



# **MINERAL AND PETROLEUM EXPLORATION**

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) WED 20 MAR 2002

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

# NOTES

## FORTHCOMING ISSUES

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## CHANGES IN THIS ISSUE

This publication and other downloadable products can be purchased online using a credit card. They can be downloaded (with no credit card needed) by AusStats and ABS@ subscribers, Australian universities and at some public libraries.



## ABBREVIATIONS

ABS	Australian Bureau of Statistics
GST	Goods and Services Tax
LPG	liquefied petroleum gas
WST	wholesale sales tax
JPDA	Joint Petroleum Development Area
UNTAET	United Nations Transitional Administration in East Timor
ZOC	Zone of Cooperation

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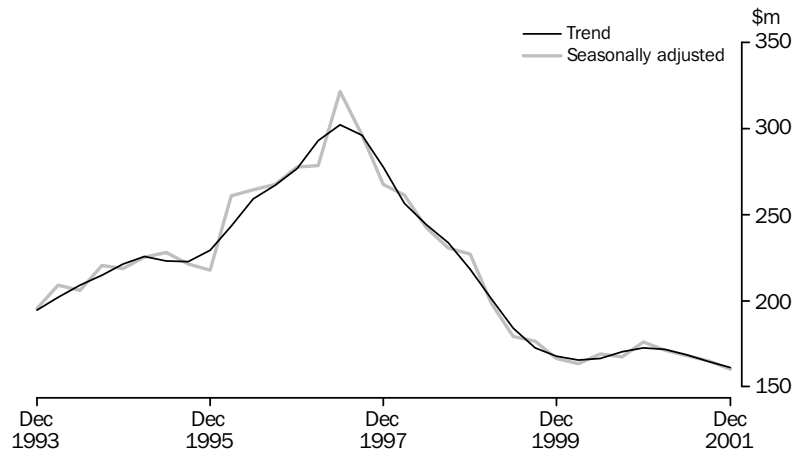
## SUMMARY OF FINDINGS

### MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

#### TREND ESTIMATES

The trend estimate for total mineral exploration expenditure decreased in the December quarter 2001 by 2%.

The December quarter 2001 trend estimate of \$161m was 7% lower than the trend estimate of \$173m for the December quarter 2000.



The largest decrease in the trend estimate between September and December quarters 2001 occurred in Western Australia (down \$3.2m), with smaller decreases in the estimates for New South Wales, Victoria, South Australia and Tasmania. In Queensland and the Northern Territory estimates showed small increases.

The trend estimate for metres drilled fell in the December quarter 2001. The decrease between the September quarter 2001 and the December quarter 2001 was 23,000 metres (2%). The December quarter 2001 figure of 1.3 million metres was 18% lower than the December quarter 2000.

## SUMMARY OF FINDINGS *continued*

### MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

#### OVERVIEW

In seasonally adjusted terms, mineral exploration expenditure for the December quarter 2001 decreased by 3% (\$5m) to \$160m, compared to the previous quarter.

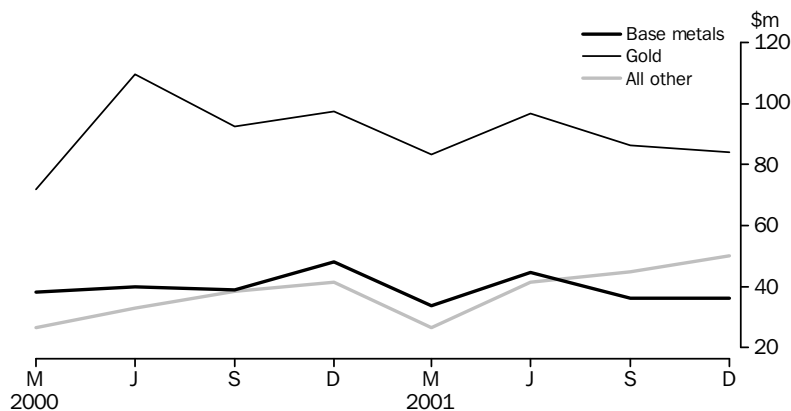
In original terms, exploration expenditure reported for the December quarter 2001 increased by 2% (\$3m) to \$171m. The December quarter 2001 total mineral exploration expenditure was 9% (\$17m) lower than the December quarter 2000.

