

**MINERAL AND PETROLEUM
EXPLORATION**

AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) WED 21 JUNE 2000

C O N T E N T S

	<i>page</i>
Notes	2
Summary of findings	3
TABLE	
1 Private exploration, actual and expected expenditure	7
2 Mineral exploration (other than for petroleum), expenditure and metres drilled	8
3 Mineral exploration (other than for petroleum), expenditure by state and territory	9
4 Mineral exploration (other than for petroleum), expenditure by mineral sought	10
5 Petroleum exploration expenditure	11
6 Petroleum exploration by region	12
ADDITIONAL INFORMATION	
Explanatory notes	13

- For further information about these and related statistics, contact Sandra Cook on Darwin 08 8943 2171, or the National Information Service on 1300 135 070.

NOTES

FORTHCOMING ISSUES

ISSUE (Quarter)

RELEASE DATE

June 2000

20 September 2000

September 2000

20 December 2000



CHANGES IN THIS ISSUE

There are no changes in this issue.



W. McLennan
Australian Statistician

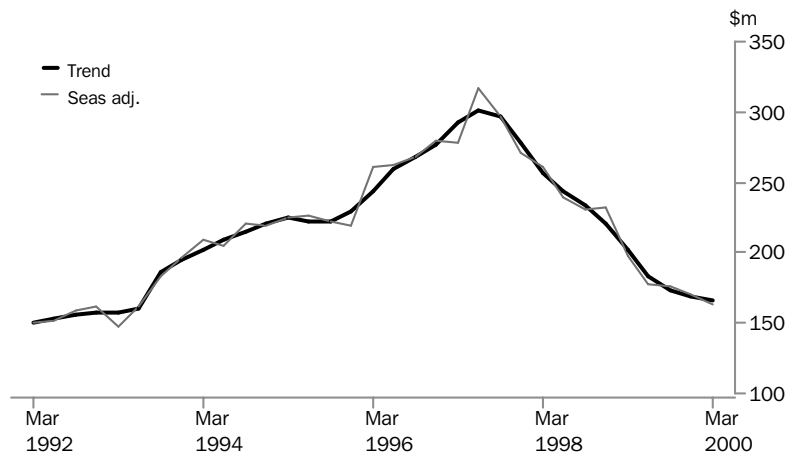
SUMMARY OF FINDINGS

MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

TREND ESTIMATES

The trend estimate for mineral exploration expenditure has continued to fall with the March quarter 2000 being the eleventh consecutive quarter of decline. The estimate is now at the lowest level since the June quarter 1993.

Between the December quarter 1999 and the March quarter 2000, the trend estimate fell \$3m to \$166m. This was 18% lower than the estimate of \$201m for the March quarter 1999.



STATES AND TERRITORIES

Falls in trend estimates occurred in South Australia (down 20%), the Northern Territory (down 11%) and New South Wales (down 6%).

Queensland, Victoria and Western Australia showed small increases, while Tasmania was unchanged.

METRES DRILLED

The trend estimate for total metres drilled for exploration has continued to fall in line with the fall in total exploration expenditure. The trend estimate for metres drilled for the March quarter fell by 11%. This was 34% lower than the March quarter 1999.

SUMMARY OF FINDINGS *continued*

MARCH QUARTER

In seasonally adjusted terms, exploration expenditure for the March quarter 2000 fell by 4% (\$7m) to \$163m.

In original terms, mineral exploration expenditure reported for the March quarter 2000 fell 23% (\$40m) to \$137m. The majority of the falls occurred in Western Australia, down \$24m (22%), Northern Territory, down \$6m (41%) and Queensland, down \$4m (20%).

