

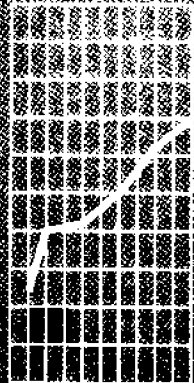


December Quarter 1996

EMBARGO: 11:30 AM (CANBERRA TIME) WED 26 MARCH 1997

Actual and Expected Private Mineral Exploration

Australia



NOTES

FORTHCOMING ISSUES

<i>ISSUE</i>	<i>RELEASE DATE</i>
March quarter 1997	30 June 1997
June quarter 1997	30 September 1997

.....

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

.....

INQUIRIES

For information about other ABS statistics and services, please refer to the back of this publication.

For further information about these statistics, contact Sandra Lowry on Darwin (08) 8943 2171.

W. McLennan
Australian Statistician

SUMMARY OF FINDINGS

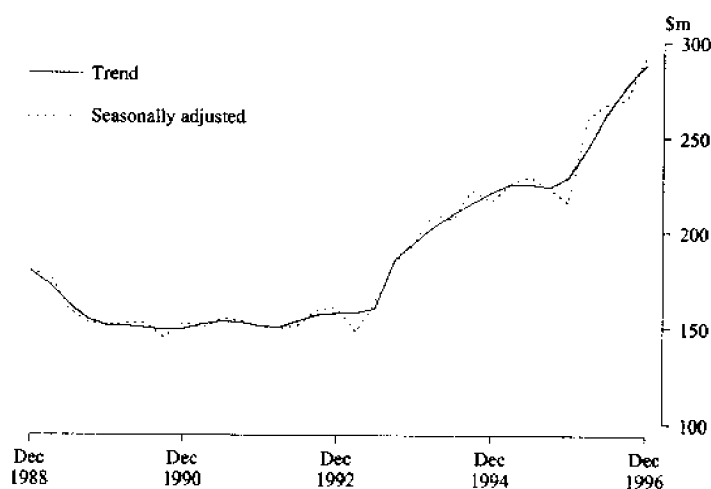
.....

MINERAL EXPLORATION EXPENDITURE (Other than for petroleum)

TREND ESTIMATES

The strong upward trend in exploration expenditure that has been evident since the June quarter 1993 has continued through to the December quarter 1996.

Between the September and December quarters 1996 the trend estimate increased by 4.0% (\$11.2m) to \$288.2m. Whereas expenditure remained relatively static during 1995, growth in all 4 quarters during 1996 resulted in a trend estimate for December 1996, 25.9% higher than for the December quarter 1995.



States and Territories

Trend estimates show expenditure growing in Western Australia over recent quarters, in a pattern similar to the national series. The trend series has been falling for Queensland. While the amount of expenditure and the growth rates are much less, Victoria, South Australia and Tasmania are showing increasing trends in recent quarters.

The largest percentage increase was for Western Australia, up 10.5% (\$16.7m) to \$175.6m, while the trend estimate for Queensland experienced the largest percentage fall, down 12.5% (\$5.6m) to \$39.1m.

SUMMARY OF FINDINGS *continued*

DECEMBER QUARTER

In original terms mineral exploration expenditure for the December quarter 1996 was \$309.5m, an increase of \$35.3m (12.9%) from the September quarter 1996. This increase was \$80.2m (35.0%) higher than the December quarter 1995 total expenditure of \$229.3m.

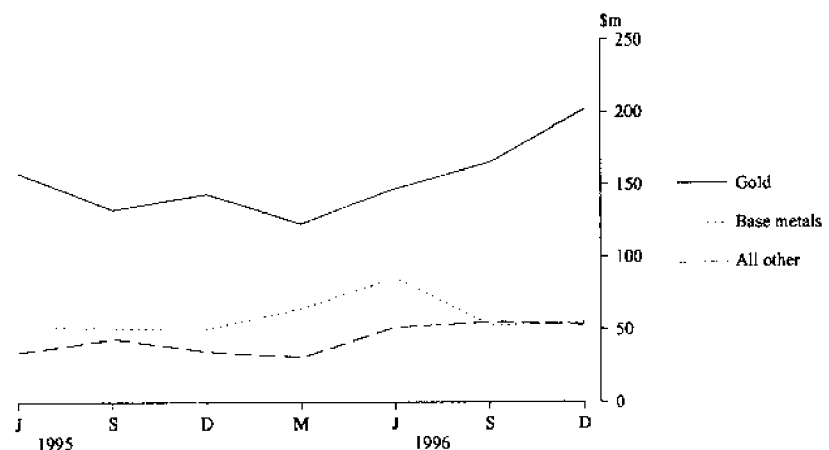
Exploration expenditure on production leases rose \$1.9m (2.6%) to \$74.9m. Expenditure on other areas rose \$33.4m (16.6%) to \$234.6m.

