636                              | Plugged and abandoned, dry.                                 | EXT<br>DRY          |
| DELHI<br>MAHL 1<br>ATP259P   | Cooper/<br>Eromanga  | 27°17'59"<br>141°19'46"           | KB 202<br>GL 198      | 23-NOV-89<br>20-DEC-89 | 2879<br>2879                              | Plugged and abandoned.<br>Recovered oil from the Triassic.  | NFW<br>NFD          |
| DELHI<br>MOOLIAMPAH 2<br>ATP259P   | Cooper/<br>Eromanga  | 28°19'58"<br>141°16'52"           | KB 136<br>GL 131      | 03-MAY-89<br>11-MAY-89 | 1798<br>1798                              | Cased and suspended as a<br>future Namur Sst oil producer.  | EXT<br>EXT          |
| MUNRO 4<br>ATP259P   | Cooper/<br>Eromanga  | 28°32'14"<br>141°12'10"           | KB 127<br>GL 122      | 16-NOV-89<br>20-NOV-89 | 1526<br>1526                              | Plugged and abandoned, dry.                                 | EXT<br>DRY          |
| DELHI<br>NACCOWLAH 2<br>PL25   | Cooper/<br>Eromanga  | 27°29'9"<br>142°8'11"             | KB 101<br>GL 95       | 01-JUL-89<br>15-JUL-89 | 2201<br>2201                              | Cased and suspended as a<br>future Murta Mbr oil producer.  | NFW<br>NFD          |
| DELHI<br>ORIENTOS 2<br>ATP259P   | Cooper/<br>Eromanga  | 28°2'58"<br>141°25'36"            | KB 140<br>GL 135      | 11-DEC-89<br>18-DEC-89 | 1589<br>1589                              | Cased and suspended as a<br>future Murta Mbr oil producer.  | NFW<br>NFD          |
| DELHI<br>PARAGILGA 1<br>ATP259P  | Cooper/<br>Eromanga  | 28°32'54"<br>141°4'19"            | KB 113<br>GL 108      | 06-AUG-89<br>12-AUG-89 | 1511<br>1511                              | Plugged and abandoned, dry.                                 | NFW<br>DRY          |
| DELHI<br>PINAROO 1<br>ATP259P  | Cooper/<br>Eromanga  | 28°9'4"<br>141°59'52"             | KB 87<br>GL 81        | 17-AUG-89<br>24-AUG-89 | 1850<br>1850                              | Cased and suspended as a<br>future Hutton Sst oil producer. | NFW<br>NFD          |
| DELHI<br>WANDILO 1<br>ATP259P  | Cooper/<br>Eromanga  | 28°4'12"<br>142°1'34"             | KB 82<br>GL 77        | 01-SEP-89<br>07-SEP-89 | 1793<br>1793                              | Cased and suspended as a<br>future Hutton Sst oil producer. | NFW<br>NFD          |
| DELHI<br>WANDILO 2<br>ATP259P  | Cooper/<br>Eromanga  | 28°4'6"<br>142°1'17"              | KB 79<br>GL 74        | 01-OCT-89<br>08-OCT-89 | 1748<br>1748                              | Cased and suspended as a<br>future Hutton Sst oil producer. | EXT<br>EXT          |
| DELHI<br>YANBEE 1<br>ATP259P   | Cooper/<br>Eromanga  | 26°50'3"<br>141°1'3"              | KB 91<br>GL 86        | 31-OCT-89<br>16-NOV-89 | 2592<br>2592                              | Plugged and abandoned, dry.                                 | NFW<br>DRY          |
| GSQ<br>GSQ LONGREACH 1<br>ATP166P  | Eromanga/<br>Galilee | 23°6'60"<br>144°34'60"            | KB na<br>GL na        | 19-AUG-89<br>03-NOV-89 | 1297<br>1341                              | Plugged and abandoned, dry.                                 | STR<br>DRY          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                    | BASIN                | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS                                      | CLASSIFI-<br>CATION |
|-------------------------------------|----------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| <b>QUEENSLAND (cont'd)</b>          |                      |                                   |                       |                        |   |   |                     |
| GSQ<br>GSQ MANEROO 1<br>ATP271P     | Eromanga             | 23°22'60"<br>143°27'60"           | KB na<br>GL na        | 16-NOV-89<br>-         | -<br>623                                  | Temporarily suspended.                                      | STR<br>-            |
| HARTOGEN<br>BERANGA 1<br>ATP375P    | Bowen/<br>Surat      | 27°4'28"<br>149°2'6"              | KB 79<br>GL 77        | 23-SEP-89<br>10-OCT-89 | 1849<br>1849                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| HARTOGEN<br>LETHBRIDGE 1<br>PL22    | Bowen/<br>Surat      | 27°5'50"<br>148°55'39"            | KB 315<br>GL 311      | 16-OCT-89<br>26-OCT-89 | 1652<br>1652                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| LASMO<br>ALBILBAH 1<br>ATP269(2)P   | Eromanga/<br>Adavale | 24°48'26"<br>144°14'34"           | KB 284<br>GL 279      | 09-MAY-89<br>21-MAY-89 | 1886<br>1886                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| LASMO<br>DEVONDALE 1<br>ATP261P     | Bowen/<br>Surat      | 26°57'5"<br>150°34'44"            | KB 340<br>GL 335      | 24-AUG-89<br>31-AUG-89 | 1131<br>1131                              | Plugged and abandoned, dry.                                 | NFW<br>DRY          |
| LASMO<br>EROUNGHOOLA 1<br>ATP269(2) | Eromanga             | 26°43'27"<br>143°20'26"           | KB 158<br>GL 153      | 28-NOV-89<br>06-DEC-89 | 1612<br>1612                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| LASMO<br>FINNISH 1<br>ATP269P       | Cooper/<br>Eromanga  | 26°47'56"<br>143°14'23"           | RT 203<br>GL 198      | 21-JUL-89<br>31-JUL-89 | 1539<br>1539                              | Plugged and abandoned, dry.                                 | NFW<br>DRY          |
| LASMO<br>KENMORE 11<br>PL32         | Cooper/<br>Eromanga  | 26°39'7"<br>143°25'60"            | KB 177<br>GL 172      | 07-JUL-89<br>13-JUL-89 | 1460<br>1460                              | Completed as a Hutton Sst<br>oil producer.                  | EXT<br>EXT          |
| LASMO<br>STONEHENGE 1<br>ATP268P    | Eromanga             | 23°58'21"<br>143°11'25"           | KB 201<br>GL 196      | 04-JAN-89<br>15-JAN-89 | 1683<br>1683                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| LASMO<br>UPSHOT 1<br>ATP268P        | Eromanga             | 23°56'60"<br>143°24'17"           | KB 170<br>GL 164      | 21-JAN-89<br>28-JAN-89 | 1144<br>1144                              | Plugged and converted to a<br>water well.                   | NFW<br>DRY          |
| SANTOS<br>CHOOKOO 7<br>ATP259P      | Cooper/<br>Eromanga  | 27°33'25"<br>142°8'26"            | KB 88<br>GL 83        | 30-DEC-88<br>08-JAN-89 | 1932<br>1478                              | Cased and suspended as a<br>future Hutton Sst oil producer  | DEV<br>DEV          |
| SANTOS<br>CHOOKOO 8<br>PL26         | Cooper/<br>Eromanga  | 27°33'38"<br>147°7'38"            | KB 84<br>GL 78        | 21-NOV-89<br>04-DEC-89 | 1889<br>1889                              | Cased and suspended as a<br>future Hutton Sst oil producer. | DEV<br>DEV          |
| SANTOS<br>COOROO 4<br>PL36          | Cooper/<br>Eromanga  | 27°43'10"<br>142°17'28"           | KB 82<br>GL 77        | 04-JUL-89<br>13-JUL-89 | 1917<br>1917                              | Cased and suspended as a<br>future Hutton Sst oil producer. | DEV<br>DEV          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                     | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
|--------------------------------------|---------------------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| <b>QUEENSLAND (cont'd)</b>           |                     |                                   |                       |                        |   |  |                     |
| SANTOS<br>COOROO 5<br>PL36           | Cooper/<br>Eromanga | 27°42'59"<br>142°17'9"            | KB 84<br>GL 78        | 30-OCT-89<br>05-NOV-89 | 1905<br>1905                              | Cased and suspended as a<br>future Hutton Sst and<br>Birkhead Fm oil producer.             | DEV                 |
| SANTOS<br>JACKSON 36<br>PL23         | Cooper/<br>Eromanga | 27°36'4"<br>142°25'19"            | KB 121<br>GL 116      | 22-MAY-89<br>27-MAY-89 | 1542<br>1542                              | Cased and suspended as a<br>future Westbourne Fm and<br>Hutton Sst oil producer.           | DEV<br>DEV          |
| SANTOS<br>JACKSON SOUTH 8<br>PL24    | Cooper/<br>Eromanga | 27°39'12"<br>142°25'26"           | KB 104<br>GL 99       | 02-FEB-89<br>06-FEB-89 | 1531<br>1531                              | Cased and suspended as a<br>future Westbourne Fm and<br>Hutton Sst oil producer.           | DEV<br>DEV          |
| SANTOS<br>MOOLIAMPAH 3<br>ATP259P    | Cooper/<br>Eromanga | 28°19'42"<br>141°16'59"           | KB 139<br>GL 134      | 27-DEC-89<br>-         | -<br>311                                  | Drilling ahead.  | DEV<br>-            |
| SANTOS<br>NACCOWLAH SOUTH 12<br>PL25 | Cooper/<br>Eromanga | 27°31'43"<br>142°5'48"            | KB 81<br>GL 75        | 14-JAN-89<br>23-JAN-89 | 1911<br>1911                              | Cased and suspended as a<br>future Hutton Sst and<br>Toolachee Fm oil and gas<br>producer. | DEV<br>NPD          |
| SANTOS<br>NACCOWLAH SOUTH 13<br>PL25 | Cooper/<br>Eromanga | 27°31'37"<br>142°6'16"            | KB 89<br>GL 84        | 20-JUN-89<br>27-JUN-89 | 1957<br>1957                              | Cased and suspended as a<br>future Hutton Sst oil producer.                                | DEV<br>DEV          |
| SANTOS<br>NACCOWLAH SOUTH 14<br>PL25 | Cooper/<br>Eromanga | 27°31'21"<br>142°5'29"            | KB 80<br>GL 75        | 02-JUN-89<br>14-JUN-89 | 1945<br>1945                              | Plugged and abandoned , dry.   | DEV<br>DRY          |
| SANTOS<br>NACCOWLAH WEST 9<br>PL25   | Cooper/<br>Eromanga | 27°31'29"<br>142°6'56"            | KB 84<br>GL 78        | 05-NOV-89<br>13-NOV-89 | 1904<br>1904                              | Cased and suspended as a<br>future Hutton Sst oil producer.                                | DEV<br>DEV          |
| SANTOS<br>WATSON SOUTH 3<br>PL35     | Cooper/<br>Eromanga | 28°8'2"<br>142°2'53"              | KB 86<br>GL 81        | 09-DEC-89<br>16-DEC-89 | 1714<br>1714                              | Plugged and abandoned.<br>Recovered 168m of oil.   | DEV<br>DEV          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL | BASIN | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS | CLASSIFI-<br>CATION |
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|

**QUEENSLAND (cont'd)****METRES DRILLED**

| WELLS       | ONSHORE | OFFSHORE | TOTAL   |
|-------------|---------|----------|---------|
| EXPLORATION | 83 936  | -        | 83 936  |
| DEVELOPMENT | 29 080  | -        | 29 080  |
| TOTAL       | 113 016 | -        | 113 016 |

