

**ACTUAL AND EXPECTED
PRIVATE MINERAL EXPLORATION** **AUSTRALIA**

EMBARGO: 11:30AM (CANBERRA TIME) TUES 22 SEPT 1998

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- For further information about these and related statistics, contact Sandra Lowry on Darwin 08 8943 2171, or any ABS office shown on the back cover of this publication.

NOTES

FORTHCOMING ISSUES

ISSUE (Quarter)

September 1998

December 1998

RELEASE DATE

22 December 1998

25 March 1999

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CHANGES IN THIS ISSUE

There are no changes in this issue.

.....

W. McLennan

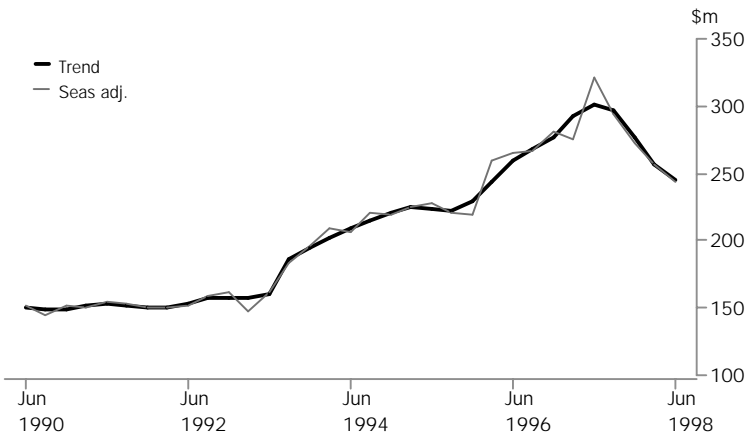
Australian Statistician

SUMMARY OF FINDINGS

MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

TREND ESTIMATES

Between the March and the June quarters of 1998 the trend estimate continued to fall, down 4% (\$11m) to \$246m. This was 19% (\$56m) lower than the corresponding June quarter 1997.



STATES AND TERRITORIES

The trend estimate for mineral exploration expenditure fell for all states and the Northern Territory during the June quarter. The most significant fall in absolute terms occurred in Queensland and New South Wales. The estimate decreased in Queensland by 13% (\$4m), followed by New South Wales where the estimate also decreased 13% (\$3m).

METRES DRILLED

The trend estimate for total metres drilled fell in the June quarter, down 4% (1 million metres) compared to March quarter 1998. This was 29% (1 million metres) less than June quarter 1997.

SUMMARY OF FINDINGS *continued*

JUNE QUARTER

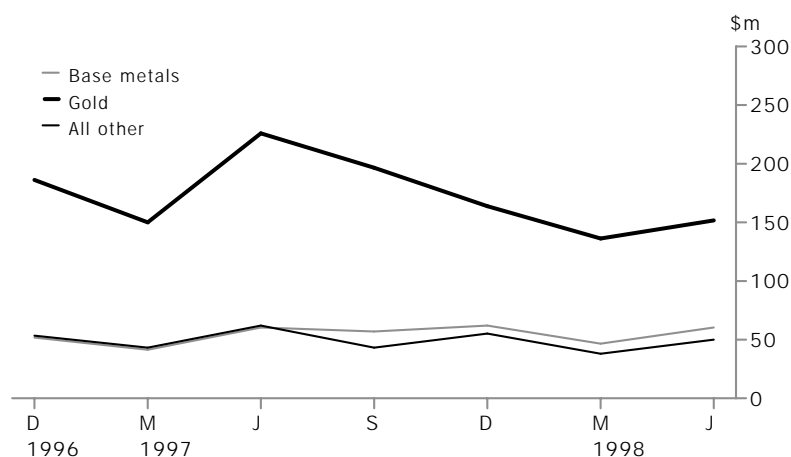
In seasonally adjusted terms, total mineral exploration expenditure fell by 6% (\$15m) in the June quarter 1998. Queensland was the most significant contributor to the decrease with a fall of 22% (\$8m). The only state where expenditure increased was Western Australia, with a 1% increase.

