



MINERAL AND PETROLEUM EXPLORATION

AUSTRALIA

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- For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Fiona Cotsell on Sydney 02 9268 4280.

NOTES

FORTHCOMING ISSUES

<i>ISSUE (Quarter)</i>	<i>RELEASE DATE</i>
December 2002	19 March 2003
March 2003	18 June 2003



INTRODUCTION

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.

CHANGES TO THIS ISSUE

As a result of a review, this release no longer contains a separate classification for estimates of petroleum exploration conducted in the Joint Petroleum Development Area (JPDA) of the Timor Sea. This exploration is now included in estimates for the Northern Territory. Further, as a reflection of the joint Australia/East Timor jurisdiction in the JPDA, a proportion of exploration expenditure in the JPDA has been excluded from the estimates. Previous issues had included all JPDA exploration expenditure.

Estimates have been revised back to December quarter 1994 to reflect this new treatment.



ABBREVIATIONS

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

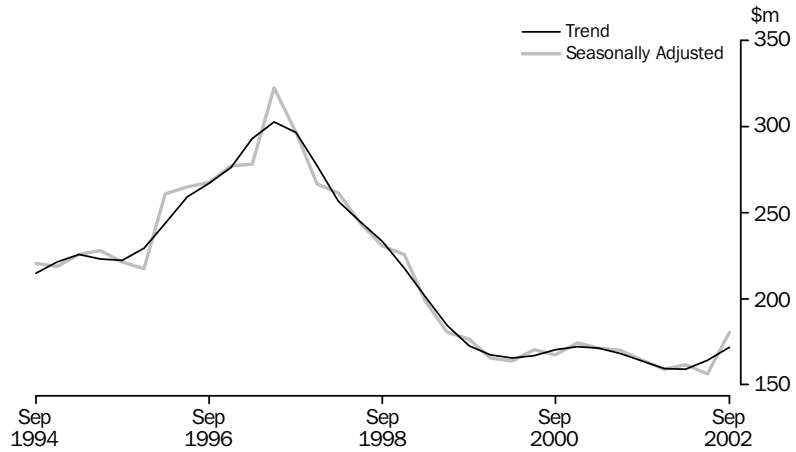
Dennis Trewin
Australian Statistician

SUMMARY OF FINDINGS

MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

TREND ESTIMATES

The trend estimate for total mineral exploration expenditure increased by 4.6% to \$171.7m in the September quarter 2002 and is 4.9% higher than September quarter 2001.



The largest increases occurred in Western Australia (\$4.3m or 4.5%) and New South Wales (\$1.4m or 10.9%). All remaining states recorded slight increases except the Northern Territory which recorded a slight decrease.

The trend estimate for metres drilled increased by 3.6% in the September quarter 2002 but was 6.4% lower than the September quarter estimate for the previous year.

SUMMARY OF FINDINGS *continued*

MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

OVERVIEW

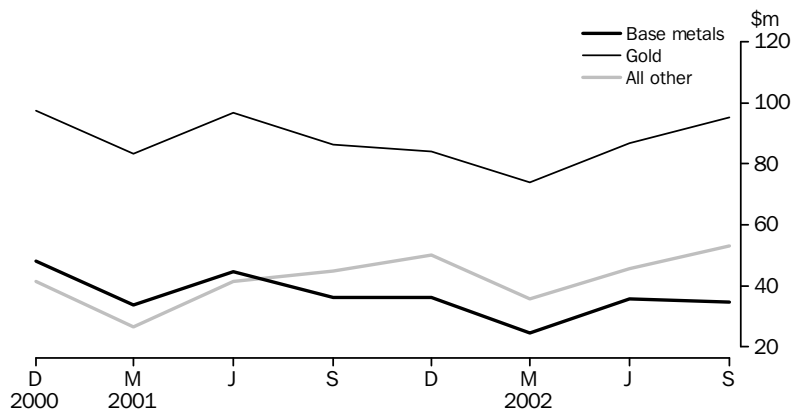
In original terms, mineral exploration expenditure increased by \$14.8m (8.8%) in the September quarter 2002 (up 15.5% in seasonally adjusted terms). Expenditure on production leases increased by \$5.9m (16.3%) and expenditure on all other areas increased by \$8.9m (6.7%).