**NEW SOUTH WALES****NO DRILLING ACTIVITY**

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |           |                                   |                       |                        |   |  |                     |
|--|-----------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| OPERATOR<br>WELL   | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
| VICTORIA   |           |                                   |                       |                        |   |  |                     |
| ESSO<br>ADMIRAL 1<br>Vic/P19   | Gippsland | 38°9'12"<br>148°38'51"            | KB 21<br>WD 101       | 21-NOV-89<br>04-DEC-89 | 1850<br>1850                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| ESSO<br>BLACKBACK 1<br>Vic/P24   | Gippsland | 38°33'3"<br>148°33'43"            | KB 21<br>WD 418       | 25-MAR-89<br>29-JUN-89 | 4401<br>5451                              | Plugged and abandoned as an extension to the Hapuku field and a deep pool oil discovery. | EXT<br>DPD          |
| ESSO<br>BREAM A 2<br>Vic/L13   | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 19-JUL-89<br>27-JUL-89 | 2089<br>2089                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 4<br>Vic/L13   | Gippsland | 38°30'5"<br>147°46'16"            | KB 34<br>WD 60        | 18-SEP-89<br>11-NOV-89 | 2845<br>5217                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 6<br>Vic/L13   | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 08-FEB-89<br>18-FEB-89 | 2138<br>2138                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 8<br>Vic/L13   | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 16-DEC-88<br>12-JAN-89 | 3093<br>433                               | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 9<br>Vic/L13   | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 18-FEB-89<br>28-FEB-89 | 1166<br>2527                              | Plugged and abandoned, mechanical problems.  | EXT<br>DRY          |
| ESSO<br>BREAM A 10<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 01-MAY-89<br>26-MAY-89 | 3302<br>3302                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 15<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 24-JUN-89<br>12-JUL-89 | 2215<br>2215                              | Completed as a gas injection well.   | DEV<br>SRV          |
| ESSO<br>BREAM A 17<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 04-MAR-89<br>29-MAR-89 | 3244<br>3244                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 18<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | KB 34<br>WD 60        | 17-NOV-89<br>26-NOV-89 | 2333<br>2333                              | Completed as a future oil producer.  | DEV<br>DEV          |
| ESSO<br>BREAM A 21<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 30-JUL-89<br>03-SEP-89 | 2937<br>2937                              | Completed as a future oil producer.  | DEV<br>DEV          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |           |                                   |                       |                        |   |  |                     |
|--|-----------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| OPERATOR<br>WELL   | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
| VICTORIA (cont'd)  |           |                                   |                       |                        |   |  |                     |
| ESSO<br>BREAM A 26<br>Vic/L13  | Gippsland | 38°30'5"<br>147°46'16"            | RT 34<br>WD 60        | 22-DEC-89<br>-         | -<br>1640                                 | Drilling ahead.  | DEV<br>-            |
| ESSO<br>CONGER 1<br>Vic/P26  | Gippsland | 38°21'27"<br>148°3'47"            | KB 21<br>WD 64        | 25-FEB-89<br>14-MAR-89 | 2970<br>2970                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| ESSO<br>DOLPHIN 2<br>Vic/L15   | Gippsland | 38°29'20"<br>147°22'34"           | KB 42<br>WD 38        | 21-OCT-89<br>26-OCT-89 | 1421<br>1421                              | Completed for future oil<br>production from monotower<br>facility. | DEV<br>DEV          |
| ESSO<br>FORTESCUE A 8C<br>Vic/L 5  | Gippsland | 38°24'32"<br>148°16'37"           | KB 35<br>WD 69        | 20-APR-89<br>05-MAY-89 | 3300<br>3300                              | Completed as a future oil<br>producer.                             | DEV<br>DEV          |
| ESSO<br>FORTESCUE A 15A<br>Vic/L 5&6   | Gippsland | 38°24'32"<br>148°16'37"           | KB 35<br>WD 69        | 22-MAY-89<br>16-JUN-89 | 3663<br>3663                              | Completed as a future oil<br>producer.                             | DEV<br>DEV          |
| ESSO<br>HARLEQUIN 1<br>Vic/P1  | Gippsland | 38°12'1"<br>147°42'28"            | KB 21<br>WD 44        | 06-JAN-89<br>01-FEB-89 | 2575<br>2575                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| ESSO<br>MULLOWAY 1<br>Vic/P27  | Gippsland | 38°19'24"<br>147°29'2"            | KB 21<br>WD 37        | 08-FEB-89<br>19-FEB-89 | 1721<br>1721                              | Cased and suspended as a<br>future Latrobe oil producer.           | NFW<br>NFD          |
| ESSO<br>PERCH 3<br>Vic/P25   | Gippsland | 38°29'14"<br>147°19'17"           | KB 43<br>WD 42        | 10-OCT-89<br>14-OCT-89 | 1332<br>1332                              | Cased and suspended as a<br>future Latrobe oil producer.           | DEV<br>DEV          |
| ESSO<br>SWEETLIPS 1<br>Vic/L10   | Gippsland | 38°5'47"<br>148°2'9"              | KB 21<br>WD 52        | 26-JUL-89<br>18-AUG-89 | 1728<br>2780                              | Plugged and abandoned as a<br>uneconomic oil/gas discovery.        | NFW<br>NFD          |
| ESSO<br>TRUMPETER 1<br>Vic/L 5   | Gippsland | 38°24'49"<br>148°20'57"           | KB 21<br>WD 85        | 08-SEP-89<br>05-OCT-89 | 3465<br>3465                              | Plugged and abandoned, dry   | NFW<br>DRY          |
| ESSO<br>WHITING A 2<br>Vic/L 2   | Gippsland | 38°14'30"<br>147°52'21"           | RT 46<br>WD 53        | 05-JUL-89<br>13-JUL-89 | 2415<br>2415                              | Cased and suspended as a<br>future Latrobe oil producer.           | DEV<br>DEV          |
| ESSO<br>WHITING A 3<br>Vic/L 2   | Gippsland | 38°14'30"<br>147°52'21"           | RT 46<br>WD 53        | 02-AUG-89<br>10-AUG-89 | 2145<br>2145                              | Cased and suspended as a<br>future Latrobe Fm oil producer.        | DEV<br>DEV          |



Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL | BASIN | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS | CLASSIFI-<br>CATION |
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|

**VICTORIA (cont'd)**

|                                       |           |                         |                 |                        |              |  |            |
|---------------------------------------|-----------|-------------------------|-----------------|------------------------|--------------|--|------------|
| ESSO<br>WHITTING A 5<br>Vic/L 2       | Gippsland | 38°14'30"<br>147°52'21" | RT 46<br>WD 53  | 28-AUG-89<br>13-SEP-89 | 2896<br>4196 | Cased and suspended as a<br>future Latrobe Fm oil producer.                | DEV<br>DEV |
| ESSO<br>WHITTING A 6<br>Vic/L 2       | Gippsland | 38°14'30"<br>147°52'21" | RT 46<br>WD 53  | 11-AUG-89<br>22-AUG-89 | 2921<br>2921 | Completed as a gas injection<br>well.                                      | DEV<br>SRV |
| ESSO<br>WHITTING A 7<br>Vic/L 2       | Gippsland | 38°14'30"<br>147°52'21" | RT 46<br>WD 53  | 17-JUL-89<br>31-JUL-89 | 3120<br>3120 | Cased and suspended as a<br>future Latrobe Fm oil producer.                | DEV<br>DEV |
| GAS AND FUEL<br>MCEACHERN 1<br>PEP119 | Otway     | 37°33'51"<br>141°11'26" | KB na<br>GL 76  | 19-DEC-89<br>-         | -<br>2084    | Drilling ahead.  | NFW<br>-   |
| MINORA<br>WINDERMERE 2<br>PEP111      | Otway     | 38°14'11"<br>142°1'20"  | KB 52<br>GL 49  | 09-MAR-89<br>13-APR-89 | 3595<br>3595 | Plugged and abandoned, mnr<br>gas shows.                                   | EXT<br>DRY |
| PETROFINA<br>ANEMONE 1<br>Vic/P20     | Gippsland | 38°45'52"<br>148°19'49" | KB 27<br>WD 231 | 29-MAY-89<br>04-SEP-89 | 4775<br>5483 | Plugged and abandoned as a<br>non-commercial gas/condensate<br>discovery.  | NFW<br>NFD |
| PETROFINA<br>ANGLER 1<br>Vic/P20      | Gippsland | 38°39'35"<br>148°26'29" | KB 27<br>WD 274 | 24-MAR-89<br>13-MAY-89 | 4330<br>4330 | Plugged and abandoned as a<br>non-commercial gas/<br>condensate discovery. | NFW<br>NFD |
| SHELL<br>JUDITH 1<br>Vic/P11          | Gippsland | 38°9'18"<br>148°33'20"  | KB 21<br>WD 76  | 14-OCT-89<br>14-NOV-89 | 2958<br>2958 | Plugged and abandoned, dry.  | NFW<br>DRY |
| SHELL<br>SHARK 1<br>Vic/P22           | Gippsland | 38°15'35"<br>149°3'7"   | KB 27<br>WD 348 | 25-OCT-89<br>28-NOV-89 | 3518<br>3518 | Plugged and abandoned, dry.  | NFW<br>DRY |

**METRES DRILLED**

| WELLS        | ONSHORE      | OFFSHORE      | TOTAL         |
|--------------|--------------|---------------|---------------|
| EXPLORATION  | 5 679        | 39 628        | 45 307        |
| DEVELOPMENT  | -            | 50 061        | 50 061        |
| <b>TOTAL</b> | <b>5 679</b> | <b>89 689</b> | <b>95 368</b> |