Gold remains the predominant mineral sought with \$201.9m spent on exploration during the December quarter, accounting for 65.2% of all mineral exploration expenditure. Exploration for gold increased by \$36.4m (22.0%) from the September quarter 1996 and \$58.2m (40.5%) from expenditure reported in the December quarter 1995.

Other commodities that recorded increases in expenditure from the September quarter were base metals (copper, silver-lead-zinc, nickel and cobalt), up \$1.7m (3.2%), coal up \$1.5m (9.7%), diamonds up \$0.8m (5.1%) and mineral sands up \$0.4m (12.1%).

Decreases were reported for exploration expenditure for, iron ore down \$2.3m (37.7%), uranium down \$1.9m (50.0%), other metals down \$0.6m (5.7%), construction materials down \$0.4m (80.0%) and tin, tungsten, scheelite and wolfram collectively down \$0.1m (50.0%).

Data collected for actual and expected expenditure for the six months ended December 1996 show a substantial increase from the expected expenditure for the first half of the year, as reported in the June quarter. The factors contributing to the increase include the effect of bad weather in the previous quarter, an increase in drilling activity and the extension of drilling programs, and changes to more expensive drilling methods.



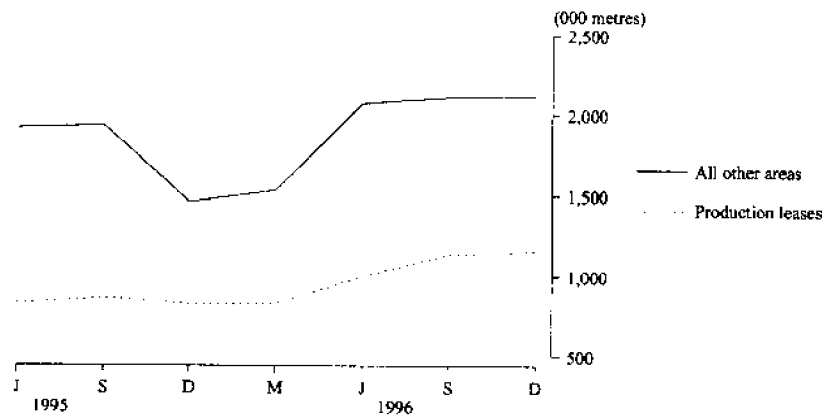
SUMMARY OF FINDINGS *continued*

METRES DRILLED

The trend estimate for total mineral exploration drilling remained stable in the December quarter 1996 at 3.0 million metres but showed a 12.0% increase from the trend estimate for December quarter 1995.

During the December quarter 1996, in original terms, a total of 3.3 million metres were drilled, a slight increase from the September quarter 1996 and 1.0 million metres (43.4%) higher than in the December quarter 1995.

Drilling on production leases increased by 2.2% from the September quarter 1996 to 1.2 million metres, while drilling on other areas remained steady at 2.1 million metres.



SUMMARY OF FINDINGS *continued*

PETROLEUM EXPLORATION EXPENDITURE

OVERVIEW

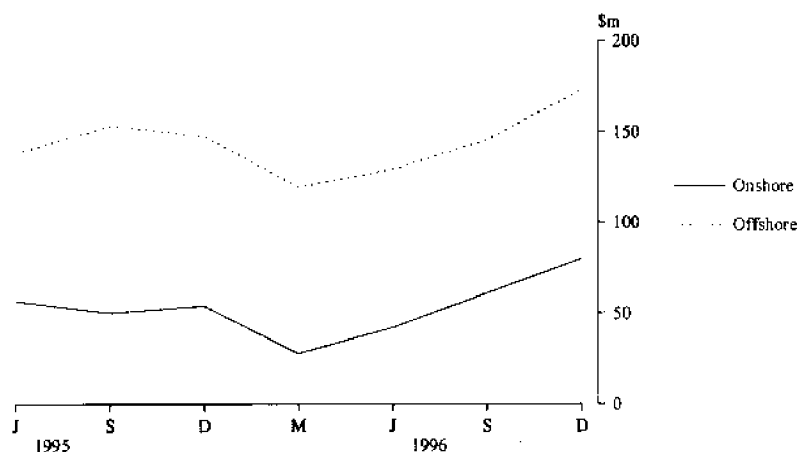
Total expenditure on petroleum exploration was \$253.6m in the December quarter 1996, a rise of \$46.6m (22.5%) from the September quarter 1996.