The increase in total mineral exploration in the December quarter 2001 was due to a 5% (\$7m) increase in expenditure reported on 'all other areas'. The majority of the increase on 'all other areas' occurred in Western Australia, up 7% (\$5m) and Queensland, up 16% (\$3m).

Overall Queensland was the main contributor to the December quarter 2001 increase, up \$3m. Almost all of the increase for Queensland occurred in exploration for gold.

Between the September and December quarters 2001, exploration expenditure for iron ore increased by \$3m (57%), coal by \$3m (21%) while gold decreased by \$2m (2%). The majority of the increase for iron ore and coal was in New South Wales, Western Australia and Queensland, while the decrease for gold occurred in Western Australia. Exploration expenditure for selected base metals (copper, silver, lead-zinc, nickel and cobalt) remained unchanged at \$36m.

MINERAL EXPLORATION EXPENDITURE, Original Series



## SUMMARY OF FINDINGS *continued*

### MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

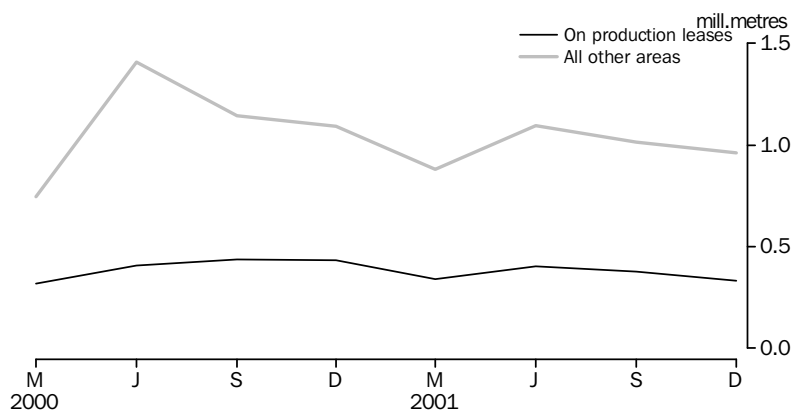
#### METRES DRILLED

The seasonally adjusted estimate for the December quarter 2001 remained unchanged from the September quarter at 1.3 million metres, and was 15% lower than the December quarter 2000.

In original terms, the 1.3 million metres drilled (total) reported for the December quarter 2001 was 7% lower than the September quarter 2001.

Since the September quarter 2001, drilling on 'production leases' has decreased by 11% to 0.3 million metres, and drilling on 'all other areas' has decreased by 5% to 1.0 million metres.

METRES DRILLED, Original Series



## SUMMARY OF FINDINGS *continued*

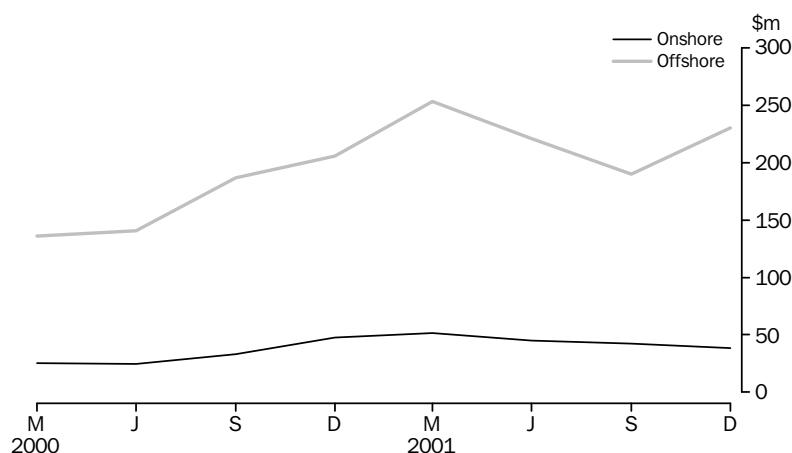
### PETROLEUM EXPLORATION EXPENDITURE

#### OVERVIEW

Reported expenditure on petroleum exploration in the December quarter 2001 was \$268m, 16% (\$37m) higher than the September quarter 2001, and 6% (\$15m) higher than the December quarter 2000.