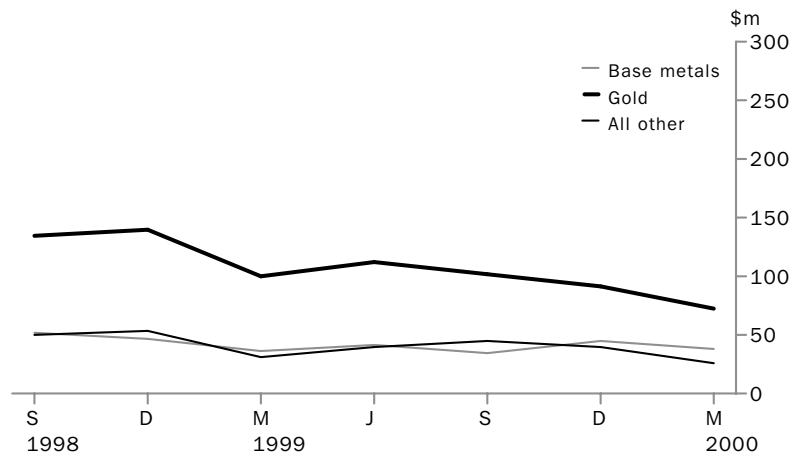
The March quarter 2000 total mineral exploration expenditure was 18% (\$31m) lower than the March quarter 1999 and is the lowest reported figure since the March quarter 1993.

In March quarter 2000, exploration expenditure on production leases fell by 8% (\$3m) with the majority of the fall being reported in "all other areas", down 27% (\$37m).

The flow on effects of low world commodity prices and lack of capital combined with unusual cyclonic weather and resultant flooding has contributed to the fall for the March quarter 2000.

Exploration for gold continued to decline and is now at its lowest level since the March quarter 1993.

MINERAL EXPLORATION EXPENDITURE, *Original Series*



SUMMARY OF FINDINGS *continued*

METRES DRILLED

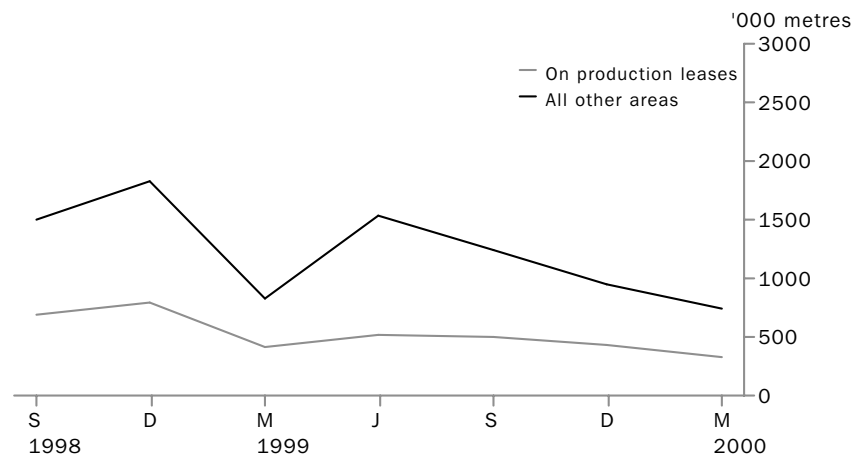
The number of metres drilled for exploration is now at the lowest level since the ABS first collected this data in the June quarter 1987.

The seasonally adjusted estimate of 1.3 million metres for the March quarter 2000 was 3% lower than the December quarter 1999.

In original terms, the 1.1 million metres drilled reported for the March quarter 2000 was down 23% from the December quarter 1999.

In the March quarter drilling on production leases fell 26% to 0.3 million metres while drilling on "all other areas" fell 21% to 0.7 million metres from the December quarter 1999.

METRES DRILLED, Original Series



SUMMARY OF FINDINGS *continued*

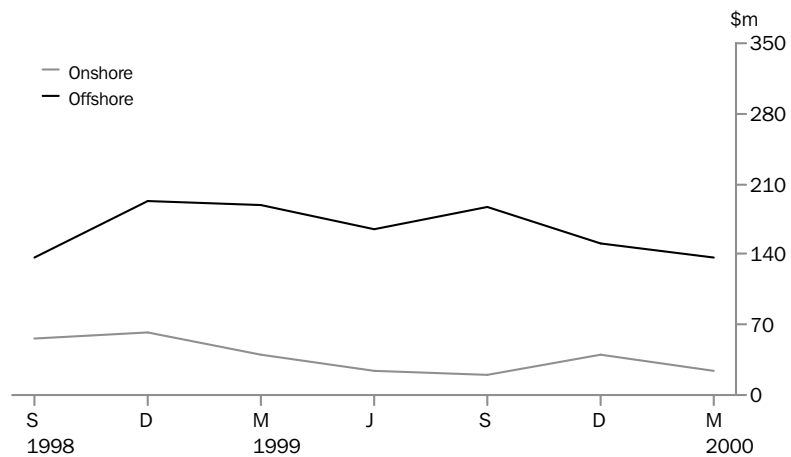
PETROLEUM EXPLORATION EXPENDITURE

OVERVIEW

Reported expenditure on petroleum exploration in the March quarter was \$161m, 16% (\$30m) lower than the December quarter 1999.

