



### MINERAL EXPLORATION, AUSTRALIA SEPTEMBER QUARTER 1986

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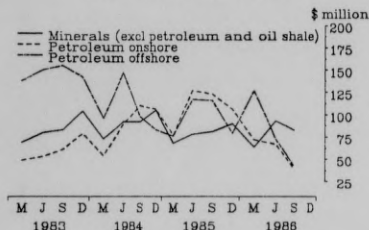
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#### MAIN FEATURES

##### EXPLORATION EXPENDITURE



#### Expenditure on exploration for the September quarter 1986 was:

- minerals (excl. petroleum and oil shale) down \$10.2m (-10.9%) on the previous quarter and up \$1.8m (+2.2%) on September quarter 1985.
- petroleum onshore down \$28.2m (-42.0%) on the previous quarter and down \$83.7m (-68.3%) on September quarter 1985.
- petroleum offshore down \$30.7m (-42.0%) on the previous quarter and down \$73.3m (-63.4%) on September quarter 1985.

#### EXPLANATORY NOTES

##### Introduction

This publication contains annual and quarterly statistics of private sector exploration for minerals in Australia (excluding A.C.T.). Minerals, in the broad sense, comprise metallic minerals, coal, construction materials, gemstones, other non-metallic minerals, oil shale and petroleum (oil and/or gas). The publication is in two parts. Part 1 shows statistics for mineral exploration (other than for petroleum and oil shale). Part 2 gives details of petroleum exploration.

2. Statistics on oil shale exploration are currently collected on an annual basis only.

3. Details of government exploration activity appear only in the annual publication, *Mineral Exploration, Australia* (8407.0).

4. A description of scope, coverage, definitions and classification is contained in the introduction to each part.

##### Expected expenditure

5. This refers to expected expenditure on exploration as reported by private enterprises during the first two months of the half year for which data are shown. Subsequent events (e.g. new discoveries, unexpected weather conditions, government policy changes, unforeseen changes in economic conditions) may cause actual expenditures to differ from those previously expected. Consequently statistics of expected expenditure should be treated with caution.

##### Related publications

6. Detailed information on mineral, oil shale and petroleum exploration on an annual basis is shown in *Mineral Exploration, Australia* (8407.0).

7. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The *Catalogue* and *Publications Advice* are available from any ABS office.

##### Symbols and other usages

- n.a. not available
- n.p. not available for separate publication
- p preliminary—figure or series subject to revision
- .. not applicable
- r revised since previous issue

8. Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

W. McLENNAN  
Acting Australian Statistician

# **PART 1. MINERAL EXPLORATION (other than for petroleum and oil shale)** **AUSTRALIA**

## **Introduction**

The statistics in this part are collected and compiled by the ABS.

## **Period covered**

2. The periods covered by the statistics are in general as shown in the tables. Where businesses find it impossible to supply information on this basis, a substitute accounting period is used.

## **Scope**

3. For both the quarterly surveys and the annual censuses all private sector exploration activity is included regardless of the main activity of the explorer.

## **Coverage**

4. In Table 1 details of mineral exploration are collected only from private enterprises which report *annual* expenditure exceeding \$0.5 million.

5. Table 2 shows figures compiled from the annual census of mineral exploration in Australia, in which data are obtained from all private enterprises known to be engaged in mineral exploration.

## **Definitions**

6. *Exploration.* The search for new ore occurrences

and/or appraisal intended to delineate or greatly expand the limits of known deposits of minerals by geological, geophysical, geochemical, drilling and other methods. This includes construction of shafts and adits primarily for exploration purposes but excludes mine development activities. Exploration for water is excluded.

7. *Exploration expenditure.* All expenditure on exploration activity in Australia. It includes expenditure on aerial surveys (including landsat photographs), general surveys, report writing, map preparation and other activities indirectly attributable to exploration.

## **Classification**

8. The data are classified into the following categories:

- Mineral exploration on production leases.* Exploration carried out on the production lease by privately operated mines currently producing or under development for production of minerals.
- Other mineral exploration.* Exploration carried out by private enterprises on areas covered by exploration licences, authorities to enter, authorities to prospect, and similar licences and authorities issued by State governments for exploration for minerals. Also included is exploration by private enterprises which is not directly connected with areas under lease, licence, etc.