The increase in total petroleum exploration expenditure for the December quarter 2001 occurred as a result of a 21% (\$40m) increase in offshore expenditure.

Between September quarter 2001 and December quarter 2001, expenditure for petroleum exploration on 'all other areas' increased by 28% (\$54m), and exploration on 'production leases' decreased by 43% (\$17m).



#### REGIONAL DATA

Regional data for petroleum exploration expenditure are available for Queensland, Western Australia, the Northern Territory/Ashmore and Cartier Islands and the Joint Petroleum Development Area formerly known as the Zone of Cooperation Area A. Combined, these regions contributed 88% to total exploration expenditure in the December quarter 2001.

Of the published regions, Western Australia was the main contributor, with a reported \$142m expenditure on exploration, an increase of 4% (\$5m) from the September quarter 2001.

PRIVATE EXPLORATION, Actual and Expected Expenditure(a)

Period	MINERAL EXPLORATION			PETROLEUM ONSHORE			PETROLEUM OFFSHORE		
	Actual	Expected(b)	Actual as a proportion of expected	Actual	Expected(b)	Actual as a proportion of expected	Actual	Expected(b)	Actual as a proportion of expected
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
<b>1998-99</b>	837.8	773.4	108.3	182.3	144.2	126.4	685.4	540.1	126.9
<b>1999-2000</b>	676.3	705.2	95.9	110.1	155.3	70.9	613.3	637.0	96.3
<b>2000-01</b>	683.3	683.2	100.0	176.9	174.4	101.4	867.0	934.5	92.8
December Half 2000	357.0	358.6	99.5	80.7	118.7	68.0	392.6	374.4	104.9
June Half 2001	326.3	324.6	100.5	96.2	55.7	172.8	474.3	560.2	84.7
December Half 2001	338.1	430.5	78.5	80.3	86.8	92.5	419.9	551.9	76.1
June Half 2002	nya	307.2	nya	nya	97.6	nya	nya	372.3	nya

nya not yet available

(b) Refer to Explanatory Notes paragraphs 13-15.

(a) From July 2000 value data no longer contains Wholesale Sales Tax.

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

Period	EXPENDITURE					METRES DRILLED				
	On production leases	On all other Areas(b)	Total	Seasonally adjusted	Trend estimate	On production leases	On all other Areas(b)	Total	Seasonally adjusted	Trend estimate
	\$m	\$m	\$m	\$m	\$m	'000 m	'000 m	'000 m	'000 m	'000 m
<b>1998-99</b>	199.1	638.7	837.8	..	..	2 404	5 697	8 101	..	..
<b>1999-2000</b>	158.4	517.9	676.3	..	..	1 662	4 342	6 004	..	..
<b>2000-01</b>	157.0	526.2	683.3	..	..	1 611	4 211	5 822	..	..
<b>2000</b>										
March	36.9	99.8	136.7	163.5	165.4	319	745	1 064	1 383	1 423
June	37.4	145.3	182.7	168.9	166.6	408	1 409	1 817	1 532	1 459
September	43.3	126.5	169.8	167.3	170.3	436	1 145	1 582	1 479	1 538
December	47.2	140.0	187.2	175.9	172.5	433	1 092	1 525	1 564	1 553
<b>2001</b>										
March	33.6	109.9	143.5	171.1	171.8	339	879	1 218	1 591	1 479
June	32.9	149.8	182.8	168.0	168.5	402	1 094	1 496	1 254	1 377
September	37.5	129.9	167.4	165.0	164.5	375	1 014	1 389	1 302	1 302
December	33.5	137.1	170.7	160.4	161.0	334	963	1 297	1 331	1 279

.. not applicable

(b) Refer to Glossary for definition.