Expenditure on onshore exploration fell by 38% (\$16m) from the December quarter 1999 with drilling expenditure contributing 84% of the fall.

Although total expenditure fell from the December quarter, offshore drilling expenditure increased by \$16m (19%) to \$103m, representing 76% of total offshore expenditure in the March quarter.



REGIONAL DATA

Regional data for petroleum exploration expenditure was available for Victoria, Western Australia, Northern Territory and Ashmore and Cartier Islands and the Zone of Cooperation (Area A).

Of the published regions Western Australia was the only state to report an increase in expenditure, up 25% (\$24m) to \$121m, while Victoria and the Northern Territory and Ashmore and Cartier Islands reported falls in expenditure of 44% and 33% respectively.

PRIVATE EXPLORATION, Actual and Expected Expenditure

Period	MINERAL EXPLORATION .			PETROLEUM ONSHORE ...			PETROLEUM OFFSHORE		
	<i>Actual</i>	<i>Expected(a)</i>	<i>Actual as a proportion of expected</i>	<i>Actual</i>	<i>Expected(a)</i>	<i>Actual as a proportion of expected</i>	<i>Actual</i>	<i>Expected(a)</i>	<i>Actual as a proportion of expected</i>
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
1996-1997	1 148.6	808.9	142.0	251.9	206.2	122.2	601.0	446.6	134.6
1997-1998	1 066.8	901.3	118.4	232.3	145.0	160.2	748.9	773.7	96.8
1998-1999	837.8	602.9	139.0	182.3	144.2	126.4	685.4	540.1	126.9
6 months ended December 1998	475.5	299.5	158.8	117.5	71.6	164.2	330.7	246.5	134.1
6 months ended June 1999	362.3	303.4	119.4	64.8	72.6	89.2	354.8	293.6	120.8
6 months ended December 1999	356.9	252.8	141.2	60.9	86.0	70.8	336.7	241.8	139.2
6 months ended June 2000	n.y.a.	284.8	n.y.a.	n.y.a.	69.3	n.y.a.	n.y.a.	395.2	n.y.a.

n.y.a. not yet available

(a) As reported in previous collections. Refer to Explanatory Notes paragraph 13.

MINERAL EXPLORATION (Other than for Petroleum), Expenditure and Metres Drilled

Period	EXPENDITURE.....					METRES DRILLED.....				
	<i>On production leases</i>	<i>On all other areas</i>	<i>Total</i>	<i>Seasonally adjusted</i>	<i>Trend estimate</i>	<i>On production leases</i>	<i>On all other areas</i>	<i>Total</i>	<i>Seasonally adjusted</i>	<i>Trend estimate</i>
	\$m	\$m	\$m	\$m	\$m	'000 m	'000 m	'000 m	'000 m	'000 m
1996-1997	306.1	842.4	1 148.6	..	..	4 453	8 378	12 831	..	..
1997-1998	253.2	813.6	1 066.8	..	..	3 365	7 843	11 209	..	..
1998-1999	199.1	638.7	837.8	..	..	2 404	5 697	8 101	..	..
1998										
June	53.3	209.3	262.6	239.2	243.5	843	1 885	2 728	2 528	2 392
September	51.5	184.3	235.9	230.7	234.0	690	1 494	2 183	1 984	2 280
December	60.0	179.7	239.6	231.5	220.0	786	1 833	2 619	2 582	2 123
1999										
March	46.0	121.3	167.3	197.8	201.4	412	835	1 247	1 549	1 935
June	41.7	153.3	195.0	177.1	183.3	517	1 534	2 051	1 896	1 739
September	43.9	136.2	180.1	176.6	173.9	504	1 239	1 743	1 582	1 564
December	40.2	136.7	176.9	170.2	169.0	431	948	1 379	1 363	1 440
2000										
March	36.9	99.8	136.7	162.8	166.0	319	745	1 064	1 321	1 286