In original terms, mineral exploration expenditure reported for the June quarter was \$263m. This was 19% (\$42m) higher than the March quarter 1998 but was 24% (\$85m) lower than the \$347m reported for the June quarter 1997.

Expenditure on production leases remained relatively stable at \$53m rising only 3% (\$1m) from the March quarter 1998, while expenditure on all other areas rose 24% (\$41m) to \$209m. Exploration expenditure on all other areas represented 80% of the total expenditure reported.

In the June quarter exploration expenditure increased for all minerals with the exception of coal which decreased slightly by 5% (\$0.6m). Gold continued to be the predominant mineral sought, representing 58% (\$152m) of total expenditure reported.

MINERAL EXPLORATION EXPENDITURE, *Original Series*



SUMMARY OF FINDINGS *continued*

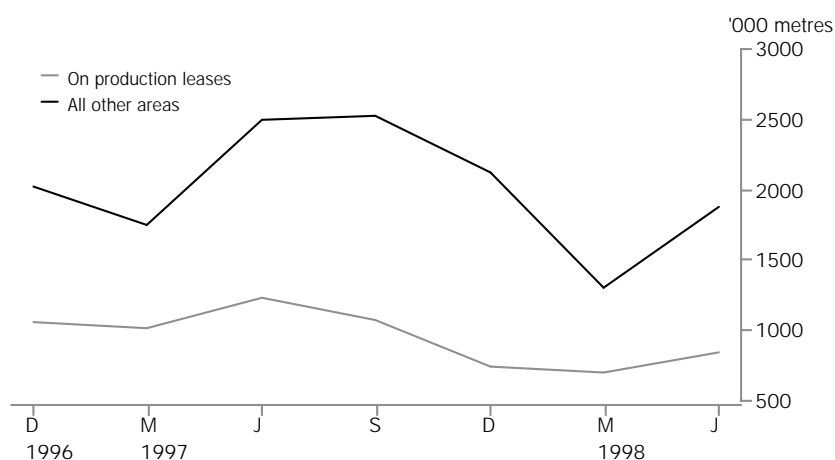
METRES DRILLED

The seasonally adjusted estimate of 2.6 million metres for the June quarter was 7% higher than the estimate for the March quarter 1998. It was 27% less than the estimate for the June quarter 1997.

In original terms, a total of 2.7 million metres was drilled in the June quarter 1998. This was 36% higher than for the March quarter, however was 27% lower than the metres drilled in the June quarter 1997.

Drilling on production leases increased 21% (0.1 million metres) from the March quarter 1998. Drilling on all other areas also rose by 44% to 1.9 million metres.

The number of metres drilled on areas other than production leases represented 69% of the total in the June quarter 1998.



SUMMARY OF FINDINGS *continued*

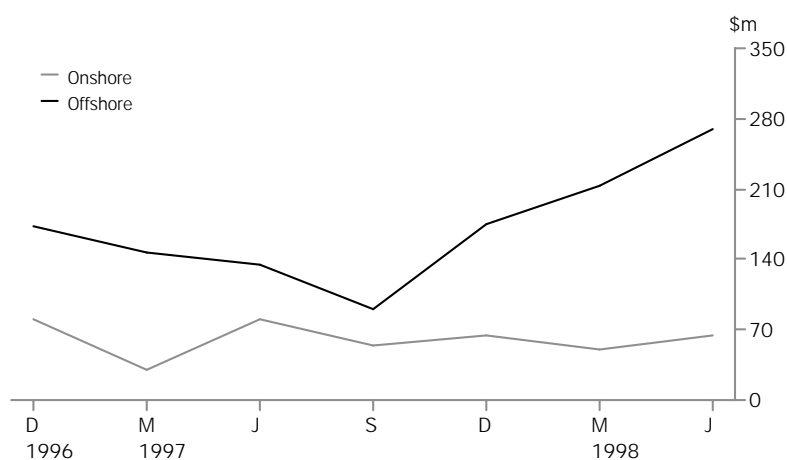
PETROLEUM EXPLORATION EXPENDITURE

OVERVIEW

Expenditure on petroleum exploration was \$334m in the June quarter 1998. This was an increase of 26% (\$70m) from the March quarter and 55% (\$119m) higher than the June quarter 1997.