(a) From July 2000 value data no longer contains Wholesale Sales Tax.

## MINERAL EXPLORATION, (Other than for Petroleum), Expenditure(a)

State	TYPE OF LEASE		
	On production leases	On all other areas(b)	Total
	\$m	\$m	\$m
New South Wales	3.4	9.3	12.6
Victoria	1.6	5.5	7.1
Queensland	7.3	17.7	25.0
South Australia	np	np	8.0
Western Australia	17.7	85.8	103.5
Tasmania	np	np	1.2
Northern Territory	2.6	10.6	13.3
<b>Australia</b>	<b>33.5</b>	<b>137.1</b>	<b>170.7</b>

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) From July 2000 value data no longer contains Wholesale Sales Tax.

(b) Refer to Glossary for definition.



<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>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ORIGINAL								
<b>1998-99</b>	65.6	37.0	93.8	41.9	523.1	11.9	64.5	<b>837.8</b>
<b>1999-2000</b>	56.1	33.8	82.6	22.6	415.0	8.8	57.5	<b>676.3</b>
<b>2000-01</b>	57.2	32.7	83.1	29.6	424.1	9.2	47.5	<b>683.3</b>
<b>2000</b>								
March	12.1	7.5	17.1	3.8	85.0	2.4	8.8	<b>136.7</b>
June	14.6	10.0	23.1	5.6	113.3	1.3	14.7	<b>182.7</b>
September	13.6	8.6	21.8	5.5	104.4	1.7	14.2	<b>169.8</b>
December	15.8	7.3	21.4	6.8	118.0	2.6	15.3	<b>187.2</b>
<b>2001</b>								
March	12.7	8.4	17.1	4.9	90.8	2.5	7.2	<b>143.5</b>
June	15.1	8.4	22.8	12.4	110.9	2.3	10.9	<b>182.8</b>
September	12.5	7.2	21.6	6.9	103.3	0.9	15.0	<b>167.4</b>
December	12.6	7.1	25.0	8.0	103.5	1.2	13.3	<b>170.7</b>
SEASONALLY ADJUSTED								
<b>2000</b>								
March	12.9	7.7	21.0	4.9	101.1	2.2	13.7	<b>163.5</b>
June	13.6	10.1	20.6	4.5	105.0	1.4	13.7	<b>168.9</b>
September	14.7	8.9	21.7	5.6	102.7	1.8	11.9	<b>167.3</b>
December	14.7	6.9	20.2	6.7	110.8	2.7	13.9	<b>175.9</b>
<b>2001</b>								
March	13.6	8.5	20.8	6.4	108.2	2.3	11.3	<b>171.1</b>
June	14.1	8.4	20.3	9.9	102.7	2.4	10.2	<b>168.0</b>
September	13.6	7.4	21.6	7.1	101.8	0.9	12.6	<b>165.0</b>
December	11.7	6.8	23.8	7.9	96.9	1.2	12.1	<b>160.4</b>
TREND								
<b>2000</b>								
March	13.4	8.6	20.5	5.0	102.5	2.0	13.4	<b>165.4</b>
June	13.7	8.9	20.9	5.0	103.2	1.7	13.2	<b>166.6</b>
September	14.3	8.7	21.0	5.3	106.0	1.9	13.1	<b>170.3</b>
December	14.5	8.2	20.7	6.5	107.9	2.3	12.4	<b>172.5</b>
<b>2001</b>								
March	14.3	8.0	20.4	7.6	107.5	2.4	11.6	<b>171.8</b>
June	13.8	8.0	20.8	8.1	104.5	2.0	11.3	<b>168.5</b>
September	13.2	7.6	21.9	8.1	100.7	1.4	11.6	<b>164.5</b>
December	12.6	6.9	22.9	7.9	97.5	1.1	12.1	<b>161.0</b>

(a) From July 2000 value data no longer contains Wholesale Sales Tax.