**TASMANIA****NO DRILLING ACTIVITY**

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                     | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
|--------------------------------------|---------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| <b>SOUTH AUSTRALIA</b>               |                     |                                   |                       |                        |   |   |                     |
| CULTUS<br>COPA 1<br>EPP23            | Otway               | 37 41' 18"<br>139 45' 21"         | KB 27<br>WD 93        | 16-DEC-89<br>-         | -<br>2317                                 | Drilling ahead.   | NFW<br>-            |
| HARTOGEN<br>BOOL LAGOON 1<br>PEL 27  | Otway               | 37°8'47"<br>140°37'56"            | KB 169<br>GL 164      | 10-NOV-89<br>15-NOV-89 | 782<br>782                                | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>ALWYN 3<br>PPL36           | Cooper/<br>Eromanga | 28°29'38"<br>140°19'41"           | KB 35<br>GL 30        | 29-AUG-89<br>07-SEP-89 | 1302<br>1302                              | Cased and suspended as a<br>MacKinlay Mbr and Murta Mbr.<br>oil producer.       | EXT<br>NPD          |
| SANTOS<br>AMYEMA 1<br>PPL13          | Cooper/<br>Eromanga | 28°22'55"<br>140°56'30"           | KB 91<br>GL 85        | 14-MAY-89<br>27-MAY-89 | 2403<br>2403                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.              | NFW<br>NFD          |
| SANTOS<br>ARABURG 1<br>PEL 5,6       | Cooper/<br>Eromanga | 26°25'44"<br>140°57'44"           | KB 180<br>GL 175      | 14-FEB-89<br>01-MAR-89 | 2395<br>2395                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>ARRAKIS NORTH 1<br>PEL 5,6 | Cooper/<br>Eromanga | 28°10'46"<br>139°58'42"           | KB 40<br>GL 34        | 03-JAN-89<br>22-JAN-89 | 2492<br>2492                              | Cased and suspended as a<br>future Epsilon Fm gas<br>producer.                  | NFW<br>NFD          |
| SANTOS<br>ATREIDES 1<br>PEL 5,6      | Cooper/<br>Eromanga | 28°14'23"<br>139°58'20"           | KB 32<br>GL 27        | 12-OCT-89<br>24-OCT-89 | 2289<br>2289                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.              | NFW<br>NFD          |
| SANTOS<br>BIG LAKE 45<br>PPL11       | Cooper/<br>Eromanga | 28°17'37"<br>140°14'32"           | KB 44<br>GL 39        | 23-JUL-89<br>10-AUG-89 | 2719<br>2719                              | Cased and suspended as a<br>future Toolachee Fm and<br>Epsilon Fm gas producer. | EXT<br>EXT          |
| SANTOS<br>BIG LAKE 46<br>PPL11       | Cooper/<br>Eromanga | 28°11'17"<br>140°21'18"           | KB 41<br>GL 36        | 12-AUG-89<br>08-SEP-89 | 3075<br>3075                              | Cased and suspended as a<br>future Toolachee Fm gas<br>producer.                | EXT<br>EXT          |
| SANTOS<br>BIG LAKE 47<br>PPL11       | Cooper/<br>Eromanga | 28°17'9"<br>140°13'45"            | KB 43<br>GL 38        | 17-NOV-89<br>05-DEC-89 | 2708<br>2708                              | Cased and suspended as a<br>future Toolachee Fm gas<br>producer.                | EXT<br>EXT          |
| SANTOS<br>BRUMBY 5<br>PPL13          | Cooper/<br>Eromanga | 28°24'4"<br>140°58'8"             | KB 87<br>GL 81        | 23-JUL-89<br>04-AUG-89 | 2368<br>2368                              | Plugged and abandoned, dry.   | EXT<br>DRY          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |                     |                                   |                       |                        |   |   |                     |
|--|---------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| OPERATOR<br>WELL   | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
| SOUTH AUSTRALIA (cont'd)   |                     |                                   |                       |                        |   |   |                     |
| SANTOS<br>BUCKINNA 2<br>PEL 5,6  | Cooper/<br>Eromanga | 28°24'3"<br>140°28'38"            | KB 45<br>GL 40        | 10-OCT-89<br>17-OCT-89 | 1655<br>1655                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>BUNGEE 2<br>PEL 5,6  | Cooper/<br>Eromanga | 28°29'24"<br>140°8'52"            | KB 33<br>GL 27        | 19-SEP-89<br>03-OCT-89 | 2527<br>2527                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.            | EXT<br>EXT          |
| SANTOS<br>CHELTON NORTH 1<br>PEL 5,6   | Cooper/<br>Eromanga | 28°10'50"<br>139°32'3"            | KB 25<br>GL 20        | 30-SEP-89<br>06-OCT-89 | 1754<br>1754                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>COWRALLI 3<br>PEL 5,6  | Cooper/<br>Eromanga | 27°53'11"<br>140°1'15"            | KB 38<br>GL 34        | 04-APR-89<br>29-APR-89 | 3305<br>3305                              | Plugged and abandoned, dry.   | EXT<br>DRY          |
| SANTOS<br>DERAMOOKOO 1<br>EL 5,6   | Cooper/<br>Eromanga | 27°10'5"<br>140°33'21"            | KB 38<br>GL 34        | 02-OCT-89<br>25-OCT-89 | 2647<br>2647                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>DULLINGARI 45<br>PPL12   | Cooper/<br>Eromanga | 28°8'50"<br>140°51'37"            | KB 88<br>GL 82        | 11-MAY-89<br>01-JUN-89 | 2872<br>2872                              | Plugged and abandoned, dry.   | EXT<br>DRY          |
| SANTOS<br>GIDGEALPA 34<br>PPL6   | Cooper/<br>Eromanga | 28°2'2"<br>139°59'58"             | KB 37<br>GL 31        | 07-FEB-89<br>16-FEB-89 | 2265<br>2265                              | Cased and suspended as a<br>future Tirrawarra Sst gas<br>producer.            | EXT<br>EXT          |
| SANTOS<br>GIDGEALPA 35<br>PPL6   | Cooper/<br>Eromanga | 28°0'42"<br>140°2'3"              | KB 37<br>GL 32        | 26-APR-89<br>15-MAY-89 | 2316<br>2316                              | Cased and suspended as a<br>future Toolachee Fm gas<br>producer.              | EXT<br>EXT          |
| SANTOS<br>GIDGEALPA 36<br>PPL6   | Cooper/<br>Eromanga | 28°1'10"<br>139°59'27"            | KB 34<br>GL 29        | 21-OCT-89<br>02-NOV-89 | 2390<br>2390                              | Cased and suspended as a<br>future Patchawarra Fm<br>gas/condensate producer. | DEV<br>DEV          |
| SANTOS<br>GIDGEALPA 37<br>PPL6   | Cooper/<br>Eromanga | 28°1'2"<br>139°59'39"             | KB 35<br>GL 29        | 06-DEC-89<br>12-DEC-89 | 1892<br>1892                              | Cased and suspended as a<br>future oil producer.                              | DEV<br>DEV          |
| SANTOS<br>GOORANIE 3<br>PEL 5,6  | Cooper/<br>Eromanga | 27°44'22"<br>140°5'59"            | KB 53<br>GL 48        | 10-JAN-89<br>03-FEB-89 | 3135<br>3135                              | Plugged and abandoned, dry.   | EXT<br>DRY          |
| SANTOS<br>JENA 3<br>PPL36  | Cooper/<br>Eromanga | 28°31'26"<br>140°19'29"           | KB 40<br>GL 35        | 11-AUG-89<br>16-AUG-89 | 1286<br>1286                              | Cased and suspended as a<br>future Murta Mbr oil producer.                    | EXT<br>EXT          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |                     |                                   |                       |                        |   |   |                     |
|--|---------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| OPERATOR<br>WELL   | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
| SOUTH AUSTRALIA (cont'd)   |                     |                                   |                       |                        |   |   |                     |
| SANTOS<br>JENA 4<br>PPL36  | Cooper/<br>Eromanga | 28°30'39"<br>140°18'11"           | KB 37<br>GL 31        | 21-AUG-89<br>24-AUG-89 | 1276<br>1276                              | Cased and suspended as a<br>future McKinlay Mbr and<br>Murta Mbr oil producer.                          | DEV<br>DEV          |
| SANTOS<br>JENA 5<br>PPL36  | Cooper/<br>Eromanga | 28°30'58"<br>140°18'24"           | KB 35<br>GL 30        | 07-SEP-89<br>13-SEP-89 | 1578<br>1578                              | Cased and suspended as a<br>future McKinlay Mbr oil<br>producer. Recovered 9m oil<br>from Courikiana Fm | DEV<br>NPD          |
| SANTOS<br>JENA 6<br>PPL36  | Cooper/<br>Eromanga | 28° 31' 25"<br>140°18'35"         | KB 38<br>GL 33        | 29-DEC-89<br>-         | 601                                       | Drilling ahead.   | DEV<br>-            |
| SANTOS<br>KEENA 2<br>PEL 5,6   | Cooper/<br>Eromanga | 28°12'11"<br>139°53'27"           | KB 37<br>GL 33        | 28-AUG-89<br>07-SEP-89 | 2009<br>2009                              | Cased and suspended as a<br>future Patchawarra Fm<br>gas/condensate producer.                           | EXT<br>NPD          |
| SANTOS<br>KURUNDA 4<br>PPL6  | Cooper/<br>Eromanga | 28°4'38"<br>139°55'23"            | KB 31<br>GL 27        | 10-JUN-89<br>22-JUN-89 | 2658<br>2658                              | Cased and suspended as a<br>future Patchawarra Fm and<br>Tirrawarra Sst gas producer.                   | EXT<br>EXT          |
| SANTOS<br>LYCIUM 1<br>PEL 5,6  | Cooper/<br>Eromanga | 28°1'52"<br>139°31'10"            | KB 26<br>GL 22        | 22-AUG-89<br>04-SEP-89 | 2250<br>2250                              | Plugged and converted to a<br>water well. Recovered 206m<br>oil from Patchawarra Fm.                    | NFW<br>NFD          |
| SANTOS<br>MARSILEA 1<br>PPL13  | Cooper/<br>Eromanga | 28°21'15"<br>140°56'17"           | KB 91<br>GL 85        | 17-APR-89<br>04-MAY-89 | 2489<br>2489                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.                                      | NFW<br>NFD          |
| SANTOS<br>MERRIMELIA 27<br>PPL17   | Cooper/<br>Eromanga | 27°44'35"<br>140°10'39"           | KB 52<br>GL 47        | 08-NOV-89<br>15-NOV-89 | 1965<br>1965                              | Plugged and abandoned, dry.   | DEV<br>DRY          |
| SANTOS<br>MERRIMELIA 28<br>PPL17   | Cooper/<br>Eromanga | 27°45'56"<br>140°9'6"             | KB 42<br>GL 36        | 23-NOV-89<br>28-NOV-89 | 1936<br>1936                              | Plugged and abandoned, dry.   | EXT<br>DRY          |
| SANTOS<br>METTIKA 1<br>PPL24   | Cooper/<br>Eromanga | 28°19'58"<br>140°57'37"           | KB 89<br>GL 83        | 12-JAN-89<br>02-FEB-89 | 2481<br>2481                              | Cased and suspended as a<br>future Patchawarra Fm<br>gas/condensate producer.                           | NFW<br>NFD          |
| SANTOS<br>METTIKA 2<br>PEL 5,6   | Cooper/<br>Eromanga | 28°20'41"<br>140°57'51"           | KB 80<br>GL 74        | 08-JUN-89<br>26-JUN-89 | 2554<br>2554                              | Cased and suspended as a<br>future Patchawarra Fm<br>gas/condensate producer.                           | EXT<br>EXT          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                        | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
|---|---------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| <b>SOUTH AUSTRALIA (cont'd)</b>         |                     |                                   |                       |                        |   |   |                     |
| SANTOS<br>METTIKA 3<br>PEL 5,6          | Cooper/<br>Eromanga | 28°19'1"<br>140°57'44"            | KB 84<br>GL 78        | 21-JUL-89<br>03-AUG-89 | 2544<br>2544                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.                                      | EXT<br>EXT          |
| SANTOS<br>MOOMBA 62<br>PPL8             | Cooper/<br>Eromanga | 28°7'14"<br>140°11'27"            | KB 39<br>GL 34        | 14-DEC-88<br>12-JAN-89 | 2975<br>607                               | Plugged and abandoned after<br>encountering minor gas in the<br>Patchawarra Fm.                         | EXT<br>EXT          |
| SANTOS<br>MOOMBA 63<br>PPL7             | Cooper/<br>Eromanga | 28°2'52"<br>149°9'4"              | KB 37<br>GL 32        | 14-OCT-89<br>08-NOV-89 | 2935<br>2935                              | Cased and suspended as a<br>future Daralingie Fm,<br>Patchawarra Fm and Tirrawarra<br>Sst gas producer. | EXT<br>EXT          |
| SANTOS<br>MUDERA 4<br>PEL 5,6           | Cooper/<br>Eromanga | 28°10'27"<br>140°34'10"           | KB 44<br>GL 38        | 23-FEB-89<br>08-MAR-89 | 2499<br>2499                              | Plugged and abandoned, dry.   | EXT<br>DRY          |
| SANTOS<br>MULKARRA WEST 1<br>PEL 5,6    | Cooper/<br>Eromanga | 27°51'41"<br>138°40'2"            | KB 33<br>GL 28        | 01-FEB-89<br>06-FEB-89 | 1287<br>1287                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| SANTOS<br>MUTEROO 5<br>PPL32            | Cooper/<br>Eromanga | 28°8'7"<br>139°53'35"             | KB 47<br>GL 42        | 15-FEB-89<br>24-FEB-89 | 2018<br>2018                              | Cased and suspended as a<br>future Hutton Sst oil producer.   | EXT<br>EXT          |
| SANTOS<br>PAPYRUS 1<br>PEL 5,6          | Cooper/<br>Eromanga | 28°12'14"<br>139°38'13"           | KB 28<br>GL 23        | 06-JUL-89<br>14-JUL-89 | 2134<br>2134                              | Plugged and abandoned, dry.   | NFW<br>DRY          |
| PELICAN 4 (SANTOS)<br>PEL 5,6           | Cooper/<br>Eromanga | 27°48'33"<br>140°6'21"            | KB 41<br>GL 36        | 11-FEB-89<br>28-FEB-89 | 2822<br>2822                              | Plugged and abandoned, dry  | EXT<br>DRY          |
| SANTOS<br>PELICAN 5 (SANTOS)<br>PEL 5,6 | Cooper/<br>Eromanga | 27°46'17"<br>140°6'53"            | KB 40<br>GL 35        | 17-SEP-89<br>02-OCT-89 | 2769<br>2769                              | Cased and suspended as a<br>future Patchawarra Fm gas<br>producer.                                      | DEV<br>DEV          |
| SANTOS<br>PONDRIE 4<br>PEL 5,6          | Cooper/<br>Eromanga | 27°33'48"<br>140°39'58"           | KB 122<br>GL 117      | 16-JAN-89<br>02-FEB-89 | 2320<br>2320                              | Cased and suspended as a<br>future Tirrawarra Sst,<br>Patchawarra Fm and<br>Nappamerri Fm gas producer. | EXT<br>EXT          |
| SANTOS<br>PONDRIE 5<br>PEL 5,6          | Cooper/<br>Eromanga | 27°33'54"<br>140°39'11"           | KB 116<br>GL 111      | 10-SEP-89<br>25-SEP-89 | 2396<br>2396                              | Cased and suspended as a<br>future Tirrawarra Sst gas<br>producer.                                      | EXT<br>EXT          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |                      |                                   |                       |                        |   |   |                     |
|--|----------------------|-----------------------------------|-----------------------|------------------------|---|---|---------------------|
| OPERATOR<br>WELL   | BASIN                | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
| SOUTH AUSTRALIA (cont'd)   |                      |                                   |                       |                        |   |   |                     |
| SANTOS<br>POOLOWANNA 3<br>PEL 5,6  | Eromanga             | 26°26'2"<br>137°40'13"            | KB 36<br>GL 31        | 05-MAR-89<br>30-MAR-89 | 2689<br>2689                              | Plugged and converted to a<br>water well.                         | EXT<br>DRY          |
| SANTOS<br>SPENCER 8<br>PPL37   | Cooper/<br>Eromanga  | 28°10'22"<br>139°51'25"           | KB 31<br>GL 25        | 28-OCT-89<br>04-NOV-89 | 1921<br>1921                              | Cased and suspended as a<br>future Birkhead Fm oil .<br>producer. | DEV<br>DEV          |
| SANTOS<br>SPENCER 9<br>PPL37   | Cooper/<br>Eromanga  | 28°10'35"<br>139°51'48"           | KB 33<br>GL 27        | 09-NOV-89<br>15-NOV-89 | 1811<br>1811                              | Cased and suspended as a<br>future Birkhead Fm oil<br>producer.   | DEV<br>DEV          |
| SANTOS<br>SPENCER 10<br>PPL37  | Cooper/<br>Eromanga  | 28°11'9"<br>139°51'10"            | KB 32<br>GL 27        | 21-NOV-89<br>28-NOV-89 | 1899<br>1899                              | Plugged and abandoned, dry.                                       | DEV<br>DRY          |
| SANTOS<br>SPENCER WEST 1<br>PEL 5,6  | Cooper/<br>Eromanga  | 28°10'35"<br>139°47'46"           | KB 38<br>GL 32        | 04-APR-89<br>10-APR-89 | 1834<br>1834                              | Cased and suspended as a<br>future Namur oil producer.            | NFW<br>NFD          |
| SANTOS<br>STURT 4<br>PEL 5,6   | Cooper/<br>Eromanga  | 28°8'20"<br>139°35'2"             | KB 34<br>GL 30        | 21-MAY-89<br>27-MAY-89 | 1969<br>1969                              | Cased and suspended as a<br>future Poolowanna Fm oil<br>producer. | EXT<br>EXT          |
| SANTOS<br>STURT 5<br>PPL47   | Cooper/<br>Eromanga  | 28°8'20"<br>139°35'44"            | KB 27<br>GL 22        | 06-DEC-89<br>12-DEC-89 | 1920<br>1920                              | Cased and suspended as a<br>future Poolowanna Fm oil<br>producer. | DEV<br>DEV          |
| SANTOS<br>STURT EAST 3<br>PEL 5,6  | Cooper/<br>Eromanga  | 28°8'33"<br>139°36'33"            | KB 28<br>GL 23        | 20-APR-89<br>26-APR-89 | 1942<br>1942                              | Cased and suspended as a<br>future Poolowana Fm oil<br>producer.  | EXT<br>EXT          |
| SANTOS<br>STURT EAST 4<br>PEL 5,6  | Cooper/<br>Eromanga  | 28°8'18"<br>139°35'54"            | KB 25<br>GL 20        | 12-SEP-89<br>18-SEP-89 | 1898<br>1898                              | Cased and suspended as a<br>future Poolowanna Fm oil<br>producer. | DEV<br>DEV          |
| SANTOS<br>TIBOUCHINA 1<br>PEL 5,6  | Cooper/<br>Eromanga  | 28°12'15"<br>139°40'48"           | KB 28<br>GL 23        | 15-DEC-89<br>26-DEC-89 | 2192<br>2192                              | Plugged and abandoned, dry.                                       | NFW<br>DRY          |
| SANTOS<br>TIRARI WEST 1<br>PEL 5,6   | Eromanga/<br>Pedirka | 27°53'17"<br>137°33'55"           | KB 20<br>GL 16        | 12-FEB-89<br>18-FEB-89 | 1785<br>1785                              | Plugged and converted to a<br>water well.                         | NFW<br>DRY          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                       | BASIN               | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
|--|---------------------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| <b>SOUTH AUSTRALIA (cont'd)</b>        |                     |                                   |                       |                        |   |  |                     |
| SANTOS<br>TIRRAWARRA 64<br>PPL20       | Cooper/<br>Eromanga | 27°44'41"<br>140°8'8"             | KB 40<br>GL 34        | 10-DEC-88<br>02-JAN-89 | 3077<br>165                               | Plugged and abandoned, dry.  | DEV<br>DRY          |
| SANTOS<br>TIRRAWARRA 65<br>PPL20       | Cooper/<br>Eromanga | 27°40'40"<br>140°5'30"            | KB 36<br>GL 31        | 11-DEC-89<br>31-DEC-89 | 3054<br>3054                              | Cased and suspended as a<br>future Tirrawarra Sst oil<br>producer.             | DEV<br>DEV          |
| SANTOS<br>UNGARI 1<br>PEL 5,6          | Cooper/<br>Eromanga | 28°35'50"<br>140°25'15"           | KB 48<br>GL 42        | 07-JUL-89<br>13-JUL-89 | 1992<br>1992                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| SANTOS<br>WILPINNIE 2<br>PEL 5,6       | Cooper/<br>Eromanga | 28°2'59"<br>140°45'55"            | KB 85<br>GL 80        | 08-AUG-89<br>20-AUG-89 | 2221<br>2221                              | Plugged and abandoned, dry.  | EXT<br>DRY          |
| SANTOS<br>WRONSKY 1<br>PEL 5,6         | Cooper/<br>Eromanga | 28°12'23"<br>139°35'44"           | KB 34<br>GL 29        | 05-MAR-89<br>10-MAR-89 | 1966<br>1966                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| ULTRAMAR<br>KATNOOK 2<br>PEL 32        | Otway               | 37°27'2"<br>140°47'19"            | KB 68<br>GL 62        | 01-DEC-88<br>09-FEB-89 | 3478<br>850                               | Cased and suspended as a<br>future Pretty Hills Fm<br>gas/condensate producer. | EXT<br>EXT          |
| ULTRAMAR<br>KATNOOK 3<br>PEL32         | Otway               | 37°06'59"<br>140°46'26"           | KB 69<br>GL 63        | 24-DEC-89<br>-         | -<br>510                                  | Drilling ahead.  | EXT<br>-            |
| ULTRAMAR<br>LADBROKE GROVE 1<br>PEL 32 | Otway               | 37°28'6"<br>140°46'52"            | KB 69<br>GL 64        | 27-APR-89<br>16-JUN-89 | 3422<br>3422                              | Cased and suspended as a<br>future Pretty Hills Fm gas<br>producer.            | NFW<br>NFD          |
| ULTRAMAR<br>LAIRA 1<br>PEL 32          | Otway               | 37°25'36"<br>140°40'24"           | KB 69<br>GL 63        | 11-NOV-89<br>17-DEC-89 | 3303<br>3303                              | Plugged and abandoned, dry.  | NFW<br>DRY          |