MINERAL EXPLORATION (other than for Petroleum), Expenditure by State and Territory

<i>Period</i>	<i>New South Wales</i>	<i>Victoria</i>	<i>Queensland</i>	<i>South Australia</i>	<i>Western Australia</i>	<i>Tasmania</i>	<i>Northern Territory</i>	<i>Australia</i>
<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
ORIGINAL								
1996-1997	94.1	51.8	160.7	35.1	691.7	26.0	88.9	1 148.6
1997-1998	88.2	43.1	133.2	45.0	660.4	20.7	75.9	1 066.8
1998-1999	65.6	37.0	93.8	41.9	523.1	11.9	64.5	837.8
1998								
June	18.0	9.6	28.2	12.0	173.4	3.5	17.8	262.6
September	14.2	9.0	22.2	12.6	154.1	2.4	21.2	235.9
December	18.4	11.0	25.0	8.9	157.3	3.0	16.0	239.6
1999								
March	15.6	10.3	20.2	7.6	102.3	3.8	7.6	167.3
June	17.4	6.7	26.4	12.8	109.4	2.6	19.6	195.0
September	14.6	8.2	21.0	6.5	107.9	2.7	19.2	180.1
December	14.8	8.1	21.3	6.7	108.8	2.3	14.8	176.9
2000								
March	12.1	7.5	17.1	3.8	85.0	2.4	8.8	136.7
SEASONALLY ADJUSTED								
1998								
June	16.3	9.8	25.4	10.2	157.9	3.1	16.5	239.2
September	15.3	9.6	22.2	13.2	149.1	2.7	18.6	230.7
December	18.2	9.7	22.5	8.5	155.1	3.0	14.5	231.5
1999								
March	16.5	10.9	25.9	9.4	119.9	4.0	11.2	197.8
June	15.7	6.8	23.7	10.8	99.5	2.4	18.2	177.1
September	15.7	8.7	21.1	6.8	104.5	3.0	16.8	176.6
December	14.5	7.1	19.2	6.4	107.3	2.3	13.4	170.2
2000								
March	12.8	8.1	21.9	4.7	99.8	2.5	13.0	162.8
TREND								
1998								
June	17.8	10.2	24.7	11.2	158.9	2.7	18.0	243.5
September	16.2	9.9	22.8	10.9	155.0	3.0	16.2	234.0
December	16.5	9.8	23.4	10.3	142.2	3.1	14.7	220.0
1999								
March	16.7	9.4	24.2	9.7	123.6	3.2	14.6	201.4
June	16.2	8.5	23.4	9.0	107.7	3.0	15.5	183.3
September	15.2	7.8	21.6	7.9	102.7	2.7	16.0	173.9
December	14.4	7.6	20.5	6.1	103.2	2.5	14.7	169.0
2000								
March	13.6	7.9	20.6	4.9	103.4	2.5	13.1	166.0

