

MINERAL EXPLORATION, AUSTRALIA
SEPTEMBER QUARTER 1983

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MAIN FEATURES

Expenditure on exploration for—	Change between			
	June quarter 1983 and September quarter 1983		September quarter 1982 and September quarter 1983	
	\$m	%	\$m	%
Minerals and oil shale	5.9	6.8	-14.8	-13.8
Petroleum—				
onshore	6.8	12.9	-85.4	-58.9
offshore	5.5	3.7	37.8	32.1

EXPLANATORY NOTES

Introduction

This publication contains annual and quarterly statistics of exploration for minerals in Australia (excluding A.C.T.). Part 1 sets out statistics of exploration for minerals and oil shale for which data are no longer available for separate publication. Part 2 gives details of petroleum exploration.

Scope and coverage

2. A description of scope and coverage is contained in the introduction to each part.

Expected expenditure

3. This refers to expected expenditure on mineral and oil shale exploration and on petroleum exploration as reported by private and government enterprises during the first two months of the half year for which data are shown. Subsequent events (e.g. discoveries of new orebodies, unexpected weather conditions, government policy changes, unforeseen changes in economic conditions) may cause actual expenditures to differ from those previously expected.

Related publications

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

5. 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.p. not available for separate publication
- p preliminary—figure or series subject to revision
- r figure or series revised since previous issue
- .. not applicable
- nil or rounded to zero
- break in continuity of series

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

7. The figures shown in this publication have been revised where necessary and as a consequence may not agree with similar data shown in previous publications.

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PART 1. MINERAL AND OIL SHALE EXPLORATION AUSTRALIA

Introduction

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

Scope and coverage

2. Details of expenditure and metres drilled (Tables 1 and 3) are collected from *three types of enterprises* undertaking exploration activity. For any quarter these comprise:

- (i) All government authorities engaged in mineral and oil shale exploration,
- (ii) All private enterprises engaged in oil shale exploration, and
- (iii) Those private enterprises whose *annual* expenditure on mineral exploration activity is expected to exceed a certain amount (currently \$0.5 million).

3. Tables 2 and 4 show figures compiled from the Annual Censuses of Mineral Exploration and Oil Shale Exploration in Australia, in which data are obtained from all private and government enterprises engaged in exploration.

Definitions

4. *Exploration* consists of the search for, and/or appraisal of, new ore occurrences and known deposits of minerals (including oil shale) 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.

5. *Exploration expenditure* includes expenditure on aerial surveys (including landsat photographs), general surveys, report writing, map preparation and other activities indirectly attributable to exploration.

Classification

6. The data obtained in the survey are classified into the following categories:

- (i) *Private exploration on production leases* relates to exploration carried out on the production lease by privately operated mines currently producing or under development for production of minerals.
- (ii) *Other private exploration* relates to 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 (including oil shale). Also included is exploration by private enterprises which is not directly connected with areas under lease, licence, etc.
- (iii) *Government exploration* consists of exploration by Commonwealth, State and Local Government departments, commissions and authorities.

TABLE 1. MINERAL AND OIL SHALE EXPLORATION : EXPENDITURE(a)—ACTUAL AND EXPECTED
(\$ million)

Period	Private expenditure		Total private	Government expenditure	Total expenditure
	On production leases	On other areas			
Actual expenditure					
1981-82—					
June qtr	6.4	113.2	119.6	11.1	130.7
1982-83—					
September qtr	5.8	101.1	106.9	7.8	114.7
December qtr	5.4	109.2	114.5	8.0	122.5
March qtr	4.9	64.3	69.2	7.0	76.2
June qtr	4.6	81.5	86.2	8.7	94.9
1983-84—					
September qtr	4.9	87.2	92.1	6.1	98.2
Expected expenditure					
Six months ended—					
December 1982	..	..	234.7	15.7	250.4
June 1983	..	..	195.2	13.0	208.2
December 1983	..	..	195.5	14.8	210.3

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

TABLE 2. MINERAL AND OIL SHALE EXPLORATION : ANNUAL EXPENDITURE BY ALL ENTERPRISES
(\$ million)

Period	Private expenditure			Government expenditure	Total expenditure
	On production leases	On other areas	Total private		
1976-77(a)	23.9	110.0	134.0	15.5	149.5
1977-78(a)	22.8	135.6	158.4	17.9	176.3
1978-79(a)	24.0	158.6	182.5	19.5	202.0
1979-80	30.5	262.7	293.2	24.3	317.5
1980-81	45.3	427.9	473.2	28.5	501.7
1981-82	44.6	556.0	600.6	27.9	628.5

(a) Mineral exploration only. No census of oil shale exploration conducted.