Expenditure on production leases increased \$19.8m (56.9%) to \$54.6m, while expenditure on all other areas increased \$26.8m to \$199.0m, 15.6% higher than in the September quarter 1996.

Onshore exploration increased \$19.1m (31.2%) to \$80.3m, while offshore exploration expenditure rose \$27.5m (18.9%) to \$173.3m in the December quarter 1996.

The two areas recording the largest increases were the drilling expenditure component for onshore exploration, where expenditure increased by \$25.0m (64.3%) to \$63.9m, and other offshore expenditure which increased by \$26.9m (105.9%) to \$52.3m.

There was a fall in reported expenditure for onshore, other than drilling, expenditure down \$5.9m (26.5%) to \$16.4m.



REGIONAL DATA

Regional data are available only for Queensland and Western Australia for the December quarter 1996. Expenditure increased in Queensland by 11.5% to \$40.6m, while in Western Australia expenditure remained stable at \$132.6m. In Western Australia, expenditure has increased by 75.2% from \$75.7m recorded for December quarter 1995. Together, Queensland and Western Australia accounted for 68.3% of total petroleum exploration expenditure in December quarter 1996.

1

PRIVATE EXPLORATION, Actual and Expected Expenditure

Period	MINERAL EXPLORATION.....			PETROLEUM ONSHORE.....			PETROLEUM OFFSHORE.....		
	Actual	Expected(a)	Actual as a proportion of expected	Actual	Expected(a)	Actual as a proportion of expected	Actual	Expected(a)	Actual as a proportion of expected
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
1993-94	792.6	553.0	143.3	144.5	100.1	144.4	362.2	459.2	78.9
1994-95	893.3	768.8	116.2	170.8	120.3	142.0	511.7	592.1	86.4
1995-96	960.2	773.6	124.1	174.8	185.6	94.2	550.3	428.0	128.6
Six months ended									
June 1995	434.9	419.6	103.6	85.2	61.5	138.5	238.7	255.8	93.3
December 1995	456.5	372.3	122.6	104.4	84.4	123.7	301.1	207.6	145.0
June 1996	503.8	401.3	125.5	70.4	101.2	69.6	249.3	220.4	113.1
December 1996	583.7	361.8	161.3	141.5	91.2	155.2	319.1	207.9	153.5
June 1997	n.y.a.	496.1	n.y.a.	n.y.a.	115.0	n.y.a.	n.y.a.	238.7	n.y.a.

(a) As reported in previous collections. Refer to Explanatory Notes paragraph 14.

2

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

Period	EXPENDITURE.....					METRES DRILLED.....				
	On production leases	On all other areas	Total	Seasonally adjusted	Trend estimate	On production leases	On all other areas	Total	Seasonally adjusted	Trend estimate
	\$m	\$m	\$m	\$m	\$m	'000 m	'000 m	'000 m	'000 m	'000 m
1993-94	184.4	608.1	792.6	..	..	2 770	6 810	9 580	..	..
1994-95	202.5	690.7	893.3	..	..	3 329	7 001	10 330	..	..
1995-96	208.8	751.5	960.2	..	..	3 520	6 995	10 514	..	..
1995										
March qtr	44.8	145.5	190.3	225.8	225.5	726	1 319	2 045	2 480	2 582
June qtr	55.6	189.0	244.6	229.6	224.0	832	1 917	2 749	2 739	2 602
September qtr	46.2	180.9	227.1	223.1	222.4	866	1 933	2 799	2 570	2 622
December qtr	47.1	182.2	229.3	215.7	228.9	824	1 458	2 282	2 106	2 704
1996										
March qtr	54.6	164.4	219.0	260.3	244.6	832	1 533	2 364	2 873	2 843
June qtr	60.9	224.0	284.9	267.6	262.9	998	2 071	3 069	3 053	2 975
September qtr	73.0	201.2	274.2	269.8	277.0	1 138	2 110	3 248	2 985	3 026
December qtr	74.9	234.6	309.5	292.0	288.2	1 163	2 110	3 272	3 022	3 029