**TABLE 1. MINERAL EXPLORATION : ACTUAL AND EXPECTED EXPENDITURE AND METRES DRILLED BY PRINCIPAL ENTERPRISES(a):**

| Period                      | Expenditure (\$ million) |       |       | Metres drilled ('000 metres) |       |       |
|-----------------------------|--------------------------|-------|-------|------------------------------|-------|-------|
|                             | On production leases     | Other | Total | On production leases         | Other | Total |
| <b>Actual expenditure</b>   |                          |       |       |                              |       |       |
| 1984-85—                    |                          |       |       |                              |       |       |
| March qtr                   | 7.0                      | 61.1  | 68.1  | 74.2                         | 391.3 | 465.6 |
| June qtr                    | 6.4                      | 71.5  | 77.9  | 102.5                        | 458.0 | 560.5 |
| 1985-86—                    |                          |       |       |                              |       |       |
| September qtr               | 7.0                      | 74.4  | 81.4  | 106.5                        | 600.1 | 706.7 |
| December qtr                | 7.4                      | 82.7  | 90.1  | 111.4                        | 625.6 | 737.0 |
| March qtr                   | 5.5                      | 58.9  | 64.3  | 80.9                         | 439.6 | 520.4 |
| June qtr                    | 7.9                      | 85.5  | 93.4  | 115.8                        | 647.9 | 763.7 |
| 1986-87—                    |                          |       |       |                              |       |       |
| September qtr               | 14.5                     | 68.8  | 83.2  | 149.8                        | 738.3 | 888.1 |
| <b>Expected expenditure</b> |                          |       |       |                              |       |       |
| Six months ended—           |                          |       |       |                              |       |       |
| June 1985                   | ..                       | ..    | 144.1 | ..                           | ..    | ..    |
| December 1985               | ..                       | ..    | 147.0 | ..                           | ..    | ..    |
| June 1986                   | ..                       | ..    | 141.2 | ..                           | ..    | ..    |
| December 1986               | ..                       | ..    | 193.8 | ..                           | ..    | ..    |

(a) For enterprises included in survey see paragraph 4 above.

TABLE 2. MINERAL EXPLORATION: ANNUAL EXPENDITURE AND METRES DRILLED BY ALL ENTERPRISES(a)

| Period  | Expenditure (\$ million) |       |       | Metres drilled ('000 metres) |       |       |
|---------|--------------------------|-------|-------|------------------------------|-------|-------|
|         | On production leases     | Other | Total | On production leases         | Other | Total |
| 1979-80 | 30.5                     | 255.6 | 286.1 | 617                          | 2,299 | 2,917 |
| 1980-81 | 45.3                     | 425.2 | 470.5 | 743                          | 3,222 | 3,965 |
| 1981-82 | 44.6                     | 531.0 | 575.6 | 648                          | 3,377 | 4,025 |
| 1982-83 | 49.6                     | 388.3 | 437.9 | 535                          | 2,217 | 2,752 |
| 1983-84 | 40.7                     | 388.0 | 428.7 | 599                          | 2,600 | 3,198 |
| 1984-85 | 44.7                     | 392.7 | 437.3 | 646                          | 2,745 | 3,391 |

(a) For enterprises included in census see paragraph 5 page 2.

## PART 2. PETROLEUM EXPLORATION, AUSTRALIA

## Introduction

This part contains statistics of expenditure and metres drilled on petroleum exploration.

2. The expenditure data shown in Table 3 are compiled from quarterly ABS returns.

3. The summary metres drilled data shown in Table 4 are provided by the Bureau of Mineral Resources, Geology and Geophysics (BMR). More detailed information is available from the Petroleum Branch, BMR.

4. There are some differences in scope, coverage and definitions between the two collections.

## Periods covered

5. In Table 3, the ABS data are shown in financial years. BMR quarterly data are added to calendar years in Table 4.

## Scope

6. For the ABS quarterly collection all exploration activity is included regardless of the main activity of the explorer.

## Coverage

7. For the ABS quarterly collection all private enterprises known to be engaged in petroleum exploration are required to complete returns in respect of their exploration activities in Australia.

## Definitions

8. *Exploration*. The search for undiscovered oil or gas, and/or appraisal intended to greatly extend the limits of a known oil or gas reservoir by geological, geophysical, geochemical, drilling and other methods. Activity of a developmental or production nature is excluded.

9. *Exploration expenditure*. All expenditure on exploration activity in Australia. It includes expenditure on aerial surveys (including landsat photographs), general surveys, report writing, map preparation and other activities indirectly attributable to exploration. Cash bids for exploration permits in the Timor Sea are also included.

## Classification

10. The data obtained are classified into the following categories:

(a) *Drilling/Other*, where *drilling* expenditure includes cost of access (roads, vessel hire, etc.) to the drilling site and site preparation, etc., and *other* expenditure includes costs of surveys, report writing, map preparation and all other activities attributable to exploration.

(b) *Onshore/Offshore*, where *offshore* includes all operations in a marine area under the Petroleum (Submerged Lands) Act 1967 or under any Acts administered by State governments.

(c) *Production lease/Other*, where a *production lease* is an area on which production or development is actually taking place.