Expenditure reported on production leases in the June quarter was \$27m, a rise of 21% (\$5m), while expenditure on all other areas also rose significantly, by 27% (\$65m). This was 67% (\$123m) higher than the June quarter 1997.

Offshore exploration expenditure rose 26% (\$56m) between the March and June quarters to \$270m. This was an increase of 99% (\$134m) from the June quarter 1997 and an increase of 108% (\$140m) when compared with the June quarter 1996.



REGIONAL DATA

Petroleum exploration regional data are available only for Victoria, Queensland and Western Australia in the June quarter 1998.

Queensland reported a rise of 66% (\$8m) while Western Australia fell 12% (\$20m) and Victoria fell slightly, down 5% (\$0.5m) compared with the March quarter 1998.

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	%
1995-96	960.3	773.6	124.1	174.8	185.6	94.2	550.4	428.0	128.6
1996-97	1 148.6	808.9	142.0	251.9	206.2	122.2	601.0	446.6	134.6
1997-98	1 066.8	1 288.9	82.8	232.3	206.7	112.4	748.9	1 201.6	62.3
6 months ended June 1997	582.8	447.1	130.4	110.4	115.0	96.0	281.9	238.7	118.1
6 months ended December 1997	583.8	513.7	113.6	117.3	83.3	140.7	265.4	345.8	76.8
6 months ended June 1998	483.1	775.2	124.6	115.0	123.3	186.6	483.5	855.8	113.0
6 months ended December 1998	n.y.a.	299.5	n.y.a.	n.y.a.	71.6	n.y.a.	n.y.a.	246.5	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

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>
<i>Period</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>'000 m</i>	<i>'000 m</i>	<i>'000 m</i>	<i>'000 m</i>	<i>'000 m</i>
1995-96	208.8	751.5	960.3	..	..	3 520	6 995	10 514	..	..
1996-97	306.1	842.4	1 148.6	..	..	4 453	8 378	12 831	..	..
1997-98	253.2	813.6	1 066.8	..	..	3 365	7 843	11 209	..	..
1996										
September	73.0	201.2	274.2	266.6	267.4	1 138	2 110	3 248	2 979	2 961
December	68.1	223.5	291.6	280.5	276.8	1 062	2 025	3 086	2 931	3 097
1997										
March	57.6	178.0	235.6	275.7	292.4	1 021	1 746	2 768	3 370	3 340
June	107.4	239.7	347.2	321.4	301.8	1 232	2 497	3 729	3 592	3 456
September	83.3	218.5	301.8	294.6	296.4	1 072	2 524	3 596	3 302	3 237
December	64.6	217.4	282.0	272.1	276.8	751	2 127	2 878	2 739	2 849
1998										
March	52.0	168.4	220.4	256.8	256.7	699	1 308	2 007	2 445	2 579
June	53.3	209.3	262.6	243.4	245.5	843	1 885	2 728	2 619	2 468