The overall increase was mainly due to exploration for Gold in Western Australia which increased by \$10.7m (18%). A number of companies contributed to this increase.

Expenditure in most states other than Western Australia was broadly comparable to the previous quarter's levels.

In terms of minerals sought, exploration expenditure for Gold increased by \$8.5m (9.8%), Iron ore by \$2.5m (38.5%), Nickel and Cobalt by \$2.4m (19.5%) and Other minerals (which includes other metallic and non-metallic minerals, tin, tungsten, scheelite, wolfram and construction materials) by \$3.6m (105.9%). Copper recorded a decrease of \$2m (15.3%) and Selected base metals (copper, silver, lead-zinc, nickel and cobalt) decreased by \$1m (2.8%).

MINERAL EXPLORATION EXPENDITURE, Original series



SUMMARY OF FINDINGS *continued*

MINERAL EXPLORATION EXPENDITURE (OTHER THAN FOR PETROLEUM)

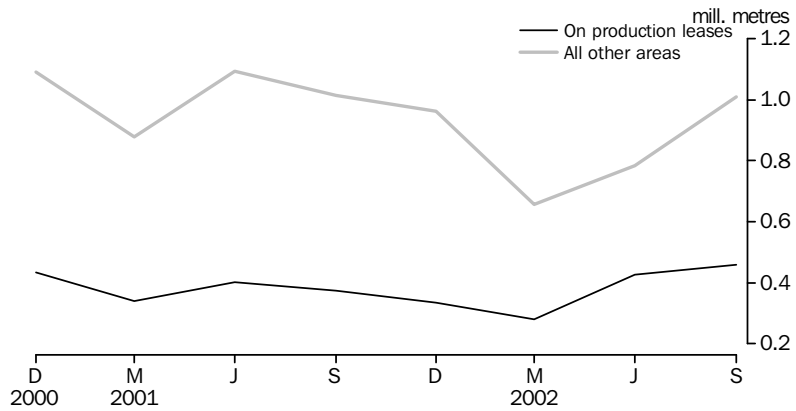
METRES DRILLED

In original terms, the 1.5 million total metres drilled reported for the September quarter 2002 was 21.2% higher than the June quarter (up 36% in seasonally adjusted terms).

The increase in metres drilled was mainly due to increased drilling on areas other than production leases, which contributed 87.5% to the overall increase.

As was the case with expenditure, exploration for Gold in Western Australia dominated the increase in metres drilled.

METRES DRILLED, Original series



SUMMARY OF FINDINGS *continued*

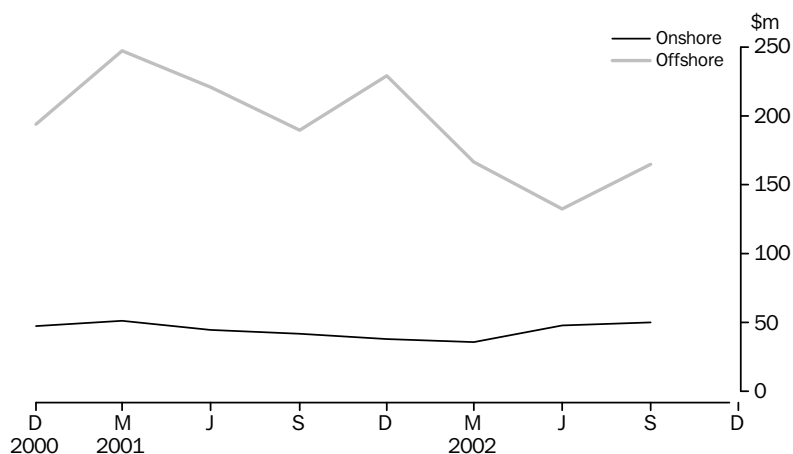
PETROLEUM EXPLORATION EXPENDITURE

OVERVIEW

In the September quarter 2002, expenditure on petroleum exploration increased by \$34.8m (19.3%) to \$215.3m, which was 7.1% lower than the September quarter 2001.

The increase in total exploration expenditure for the September quarter 2002 was mainly due to a \$32.5m increase in offshore exploration.