MINERAL EXPLORATION (Other than for Petroleum), Expenditure by State

Period	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ORIGINAL								
1993-94	73.6	20.7	140.2	24.7	453.7	10.2	69.5	792.6
1994-95	79.2	31.2	176.0	20.9	495.5	14.9	75.8	893.3
1995-96	80.3	42.6	181.0	24.1	519.5	18.7	93.9	960.2
1995								
March qtr	19.8	9.3	32.4	4.6	106.3	4.0	14.1	190.3
June qtr	22.7	8.7	44.9	6.6	135.3	5.2	21.3	244.6
September qtr	20.5	8.2	43.8	5.6	125.0	2.5	21.6	227.1
December qtr	17.7	11.5	39.4	6.6	128.9	5.6	19.5	229.3
1996								
March qtr	19.2	10.1	40.9	5.1	118.6	6.0	19.1	219.0
June qtr	23.0	12.8	56.9	6.8	147.0	4.7	33.7	284.9
September qtr	21.1	14.9	38.3	5.4	162.8	4.2	27.5	274.2
December qtr	20.6	14.1	48.0	8.0	187.7	5.7	25.4	309.5
SEASONALLY ADJUSTED								
1995								
March qtr	21.8	8.7	42.4	5.8	123.7	3.5	19.9	225.8
June qtr	21.6	8.4	44.5	6.0	125.6	4.5	19.0	229.6
September qtr	21.8	9.0	41.5	5.6	122.2	3.2	19.8	223.1
December qtr	16.2	11.7	33.6	6.0	124.0	6.1	18.1	215.7
1996								
March qtr	21.1	9.4	53.4	6.4	137.8	5.3	26.9	260.3
June qtr	21.8	12.5	56.4	6.2	136.6	4.1	30.0	267.6
September qtr	22.3	16.2	36.2	5.4	159.1	5.4	25.2	269.8
December qtr	18.9	14.3	41.1	7.3	180.6	6.2	23.6	292.0
TREND								
1995								
March qtr	20.5	7.9	44.8	5.4	124.1	3.6	19.2	225.5
June qtr	21.2	8.7	42.0	5.8	123.1	3.9	19.3	224.0
September qtr	20.3	9.5	39.7	5.9	123.9	4.5	18.6	222.4
December qtr	19.2	10.0	43.1	6.0	126.3	5.0	19.3	228.9
1996								
March qtr	20.1	11.1	48.0	6.1	131.9	5.0	22.4	244.6
June qtr	21.3	12.7	48.9	6.1	143.6	5.0	25.3	262.9
September qtr	21.4	14.4	44.7	6.2	158.9	5.2	26.2	277.0
December qtr	20.4	15.6	39.1	6.5	175.6	5.8	25.2	288.2

4

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

State/Territory	Copper, silver-lead-zinc, nickel and cobalt	Gold	Iron ore	Mineral sands	Tin, tungsten, scheelite and wolfram	Uranium	Coal	Construction materials	Diamonds	Other	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
DECEMBER QUARTER 1996											
New South Wales	6.5	8.7	—	0.2	—	—	4.4	—	0.4	0.5	20.6
Victoria	0.3	6.7	n.p.	n.p.	—	—	n.p.	—	n.p.	n.p.	14.1
Queensland	18.0	15.0	n.p.	n.p.	n.p.	n.p.	11.4	—	—	1.7	48.0
South Australia	2.5	5.0	—	—	—	—	n.p.	—	n.p.	0.2	8.0
Western Australia	20.1	147.9	3.7	1.8	n.p.	n.p.	0.8	n.p.	11.5	n.p.	187.7
Tasmania	2.8	2.9	—	—	—	—	—	—	—	—	5.7
Northern Territory	4.6	15.9	—	—	n.p.	0.5	—	n.p.	4.1	0.3	25.4
Australia	54.9	201.9	3.8	3.7	0.1	1.9	16.9	0.1	16.4	9.9	309.5
AUSTRALIA											
1993-94	191.6	453.7	18.8	8.5	1.1	7.6	27.7	1.3	58.7	23.5	792.6
1994-95	201.0	554.5	12.1	5.8	1.1	7.8	38.0	0.9	48.4	23.5	893.3
1995-96	251.8	547.1	14.1	9.3	0.6	7.2	52.6	0.7	52.9	23.8	960.2
1995											
March qtr	49.2	114.2	1.4	1.5	0.2	1.8	7.4	0.2	8.6	5.8	190.3
June qtr	51.5	158.6	5.3	0.6	0.4	2.2	9.3	0.4	10.3	6.1	244.6
September qtr	50.8	132.7	4.9	2.1	0.1	2.1	12.7	0.6	15.3	5.9	227.1
December qtr	50.5	143.7	1.1	1.6	0.2	2.3	12.1	—	11.9	5.9	229.3
1996											
March qtr	64.7	123.3	3.6	2.0	n.p.	n.p.	10.8	—	8.4	4.4	219.0
June qtr	85.8	147.4	4.5	3.6	n.p.	n.p.	17.1	0.1	17.3	7.8	284.9
September qtr	53.2	165.5	6.1	3.3	0.2	3.8	15.4	0.5	15.6	10.5	274.2
December qtr	54.9	201.9	3.8	3.7	0.1	1.9	16.9	0.1	16.4	9.9	309.5