MINERAL EXPLORATION (other than for Petroleum), Expenditure by Mineral Sought

	<i>Copper, silver-lead- zinc, nickel and cobalt</i>	<i>Gold</i>	<i>Iron ore</i>	<i>Mineral sands</i>	<i>Tin, tungsten, scheelite and wolfram</i>	<i>Uranium</i>	<i>Coal</i>	<i>Construction materials</i>	<i>Diamonds</i>	<i>Other</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
MARCH QUARTER 2000											
New South Wales	4.4	3.0	—	0.6	n.p.	—	3.4	—	—	0.4	12.1
Victoria	n.p.	5.7	—	1.1	—	—	—	—	—	n.p.	7.5
Queensland	5.4	7.0	—	n.p.	—	—	4.2	—	—	0.1	17.1
South Australia	1.1	1.7	—	n.p.	—	0.1	n.p.	—	—	0.1	3.8
Western Australia	24.8	47.2	5.0	2.1	—	n.p.	n.p.	—	2.8	2.8	85.0
Tasmania	n.p.	1.0	—	—	—	—	—	—	—	n.p.	2.4
Northern Territory	0.7	6.3	—	—	—	1.1	—	—	0.7	—	8.8
Australia	38.2	71.9	5.0	4.6	n.p.	n.p.	7.9	—	3.5	3.8	136.7
AUSTRALIA											
1996–1997	206.8	728.3	25.8	13.9	0.6	13.0	70.5	0.9	59.3	29.4	1 148.6
1997–1998	227.1	648.4	30.0	14.0	0.1	22.2	64.8	1.1	42.8	16.3	1 066.8
1998–1999	176.9	486.1	41.5	19.0	0.2	15.4	39.9	0.7	40.9	17.2	837.8
June 1998	60.9	151.7	12.6	4.5	n.p.	6.0	11.9	n.p.	9.9	5.1	262.6
September 1998	52.0	134.3	12.6	3.6	n.p.	7.4	9.6	n.p.	13.1	3.0	235.9
December 1998	46.4	139.8	13.7	5.8	—	3.6	9.4	0.2	15.3	5.5	239.6
March 1999	36.5	99.4	7.2	4.6	n.p.	1.4	9.8	n.p.	3.6	4.7	167.3
June 1999	42.0	112.7	8.1	5.0	n.p.	3.1	11.1	n.p.	9.0	3.9	195.0
September 1999	33.7	101.5	8.8	4.5	—	4.8	9.5	0.1	12.2	5.0	180.1
December 1999	45.0	91.6	n.p.	4.8	n.p.	3.7	9.2	0.1	9.2	4.0	176.9
March 2000	38.2	71.9	5.0	4.6	n.p.	n.p.	7.9	—	3.5	3.8	136.7
	n.p. not available for publication					— nil or rounded to zero					

PETROLEUM EXPLORATION EXPENDITURE

Period	ONSHORE.....			OFFSHORE.....			TOTAL EXPENDITURE.....		
	<i>Drilling</i>	<i>Other</i>	<i>Total</i>	<i>Drilling</i>	<i>Other</i>	<i>Total</i>	<i>On production leases</i>	<i>On all other leases</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1996-1997	179.6	72.3	251.9	412.0	189.1	601.0	137.7	715.3	853.0
1997-1998	174.1	58.2	232.3	501.2	247.6	748.9	68.8	912.4	981.2
1998-1999	111.7	70.5	182.3	428.5	257.0	685.4	105.6	762.1	867.7
1998									
June	49.2	15.5	64.8	207.5	62.0	269.5	27.3	306.9	334.2
September	34.3	21.7	56.0	81.6	55.7	137.3	24.3	169.0	193.3
December	44.7	16.9	61.6	123.0	70.4	193.3	35.1	219.8	254.9
1999									
March	20.8	18.9	39.7	127.0	61.8	188.9	24.6	203.9	228.5
June	12.0	13.1	25.1	96.9	69.0	165.9	21.6	169.4	191.0
September	10.9	9.5	20.3	113.2	72.9	186.1	23.8	182.6	206.5
December	23.7	16.9	40.6	86.8	63.7	150.5	51.2	139.9	191.1
2000									
March	10.6	14.4	25.0	103.1	32.6	135.8	26.9	133.9	160.7