**METRES DRILLED**

| WELLS        | ONSHORE        | OFFSHORE     | TOTAL          |
|--------------|----------------|--------------|----------------|
| EXPLORATION  | 112 487        | 2 317        | 114 804        |
| DEVELOPMENT  | 23 561         | -            | 23 561         |
| <b>TOTAL</b> | <b>136 048</b> | <b>2 317</b> | <b>138 365</b> |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                       | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED | STATUS<br>AND<br>SHOWS                                     | CLASSIFI-<br>CATION |
|--|-----------|-----------------------------------|-----------------------|------------------------|------------------------------------|--|---------------------|
| <b>WESTERN AUSTRALIA</b>               |           |                                   |                       |                        |                                    |  |                     |
| ARCO<br>CYGNUS 1<br>WA-202-P           | Carnarvon | 19°42'44"<br>116°54'33"           | RT 30<br>WD 73        | 08-JUL-89<br>02-AUG-89 | 2470<br>2470                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| BHP<br>CHINOOK 1<br>WA-210-P           | Carnarvon | 21°10'12"<br>114°41'48"           | KB 18<br>WD 121       | 07-MAY-89<br>27-JUN-89 | 3400<br>3400                       | Cased and suspended as a<br>future Barrow Gp oil producer. | NFW<br>NFD          |
| BHP<br>GRIFFIN 1<br>WA-210-P           | Carnarvon | 21°14'8"<br>114°37'12"            | KB 18<br>WD 138       | 20-DEC-89<br>-         | -<br>2220                          | Drilling ahead.  | NFW<br>-            |
| BHP<br>MONTEBELLO 1<br>WA-209-P        | Carnarvon | 20°5'21"<br>116°17'23"            | KB 18<br>WD 57        | 05-NOV-89<br>08-DEC-89 | 2750<br>2750                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| BARRACK<br>MT HORNER 10<br>EP 96       | Perth     | 29°7'56"<br>115°5'47"             | KB 217<br>GL 213      | 01-SEP-89<br>16-SEP-89 | 1450<br>1450                       | Cased and suspended as a<br>future F sand oil producer.    | EXT<br>EXT          |
| BARRACK<br>MT HORNER 11<br>PL7         | Perth     | 29°8'50"<br>115°6'32"             | KB 213<br>GL 209      | 15-OCT-89<br>30-OCT-89 | 1408<br>1408                       | Plugged and abandoned, dry.                                | EXT<br>DRY          |
| BOND<br>AVOCET 2<br>WA-199-P           | Bonaparte | 11°21'52"<br>125°45'26"           | KB 25<br>WD 104       | 27-JUL-89<br>18-AUG-89 | 2000<br>2000                       | Plugged and abandoned, dry.                                | EXT<br>DRY          |
| BOND<br>FULICA 1<br>WA-199-P           | Bonaparte | 11°5'20"<br>125°52'31"            | KB 25<br>WD 136       | 02-JUL-89<br>21-JUL-89 | 2674<br>2674                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| BOND<br>GARGANEY 1<br>WA-199-P         | Bonaparte | 11°21'24"<br>125°54'59"           | KB 25<br>WD 100       | 26-AUG-89<br>13-SEP-89 | 2481<br>2675                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| COMMAND<br>CUDALGARRA NORTH 1<br>EP164 | Canning   | 19°10'11"<br>122°17'50"           | KB 147<br>GL 151      | 12-JUL-89<br>21-JUL-89 | 1220<br>1220                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| MARATHON<br>ALPHA NORTH 1<br>WA-8-L    | Carnarvon | 19°28'05"<br>116°58'15"           | KB 20<br>WD 93        | 17-JUN-89<br>11-JUL-89 | 2200<br>2200                       | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| METANA<br>SOMELIM 1<br>EP137           | Carnarvon | 21°18'58"<br>115°49'6"            | KB 10<br>GL 7         | 07-JUN-89<br>15-JUL-89 | 413<br>413                         | Plugged and abandoned, dry.                                | NFW<br>DRY          |
| MINORA<br>RIVOLI 1<br>EP325            | Carnarvon | 21°58'58"<br>114°10'49"           | KB 32<br>WD 19        | 19-AUG-89<br>06-SEP-89 | 1975<br>1975                       | Plugged and abandoned, dry                                 | NFW<br>DRY          |



Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                  | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED | STATUS<br>AND<br>SHOWS                           | CLASSIFI-<br>CATION |
|-----------------------------------|-----------|-----------------------------------|-----------------------|---------------------|------------------------------------|--|---------------------|
| <b>WESTERN AUSTRALIA (cont'd)</b> |           |                                   |                       |                     |                                    |  |                     |
| MINORA                            |           |                                   |                       |                     |                                    |  |                     |
| TENT HILL 1 (MINORA)              | Carnarvon | 22°11'3"                          | KB 12                 | 22-DEC-89           | 580                                | Plugged and abandoned, dry.                      | NFW                 |
| EP325                             |           | 114°37'2"                         | GL 6                  | 26-DEC-89           | 580                                |  | DRY                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND F 51M               | Carnarvon | 20°49'60"                         | KB 44                 | 29-DEC-88           | 940                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'60"                        | GL 41                 | 12-JAN-89           | 791                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND F 53M               | Carnarvon | 20°50'48"                         | KB 28                 | 30-MAY-89           | 920                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'46"                        | GL 23                 | 15-JUN-89           | 920                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND F 55M               | Carnarvon | 20°50'46"                         | KB 20                 | 09-MAR-89           | 1195                               | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'17"                        | GL 14                 | 18-MAR-89           | 1195                               |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND F 81F               | Carnarvon | 20°51'25"                         | RT 13                 | 07-DEC-88           | 1001                               | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'15"                        | GL 8                  | 04-MAR-89           | 721                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND L65M                | Carnarvon | 20°49'15"                         | RT 61                 | 23-MAR-89           | 985                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°23'23"                        | GL 56                 | 03-APR-89           | 985                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND L 71M               | Carnarvon | 20°49'35"                         | KB 39                 | 19-JUN-89           | 945                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'26"                        | GL 34                 | 27-JUN-89           | 945                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND L 73M               | Carnarvon | 20°49'27"                         | KB 42                 | 17-JAN-89           | 950                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'46"                        | GL 37                 | 04-FEB-89           | 950                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND R 65                | Carnarvon | 20°47'29"                         | KB 34                 | 05-APR-89           | 790                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°21'23"                        | GL 29                 | 12-APR-89           | 790                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND R 74                | Carnarvon | 20°47'40"                         | KB 52                 | 23-MAY-89           | 810                                | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°21'13"                        | GL 47                 | 27-MAY-89           | 810                                |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND S 67M               | Carnarvon | 20°45'46"                         | KB 40                 | 13-MAY-89           | 1118                               | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°22'45"                        | GL 34                 | 22-MAY-89           | 1118                               |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND Y 33M               | Carnarvon | 20°43'19"                         | KB 30                 | 04-MAY-89           | 1240                               | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°23'50"                        | GL 25                 | 09-MAY-89           | 1240                               |  | DEV                 |
| WAPET                             |           |                                   |                       |                     |                                    |  |                     |
| BARROW ISLAND Y 52M               | Carnarvon | 20°43'49"                         | KB 44                 | 27-APR-89           | 1253                               | Cased and suspended as a<br>future oil producer. | EXT                 |
| L1 H                              |           | 115°23'23"                        | GL 39                 | 01-MAY-89           | 1253                               |  | DEV                 |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                       | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED | STATUS<br>AND<br>SHOWS  | CLASSIFI-<br>CATION |
|--|-----------|-----------------------------------|-----------------------|------------------------|------------------------------------|---|---------------------|
| <b>WESTERN AUSTRALIA (cont'd)</b>      |           |                                   |                       |                        |                                    |   |                     |
| WAPET<br>BARROW ISLAND Y 73M<br>L1 H   | Carnarvon | 20°44'12"<br>115°23'00"           | KB 42<br>GL 38        | 15-APR-89<br>20-APR-89 | 1220<br>1220                       | Cased and suspended as a<br>future oil producer.                | EXT<br>DEV          |
| WAPET<br>COWLE 1<br>TP/3               | Carnarvon | 21°31'25"<br>114°58'5"            | RT 32<br>WD 18        | 11-DEC-89<br>22-DEC-89 | 1174<br>1174                       | Cased and suspended as a<br>future Flacourt Fm oil<br>producer. | NFW<br>NFD          |
| WAPET<br>SALADIN 4<br>EP 65            | Carnarvon | 21°27'52"<br>115°1'3"             | KB 9<br>GL 3          | 06-MAR-89<br>18-APR-89 | 1750<br>4032                       | Cased and suspended as a<br>future oil producer.                | EXT<br>DEV          |
| WAPET<br>SALADIN 6<br>EP 65            | Carnarvon | 21°27'3"<br>115°1'3"              | KB na<br>GL na        | 26-DEC-88<br>07-MAY-89 | 1875<br>4321                       | Cased and suspended as a<br>future oil producer.                | EXT<br>DEV          |
| WAPET<br>SALADIN 8<br>TL/4             | Carnarvon | 21°26'30"<br>115°3'11"            | RT 34<br>WD 17        | 18-NOV-89<br>29-NOV-89 | 1296<br>1296                       | Cased and suspended as a<br>future oil producer.                | DEV<br>DEV          |
| WMC<br>CHERVIL 4<br>TP/7               | Carnarvon | 21°18'36"<br>113°13'37"           | RT 33<br>WD 14        | 07-FEB-89<br>06-MAR-89 | 1618<br>1860                       | Completed as a future gas and<br>oil producer.                  | EXT<br>DEV          |
| WMC<br>CHERVIL 5<br>TP/7               | Carnarvon | 21°18'35"<br>115°13'37"           | RT 30<br>WD 14        | 08-JUL-89<br>05-AUG-89 | 1909<br>1909                       | Completed as an oil producer.                                   | DEV<br>DEV          |
| WMC<br>SETARIA 1<br>EP143              | Canning   | 19°24'6"<br>124°58'9"             | KB 201<br>GL 194      | 14-MAY-89<br>30-MAY-89 | 995<br>995                         | Plugged and abandoned, dry.                                     | NFW<br>DRY          |
| WMC<br>SOUTH PEPPER 8<br>WA-149-P      | Carnarvon | 21°7'29"<br>115°16'29"            | KB 32<br>WD 19        | 05-MAR-89<br>07-APR-89 | 1823<br>4839                       | Completed as an oil producer.                                   | DEV<br>DEV          |
| WMC<br>TURTLE 2<br>WA-128-P            | Bonaparte | 14°30'21"<br>128°56'45"           | KB 33<br>WD 20        | 20-MAR-89<br>26-JUN-89 | 2760<br>2760                       | Plugged and abandoned, dry.                                     | EXT<br>DRY          |
| WOODSIDE<br>COSSACK 1<br>WA-28-P       | Carnarvon | 19°33'22"<br>116°29'45"           | KB 24<br>WD 82        | 16-NOV-89<br>-         | -<br>2831                          | Drilling ahead.   | NFW<br>-            |
| WOODSIDE<br>NORTH RANKIN A16<br>WA-1-L | Carnarvon | 19°35'9"<br>116°8'12"             | RT 46<br>WD 125       | 09-JAN-89<br>06-OCT-89 | 5330<br>5330                       | Completed as a gas producer.                                    | DEV<br>DEV          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL | BASIN | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED | STATUS<br>AND<br>SHOWS | CLASSIFI-<br>CATION |
|------------------|-------|-----------------------------------|-----------------------|---------------------|------------------------------------|------------------------|---------------------|
|------------------|-------|-----------------------------------|-----------------------|---------------------|------------------------------------|------------------------|---------------------|