TABLE 3. PETROLEUM EXPLORATION : ACTUAL AND EXPECTED EXPENDITURE  
(\$ million)

| Period                      | Onshore  |        |        | Offshore |        |        | Total expenditure    |        |        |
|-----------------------------|----------|--------|--------|----------|--------|--------|----------------------|--------|--------|
|                             | Drilling | Other  | Total  | Drilling | Other  | Total  | On production leases | Other  | Total  |
| <b>Actual expenditure</b>   |          |        |        |          |        |        |                      |        |        |
| 1980-81                     | 75.3     | 94.4   | 169.7  | 139.1    | 59.5   | 198.6  | n.a.                 | n.a.   | 368.3  |
| 1981-82                     | 178.1    | 200.5  | 378.6  | 333.4    | 92.0   | 425.4  | n.a.                 | n.a.   | 804.0  |
| 1982-83                     | 176.3    | 168.8  | 345.1  | 509.9    | 72.4   | 582.3  | n.a.                 | n.a.   | 927.4  |
| 1983-84                     | 139.9    | 143.2  | 283.1  | 472.9    | 67.7   | 540.6  | n.a.                 | n.a.   | 823.7  |
| 1984-85                     | 224.2    | 195.4  | 419.6  | 284.6    | 89.0   | 373.6  | n.a.                 | n.a.   | 793.2  |
| 1985-86                     | r149.6   | r218.1 | r367.8 | r277.5   | r118.0 | r395.5 | 59.3                 | r704.0 | r763.3 |
| <b>1984-85—</b>             |          |        |        |          |        |        |                      |        |        |
| March qtr                   | 38.8     | 37.8   | 76.6   | 51.9     | 24.1   | 76.0   | n.a.                 | n.a.   | 152.6  |
| June qtr                    | 67.5     | 59.5   | 127.0  | 84.7     | 32.3   | 117.0  | n.a.                 | n.a.   | 244.0  |
| <b>1985-86—</b>             |          |        |        |          |        |        |                      |        |        |
| September qtr               | 55.6     | 67.0   | 122.6  | 93.6     | 22.1   | 115.7  | 26.9                 | 211.5  | 238.4  |
| December qtr                | 40.4     | 65.3   | 105.7  | 54.8     | 24.6   | 79.4   | 13.2                 | 171.9  | 185.1  |
| March qtr                   | 31.8     | 40.5   | 72.3   | 81.4     | 45.9   | 127.3  | n.p.                 | n.p.   | 199.6  |
| June qtr                    | r21.8    | r45.4  | r67.1  | 47.7     | r25.4  | r73.1  | n.p.                 | n.p.   | r140.3 |
| <b>1986-87—</b>             |          |        |        |          |        |        |                      |        |        |
| September qtr               | 11.5     | 27.4   | 38.9   | 27.3     | 15.1   | 42.4   | 9.6                  | 71.7   | 81.3   |
| <b>Expected expenditure</b> |          |        |        |          |        |        |                      |        |        |
| <i>Six months ended—</i>    |          |        |        |          |        |        |                      |        |        |
| June 1985                   | ..       | ..     | 194.2  | ..       | ..     | 155.3  | ..                   | ..     | 349.5  |
| December 1985               | ..       | ..     | 194.0  | ..       | ..     | 206.5  | ..                   | ..     | 400.5  |
| June 1986                   | ..       | ..     | 189.4  | ..       | ..     | 253.7  | ..                   | ..     | 443.0  |
| December 1986               | ..       | ..     | 71.5   | ..       | ..     | 72.2   | ..                   | ..     | 143.8  |

TABLE 4. PETROLEUM EXPLORATION : METRES DRILLED  
(Source: Bureau of Mineral Resources, Geology and Geophysics)  
(' 000 metres)

| Period        | Onshore | Offshore | Total drilling |
|---------------|---------|----------|----------------|
| 1980          | 137.3   | 62.0     | 199.3          |
| 1981          | 277.3   | 45.1     | 322.4          |
| 1982          | 324.3   | 128.2    | 452.5          |
| 1983          | 273.6   | 137.5    | 411.1          |
| 1984          | 403.3   | 113.5    | 516.8          |
| 1985          | 405.0   | 104.1    | 509.1          |
| <b>1985—</b>  |         |          |                |
| June qtr      | 109.0   | 27.7     | 136.7          |
| September qtr | 97.4    | 37.3     | 134.8          |
| December qtr  | 96.6    | 22.1     | 118.7          |
| <b>1986p—</b> |         |          |                |
| March qtr     | 71.1    | 27.8     | 98.9           |
| June qtr      | 52.0    | 17.8     | 69.8           |
| September qtr | 28.5    | 11.9     | 40.4           |