

ACTUAL AND EXPECTED PRIVATE MINERAL EXPLORATION, AUSTRALIA SEPTEMBER QUARTER 1995

MAIN FEATURES

Mineral exploration (other than for petroleum)

Exploration expenditure for the September quarter 1995 totalled \$222.9 million, a decrease of 8.9% compared to the June quarter 1995, and a decrease of 1.4% compared to the September quarter 1994.

Expenditure on production leases for the September quarter 1995 decreased by 19.4% from the previous quarter, and was 12.2% lower than the September quarter 1994. Expenditure on all other areas decreased by 5.8% from the June quarter 1995, but was 1.8% higher than in the September quarter 1994.

The total metres drilled during the September quarter 1995 was 1.8% more than in June quarter 1995, and 1.7 % greater than in the September quarter 1994.

Petroleum exploration

Total expenditure on petroleum exploration in the September quarter 1995 was \$203.2 million, a decrease of 0.7% compared to the June quarter 1995, but 12.6% more than in the September quarter 1994.

Expenditure on production leases decreased by 38.8% compared to the September quarter 1994. Expenditure on all other areas increased by 22.5% over the same period.

Total onshore exploration increased by 19.9% compared to the September quarter 1994. Total offshore exploration rose by 10.5% over the same period.

Overseas exploration

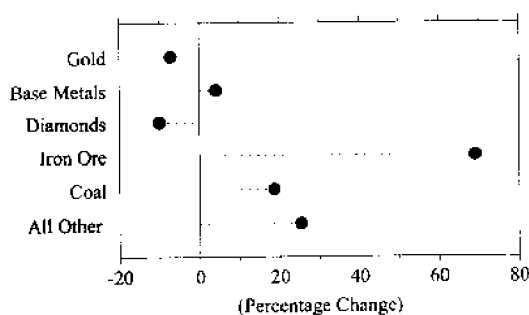
Overseas exploration expenditure by Australian resident companies increased by 68.6% from \$255.5 million in 1993-94 to \$430.8 million in 1994-95.

Exploration drilling methods

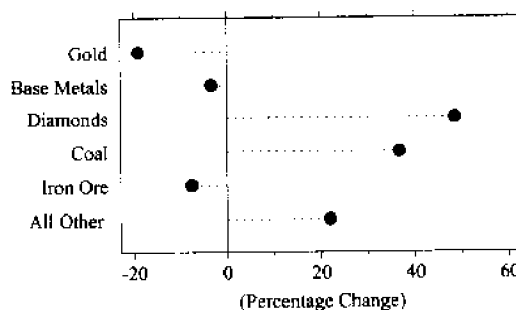
Exploration drilling expenditure in Australia increased by 13.6% from \$283.6 million in 1993-94 to \$322.2 million in 1994-95. Diamond drilling accounted for 47.1% and Reverse Circulation for 35.6% of the total drilling expenditure.

MINERAL EXPLORATION EXPENDITURE BY TYPE OF MINERAL SOUGHT

September qtr 1994 to September qtr 1995



June qtr 1995 to Sept qtr 1995



INQUIRIES

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- for any information about other ABS statistics and services please contact Information Services in Canberra on (06) 252 6627, 252 6007 or any other ABS State Office.

1 PRIVATE EXPLORATION, Actual and Expected Expenditure

Period	Mineral (other than petroleum)			Petroleum onshore			Petroleum offshore		
	Expenditure		Actual as a percentage of expected	Expenditure		Actual as a percentage of expected	Expenditure		Actual as a percentage of expected
	Actual Expected(a)			Actual Expected(a)			Actual Expected(a)		
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
1990-91	601.7	452.6	132.9	217.1	165.8	130.9	365.4	326.8	111.8
1991-92	604.0	466.5	129.5	135.3	191.3	70.7	338.8	344.0	98.5
1992-93	631.8	532.8	118.6	115.2	131.1	87.9	496.7	438.5	113.3
1993-94	792.6	553.0	143.3	144.5	100.1	144.4	362.1	459.2	78.9
1994-95	893.3	696.2	128.3	169.0	120.3	140.5	519.8	592.1	87.8

Six months ended

June 1994	396.2	319.4	124.1	78.4	41.3	189.8	158.5	235.1	67.4
December 1994	458.4	349.2	131.3	84.0	58.8	142.9	281.1	336.3	83.6
June 1995	434.9	347.0	125.3	185.0	61.5	138.2	238.7	255.8	93.3
December 1995	n.y.a.	349.0	n.y.a.	n.y.a.	84.4	n.y.a.	n.y.a.	207.4	n.y.a.