**WESTERN AUSTRALIA (cont'd)**

|  |           |                        |                 |                        |              |  |            |
|--|-----------|------------------------|-----------------|------------------------|--------------|--|------------|
| WOODSIDE<br>NORTH RANKIN A17<br>WA-1-L | Carnarvon | 19°35'9"<br>116°8'12"  | KB 46<br>WD 125 | 17-MAR-89<br>13-AUG-89 | 4671<br>6259 | Completed as a gas producer.                     | DEV<br>DEV |
| WOODSIDE<br>NORTH RANKIN A18<br>WA-1-L | Carnarvon | 19°35'9"<br>116°8'12"  | RT 46<br>WD 125 | 10-OCT-89<br>08-DEC-89 | 3243<br>3243 | Completed as a gas producer.                     | DEV<br>DEV |
| WOODSIDE<br>NORTH RANKIN A19<br>WA-1-L | Carnarvon | 19°35'9"<br>116°8'12"  | KB 46<br>WD 125 | 24-NOV-89<br>-         | -<br>2251    | Drilling ahead.                                  | DEV<br>-   |
| WOODSIDE<br>WANAEA 1<br>WA-28-P        | Carnarvon | 19°35'35"<br>116°24'3" | RT 25<br>WD 80  | 08-NOV-88<br>26-MAY-89 | 4154<br>1710 | Cased and suspended as a<br>future oil producer. | NFW<br>NFD |

**METRES DRILLED (m)**

| WELLS       | ONSHORE | OFFSHORE | TOTAL  |
|-------------|---------|----------|--------|
| EXPLORATION | 6 066   | 30 839   | 36 905 |
| DEVELOPMENT | 12 938  | 35 340   | 48 278 |
| TOTAL       | 19 004  | 66 179   | 85 183 |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL                 | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS                                   | CLASSIFI-<br>CATION |
|----------------------------------|-----------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| <b>NORTHERN TERRITORY</b>        |           |                                   |                       |                        |   |  |                     |
| AQUITAINE<br>BARNETT 2<br>NT/P28 | Bonaparte | 14°31'56"<br>129°3'8"             | KB 15<br>WD 24        | 30-AUG-89<br>11-OCT-89 | 2817<br>2817                              | Cased and suspended as a<br>future oil producer.         | EXT<br>EXT          |
| BHP<br>ARUNTA 1<br>AC/L1         | Bonaparte | 11°58'31"<br>124°57'5"            | KB 18<br>WD 140       | 28-MAR-89<br>24-MAR-89 | 2500<br>2500                              | Plugged and abandoned, dry.                              | NFW<br>DRY          |
| BHP<br>CHALLIS 8<br>AC/L3        | Bonaparte | 12°57'8"<br>125°6'52"             | KB 26<br>WD 104       | 23-FEB-89<br>06-APR-89 | 1540<br>1540                              | Completed as a future oil<br>producer.                   | DEV<br>DEV          |
| BHP<br>COCKELL 1<br>AC/P6        | Bonaparte | 11°40'2"<br>125°2'21"             | RT 22<br>WD 266       | 11-DEC-88<br>29-JAN-89 | 3274<br>1153                              | Plugged and abandoned, dry.                              | NFW<br>DRY          |
| BHP<br>DISCORBIS 1<br>AC/P3      | Bonaparte | 12°52'57"<br>123°48'46"           | KB 18<br>WD 199       | 08-AUG-89<br>14-NOV-89 | 4165<br>4196                              | Plugged and abandoned, dry.                              | NFW<br>DRY          |
| BHP<br>EAST SWAN 2<br>AC/P2      | Bonaparte | 12°17'34"<br>124°35'1"            | KB 18<br>WD 104       | 22-SEP-89<br>25-OCT-89 | 2855<br>2855                              | Plugged and abandoned, dry.                              | EXT<br>DRY          |
| BHP<br>JABIRU 8<br>AC/L1         | Bonaparte | 11°56'11"<br>125°0'37"            | KB 22<br>WD 118       | 06-FEB-89<br>14-FEB-89 | 1130<br>1130                              | Plugged and abandoned due<br>to mechanical problems.     | EXT<br>DRY          |
| BHP<br>JABIRU 8A<br>AC/L1        | Bonaparte | 11°56'11"<br>125°0'37"            | KB 22<br>WD 118       | 20-FEB-89<br>15-APR-89 | 1942<br>2902                              | Cased and suspended as a<br>future oil producer.         | EXT<br>EXT          |
| BHP<br>JABIRU 9<br>AC/L1         | Bonaparte | 11°57'4"<br>124°58'49"            | KB 26<br>WD 118       | 09-JUN-89<br>27-JUL-89 | 1915<br>2377                              | Plugged and abandoned.<br>Intersected a 47m oil column.  | EXT<br>EXT          |
| BHP<br>JABIRU 10<br>AC/L1        | Bonaparte | 11°55'20"<br>125°1'34"            | KB 26<br>WD 118       | 05-AUG-89<br>24-AUG-89 | 1826<br>1826                              | Plugged and abandoned, dry.                              | EXT<br>EXT          |
| BHP<br>JABIRU 11<br>AC/L1        | Bonaparte | 11°56'31"<br>124°59'36"           | KB 26<br>WD 118       | 31-AUG-89<br>22-SEP-89 | 1840<br>1840                              | Completed as a future oil<br>producer.                   | DEV<br>DEV          |
| BHP<br>KALYPTEA 1<br>AC/P3       | Browse    | 13°1'59"<br>123°52'21"            | KB 18<br>WD 215       | 17-SEP-88<br>06-FEB-89 | 4575<br>2767                              | Plugged and abandoned as<br>an uneconomic oil discovery. | NFW<br>DRY          |

Table 7. (cont'd)

| WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989 |           |                                   |                       |                        |   |  |                     |
|--|-----------|-----------------------------------|-----------------------|------------------------|---|--|---------------------|
| OPERATOR<br>WELL   | BASIN     | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD    | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS   | CLASSIFI-<br>CATION |
| NORTHERN TERRITORY (Cont'd)  |           |                                   |                       |                        |   |  |                     |
| BHP<br>MAPLE 1<br>AC/P2  | Bonaparte | 12°1'12"<br>124°32'19"            | KB 22<br>WD 125       | 15-DEC-89<br>-         | -<br>4130                                 | Drilling ahead.  | NFW<br>-            |
| BHP<br>NANCAR 1<br>AC/P4   | Bonaparte | 10°59'19"<br>125°45'28"           | KB 22<br>WD 223       | 15-APR-89<br>24-JUN-89 | 3650<br>3696                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| BHP<br>PAQUALIN 1<br>AC/P2   | Bonaparte | 11°58'50"<br>124°30'25"           | RT 27<br>WD 125       | 13-DEC-88<br>19-FEB-89 | 4242<br>2238                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| BHP<br>ROWAN 1<br>AC/P2  | Bonaparte | 12°29'54"<br>124°23'37"           | KB 22<br>WD 300       | 22-OCT-89<br>21-DEC-89 | 3348<br>4186                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| BHP<br>SKUA 6<br>AC/P2   | Bonaparte | 12°29'15"<br>124°26'19"           | KB 22<br>WD 82        | 01-JUL-89<br>28-JUL-89 | 2830<br>2830                              | Plugged and abandoned, dry.  | EXT<br>DRY          |
| BHP<br>TALTARNI 1<br>AC/P7   | Bonaparte | 12°36'41"<br>124°34'46"           | KB 18<br>WD 76        | 14-AUG-89<br>12-SEP-89 | 3362<br>3362                              | Plugged and abandoned, dry.  | NFW<br>DRY          |
| MAGELLAN<br>GOSSSES BLUFF 2<br>OP175   | Amadeus   | 23°49'7"<br>132°18'17"            | KB 750<br>GL 743      | 26-DEC-88<br>06-MAR-89 | 2652<br>4262                              | Plugged and abandoned, dry   | EXT<br>DRY          |
| MAGELLAN<br>PALM VALLEY 7<br>OL3   | Amadeus   | 23°59'58"<br>132°43'41"           | KB 855<br>GL 849      | 01-JUL-89<br>14-AUG-89 | 1893<br>1893                              | Completed as a gas producer<br>from the lower Stairway and<br>Pacoota P1 Fm. | DEV<br>DEV          |
| NORCEN<br>KEELING 1<br>AC/P10  | Bonaparte | 12°37'14"<br>124°9'54"            | KB 11<br>WD 206       | 15-DEC-89<br>-         | -<br>2235                                 | Drilling ahead.  | NFW<br>-            |
| PACIFIC<br>MCINTYRE 1  | Georgina  | 22°02'21"<br>135°05'30"           | KB na<br>GL 381       | 08-DEC-89<br>30-DEC-89 | 960<br>960                                | Plugged and abandoned, dry.  | STR<br>DRY          |
| PACIFIC<br>MCMANUS 1<br>EP24   | McArthur  | 15°55'14"<br>133°37'46"           | KB na<br>GL 189       | 27-SEP-89<br>12-NOV-89 | 1617<br>1617                              | Plugged and abandoned, dry.  | STR<br>DRY          |
| PACIFIC<br>WALTON 1<br>EP24  | McArthur  | 15°55'00"<br>133°40'00"           | KB na<br>GL 192       | 07-AUG-89<br>12-AUG-89 | 59<br>59                                  | Plugged and abandoned, dry.  | STR<br>DRY          |
| PACIFIC<br>WALTON 2<br>EP24  | McArthur  | 15°55'00"<br>133°40'00"           | KB na<br>GL 192       | 13-AUG-89<br>21-AUG-89 | 1014<br>1014                              | Plugged and abandoned, dry.  | STR<br>DRY          |

Table 7. (cont'd)

**WELLS DRILLED FOR PETROLEUM EXPLORATION, DEVELOPMENT, AND PRODUCTION BY STATE - 1989**

| OPERATOR<br>WELL | BASIN | LOCATION<br>LAT. (S)<br>LONG. (E) | ELEVA-<br>TION<br>(m) | DATES<br>SPUD<br>TD | TOTAL<br>DEPTH<br>TOTAL<br>DRILLED<br>(m) | STATUS<br>AND<br>SHOWS | CLASSIFI-<br>CATION |
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|
|------------------|-------|-----------------------------------|-----------------------|---------------------|---|------------------------|---------------------|