## MINERAL EXPLORATION, (Other than for Petroleum), Expenditure by Mineral Sought(a)

	Copper	Silver, lead- zinc	Nickel, cobalt	Selected base metals total(b)	Gold	Iron ore	Mineral sands	Uranium	Coal	Diamonds	Other(c)	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
DECEMBER QUARTER 2001												
New South Wales	0.6	0.5	np	np	3.4	—	3.1	—	4.4	—	np	12.6
Victoria	np	np	—	np	4.4	—	2.4	—	—	—	np	7.1
Queensland	4.6	np	np	8.6	6.4	—	np	—	9.2	—	np	25.0
South Australia	np	1.3	np	4.5	1.5	—	np	np	np	—	0.1	8.0
Western Australia	1.4	2.6	14.7	18.8	60.4	6.9	np	—	np	9.8	6.0	103.5
Tasmania	—	np	np	0.5	0.7	—	—	—	—	—	—	1.2
Northern Territory	1.0	np	np	2.2	7.4	—	np	np	—	0.8	0.7	13.3
Australia	10.3	9.3	16.7	36.3	84.2	6.9	8.7	2.1	14.4	10.7	7.3	170.7
AUSTRALIA												
<b>1998-99</b>	na	na	na	176.9	486.1	41.5	19.0	15.4	39.9	40.9	18.0	837.8
<b>1999-2000</b>	28.4	55.4	73.0	156.8	374.8	29.7	21.5	11.7	35.4	29.8	16.7	676.3
<b>2000-01</b>	32.8	59.8	72.8	165.4	370.2	23.4	23.6	8.4	41.3	31.8	19.3	683.3
March 2000	6.5	10.0	21.6	38.2	71.9	5.0	4.6	np	7.9	3.5	np	136.7
June 2000	7.0	14.6	18.4	40.0	109.8	np	7.6	np	8.7	4.9	3.1	182.7
September 2000	6.9	14.9	17.1	38.9	92.5	7.2	4.9	np	9.2	11.3	np	169.8
December 2000	7.7	16.3	24.1	48.2	97.5	7.4	6.1	2.9	9.3	9.7	6.0	187.2
March 2001	5.8	13.1	14.7	33.6	83.3	3.4	5.8	1.1	7.6	4.1	4.6	143.6
June 2001	12.3	15.5	16.9	44.7	96.8	5.4	6.8	np	15.1	6.7	np	182.8
September 2001	10.0	11.4	14.9	36.3	86.4	4.4	7.8	3.0	11.9	9.4	8.2	167.4
December 2001	10.3	9.3	16.7	36.3	84.2	6.9	8.7	2.1	14.4	10.7	7.3	170.7

np not available for publication but included in totals where applicable, unless otherwise indicated  
— nil or rounded to zero (including null cells)  
na not available

(a) From July 2000 value data no longer contains Wholesale Sales Tax.  
(b) Selected base metal total is copper, silver, lead-zinc, nickel, cobalt.  
(c) From September quarter 2000 this category includes tin, tungsten, scheelite, wolfram and construction materials.

PETROLEUM EXPLORATION EXPENDITURE (a)

Period	ONSHORE			OFFSHORE			TOTAL EXPENDITURE		
	Drilling	Other	Total	Drilling	Other	Total	On production leases	On all other areas(b)	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>1998-99</b>	111.7	70.5	182.3	428.5	257.0	685.4	105.6	762.1	867.7
<b>1999-2000</b>	53.8	56.3	110.1	381.8	231.4	613.2	121.9	601.4	723.3
<b>2000-01</b>	98.4	78.5	176.9	543.3	323.7	867.0	212.5	831.3	1 043.9
<b>2000</b>									
March	10.6	14.4	25.0	103.1	32.6	135.8	26.9	133.9	160.7
June	8.6	15.6	24.2	78.7	62.1	140.8	19.9	145.1	165.0
September	17.3	15.8	33.1	129.2	57.4	186.6	42.3	177.5	219.8
December	26.8	20.8	47.6	104.4	101.6	206.0	60.0	193.5	253.5
<b>2001</b>									
March	28.2	23.2	51.4	157.8	95.3	253.1	59.7	244.8	304.5
June	26.1	18.7	44.8	151.8	69.4	221.2	50.5	215.5	266.0
September	28.8	13.3	42.1	137.3	52.5	189.8	40.5	191.4	231.8
December	23.2	15.0	38.3	152.3	77.8	230.1	23.1	245.2	268.3

- (a) From July 2000 value data no longer contains Wholesale Sales Tax.
- (b) Refer to Glossary for definition.