Between June and September quarters 2002, expenditure for petroleum exploration on areas other than production leases increased by \$25m (16.1%), and exploration on production leases increased by \$9.8m (38.1%).



REGIONAL DATA

Victoria was the main contributor to the increase in petroleum exploration expenditure with an increase of \$40.2m to \$54m. Most of this increase was due to offshore drilling.

PRIVATE EXPLORATION, Actual and expected expenditure(a)

	MINERAL EXPLORATION			PETROLEUM ONSHORE			PETROLEUM OFFSHORE		
	<i>Actual</i>	<i>Expected(b)</i>	<i>Actual as a proportion of expected</i>	<i>Actual</i>	<i>Expected(b)</i>	<i>Actual as a proportion of expected</i>	<i>Actual</i>	<i>Expected(b)</i>	<i>Actual as a proportion of expected</i>
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
1999-2000	676.3	689.8	98.1	110.1	155.3	70.9	590.6	637.0	92.7
2000-01	683.3	667.3	102.4	176.9	174.4	101.4	847.8	934.5	90.7
2001-02	640.8	719.7	89.0	164.5	184.4	89.2	718.1	924.2	77.7
June half 2001	326.3	314.7	103.7	96.2	55.7	172.8	468.6	560.2	83.7
December half 2001	338.1	423.0	79.9	80.3	86.8	92.5	418.8	551.9	75.9
June half 2002	302.7	296.7	102.0	84.2	97.6	86.3	299.3	372.3	80.4
December half 2002	nya	414.7	nya	nya	88.7	nya	nya	292.5	nya

nya not yet available

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

(a) From July 2000 value data no longer contains wholesale sales taxes.

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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	'000	'000	'000	'000
1999-2000	158.4	517.9	676.3	..	..	1 662	4 342	6 004	..	..
2000-01	157.0	526.2	683.3	..	..	1 611	4 211	5 822	..	..
2001-02	131.4	509.1	640.6	..	..	1 416	3 418	4 834	..	..
2000-01										
December	47.2	140.0	187.2	174.4	172.0	433	1 092	1 525	1 552	1 548
March	33.6	109.9	143.5	171.2	171.3	339	879	1 218	1 578	1 474
June	32.9	149.8	182.8	170.0	168.1	402	1 094	1 496	1 263	1 380
2001-02										
September	37.5	129.9	167.4	164.4	163.7	375	1 014	1 389	1 310	1 312
December	33.5	137.1	170.7	159.0	159.2	334	963	1 297	1 321	1 246
March	24.3	110.0	134.2	161.5	159.1	280	656	937	1 213	1 200
June	36.1	132.1	168.3	156.4	164.1	427	784	1 211	1 019	1 185
2002-03										
September	42.0	141.0	183.1	180.6	171.7	459	1 009	1 468	1 386	1 228

.. not applicable

(b) Refer to glossary for definition.

(a) From July 2000 value data no longer contains wholesale sales taxes.

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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	2.9	12.4	15.4
Victoria	np	np	10.7
Queensland	9.4	14.0	23.4
South Australia	1.1	8.6	9.7
Western Australia	26.1	84.0	110.1
Tasmania	np	np	1.1
Northern Territory	np	np	12.8
Australia	42.0	141.0	183.1

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 taxes.

(b) Refer to Glossary for definition.

MINERAL EXPLORATION, (Other than for petroleum)—Expenditure by state and territory(a)