**NORTHERN TERRITORY (cont'd)**

|          |           |            |        |           |      |                          |     |
|----------|-----------|------------|--------|-----------|------|--------------------------|-----|
| SANTOS   |           |            |        |           |      |                          |     |
| TALBOT 1 | Bonaparte | 12°27'11"  | KB 11  | 11-NOV-89 | 1784 | Cased and suspended as a | NFW |
| AC/P12   |           | 124°52'54" | WD 111 | 01-DEC-89 | 1784 | future oil producer.     | NFD |

**METRES DRILLED**

| WELLS       | ONSHORE | OFFSHORE | TOTAL  |
|-------------|---------|----------|--------|
| EXPLORATION | 7 912   | 48 984   | 56 896 |
| DEVELOPMENT | 1 893   | 3 380    | 5 273  |
| TOTAL       | 9 805   | 52 364   | 62 169 |

**TABLE 8. PETROLEUM EXPLORATION, DEVELOPMENT AND PRODUCTION EXPENDITURE - OPERATORS, 1988**

| STATE              | DRILLING           |                    | PRODUCTION         | GEOLOGY          | SEISMIC           |                   |                  | OTHER             | TOTAL                |
|--------------------|--------------------|--------------------|--------------------|------------------|-------------------|-------------------|------------------|-------------------|----------------------|
|                    | EXPLORATION        | DEVELOPMENT        |                    |                  | REGIONAL          | 2D                | 3D               |                   |                      |
| Queensland         | 27 354 344         | 34 505 339         | 54 517 690         | 6 065 508        | 9 776 531         | 12 265 933        | -                | 20 902 208        | 165 387 553          |
| New South Wales    | 636 097            | -                  | -                  | 275 427          | 488 440           | 465 000           | -                | 40 000            | 1 904 964            |
| Victoria           | 9 090 000          | 38 010 000         | 374 873 000        | 117 036          | 3 503 180         | 8 027 380         | 6 917 000        | 18 441 846        | 458 979 442          |
| Tasmania           | -                  | -                  | -                  | -                | 673 000           | -                 | -                | 159 000           | 832 000              |
| South Australia    | 62 508 000         | 11 401 900         | 167 472 800        | -                | 9 170 400         | 633 200           | -                | 34 933 091        | 286 119 391          |
| Western Australia  | 108 467 242        | 51 145 000         | 159 036 520        | 2 162 716        | 7 294 618         | 16 790 430        | 1 797 000        | 12 295 384        | 358 988 910          |
| Northern Territory | 156 882 000        | 7 999 000          | 101 469 000        | 1 132 265        | 2 656 000         | 7 502 200         | -                | 1 817 686         | 279 458 151          |
| <b>TOTAL</b>       | <b>364 937 683</b> | <b>143 061 239</b> | <b>857 369 010</b> | <b>9 752 952</b> | <b>33 562 169</b> | <b>45 684 143</b> | <b>8 714 000</b> | <b>88 589 215</b> | <b>1 551 670 411</b> |

8

**ORIGIN OF PRIVATE ENTERPRISE EXPENDITURE ON EXPLORATION, DEVELOPMENT AND PRODUCTION - 1988**

|                  | FOR ONSHORE<br>OPERATIONS | FOR OFFSHORE<br>OPERATIONS | TOTAL                |
|------------------|---------------------------|----------------------------|----------------------|
| Australian Funds | 497 440 804               | 738 431 835                | 1 235 872 639        |
| Reinvestment     | 45 783 000                | 196 770 000                | 242 553 000          |
| North American   | 4 358 000                 | 9 520 030                  | 13 878 030           |
| Other            | 4 195 000                 | 55 171 742                 | 59 366 742           |
| <b>TOTAL</b>     | <b>551 776 804</b>        | <b>999 893 607</b>         | <b>1 551 670 411</b> |

TABLE 8. (Cont'd) PETROLEUM EXPLORATION EXPENDITURE- OPERATORS 1988

| STATE              | EXPLORATION<br>DRILLING | GEOLOGICAL       | REGIONAL          | SEISMIC<br>2D     | 3D               | OTHER             | TOTAL              |
|--------------------|-------------------------|------------------|-------------------|-------------------|------------------|-------------------|--------------------|
| <b>ONSHORE</b>     |                         |                  |                   |                   |                  |                   |                    |
| Queensland         | 27 354 344              | 6 065 508        | 9 776 531         | 12 265 933        | -                | 2 940 878         | 58 403 194         |
| New South Wales    | 636 097                 | 275 427          | 488 440           | 465 000           | -                | 40 000            | 1 904 964          |
| Victoria           | 1 971 000               | 117 036          | 982 180           | 2 880 180         | -                | 18 846            | 5 969 242          |
| Tasmania           | -                       | -                | -                 | -                 | -                | -                 | -                  |
| South Australia    | 62 508 000              | -                | 7 945 400         | 633 200           | -                | 7 974 591         | 79 061 191         |
| Western Australia  | 27 442 242              | 2 162 716        | 4 536 618         | 4 546 670         | -                | 1 829 937         | 40 518 183         |
| Northern Territory | 6 000 000               | 1 132 265        | 2 596 000         | 41 000            | -                | 275 686           | 10 044 951         |
| <b>TOTAL</b>       | <b>125 911 683</b>      | <b>9 752 952</b> | <b>26 325 169</b> | <b>20 831 983</b> | <b>-</b>         | <b>13 079 938</b> | <b>195 901 725</b> |
| <b>OFFSHORE</b>    |                         |                  |                   |                   |                  |                   |                    |
| Queensland         | -                       | -                | -                 | -                 | -                | -                 | -                  |
| New South Wales    | -                       | -                | -                 | -                 | -                | -                 | -                  |
| Victoria           | 7 119 000               | -                | 2 521 000         | 5 147 200         | 6 917 000        | 18 423 000        | 40 127 200         |
| Tasmania           | -                       | -                | 673 000           | -                 | -                | 159 000           | 832 000            |
| South Australia    | -                       | -                | 1 225 000         | -                 | -                | 100 000           | 1 325 000          |
| Western Australia  | 81 025 000              | -                | 2 758 000         | 12 243 760        | 1 797 000        | 6 829 447         | 104 653 207        |
| Northern Territory | 150 882 000             | -                | 60 000            | 7 461 200         | -                | 1 542 000         | 159 945 200        |
| <b>TOTAL</b>       | <b>239 026 000</b>      | <b>-</b>         | <b>7 237 000</b>  | <b>24 852 160</b> | <b>8 714 000</b> | <b>27 053 447</b> | <b>306 882 607</b> |
| <b>TOTAL</b>       | <b>364 937 683</b>      | <b>9 752 952</b> | <b>33 562 169</b> | <b>45 684 143</b> | <b>8 714 000</b> | <b>40 133 385</b> | <b>502 784 332</b> |
| <b>EXPLORATION</b> |                         |                  |                   |                   |                  |                   |                    |



**TABLE 8. (Cont'd) PETROLEUM DEVELOPMENT AND PRODUCTION EXPENDITURE - OPERATORS, 1988**

| <b>STATE</b>                                | <b>DEVELOPMENT<br/>DRILLING</b> | <b>PRODUCTION</b>  | <b>OTHER</b>      | <b>TOTAL</b>         |
|---|---------------------------------|--------------------|-------------------|----------------------|
| <b>ONSHORE</b>                              |                                 |                    |                   |                      |
| Queensland                                  | 34 505 339                      | 54 517 690         | 17 961 330        | 106 984 359          |
| New South Wales                             | -                               | -                  | -                 | -                    |
| Victoria                                    | -                               | -                  | -                 | -                    |
| Tasmania                                    | -                               | -                  | -                 | -                    |
| South Australia                             | 11 401 900                      | 167 472 800        | 26 858 500        | 205 733 200          |
| Western Australia                           | 6 356 000                       | 32 967 520         | 2 442 000         | 41 765 520           |
| Northern Territory                          | -                               | 1 392 000          | -                 | 1 392 000            |
| <b>TOTAL</b>                                | <b>52 263 239</b>               | <b>256 350 010</b> | <b>47 261 830</b> | <b>355 875 079</b>   |
| <b>OFFSHORE</b>                             |                                 |                    |                   |                      |
| Queensland                                  | -                               | -                  | -                 | -                    |
| New South Wales                             | -                               | -                  | -                 | -                    |
| Victoria                                    | 38 010 000                      | 374 873 000        | -                 | 412 883 000          |
| Tasmania                                    | -                               | -                  | -                 | -                    |
| South Australia                             | -                               | -                  | -                 | -                    |
| Western Australia                           | 44 789 000                      | 126 069 000        | 1 194 000         | 172 052 000          |
| Northern Territory                          | 7 999 000                       | 100 077 000        | -                 | 108 076 000          |
| <b>TOTAL</b>                                | <b>90 798 000</b>               | <b>601 019 000</b> | <b>1 194 000</b>  | <b>693 011 000</b>   |
| <b>TOTAL DEVELOPMENT<br/>AND PRODUCTION</b> | <b>143 061 239</b>              | <b>857 369 010</b> | <b>48 455 830</b> | <b>1 048 886 079</b> |

**TABLE 8. (Cont'd) GOVERNMENT EXPENDITURE ON PETROLEUM EXPLORATION, 1988 (\$)**

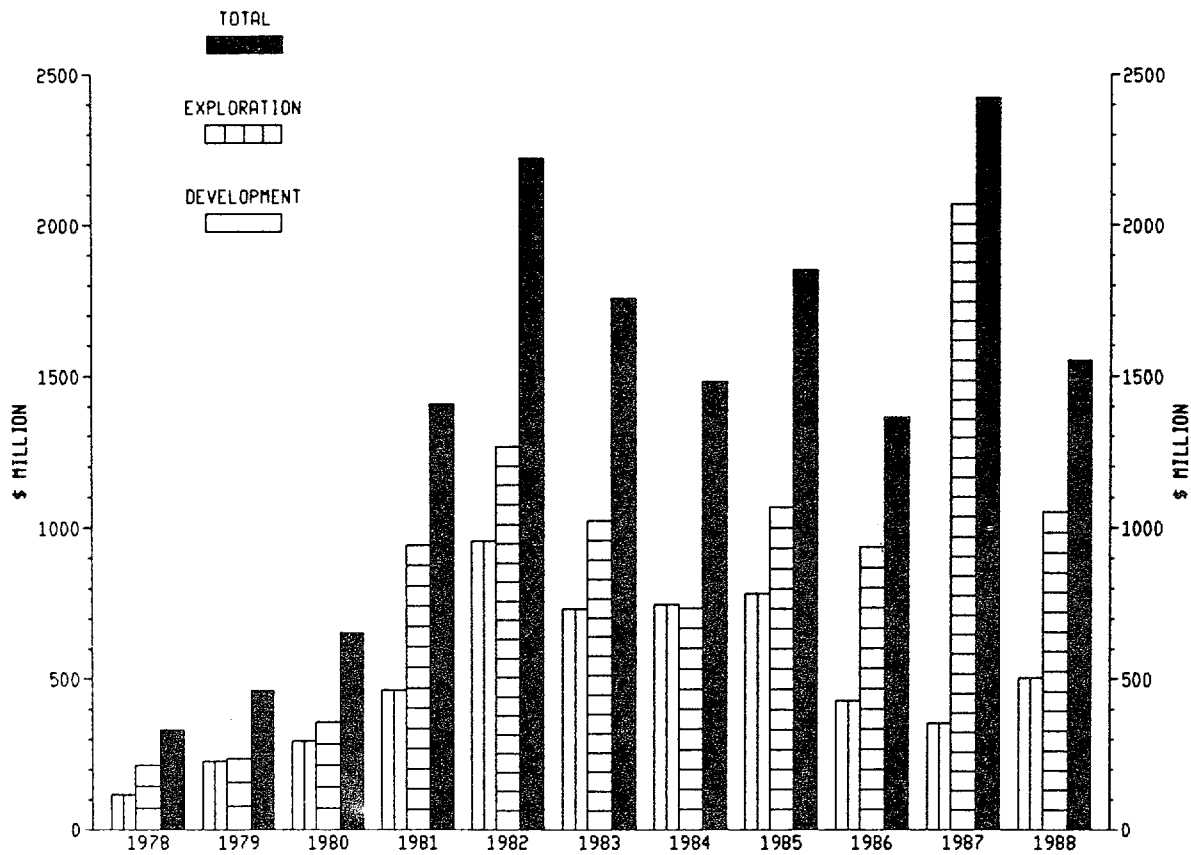
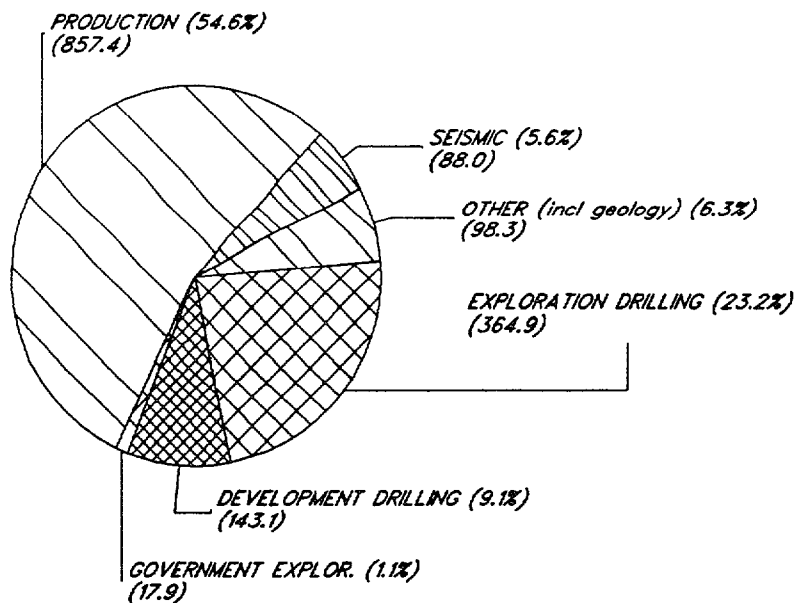
|  |                   |
|--|-------------------|
| State mines departments and equivalents                            | 1 998 800         |
| Federal Department of Administrative Services (topographic survey) | 1 135 700         |
| BMR  | 14 787 168        |
| <b>Total</b>   | <b>17 921 668</b> |