5

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 areas</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1993-94	84.4	60.0	144.5	208.0	154.2	362.2	70.1	436.5	506.7
1994-95	88.2	82.6	170.8	377.3	134.4	511.7	105.0	577.3	682.5
1995-96	95.5	79.4	174.8	367.1	183.2	550.3	78.8	646.5	725.1
1995									
March qtr	11.9	16.2	28.1	73.6	26.5	100.1	20.6	107.6	128.2
June qtr	32.3	24.8	57.2	96.1	42.5	138.6	29.3	166.4	195.8
September qtr	30.9	19.2	50.0	120.4	32.8	153.2	17.7	185.6	203.2
December qtr	28.7	25.6	54.3	103.9	44.0	147.9	19.6	182.7	202.2
1996									
March qtr	13.6	14.5	28.1	68.1	51.6	119.7	18.9	128.9	147.8
June qtr	22.3	20.1	42.4	74.7	54.8	129.5	22.6	149.3	171.9
September qtr	38.9	22.3	61.2	120.4	25.4	145.8	34.8	172.2	207.0
December qtr	63.9	16.4	80.3	121.1	52.3	173.3	54.6	199.0	253.6

6

PETROLEUM EXPLORATION BY REGION

Period	New South Wales	Victoria	Queensland	South Australia	Western Australia(a)	Tasmania	Northern Territory/ Ashmore and Cartier Islands	Zone of Cooperation Area A(b)	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1994-95	n.p.	n.p.	82.7	46.7	345.6	n.p.	55.9	89.4	682.5
1995-96	n.p.	n.p.	106.5	55.1	319.0	n.p.	96.3	89.2	725.1
1995									
March qtr	n.p.	n.p.	16.9	7.4	65.6	n.p.	7.6	17.6	128.2
June qtr	n.p.	n.p.	26.3	14.4	89.2	n.p.	21.8	18.6	195.8
September qtr	n.p.	n.p.	34.5	18.3	88.5	n.p.	17.0	20.4	203.2
December qtr	n.p.	n.p.	32.8	13.8	75.7	—	45.8	21.3	202.2
1996									
March qtr	n.p.	n.p.	16.7	9.6	74.6	—	17.4	18.2	147.8
June qtr	n.p.	n.p.	22.5	13.4	80.3	—	16.0	29.4	171.9
September qtr	n.p.	n.p.	36.4	22.7	131.5	—	2.5	7.4	207.0
December qtr	n.p.	n.p.	40.6	n.p.	132.6	n.p.	n.p.	n.p.	253.6

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

(b) Refer to Explanatory Notes paragraph 15.

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, and incurring expenditure of more than \$20,000 per year.

SEASONAL ADJUSTMENT

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.

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.

6 Irregular influences that are highly volatile can make it difficult to interpret the series even after adjustment for seasonal variation.

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.

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 *A Guide to Interpreting Time Series — Monitoring "Trends": an Overview* (1348.0) or contact the Assistant Director, Time Series Analysis on (06) 252 6345.

CLASSIFICATIONS

- 9** The following categories are used:
- 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 *Petroleum (Submerged Lands) Act 1967* or under any Acts administered by State and Territory Governments.
 - Drilling/Other, where *drilling expenditure* includes cost of access (roads, vessel hire, etc.) to the drilling site and site preparation etc., and *other expenditure* includes costs of surveys, report writing, map preparation and all other activities attributable to exploration.

DEFINITIONS

10 Minerals: In the broad sense these comprise metallic minerals, construction materials, gemstones, other non-metallic minerals and petroleum (oil or gas).

11 Exploration: 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.

12 Exploration expenditure: 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.

13 Expected expenditure: 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.

14 Zone of Cooperation (ZOC): 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 Indonesian authorities but Australia must be notified of any changes to tenements in the area and to pay Australia 10% of Contractors Income Tax collected by the Republic of Indonesia from corporations producing petroleum.

15 Ashmore and Cartier Islands: 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.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS

16 Users may also wish to refer to the following priced publications which are available on request:

Australian Mining Industry (8414.0)

Australian Business Expectations (5250.0)

Private New Capital Expenditure and Expected Expenditure, Australia (5625.0)

17 Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

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.

EFFECTS OF ROUNDING

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