PETROLEUM EXPLORATION, By Region

<i>Period</i>	<i>New South Wales</i>	<i>Victoria</i>	<i>Queensland</i>	<i>South Australia</i>	<i>Western Australia(a)</i>	<i>Tasmania</i>	<i>Northern Territory/ Ashmore and Cartier Islands</i>	<i>Zone of Cooperation Area A(b)</i>	<i>Total</i>
<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
1996-1997	n.p.	45.8	134.5	n.p.	444.1	n.p.	41.5	72.5	853.0
1997-1998	0.2	34.5	107.1	n.p.	464.0	n.p.	n.p.	61.9	981.2
1998-1999	0.1	32.6	65.9	n.p.	530.8	n.p.	132.0	32.3	867.7
1998									
June	n.p.	9.9	19.8	n.p.	145.2	n.p.	n.p.	n.p.	334.2
September	n.p.	4.0	17.2	n.p.	90.9	n.p.	n.p.	n.p.	193.3
December	n.p.	n.p.	19.1	n.p.	148.5	n.p.	36.7	n.p.	254.9
1999									
March	n.p.	15.6	15.3	11.1	164.1	n.p.	17.9	4.3	228.5
June	n.p.	7.2	14.3	n.p.	127.2	n.p.	35.2	0.8	191.0
September	n.p.	n.p.	11.0	n.p.	112.0	0.2	42.4	18.5	206.5
December	-	20.9	23.2	n.p.	96.9	0.4	18.8	n.p.	191.1
2000									
March	n.p.	11.6	n.p.	n.p.	121.2	n.p.	12.6	1.6	160.7

n.p. not available for publication

- nil or rounded to zero

(a) Includes expenditure on Western Australian leases in the Zone of Cooperation Area B.

(b) Refer to Explanatory paragraph 14.

EXPLANATORY NOTES

INTRODUCTION	<p>1 This publication contains annual and quarterly statistics of private sector exploration for minerals (other than oil shale) and petroleum in Australia.</p>
SOURCE	<p>2 Data are collected and compiled from exploration censuses conducted by the Australian Bureau of Statistics (ABS).</p>
SCOPE AND COVERAGE	<p>3 All exploration activity is included, regardless of the main activity of the explorer. Details of exploration are collected from all private enterprises known to be engaged in exploration, in Australia (including Australian waters) and incurring expenditure of more than \$20,000 per year.</p>
SEASONAL ADJUSTMENT	<p>4 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised.</p> <p>5 Seasonal adjustment does not remove from the series the effect of irregular or non-seasonal influences. Particular care should be taken in interpreting quarterly movements in the adjusted figures in this publication.</p> <p>6 Irregular influences that are highly volatile can make it difficult to interpret the series even after adjustment for seasonal variation.</p> <p>7 Seasonal factors are reviewed and revised annually to take account of each additional year's original data. The nature of the seasonal adjustment process is such that the magnitude of some revisions resulting from the re-analysis may be quite significant, especially for data for more recent quarters. For this reason, additional care should be exercised when interpreting movements in seasonally adjusted data for recent quarters.</p>
TREND ESTIMATES	<p>8 The trend estimates are derived by applying a 7-term Henderson moving average to the seasonally adjusted series. The 7-term Henderson average (like all Henderson averages) is symmetric but, as the end of a time series is approached, asymmetric forms of the average are applied. Unlike the weights of the standard 7-term Henderson moving average, the weights employed here have been tailored to suit particular characteristics of the individual series. While the asymmetric weights enable trend estimates for recent quarters to be produced, it does result in revisions to the estimates for the most recent three quarters as additional observations become available. There may also be revisions because of changes in the original data and as a result of the re-estimation of the seasonal factors. For further information, see <i>Information Paper: A Guide to Interpreting Time Series—Monitoring Trends, an Overview</i> (Cat. no. 1348.0) or contact the Assistant Director, Time Series Analysis on Canberra (02) 6252 6345.</p>
CLASSIFICATIONS	<p>9 The following categories are used:</p> <ul style="list-style-type: none">▪ Production lease/Other, where a production lease is an area on which production or development is actually taking place.▪ Onshore/Offshore, where offshore includes all operations in a marine area under the <i>Petroleum (Submerged Lands) Act 1967</i> or under any Acts administered by State and Territory Governments.▪ Drilling/Other, where <i>drilling expenditure</i> includes cost of access (roads, vessel hire, etc.) to the drilling site and site preparation etc., and <i>other expenditure</i> includes costs of surveys, report writing, map preparation and all other activities attributable to exploration.