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

	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
Period	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ORIGINAL								
1995-96	80.4	42.6	181.0	24.1	519.5	18.8	93.8	960.3
1996-97	94.1	51.8	160.7	35.1	691.7	26.0	88.9	1 148.6
1997-98	88.2	43.1	133.2	45.0	660.4	20.7	75.9	1 066.8
1996								
September	21.1	14.9	38.3	5.4	162.8	4.2	27.5	274.2
December	20.6	14.1	45.1	8.0	173.1	5.7	25.0	291.6
1997								
March	22.0	9.6	31.6	7.2	144.2	6.0	14.8	235.6
June	30.4	13.2	45.7	14.5	211.6	10.1	21.6	347.2
September	23.3	9.5	41.9	12.5	182.7	9.7	22.1	301.8
December	26.1	13.4	41.7	11.4	162.3	3.8	23.4	282.0
1998								
March	20.8	10.6	21.5	9.2	142.0	3.7	12.6	220.4
June	18.0	9.6	28.2	12.0	173.4	3.5	17.8	262.6
SEASONALLY ADJUSTED								
1996								
September	21.8	15.8	37.3	5.7	157.0	4.8	24.3	266.6
December	21.4	12.8	39.5	7.5	170.1	5.8	23.4	280.5
1997								
March	23.7	10.1	41.4	8.8	164.5	5.9	21.3	275.7
June	26.6	13.2	42.6	12.4	197.9	9.0	19.6	321.4
September	23.9	10.1	41.0	13.2	176.0	11.0	19.5	294.6
December	27.3	12.0	36.5	10.6	159.9	3.8	21.9	272.1
1998								
March	22.4	11.3	28.3	11.2	161.6	3.8	18.2	256.8
TREND								
1996								
September	21.2	13.8	43.7	6.1	153.7	4.7	24.1	267.4
December	22.3	13.2	39.5	7.3	166.0	5.3	23.2	276.8
1997								
March	23.8	11.9	40.5	9.6	178.1	7.2	21.3	292.4
June	25.3	11.2	42.4	11.7	182.3	8.7	20.2	301.8
September	26.2	11.5	40.4	12.3	177.4	8.3	20.2	296.4
December	24.8	11.4	35.5	11.7	167.4	6.1	19.9	276.8
1998								
March	21.8	10.9	30.2	10.8	160.5	3.8	18.7	256.7
June	18.9	10.5	26.3	10.4	159.5	2.6	17.3	245.5

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
JUNE QUARTER 1998											
New South Wales	6.1	5.0	—	0.6	—	—	5.8	—	0.1	0.3	18.0
Victoria	n.p.	8.4	n.p.	n.p.	—	n.p.	—	—	n.p.	0.2	9.6
Queensland	10.9	9.4	n.p.	n.p.	n.p.	n.p.	5.9	n.p.	n.p.	1.1	28.2
South Australia	4.9	5.1	n.p.	n.p.	n.p.	1.5	—	n.p.	0.2	n.p.	12.0
Western Australia	32.9	111.5	12.4	3.6	—	n.p.	n.p.	—	7.6	3.0	173.4
Tasmania	n.p.	1.2	—	—	n.p.	—	n.p.	—	—	n.p.	3.5
Northern Territory	3.3	11.1	—	—	—	n.p.	—	—	n.p.	—	17.8
Australia	60.9	151.7	12.6	4.5	n.p.	6.0	11.9	n.p.	9.9	5.1	262.6
AUSTRALIA											
1995-96	251.8	547.1	14.1	9.3	0.5	7.4	52.7	0.7	52.9	24.0	960.3
1996-97	206.8	728.3	25.8	13.9	0.6	13.0	70.5	0.9	59.3	29.4	1 148.6
1997-98	227.1	648.4	30.0	14.0	0.1	22.2	64.8	0.4	42.8	13.1	1 066.8
September 1996	53.2	165.5	6.1	3.3	0.2	3.8	15.4	0.5	15.6	10.5	274.2
December 1996	52.1	186.8	3.8	3.7	—	1.9	16.9	0.1	16.4	9.9	291.6
March 1997	41.8	150.1	6.6	3.4	—	2.2	15.7	0.1	11.7	4.0	235.6
June 1997	59.7	225.9	9.3	3.5	0.4	5.1	22.5	0.2	15.6	5.0	347.2
September 1997	57.6	196.7	4.0	3.2	—	4.9	19.1	n.p.	12.4	n.p.	301.8
December 1997	62.7	163.9	6.3	2.9	0.1	6.2	21.3	0.3	13.1	5.3	282.0
March 1998	45.9	136.1	7.1	3.5	—	5.1	12.5	n.p.	7.4	2.8	220.4
June 1998	60.9	151.7	12.6	4.5	n.p.	6.0	11.9	n.p.	9.9	5.1	262.6
n.p. not published											