(a) As reported in a previous census. See Explanatory Notes see paragraph 9.

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

Period	Expenditure (\$ million)			Metres drilled ('000 metres)		
	On production leases	On all other areas	Total	On production leases	On all other areas	Total
1990-91	115.4	486.3	601.7	1,760	4,452	6,212
1991-92	130.9	473.1	604.0	1,626	4,253	5,877
1992-93	148.4	483.4	631.8	1,944	5,049	6,993
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
1993-94 June qtr	60.0	160.0	220.6	842	1,643	2,485
1994-95						
September qtr	51.0	175.0	226.1	833	1,918	2,751
December qtr	51.1	181.2	232.3	938	1,847	2,785
March qtr	44.8	145.5	190.3	726	1,319	2,045
June qtr	55.6	189.0	244.6	832	1,917	2,749
1995-96						
September qtr	44.8	178.1	222.9	866	1,933	2,799

3 MINERAL EXPLORATION (Other than for Petroleum), Expenditure By State (\$ million)

Period	NSW	Vic.	Qld	SA	WA	Tas.	NT	Australia
1990-91	60.6	12.7	124.1	15.5	324.8	9.9	53.9	601.7
1991-92	63.3	12.6	109.9	19.7	332.8	7.9	57.8	604.0
1992-93	60.9	12.2	117.9	21.3	348.1	7.8	63.5	631.8
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
1993-94 June qtr	25.0	6.3	37.0	5.8	123.4	3.1	19.9	220.6
1994-95								
September qtr	18.4	6.7	45.0	4.6	127.5	2.8	21.1	226.1
December qtr	18.3	6.5	53.7	5.1	126.4	2.9	19.3	232.3
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
1995-96								
September qtr	20.5	8.2	43.8	5.6	124.9	2.5	17.5	222.9

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MINERAL EXPLORATION (Other than for Petroleum) Expenditure By Type of Mineral Sought By State, September Quarter 1995 (\$ million)

Period	Copper, lead zinc, silver nickel and cobalt	Gold	Iron ore	Mineral sands	Tin, tungsten, scheelite, wolfram	Uranium	Coal	Con- struction materials	Diamonds	Other	Total
New South Wales	5.5	10.9	n.p.	n.p.	—	—	2.6	—	n.p.	0.3	20.5
Victoria	0.4	5.7	n.p.	n.p.	—	—	n.p.	—	n.p.	1.9	8.2
Queensland	17.2	13.5	n.p.	n.p.	n.p.	n.p.	9.7	n.p.	n.p.	2.8	43.8
South Australia	3.9	0.6	n.p.	—	—	n.p.	n.p.	n.p.	0.4	0.5	5.6
Western Australia	16.6	90.4	4.6	1.3	n.p.	n.p.	n.p.	n.p.	9.7	1.3	124.9
Tasmania	1.7	0.7	n.p.	—	n.p.	—	n.p.	n.p.	—	n.p.	2.5
Northern Territory	4.6	6.7	n.p.	n.p.	n.p.	1.3	—	—	4.6	n.p.	17.5
Australia	49.8	128.5	4.9	2.1	0.1	2.1	12.7	0.6	15.3	6.9	222.9

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MINERAL EXPLORATION (Other than for Petroleum), Expenditure By Type of Mineral Sought, Australia (\$ million)