PETROLEUM EXPLORATION, By Region(a)

<i>Period</i>	<i>New South Wales</i>	<i>Victoria</i>	<i>Queensland</i>	<i>South Australia</i>	<i>Western Australia(b)</i>	<i>Tasmania</i>	<i>Northern Territory/ Ashmore and Cartier Islands</i>	<i>Joint Petroleum Development Area(c)</i>	<b>Total</b>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>1998-99</b>	0.1	32.6	65.9	np	530.8	np	132.0	32.3	<b>867.7</b>
<b>1999-2000</b>	np	63.2	50.6	np	444.1	np	88.3	45.2	<b>723.3</b>
<b>2000-01</b>	6.4	74.4	84.8	66.7	687.5	np	63.4	np	<b>1 043.9</b>
<b>2000</b>									
March	np	11.6	np	np	121.2	np	12.6	1.6	<b>160.7</b>
June	np	np	np	np	113.9	np	14.6	np	<b>165.0</b>
September	np	6.7	22.3	np	148.8	np	30.8	np	<b>219.8</b>
December	np	13.3	27.1	np	166.3	np	8.6	np	<b>253.5</b>
<b>2001</b>									
March	np	10.3	19.2	np	216.4	np	np	np	<b>304.5</b>
June	1.1	44.0	16.1	25.0	156.0	np	np	0.1	<b>266.0</b>
September	2.7	np	19.4	12.1	136.3	np	np	0.4	<b>231.8</b>
December	np	np	14.0	np	141.7	np	77.7	1.8	<b>268.3</b>

np not available for publication but included in totals where applicable, unless otherwise indicated

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

(a) From July 2000 value data no longer contains Wholesale Sales Tax.

(c) Refer to Explanatory Notes paragraphs 2-5.

## EXPLANATORY NOTES

### INTRODUCTION

**1** The private sector exploration statistics appearing in this publication have been collected and compiled from the Mineral Exploration and Petroleum Exploration quarterly censuses conducted by the Australian Bureau of Statistics. This publication contains actual and expected exploration expenditure.

### SCOPE AND COVERAGE

**2** The Mineral Exploration and Petroleum Exploration censuses cover private enterprises known to be engaged in exploration in Australia, in Australian waters, in the Joint Petroleum Development Area (JPDA), and in Areas B and C previously recognised under the Timor Sea Economic Cooperation Zone (referred to as the Zone of Cooperation (ZOC)), regardless of the main activity of the explorer.

**3** The Joint Petroleum Development Area (JPDA) is an area in the Timor Sea, about 500 km north west of Darwin. The JPDA consists of the area previously referred to as Area A of the Zone of Cooperation (ZOC). A Treaty was signed with Indonesia in 1989 to enable exploration for and development of petroleum resources in this area. Following East Timor's separation from Indonesia, arrangements have continued on a transitional basis since 25 October 1999 with Australia and the United Nations Transitional Administration in East Timor (UNTAET) on behalf of East Timor. These arrangements will terminate when East Timor becomes independent, expected in 2002.

**4** Australia and East Timor have agreed a Framework Arrangement to form the basis of a Treaty to come into effect on East Timorese independence. Under this Arrangement, the JPDA will be controlled by a designated authority which will report to a Joint Commission, with a Ministerial Council to provide oversight. Ninety per cent of resources in this region will belong to East Timor and 10% to Australia.