**COMBINED EXPENDITURE ON PETROLEUM EXPLORATION IN AUSTRALIA TO 1988 (\$ '000)**

|              | <b>Private<br/>Enterprise</b> | <b>Subsidy<br/>payments</b> | <b>State/Federal<br/>Governments</b> | <b>TOTAL</b>     |
|--------------|-------------------------------|-----------------------------|--------------------------------------|------------------|
| To 1965      | 205 268                       | 39 041                      | 31 772                               | 276 081          |
| 1966         | 48 299                        | 9 617                       | 4 426                                | 62 972           |
| 1967         | 49 157                        | 9 635                       | 5 074                                | 63 866           |
| 1968         | 56 662                        | 11 213                      | 5 540                                | 73 415           |
| 1969         | 65 188                        | 12 871                      | 5 070                                | 83 129           |
| 1970         | 59 465                        | 9 744                       | 4 296                                | 73 505           |
| 1971         | 70 988                        | 5 986                       | 5 155                                | 82 129           |
| 1972         | 95 736                        | 6 217                       | 5 312                                | 107 265          |
| 1973         | 85 675                        | 7 605                       | 5 684                                | 98 964           |
| 1974         | 83 452                        | 5 248                       | 4 468                                | 93 168           |
| 1975         | 54 850                        | 2 438                       | 4 941                                | 62 229           |
| 1976         | 49 031                        | 94                          | 5 132                                | 54 257           |
| 1977         | 82 012                        | -                           | 4 703                                | 86 715           |
| 1978         | 111 566                       | -                           | 4 915                                | 116 481          |
| 1979         | 222 616                       | -                           | 4 870                                | 227 486          |
| 1980         | 290 164                       | -                           | 5 172                                | 295 336          |
| 1981         | 458 676                       | -                           | 5 588                                | 464 264          |
| 1982         | 947 901                       | -                           | 8 613                                | 956 514          |
| 1983         | 723 461                       | -                           | 8 026                                | 731 487          |
| 1984         | 740 424                       | -                           | 7 195                                | 747 619          |
| 1985         | 773 624                       | -                           | 9 829                                | 783 453          |
| 1986         | 423 737                       | -                           | 4 934                                | 428 671          |
| 1987         | 346 390                       | -                           | 6 727                                | 353 117          |
| 1988         | 502 784                       | -                           | 17 922                               | 520 706          |
| <b>Total</b> | <b>6 547 756</b>              | <b>119 709</b>              | <b>175 364</b>                       | <b>6 842 829</b> |

TABLE 8. (Cont'd)

## TOTAL PETROLEUM EXPENDITURE 1978 TO 1988

TOTAL PETROLEUM EXPENDITURE - 1988  
(\$ MILLION)

**TABLE 9. PETROLEUM EXPLORATION AND DEVELOPMENT EXPENDITURE  
AND ACTIVITY 1976 TO 1989**

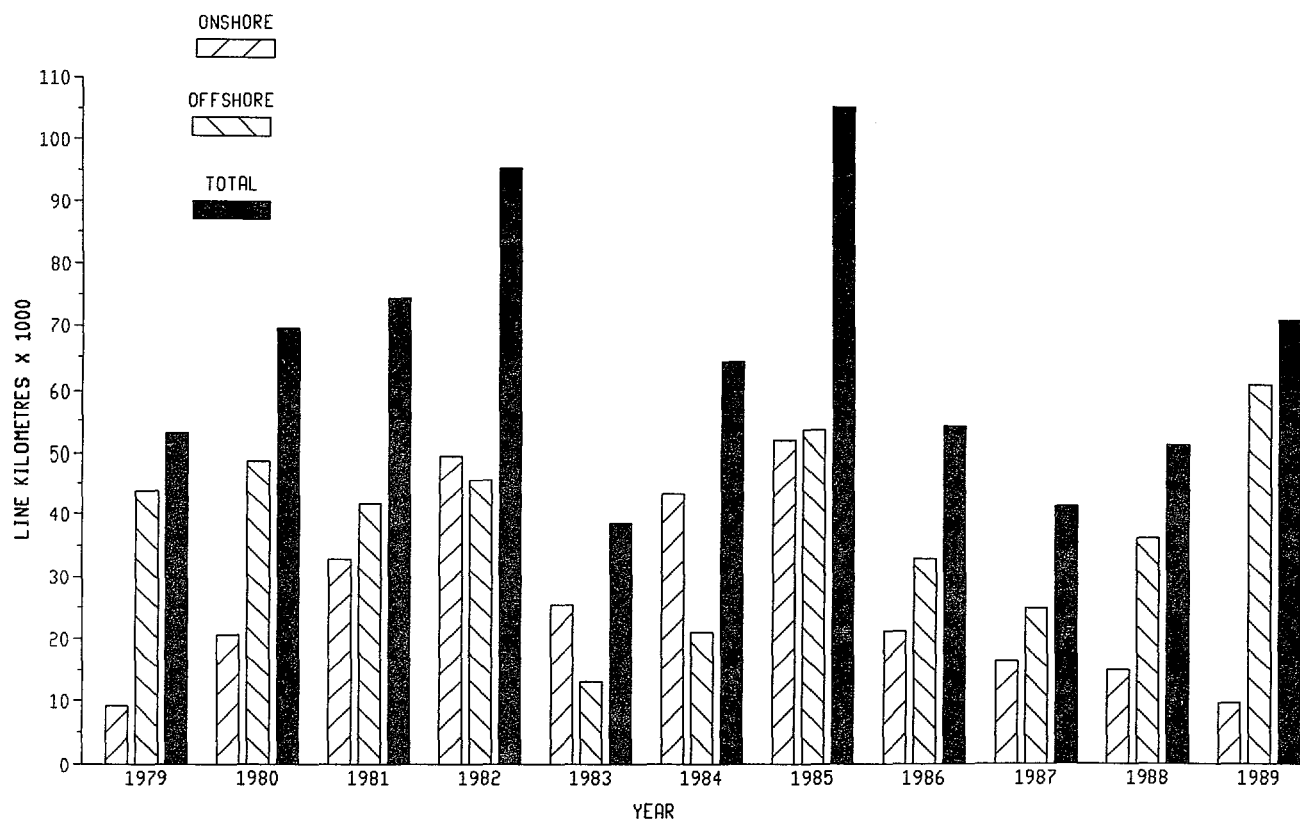
| YEAR     | EXPLORATION<br>EXPENDITURE<br>(\$ million) | DEVELOPMENT<br>EXPENDITURE<br>(Including Production)<br>(\$ million) | SEISMIC<br>SURVEYS<br>(line km) | EXPLORATION<br>WELLS<br>DRILLED | DEVELOPMENT<br>WELLS<br>DRILLED |
|----------|--|--|---------------------------------|---------------------------------|---------------------------------|
| 1976     | 49   | 94   | 94200                           | 19                              | 13                              |
| 1977     | 82   | 114  | 11600                           | 21                              | 20                              |
| 1978     | 112  | 216  | 44421                           | 55                              | 37                              |
| 1979     | 222  | 236  | 41539                           | 52                              | 57                              |
| 1980     | 290  | 358  | 55445                           | 94                              | 33                              |
| 1981     | 458  | 944  | 74438                           | 158                             | 55                              |
| 1982     | 957  | 1263   | 95253                           | 221                             | 108                             |
| 1983     | 731  | 1022   | 38761                           | 209                             | 66                              |
| 1984     | 748  | 734  | 61941                           | 264                             | 109                             |
| 1985     | 784  | 1065   | 90169                           | 270                             | 94                              |
| 1986     | 429  | 936  | 47353                           | 139                             | 37                              |
| 1987     | 353  | 2068   | 42527                           | 229                             | 53                              |
| 1988     | 503  | 1049   | 51492                           | 237                             | 54                              |
| 1989 (a) | 560  | 1180   | 71774                           | 148                             | 76                              |

(a) Preliminary

TABLE 9 (Cont'd) SEISMIC SURVEY ACTIVITY BY STATE - 1985 to 1989

Line km

|              | 1985          |          | 1986          |          | 1987          |          | 1988          |          | 1989          |          |
|--------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|
|              | Onshore       | Offshore | Onshore       | Offshore | Onshore       | Offshore | Onshore       | Offshore | Onshore       | Offshore |
| Qld          | 27 326        | -        | 8 345         | -        | 7 855         | -        | 6 675         | -        | 4 448         | 800      |
| NSW          | 1 229         | -        | 748           | -        | 703           | -        | 128           | -        | 88            | -        |
| Vic          | 1 276         | 2 651    | 373           | -        | 864           | -        | 645           | 13 877   | 385           | 3 030    |
| Tas          | -             | 7 057    | -             | -        | -             | -        | 611           | -        | -             | 435      |
| SA           | 12 154        | 2 339    | 5 576         | -        | 4 409         | -        | 4 002         | 720      | 1 662         | -        |
| WA           | 9 196         | 25 346   | 5 197         | 13 696   | 3 394         | 10 044   | 2 801         | 18 487   | 2 397         | 19 078   |
| NT           | 680           | 2 538    | 543           | 12 875   | 429           | 14 829   | 232           | 3 314    | 676           | 37 751   |
| Sub-total    | 51 861        | 39 931   | 20 782        | 26 571   | 17 654        | 24 873   | 15 094        | 36 398   | 9 656         | 61 094   |
| <b>Total</b> | <b>91 792</b> |          | <b>49 353</b> |          | <b>42 527</b> |          | <b>51 492</b> |          | <b>70 750</b> |          |

SEISMIC SURVEY ACTIVITY  
1979 TO 1989

## APPENDIX 1. WELLS AND METRES DRILLED - 1979 to 1989

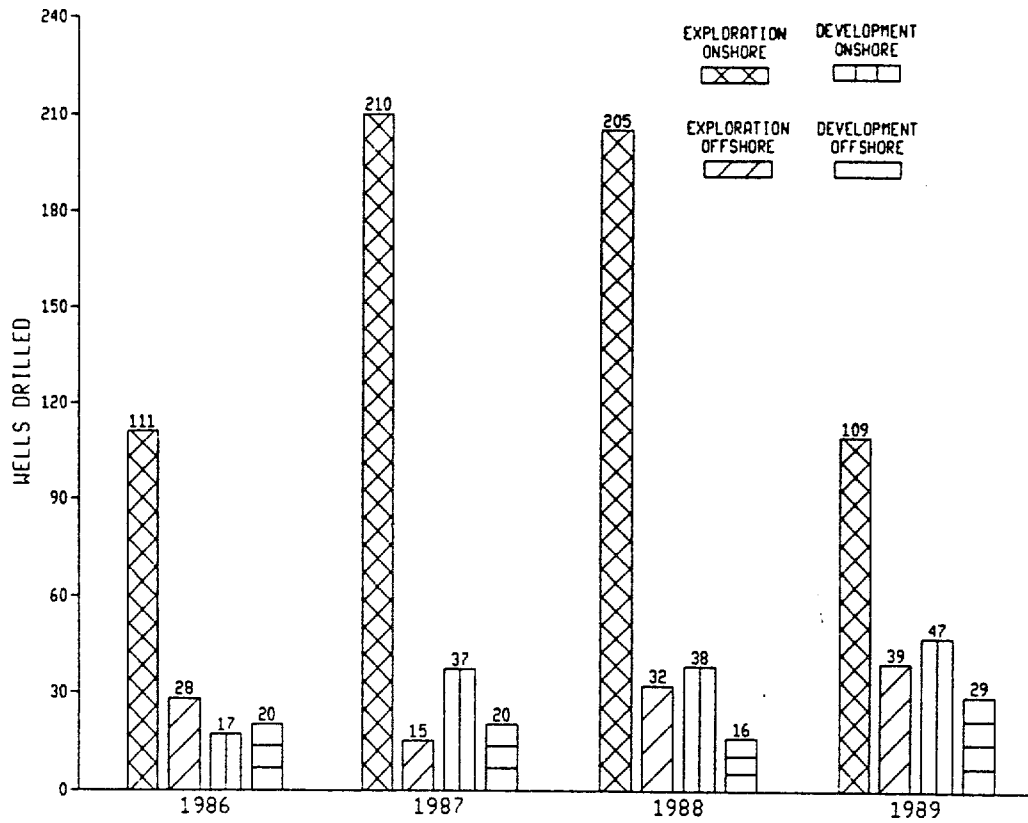
|               | EXPLORATION |          | DEVELOPMENT |          | TOTAL       |             |       |
|---------------|-------------|----------|-------------|----------|-------------|-------------|-------|
| YEAR          | ONSHORE     | OFFSHORE | ONSHORE     | OFFSHORE | EXPLORATION | DEVELOPMENT | TOTAL |
| Wells Drilled |             |          |             |          |             |             |       |
| 1979          | 31          | 21       | 48          | 9        | 52          | 57          | 109   |
| 1980          | 77          | 17       | 26          | 7        | 94          | 33          | 127   |
| 1981          | 142         | 16       | 41          | 14       | 158         | 55          | 213   |
| 1982          | 177         | 44       | 95          | 13       | 221         | 108         | 329   |
| 1983          | 162         | 49       | 38          | 26       | 211         | 64          | 275   |
| 1984          | 221         | 43       | 71          | 38       | 264         | 109         | 373   |
| 1985          | 227         | 43       | 76          | 18       | 270         | 94          | 364   |
| 1986          | 111         | 28       | 17          | 20       | 139         | 37          | 176   |
| 1987          | 210         | 15       | 37          | 20       | 225         | 57          | 282   |
| 1988          | 205         | 32       | 38          | 16       | 237         | 54          | 291   |
| 1989          | 109         | 39       | 47          | 29       | 148         | 76          | 224   |