<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								
1999–2000	56.1	33.8	82.6	22.6	415.0	8.8	57.5	676.3
2000–01	57.2	32.7	83.1	29.6	424.1	9.2	47.5	683.3
2001–02	48.3	33.9	92.7	32.1	381.1	4.0	48.4	640.6
2000–01								
December	15.8	7.3	21.4	6.8	118.0	2.6	15.3	187.2
March	12.7	8.4	17.1	4.9	90.8	2.5	7.2	143.5
June	15.1	8.4	22.8	12.4	110.9	2.3	10.9	182.8
2001–02								
September	12.5	7.2	21.6	6.9	103.3	0.9	15.0	167.4
December	12.6	7.1	25.0	8.0	103.5	1.2	13.3	170.7
March	10.5	8.4	17.3	7.3	82.5	1.0	7.2	134.2
June	12.6	11.2	28.7	9.9	91.8	0.9	13.0	168.3
2002–03								
September	15.4	10.7	23.4	9.7	110.1	1.1	12.8	183.1
SEASONALLY ADJUSTED								
2000–01								
December	14.7	7.3	20.0	6.6	109.6	2.5	13.7	174.4
March	13.8	8.3	20.9	6.6	107.8	2.3	11.5	171.2
June	14.2	8.3	20.4	9.7	104.5	2.4	10.5	170.0
2001–02								
September	13.2	7.3	21.7	7.5	101.5	1.0	12.2	164.4
December	11.8	7.2	23.5	7.6	95.8	1.2	11.9	159.0
March	11.5	8.3	21.1	9.8	98.2	0.9	11.7	161.5
June	11.8	11.0	25.8	7.7	86.6	1.0	12.5	156.4
2002–03								
September	16.1	10.8	23.4	10.6	108.1	1.2	10.4	180.6
TREND								
2000–01								
December	14.5	8.2	20.7	6.4	107.5	2.3	12.4	172.0
March	14.3	7.9	20.5	7.0	107.5	2.4	11.7	171.3
June	13.8	7.8	21.0	7.3	104.8	2.0	11.4	168.1
2001–02								
September	13.0	7.4	21.6	7.6	101.3	1.4	11.4	163.7
December	11.9	7.6	22.4	7.6	96.7	1.0	12.0	159.2
March	11.8	8.7	23.2	7.9	94.6	0.9	12.0	159.1
June	12.9	10.1	23.8	8.7	96.0	1.0	11.6	164.1
2002–03								
September	14.3	11.2	24.1	9.5	100.3	1.1	11.2	171.7

(a) From July 2000 value data no longer contains wholesale sales taxes.

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
SEPTEMBER QUARTER 2002												
New South Wales	0.7	1.3	np	2.7	4.1	—	3.3	—	4.1	np	0.8	15.4
Victoria	np	np	—	np	8.8	—	1.1	—	—	np	np	10.7
Queensland	5.3	2.4	np	7.7	4.9	—	np	np	9.5	np	0.5	23.4
South Australia	4.1	0.8	np	5.2	2.1	np	np	np	np	0.4	np	9.7
Western Australia	0.6	2.9	12.5	16.0	70.1	8.4	1.9	np	np	7.3	4.2	110.1
Tasmania	np	np	np	0.7	0.3	—	—	—	—	—	np	1.1
Northern Territory	0.5	1.0	0.9	np	5.0	—	np	np	—	2.3	np	12.8
Australia	11.1	8.8	14.7	34.6	95.3	9.0	8.3	2.5	16.0	10.4	7.0	183.1
AUSTRALIA												
1999–2000	28.4	55.4	73.0	156.8	374.8	29.7	21.5	11.7	35.4	29.8	16.7	676.3
2000–01	32.8	59.8	72.8	165.4	370.2	23.4	23.6	8.4	41.3	31.8	19.3	683.3
2001–02	41.6	37.6	53.7	132.9	331.3	25.2	33.2	8.8	50.3	35.4	23.4	640.6
2000–01												
December	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	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	12.3	15.5	16.9	44.7	96.8	5.4	6.8	np	15.1	6.7	np	182.8
2001–02												
September	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	10.3	9.3	16.7	36.3	84.2	6.9	8.7	2.1	14.4	10.7	7.3	170.7
March	8.1	6.7	9.8	24.6	73.9	7.4	7.0	0.9	10.2	5.7	4.6	134.3
June	13.1	10.3	12.3	35.6	86.8	6.5	9.7	2.7	13.9	9.6	3.4	168.2
2002–03												
September	11.1	8.8	14.7	34.6	95.3	9.0	8.3	2.5	16.0	10.4	7.0	183.1

— nil or rounded to zero (including null cells)

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 taxes.