EXPLANATORY NOTES

DEFINITIONS

- MINERALS 10** In the broad sense these comprise metallic minerals, construction materials, gemstones, other non-metallic minerals and petroleum (oil or gas).
- EXPLORATION 11** This includes the search for new ore occurrences or undiscovered oil or gas, and/or appraisal intended to delineate or greatly extend the limits of known deposits of minerals or oil or gas reservoirs by geological, geophysical, geochemical, drilling or other methods. This includes construction of shafts and adits primarily for exploration purposes but excludes activity of a developmental or production nature. Exploration for water is excluded.
- EXPLORATION EXPENDITURE 12** This covers 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 offshore petroleum exploration permits are also included.
- EXPECTED EXPENDITURE 13** This refers to expected expenditure on exploration as reported by private enterprise explorers who were included in the previous census. Events such as new discoveries, unexpected weather conditions, government policy changes and unforeseen changes in economic conditions may cause actual expenditures to differ from those previously expected. The differences between actual and expected expenditure can be seen in table 1.
- ZONE OF COOPERATION (ZOC) 14** The ZOC was established by an agreement between Australia and the Republic of Indonesia on an area between the former Indonesian Province of East Timor and Northern Australia (the "Timor Gap"). The ZOC is divided into three areas: A, B and C. Area A is controlled by a joint authority and all petroleum operations in this area are carried out through production sharing contracts. The United Nations has recently replaced Indonesia as Australia's partner in the agreement. Once sovereignty is achieved the proposed State of East Timor is expected to assume this role.
- ASHMORE AND CARTIER ISLANDS 15** Tenements in the Ashmore and Cartier Islands are administered by the Northern Territory Department of Mines and Energy. Therefore all petroleum exploration expenditure in this area has been included with Northern Territory data.
- RELATED PUBLICATIONS 16** Users may also wish to refer to the following priced publications which are available on request:
- *Australian Business Expectations* (Cat. no. 5250.0)
 - *Australian Mining Industry 1996-97* (Cat. no. 8414.0)
 - *Mining, Electricity and Gas Operations, Australia, Preliminary* (Cat. no. 8401.0)
 - *Mining Operations, Australia 1997-98* (Cat. no. 8415.0)
 - *Private New Capital Expenditure and Expected Expenditure, Australia* (Cat. no. 5625.0)
- 17** Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

EXPLANATORY NOTES

RELATED PUBLICATIONS <i>continued</i>	18 Publications showing the details of wells and metres drilled in petroleum exploration are available from the Petroleum Resources Program of the Australian Geological Survey Organisation.
EFFECTS OF ROUNDING	19 Where figures have been rounded, discrepancies may occur between the sums of the component items and their totals.
SYMBOLS AND OTHER USAGES	n.a. not available n.p. not available for publication but included in totals where applicable n.y.a. not yet available r figure or series revised since previous issue . . not applicable — nil or rounded to zero

FOR MORE INFORMATION...

- INTERNET** www.abs.gov.au the ABS web site is the best place to start for access to summary data from our latest publications, information about the ABS, advice about upcoming releases, our catalogue, and Australia Now—a statistical profile.
- LIBRARY** A range of ABS publications is available from public and tertiary libraries Australia-wide. Contact your nearest library to determine whether it has the ABS statistics you require, or visit our web site for a list of libraries.
- CPI INFOLINE** For current and historical Consumer Price Index data, call 1902 981 074 (call cost 75c per minute).
- DIAL-A-STATISTIC** For the latest figures for National Accounts, Balance of Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400 (call cost 75c per minute).

INFORMATION SERVICE

Data which have been published and can be provided within five minutes are free of charge. Our information consultants can also help you to access the full range of ABS information—ABS user pays services can be tailored to your needs, time frame and budget. Publications may be purchased. Specialists are on hand to help you with analytical or methodological advice.

- PHONE** **1300 135 070**
- EMAIL** **client.services@abs.gov.au**
- FAX** 1300 135 211
- POST** Client Services, ABS, GPO Box 796, Sydney 1041

WHY NOT SUBSCRIBE?

ABS subscription services provide regular, convenient and prompt deliveries of ABS publications and products as they are released. Email delivery of monthly and quarterly publications is available.

- PHONE** 1300 366 323
- EMAIL** subscriptions@abs.gov.au
- FAX** 03 9615 7848
- POST** Subscription Services, ABS, GPO Box 2796Y, Melbourne 3001



2841200003006
ISSN 1442-7508

RRP \$15.50

© Commonwealth of Australia 2000

Produced by the Australian Bureau of Statistics