Period	Copper, lead zinc, silver nickel and	Gold	Iron ore	Mineral sands	Tin, tungsten, scheelite, wolfram	Uranium	Coal	Con- struction materials	Diamonds	Other	Total
1990-91	171.8	300.8	11.2	19.2	2.4	12.8	23.1	2.7	39.0	18.5	601.7
1991-92	144.9	304.7	36.9	13.9	1.7	12.8	27.5	1.6	35.7	24.3	604.0
1992-93	183.4	320.1	24.0	9.8	0.5	8.8	24.2	1.1	38.1	21.9	631.8
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
1993-94											
June qtr	50.6	133.4	1.2	2.2	0.2	1.4	7.4	0.4	16.9	6.8	220.6
1994-95											
September qtr	47.8	138.2	2.9	1.9	0.1	2.1	10.7	0.1	17.0	5.2	226.1
December qtr	52.5	143.5	2.5	1.8	0.4	1.7	10.6	0.2	12.5	6.5	232.3
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
1995-96											
September qtr	49.8	128.5	4.9	2.1	0.1	2.1	12.7	0.6	15.3	6.9	222.9

6

PETROLEUM EXPLORATION EXPENDITURE (\$ million)

Period	Onshore			Offshore			Total expenditure		
	Drilling	Other	Total	Drilling	Other	Total	On production leases	On all other areas	Total
1990-91	128.8	88.3	217.1	257.1	108.4	365.4	131.2	451.4	582.6
1991-92	60.5	75.0	135.3	142.2	196.4	338.8	70.4	403.6	473.9
1992-93	62.8	52.4	115.2	283.7	213.1	496.7	69.1	542.9	611.9
1993-94	84.4	60.0	144.5	208.0	154.2	362.2	70.1	436.5	506.7
1994-95	185.6	183.5	169.0	384.9	134.9	519.8	1104.7	1584.2	1688.8
1993-94									
June qtr	29.3	16.7	46.0	41.2	37.0	78.2	20.2	104.1	124.2
1994-95									
September qtr	26.0	15.8	41.7	108.5	30.2	138.7	28.9	151.5	180.5
December qtr	17.2	25.1	42.3	106.7	35.7	142.4	25.9	158.7	184.7
March qtr	11.9	16.2	28.1	73.6	26.5	100.1	20.6	107.6	128.2
June qtr	130.5	126.4	156.9	96.1	42.5	138.6	129.3	1166.4	1195.7
1994-95									
September qtr	30.9	19.2	50.0	120.4	32.8	153.2	17.7	185.6	203.2

7 OVERSEAS EXPLORATION EXPENDITURE OF AUSTRALIAN RESIDENT COMPANIES (a) 1994-95 (\$ million)

	North America(b)	Latin America(c)	PNG	Indonesia	China	Other Asia	Africa	Other	Total
Petroleum	72.0	57.2	26.8	n.p.	21.2	31.5	n.p.	67.3	325.2
Copper, lead, zinc, silver, nickel and cobalt	n.p.	n.p.	n.p.	n.p.	n.p.	3.9	n.p.	n.p.	21.2
Gold	9.0	6.9	n.p.	10.0	n.p.	11.5	8.1	7.0	64.8
Iron ore	—	—	—	—	—	—	—	—	—
Mineral sands	n.p.	—	—	—	—	n.p.	—	n.p.	1.5
Tin, tungsten, scheelite and wolfram	—	—	—	—	—	—	—	—	—
Uranium	—	—	—	—	—	—	—	—	—
Coal	—	—	—	—	—	n.p.	—	—	n.p.
Construction materials	—	—	—	—	—	n.p.	—	—	n.p.
Diamonds	n.p.	n.p.	—	n.p.	—	n.p.	3.4	4.4	17.7
Bauxite	—	—	—	—	—	n.p.	—	—	n.p.
Other	—	—	—	—	n.p.	—	—	—	n.p.
Total	89.2	70.8	40.6	20.1	23.5	48.4	56.7	81.7	430.8

(a) Excludes overseas subsidiaries of Australian resident companies (b) Includes Canada (c) Comprises Mexico, South America, Central America and the Caribbean