PETROLEUM EXPLORATION EXPENDITURE

	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>
<i>Period</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>
1995-96	95.5	79.4	174.8	367.1	183.2	550.3	78.8	646.5	725.1
1996-97	179.6	72.3	251.9	412.0	189.1	601.0	137.7	715.3	853.0
1997-98	174.1	58.2	232.3	501.2	247.6	748.9	68.8	912.4	981.2
1996									
September	38.9	22.3	61.2	120.4	25.4	145.8	34.8	172.2	207.0
December	63.9	16.4	80.3	121.1	52.3	173.3	54.6	199.0	253.6
1997									
March	22.3	8.4	30.7	96.3	50.2	146.5	17.2	160.1	177.3
June	54.5	25.2	79.7	74.2	61.2	135.4	31.1	184.0	215.1
September	38.4	15.2	53.6	64.3	26.2	90.6	10.8	133.4	144.2
December	48.0	15.6	63.6	90.1	84.8	174.9	8.2	230.3	238.5
1998									
March	38.4	11.9	50.3	139.4	74.6	214.0	22.5	241.8	264.3
June	49.2	15.5	64.8	207.5	62.0	269.5	27.3	306.9	334.2

PETROLEUM EXPLORATION, By Region

	New South Wales	Victoria	Queensland	South Australia	Western Australia(a)	Tasmania	Northern Territory/ Ashmore and Cartier Islands	Zone of Cooperation Area A(b)	Total
Period	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1995-96	n.p.	n.p.	106.5	55.1	319.1	n.p.	96.2	89.3	725.1
1996-97	n.p.	45.8	134.5	n.p.	444.1	n.p.	41.5	n.p.	853.0
1997-98	n.p.	34.5	107.1	n.p.	464.0	n.p.	n.p.	n.p.	981.2
1996									
September	n.p.	n.p.	36.4	22.7	131.5	n.p.	2.5	7.4	207.0
December	n.p.	n.p.	40.6	n.p.	132.6	n.p.	n.p.	n.p.	253.6
1997									
March	n.p.	n.p.	12.5	n.p.	78.5	—	n.p.	30.1	177.3
June	n.p.	6.7	45.0	n.p.	101.5	n.p.	15.8	35.0	215.1
September	n.p.	6.0	46.4	n.p.	46.8	n.p.	7.4	n.p.	144.2
December	n.p.	8.3	29.0	n.p.	106.9	n.p.	28.0	45.7	238.5
1998									
March	0.1	10.4	11.9	n.p.	165.0	n.p.	n.p.	n.p.	264.3
June	n.p.	9.9	19.8	n.p.	145.2	n.p.	n.p.	n.p.	334.2

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

(b) Refer to Explanatory Notes paragraph 14.

— nil or rounded to zero, including null cells

n.p. not available for publication

EXPLANATORY NOTES

INTRODUCTION	1 This publication contains annual and quarterly statistics of private sector exploration for minerals (other than oil shale) and petroleum in Australia.
SOURCE	2 Data are collected and compiled from exploration censuses conducted by the Australian Bureau of Statistics (ABS).
SCOPE AND COVERAGE	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.
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	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.
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 Is an agreement between Australia and the Republic of Indonesia on an area between the Indonesian Province of East Timor and Northern Australia. 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. Area B is controlled by Australian authorities but the Republic of Indonesia must be notified of any changes to tenements in the area and be paid 10% of gross Resource Rent Tax collected by Australia from corporations producing petroleum. Area C is controlled by the Republic of Indonesia but Australia must be notified of any changes to tenements in the area and be paid 10% of Contractors Income Tax collected by the Republic of Indonesia from corporations producing petroleum.
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	<p>Users may also wish to refer to the following priced publications which are available on request:</p> <ul style="list-style-type: none"> ▪ <i>Australian Business Expectations</i> (Cat. no. 5250.0) ▪ <i>Australian Mining Industry</i> (Cat. no. 8414.0) ▪ <i>Private New Capital Expenditure and Expected Expenditure, Australia</i> (Cat. no. 5625.0) <p>17 Current publications produced by the ABS are listed in the <i>Catalogue of Publications and Products</i> (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a <i>Release Advice</i> (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.</p> <p>18 Publications showing the details of wells and metres drilled in petroleum exploration are available from the Petroleum Resource Assessment Branch of the Bureau of Resource Sciences.</p>

EXPLANATORY NOTES



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

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Darwin	08 8943 2111	08 8981 1218

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