**5** The situation regarding Areas B and C, in the former Zone of Cooperation has not yet been determined. Under the original agreement, Area B is controlled by Australian authorities, but UNTAET must be notified of any changes to tenements in the area and will be paid 10% of resource rent tax revenues collected by Australia from corporations producing petroleum. Exploration expenditure in this area has been included with the Western Australia data. Area C is controlled by UNTAET, but Australia must be notified of any changes to tenements in the area and will be paid 10% of Contractors Income Tax collected by UNTAET from corporations producing petroleum. Exploration expenditure in this area is excluded from the data.

**6** The 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 the Northern Territory data.

### SEASONAL ADJUSTMENT

**7** 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. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series.

**8** These irregular influences that are volatile or unsystematic can make it difficult to interpret the movement of the series even after adjustment for seasonal variation. This means that quarter-to-quarter movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.

## EXPLANATORY NOTES *continued*

### SEASONAL ADJUSTMENT

*continued*

**9** 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.

### TREND ESTIMATES

**10** The smoothing of seasonally adjusted series to create trend estimates reduces the impact of the irregular component of the seasonally adjusted series.

**11** The trend estimates are derived by applying a 7-term Henderson moving average to the seasonally adjusted series. The 7-term Henderson average 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.

**12** *Information Paper: A Guide to Interpreting Time Series, Monitoring Trends, an Overview* (Cat. no. 1348.0), can be obtained by contacting Time Series Analysis Canberra on (02) 6252 6345 or e-mail [timeseries@abs.gov.au](mailto:timeseries@abs.gov.au).

### EXPECTED EXPLORATION EXPENDITURE

**13** Expected expenditure is collected in June and December quarter each year. Businesses are asked to report their expected expenditure for the next six months.

**14** From the June quarter 2000 publication, the basis for the expected mineral exploration expenditure series changed. Prior to June 2000, the expected estimates released were simple aggregates of data compiled through the quarterly Mineral Exploration collection. However, these aggregates underestimated actual expenditure to a fairly consistent degree. The consistency with which the published data underestimated actual expenditure suggested that adjustments to improve the accuracy and usefulness of the estimates of expected expenditure would be possible.

**15** In the period since June 2000, such adjustments have been made to reported expected exploration data resulting in estimates which better predict actual expenditure for the same period. For more information regarding the adjustments made to the Expected Mineral Exploration Expenditure series, see the feature article in *Mineral and Petroleum Exploration Australia June quarter 2000* (Cat No 8412.0).

### TAX REFORM

**16** Goods and Services Tax (GST) which came into effect on 1 July 2000 is not included in the value of exploration expenditure. Enterprises in the censuses are asked to report actual expenditure based on the expected net cost to them under the New Tax System. That is, the Wholesale Sales Tax no longer applies and the exploration expenditure estimates should exclude the 10% GST where this amount can be returned to the business as a tax credit. The GST replaced the wholesale sales tax (WST) which was included in the value of exploration expenditure estimates for periods up to June quarter 2000.

### ACKNOWLEDGEMENT

**17** ABS publications draw extensively on information provided freely by individuals, businesses, government and other organisations. Their continued cooperation is appreciated: without it a wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

## EXPLANATORY NOTES *continued*

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### RELATED PUBLICATIONS

**18** User may also wish to refer to the following publications which are for sale and available on request:

- *Australian Business Expectations* (Cat. no. 5250.0)
- *Private New Capital Expenditure and Expected Expenditure, Australia* (Cat. no. 5625.0)
- *Australian Mining Industry* (Cat. no. 8414.0)
- *Mining Operations* (Cat. no. 8415.0)

**19** 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 or on the ABS' web site [www.abs.gov.au](http://www.abs.gov.au).

**20** Publications showing the details of wells and metres drilled in petroleum exploration are available from the Petroleum Resources Program of Geoscience Australia.