8 MINERAL EXPLORATION, DRILLING METHODS : TOTAL EXPENDITURE BY STATE, 1994-95 (\$ million)

	NSW	Vic	Qld	SA	WA	Tas	NT	Australia
Diamond	17.9	3.8	34.3	n.p.	80.4	n.p.	9.4	151.8
Reverse Circulation	4.5	1.5	14.3	n.p.	86.9	n.p.	6.3	114.6
Percussion	1.5	0.3	6.3	n.p.	1.4	—	n.p.	10.0
Rotary Air Blast	0.7	0.1	5.3	0.1	28.3	—	2.5	37.0
Other	0.3	—	0.7	n.p.	6.7	—	n.p.	8.6
Total	24.8	5.7	61.0	3.2	203.7	4.6	19.2	322.2

9 MINERAL EXPLORATION, DRILLING METHODS : TOTAL METRES DRILLED, BY STATE, 1994-95 ('000 metres)

	NSW	Vic	Qld	SA	WA	Tas	NT	Australia
Diamond	213.4	44.1	220.9	12.8	791.5	38.2	83.4	1,404.2
Reverse Circulation	165.9	49.7	402.7	n.p.	2,992.5	n.p.	193.0	3,845.9
Percussion	42.4	14.3	187.7	n.p.	55.0	n.p.	n.p.	313.3
Rotary Air Blast	53.7	n.p.	313.0	9.0	2,956.3	n.p.	192.2	3,537.3
Other	28.7	n.p.	27.0	12.6	460.8	—	n.p.	609.3
Total	504.1	119.1	1,151.3	64.9	7,256.2	57.7	556.8	9,710.1

EXPLANATORY NOTES

INTRODUCTION	1 This publication contains annual and quarterly statistics of private sector exploration for minerals (other than oil shale) in Australia.
SOURCE	2 Data are collected and compiled from the 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. 4 From September quarter 1989 details of mineral explorers reporting less than \$5,000 per quarter have been excluded from the Tables, resulting in a small break in the series from 1989-90. Data linking the two collection methodologies for Tables 1, 2, 3, and 4 are contained in the September quarter 1990 issue.
CLASSIFICATION	5 The following categories are used : ■ <i>Production lease/Other</i> , where a production lease is an area on which production or development is actually taking place. ■ <i>Onshore/Offshore</i> , 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 governments. ■ <i>Drilling/Other</i> , 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.
DEFINITIONS	6 <i>Minerals</i> . In the broad sense these comprise metallic minerals, construction materials, gemstones, other non-metallic minerals and petroleum (oil or gas). 7 <i>Exploration</i> . 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. 8 <i>Exploration expenditure</i> . 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. 9 <i>Expected expenditure</i> . 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.
OVERSEAS EXPLORATION	10 The ABS conducted a supplementary collection to collect details of overseas exploration expenditure from Australian resident companies for 1994-95. Data for 1992-93 and 1993-94 is available on request.
DRILLING METHODS	11 A supplementary collection was also conducted during 1995 to collect information on exploration drilling for minerals in Australia, by drilling method. Unpublished data is also available, as a special data request, for expenditure and metres drilled by drilling methods used on production leases and other areas, as defined in paragraph 5 of these notes. 12 Data was collected for the following drilling methods: <i>Diamond drilling</i> uses rotary action combined with a diamond impregnated drill bit to produce a solid cylindrical sample called drill core. <i>Reverse Circulation</i> drilling uses a combination of separate percussive and rotational actions. Reverse Circulation drilling differs from percussion drilling in that the drill cuttings are removed by compressed air up an inner tube in the drilling rods (instead of outside the rods) to improve sample quality.

Percussion drilling uses a combination of separate percussive and rotational actions. Compressed air is used to remove drill cuttings outside of the drill rods. *Rotary Air Blast (RAB)* drilling generally uses rotational action with a blade bit to reach bedrock using compressed air to remove drill cuttings.

RELATED INFORMATION

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

14 Publications showing the details of wells and metres drilled in petroleum exploration available from the Petroleum Resource Assessment Branch of the Bureau of Resource Sciences.

EFFECTS OF ROUNDING

15 Where figures have been rounded, discrepancies may occur between the sums of the component items and their totals. Percentage changes shown in this publication have been calculated on actual figures as reported by explorers.

SYMBOLS AND OTHER USAGES

n.y.a. not yet available
n.a. not available
— nil or rounded to zero
r figures revised since previous issue

W. McLennan
Australian Statistician

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