(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 leases (b)	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1999-2000	53.8	56.3	110.1	372.6	217.9	590.6	117.1	583.5	700.7
2000-01	98.4	78.5	176.9	525.2	322.7	847.8	212.5	812.2	1 024.7
2001-02	98.2	66.3	164.5	456.8	261.2	718.1	111.0	771.5	882.6
2000-01									
December	26.8	20.8	47.6	92.9	101.2	194.1	60.0	181.6	241.7
March	28.2	23.2	51.4	152.4	95.0	247.4	59.7	239.1	298.8
June	26.1	18.7	44.8	151.8	69.3	221.2	50.5	215.4	266.0
2001-02									
September	28.8	13.3	42.1	137.3	52.3	189.6	40.5	191.2	231.7
December	23.2	15.0	38.3	152.3	76.9	229.2	23.1	244.3	267.4
March	16.7	19.4	36.1	94.6	72.3	166.9	21.8	181.2	203.0
June	29.6	18.6	48.1	72.6	59.8	132.4	25.7	154.8	180.5
2002-03									
September	31.6	18.8	50.4	122.0	42.9	164.9	35.5	179.8	215.3

(a) From July 2000 value data no longer contains wholesale sales taxes.

(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</i>	<i>Tasmania</i>	<i>Northern Territory(b)</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1999–2000	np	63.2	50.6	np	444.1	np	111.0	700.7
2000–01	6.4	74.4	84.8	66.8	687.5	np	82.5	1 024.7
2001–02	8.7	85.1	73.4	35.8	479.8	np	169.9	882.6
2000–01								
December	np	13.3	27.1	np	166.3	np	20.5	241.7
March	np	10.3	19.2	np	216.4	np	np	298.8
June	1.1	44.0	16.1	25.0	156.0	np	np	266.0
2001–02								
September	2.7	np	19.4	12.1	136.3	np	np	231.7
December	np	np	14.0	np	141.7	np	78.6	267.4
March	np	21.7	13.3	np	119.7	—	40.5	203.0
June	0.8	13.8	26.7	9.7	82.0	np	np	180.5
2002–03								
September	np	54.0	27.2	11.9	84.1	1.2	np	215.3

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

(a) From July 2000 value data no longer contains wholesale sales taxes.
 (b) Also contains some additional areas. See paragraphs 5 and 6 of the Explanatory Notes.

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 including the area formerly known as ZOCC, and in the Joint Petroleum Development Area (JPDA) formerly known as ZOCA, 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 between Australia and the United Nations Transitional Administration in East Timor (UNTAET) on behalf of East Timor. On 20 May 2002, the newly independent East Timor and Australia accepted arrangements as proposed in the new Timor Sea Treaty (based on an 'Exchange of Notes' between the two countries). The new Treaty, expected to come into force in late 2002/early 2003, will provide the necessary framework arrangements for companies to exploit resources in the JPDA.

4 The areas formerly known as Areas B and C of the Zone of Cooperation will no longer exist under this arrangement. Since 20 May 2002, ZOCC is simply a part of Australia's waters, and ZOCC a part of East Timor's.

5 Exploration in the JPDA is included in estimates for the Northern Territory. Further, as a reflection of the joint Australia/East Timor jurisdiction in the JPDA, a proportion of exploration expenditure in the JPDA is excluded from the estimates.

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.

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.

EXPLANATORY NOTES *continued*

TREND ESTIMATES *continued*

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.

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 The 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.

RELATED PUBLICATIONS

18 Users 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)

EXPLANATORY NOTES *continued*

ABS DATA AVAILABLE ELECTRONICALLY

19 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.

20 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.

21 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

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

GLOSSARY

Development	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.
Exploration	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.
Exploration expenditure	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.
Exploration licence/permit	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.
Minerals	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).
Mining licence/lease	Covers the commercial mining phase of a project for the licenced area. This licence authorises both full recovery and further exploration to occur.
Offshore	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> .
Onshore	Includes all Australian territorial lands to the low water mark.
Petroleum	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.
Retention licence	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.
Selected base metals	Are made up of the following minerals: copper, silver, lead-zinc, nickel and cobalt.
Type of expenditure	Classification used:

GLOSSARY *continued*

Type of expenditure *continued*

Drilling expenditure — 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.

Other expenditure — 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.

Type of lease

Classifications used:

Production lease — 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.

All other areas — 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.

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