### EFFECTS OF ROUNDING

**21** Where figures have been rounded discrepancies may occur between the sums of the component items and their totals.

## GLOSSARY

<b>Development</b>	Phase usually following exploration where a prospective discovery (e.g. proven oil or gas field or concentrate of ore) is brought into production or for extending the life of a current mine or well. Activities may include preparing the ground by the removal of overburden, constructing shafts, drives and winzes; or by drilling and completing wells. All activities are for the purposes of commencing extraction/mining or extending production.
<b>Exploration</b>	Activity involves searching for concentrations of naturally occurring solid, liquid or gaseous materials and includes new field wildcat and stratigraphical and extension/appraisal wells and mineral appraisals intended to delineate or greatly extend the limits of known deposits by geological, geophysical, geochemical, drilling or other methods. This includes drilling of boreholes, construction of shafts and adits primarily for exploration purposes but excludes activity of a developmental or production nature. Exploration for water is excluded.
<b>Exploration expenditure</b>	Covers all expenditure (capitalised and non-capitalised) during the exploratory or evaluation stages in Australia, Australian waters, JPDA and Areas B and C of the original ZOC. Costs include cost of exploration, determination of recoverable reserves, engineering and economic feasibility studies, procurement of finance, gaining access to reserves, construction of pilot plants and all technical and administrative overheads directly associated with these functions. Examples are costs of satellite imagery, airborne and seismic surveys, use of geophysical and other instruments, geochemical surveys and map preparation; licence fees, land access and legal costs; geologist inspections, chemical analysis and payments to employees and contractors. Cash bids for offshore petroleum exploration permits are also included.
<b>Exploration licence/permit</b>	Is designed to cover the exploration phase of a project and confers exclusive rights to the exploration for and recovery of samples from the area designated. These rights are granted by relevant Commonwealth, State or Territory Governments.
<b>Minerals</b>	Are a naturally occurring inorganic element or compound having an orderly internal structure and characteristic chemical composition, crystal form, and physical properties. These, for example, comprise of metallic minerals, such as copper, silver, lead-zinc, nickel, cobalt, gold, iron ore, mineral sands, uranium and non-metallic minerals such as coal, diamonds and other precious and semi-precious stones and construction materials (e.g. gravel and sand).
<b>Mining licence/lease</b>	Covers the commercial mining phase of a project for the licenced area. This licence authorises both full recovery and further exploration to occur.
<b>Offshore</b>	Commences from the low water mark to three nautical miles out (referred to as coastal waters) under State and Northern Territory legislation and extends to those areas beyond coastal waters governed by the Commonwealth under the <i>Petroleum (Submerged Lands) Act 1967</i> .
<b>Onshore</b>	Includes all Australian territorial lands to the low water mark.
<b>Petroleum</b>	Is a naturally occurring hydrocarbon or mixture of hydrocarbons. As oil or gas in solution (e.g. LPG), it is widespread in Australian sedimentary rocks.
<b>Retention licence</b>	Is an intermediate form of tenure between the exploration licence and mining licence allowing the holder of the exploration licence to retain title to the area for a limited time. It is designed to ensure the retention of rights pending the transition of a project from the exploration phase to the commercial mining phase.
<b>Selected base metals</b>	Are made up of the following minerals: copper, silver, lead-zinc, nickel and cobalt.



## GLOSSARY *continued*

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<b>Type of expenditure</b>	<p>Classification used:</p> <p><i>Drilling expenditure</i> — includes wages and salaries paid to employees; purchase, rental, hiring as well as operation and maintenance of drilling equipment together with activities associated with accessing the areas where drilling is to occur (e.g. road creation, vessel/transport hiring, site preparation and restoration). Also includes expenditure on drilling done by contractors.</p> <p><i>Other expenditure</i> — includes all other exploration costs, other than those associated with drilling expenditure. This expenditure includes purchase of capital and non-capital items, rental or hiring fees, service fees relating to surveying and analysis, administrative and legal fees associated with obtaining licences/permits, land access, map preparation, feasibility studies, environmental impacts studies and restoration costs.</p>
<b>Type of lease</b>	<p>Classifications used:</p> <p><i>Production lease</i> — is an area on which development to extract coal, minerals, liquids or gaseous materials is underway or where extraction/mining of these substances is already occurring. See also mining licence/lease.</p> <p><i>All other areas</i> — are those areas outside the Production lease. These include areas under exploration licence/permit or retention licence, as well as non-licenced areas being assessed for exploration, e.g. through airborne surveys.</p>





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