**Metres Drilled**

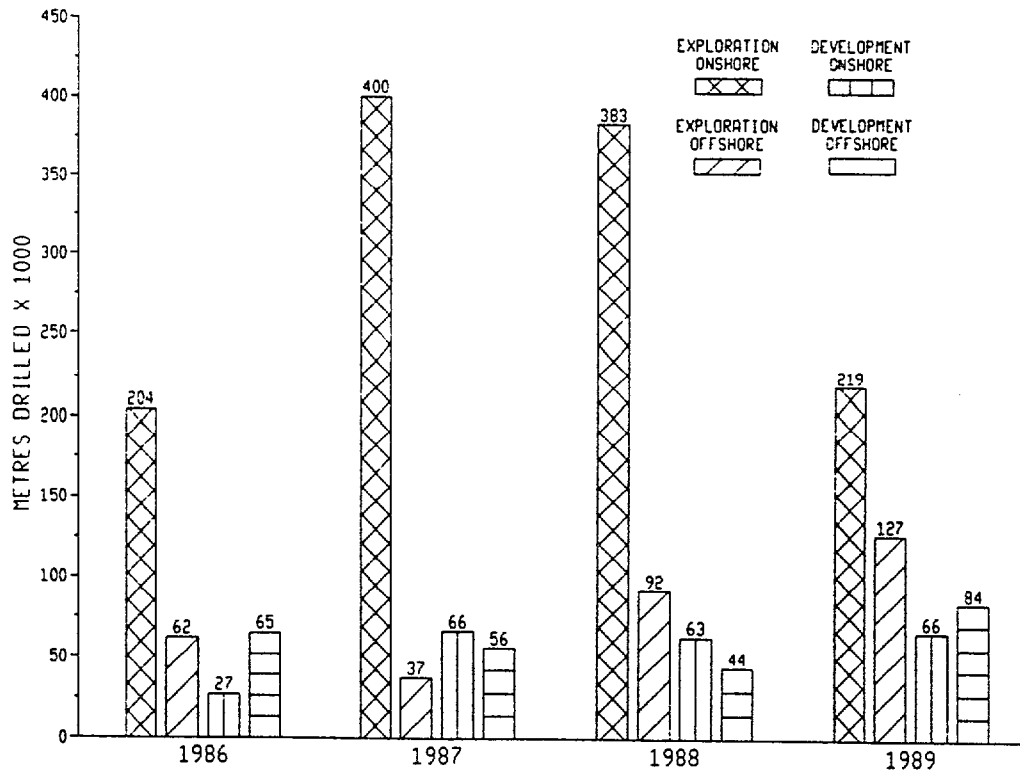
|      |         |         |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|---------|---------|
| 1979 | 59 635  | 76 424  | 44 110  | 36 612  | 136 059 | 80 722  | 216 781 |
| 1980 | 137 296 | 62 012  | 41 337  | 27 142  | 199 308 | 68 479  | 267 787 |
| 1981 | 277 258 | 45 126  | 77 602  | 34 473  | 322 384 | 112 075 | 434 459 |
| 1982 | 324 288 | 128 213 | 154 030 | 28 379  | 452 501 | 182 409 | 634 910 |
| 1983 | 273 571 | 137 472 | 82 019  | 86 425  | 411 043 | 168 444 | 579 487 |
| 1984 | 403 329 | 113 486 | 147 294 | 137 645 | 516 815 | 284 939 | 801 754 |
| 1985 | 406 967 | 105 145 | 125 190 | 59 816  | 512 112 | 185 006 | 697 118 |
| 1986 | 204 113 | 62 093  | 27 115  | 65 197  | 266 206 | 92 312  | 358 518 |
| 1987 | 400 146 | 37 606  | 66 412  | 55 518  | 437 752 | 121 930 | 559 682 |
| 1988 | 382 520 | 91 571  | 63 324  | 44 413  | 474 091 | 107 737 | 581 828 |
| 1989 | 216 080 | 121 768 | 67 472  | 88 781  | 337 848 | 156 253 | 494 101 |

## APPENDIX 1. (Cont'd)

## WELLS DRILLED 1986 TO 1989



## METRES DRILLED 1986 TO 1989



## APPENDIX 1. (Cont'd) ONSHORE DRILLING ACTIVITY BY STATE - 1979 to 1989

## New Field Wildcat wells drilled in each state

| STATE        | 1979      | 1980      | 1981      | 1982       | 1983       | 1984       | 1985       | 1986      | 1987       | 1988       | 1989      |
|--------------|-----------|-----------|-----------|------------|------------|------------|------------|-----------|------------|------------|-----------|
| QLD          | 17        | 26        | 51        | 67         | 55         | 58         | 87         | 49        | 97         | 58         | 32        |
| NSW          | -         | 3         | 1         | 2          | 4          | 4          | 8          | 6         | 3          | -          | -         |
| VIC          | 1         | 1         | 3         | 3          | 5          | 2          | 7          | 5         | 6          | 4          | -         |
| TAS          | -         | -         | -         | -          | -          | -          | -          | -         | -          | -          | -         |
| SA           | 7         | 6         | 15        | 11         | 9          | 23         | 29         | 26        | 34         | 29         | 20        |
| WA           | 1         | 6         | 20        | 31         | 27         | 37         | 29         | 5         | 20         | 22         | 4         |
| NT           | -         | -         | 4         | 4          | 5          | 4          | 1          | -         | -          | 11         | 4         |
| <b>TOTAL</b> | <b>26</b> | <b>42</b> | <b>94</b> | <b>118</b> | <b>105</b> | <b>128</b> | <b>161</b> | <b>91</b> | <b>160</b> | <b>124</b> | <b>60</b> |

## Extension/Appraisal wells drilled in each state

| STATE        | 1979     | 1980      | 1981      | 1982      | 1983      | 1984      | 1985      | 1986      | 1987      | 1988      | 1989      |
|--------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| QLD          | 3        | 13        | 22        | 23        | 15        | 43        | 25        | 5         | 23        | 37        | 16        |
| NSW          | -        | 3         | -         | -         | -         | -         | -         | 2         | -         | -         | -         |
| VIC          | -        | 1         | 1         | -         | -         | -         | -         | -         | 1         | -         | 1         |
| TAS          | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| SA           | 1        | 5         | 11        | 15        | 20        | 34        | 23        | 13        | 21        | 40        | 29        |
| WA           | 1        | 13        | 14        | 15        | 20        | 14        | 15        | -         | 5         | 1         | 2         |
| NT           | -        | -         | -         | 6         | 2         | 2         | 3         | -         | -         | 3         | 1         |
| <b>TOTAL</b> | <b>5</b> | <b>35</b> | <b>48</b> | <b>59</b> | <b>57</b> | <b>93</b> | <b>66</b> | <b>20</b> | <b>50</b> | <b>81</b> | <b>49</b> |

## Development wells drilled in each state

| STATE        | 1979      | 1980      | 1981      | 1982      | 1983      | 1984      | 1985      | 1986      | 1987      | 1988      | 1989      |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| QLD          | 3         | 9         | 16        | 8         | 15        | 16        | 5         | 6         | 11        | 17        | 20        |
| NSW          | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| VIC          | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| TAS          | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| SA           | 5         | 7         | 15        | 47        | 21        | 43        | 32        | 6         | 25        | 12        | 13        |
| WA           | 40        | 10        | 10        | 40        | 1         | 6         | 29        | -         | 1         | 9         | 13        |
| NT           | -         | -         | -         | -         | 1         | 6         | 10        | 5         | -         | -         | 1         |
| <b>TOTAL</b> | <b>48</b> | <b>26</b> | <b>41</b> | <b>95</b> | <b>38</b> | <b>71</b> | <b>76</b> | <b>17</b> | <b>37</b> | <b>38</b> | <b>47</b> |



## APPENDIX 1. (Cont'd) OFFSHORE DRILLING ACTIVITY BY STATE - 1979 to 1989

## New Field Wildcat wells drilled in each state

| STATE        | 1979      | 1980      | 1981      | 1982      | 1983      | 1984      | 1985      | 1986      | 1987     | 1988      | 1989      |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| QLD          | -         | -         | -         | -         | -         | -         | -         | -         | -        | -         | -         |
| NSW          | -         | -         | -         | -         | -         | -         | -         | -         | -        | -         | -         |
| VIC          | 2         | -         | 6         | 11        | 17        | 6         | 4         | 3         | 2        | 2         | 10        |
| TAS          | -         | -         | -         | 2         | -         | 2         | 3         | 2         | -        | -         | -         |
| SA           | -         | -         | -         | 2         | -         | -         | -         | 1         | -        | -         | -         |
| WA           | 14        | 13        | 5         | 19        | 22        | 15        | 10        | 10        | 4        | 8         | 9         |
| NT           | 2         | 4         | -         | 3         | 5         | 6         | 7         | 3         | 3        | 14        | 9         |
| <b>TOTAL</b> | <b>18</b> | <b>17</b> | <b>11</b> | <b>37</b> | <b>44</b> | <b>29</b> | <b>24</b> | <b>19</b> | <b>9</b> | <b>24</b> | <b>28</b> |

## Extension/Appraisal wells drilled in each state

| STATE        | 1979     | 1980     | 1981     | 1982     | 1983     | 1984      | 1985      | 1986     | 1987     | 1988     | 1989      |
|--------------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|-----------|
| QLD          | -        | -        | -        | -        | -        | -         | -         | -        | -        | -        | -         |
| NSW          | -        | -        | -        | -        | -        | -         | -         | -        | -        | -        | -         |
| VIC          | 1        | -        | 2        | 3        | 3        | 4         | 8         | 1        | 1        | -        | 2         |
| TAS          | 1        | -        | -        | -        | -        | -         | -         | 1        | -        | -        | -         |
| SA           | -        | -        | -        | -        | -        | -         | -         | -        | -        | -        | -         |
| WA           | 1        | -        | 3        | 3        | 2        | 7         | 11        | 3        | 3        | 3        | 2         |
| NT           | -        | -        | -        | 1        | -        | 3         | -         | 4        | 2        | 5        | 7         |
| <b>TOTAL</b> | <b>3</b> | <b>-</b> | <b>5</b> | <b>7</b> | <b>5</b> | <b>14</b> | <b>19</b> | <b>9</b> | <b>6</b> | <b>8</b> | <b>11</b> |

## Development wells drilled in each state

| STATE        | 1979     | 1980     | 1981      | 1982      | 1983      | 1984      | 1985      | 1986      | 1987      | 1988      | 1989      |
|--------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| QLD          | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| NSW          | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| VIC          | 9        | 7        | 14        | 13        | 26        | 33        | 15        | 15        | 14        | 9         | 18        |
| TAS          | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| SA           | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| WA           | -        | -        | -         | -         | -         | 5         | 3         | 5         | 3         | 4         | 9         |
| NT           | -        | -        | -         | -         | -         | -         | -         | -         | 3         | 3         | 2         |
| <b>TOTAL</b> | <b>9</b> | <b>7</b> | <b>14</b> | <b>13</b> | <b>26</b> | <b>38</b> | <b>18</b> | <b>20</b> | <b>20</b> | <b>16</b> | <b>29</b> |