TABLE 3. MINERAL AND OIL SHALE EXPLORATION : METRES DRILLED(a)
('000 metres)

Period	Private exploration			Government exploration	Total drilling
	On production leases	On other areas	Total private		
1981-82— June qtr	133.5	724.6	858.1	76.7	934.8
1982-83— September qtr	126.6	564.0	690.6	60.3	750.9
December qtr	90.2	707.5	797.6	40.9	838.6
March qtr	73.2	309.5	382.7	22.5	405.2
June qtr	89.1	402.2	491.4	25.0	516.4
1983-84— September qtr	90.6	550.3	640.9	28.4	669.3

(a) For enterprises in survey see paragraph 2, page 2.

TABLE 4. MINERAL AND OIL SHALE EXPLORATION : METRES DRILLED BY ALL ENTERPRISES
('000 metres)

Period	Private exploration			Government exploration	Total drilling
	On production leases	On other areas	Total private		
1976-77(a)	461	1,372	1,834	129	1,963
1977-78(a)	410	1,919	2,329	202	2,531
1978-79(a)	639	1,689	2,328	185	2,513
1979-80	617	2,331	2,949	159	3,108
1980-81	743	3,182	3,925	239	4,164
1981-82	648	3,486	4,134	243	4,377

(a) Mineral exploration only. No census of oil shale exploration conducted.

PART 2. PETROLEUM EXPLORATION, AUSTRALIA

Introduction

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

2. The exploration expenditure data in Table 5 are collected by the ABS and shown for years ended 30 June while the metres drilled data in Table 6 are provided by the Bureau of Mineral Resources, Geology and Geophysics (BMR) and relate to years ended 31 December.

Scope and coverage

3. Details of expenditure and metres drilled relate to all private and public undertakings known to be engaged in petroleum exploration activity.

Definition

4. *Exploration* consists of 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 exploration methods. Activity of a developmental or production nature is excluded.

Classification

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

- (i) *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.
- (ii) *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.
- (iii) *Private/Government* where government relates to exploration for petroleum carried out by Commonwealth, State and Local Government departments, commissions and authorities.

TABLE 5. EXPENDITURE ON PETROLEUM EXPLORATION, ACTUAL AND EXPECTED
(\$ million)

Period	Private expenditure					Government expenditure			
	Onshore		Offshore		Total	Onshore (a)	Offshore (b)	Total	Total expenditure
	Drilling	Other	Drilling	Other					
Actual expenditure									
1977-78	n.p.	n.p.	65.1	14.9	103.1	3.9	1.6	5.5	108.7
1978-79	9.6	20.9	97.1	35.8	163.4	3.3	1.5	4.7	168.1
1979-80	34.1	49.3	171.2	40.0	294.7	3.7	1.3	5.0	299.7
1980-81	75.3	94.4	139.1	59.5	368.3	4.0	1.4	5.4	373.7
1981-82	176.7	200.5	333.4	92.0	802.6	6.3	1.9	8.2	810.8
1982-83	r176.3	168.8	509.9	72.4	r927.4	r6.5	3.7	r10.2	r937.6
1981-82—									
June qtr	55.3	56.1	124.4	25.4	261.1	3.0	0.7	3.7	264.7
1982-83—									
September qtr	70.3	74.6	91.2	26.5	262.6	1.2	1.9	3.1	265.7
December qtr	54.0	44.9	160.6	16.3	275.8	1.7	0.6	2.3	278.1
March qtr	34.2	24.3	124.9	12.8	186.3	2.0	0.6	2.6	189.0
June qtr	r27.7	r25.0	133.2	r16.8	r202.7	1.9	0.6	2.5	r205.2
1983-84—									
September qtr	27.4	32.1	139.6	15.9	215.0	1.5	0.5	2.0	217.0
Expected expenditure									
<i>Six months ended—</i>									
December 1982	199.1		195.3		394.4	..	..	4.2	398.7
June 1983	168.8		307.7		476.5	..	..	4.1	480.6
December 1983	155.6		258.0		413.6	..	..	3.7	417.3

(a) Includes 'Drilling' and 'Other'. (b) No government drilling offshore.

TABLE 6. PRIVATE PETROLEUM EXPLORATION—METRES DRILLED, AUSTRALIA
 (Source: Bureau of Mineral Resources, Geology and Geophysics)
 ('000 metres)

<i>Period</i>	<i>Onshore</i>	<i>Offshore</i>	<i>Total drilling</i>
1977	23.7	36.8	60.5
1978	57.8	56.9	114.7
1979	58.7	77.4	136.1
1980	137.3	62.0	199.3
1981	282.4	44.9	327.3
1982	338.3	128.3	466.6
1982—			
June qtr	91.4	32.4	123.9
September qtr	98.8	27.9	126.7
December qtr	68.9	43.9	112.8
1983p—			
March qtr	51.6	39.2	90.9
June qtr	147.5	39.8	187.3
September qtr	66.7	25.3	92.0