



1996-97

8414.0

Reissue

AUSTRALIAN MINING INDUSTRY

EMBARGO: 11:30AM (CANBERRA TIME) MON 28 JUNE 1999

CONTENTS

	<i>page</i>
Notes.....	2
List of tables and graphs	3
 CHAPTERS	
1 Overview	7
2 Structure of the mining industry	9
3 Mineral and petroleum exploration	14
4 Identified mineral resources	18
5 Mineral production	23
6 Financial operations	26
7 Industry performance measures	58
8 Employment	64
9 Contracting in the mining industry	75
10 A broader view of mining	78
11 Environmental protection expenditure	82
12 Overseas trade	84
13 World comparison	89
 ADDITIONAL INFORMATION	
Explanatory notes	91
Glossary	100
List of references	105

- For further information about these and related statistics, contact Jeff Bulger on Adelaide 08 8237 7621, or any ABS office shown on the back cover of this publication.

NOTES

ABOUT THIS PUBLICATION

A number of errors have been detected in the 1996–97 issue of the publication *Australian Mining Industry* (Cat. no. 8414.0) which was released on 26 November 1998.

This replacement issue contains the following corrections:

Tables 2.2, 6.4 and 6.8—some of the 1996–97 figures for net capital expenditure have changed slightly.

Table 5.2—figures in the quantity section for the categories metallic minerals and coal have been corrected. Quantities for oil and gas and figures in the value table are unaffected.

Table 6.1—figures for 1995–96 in the column 'Total mining' were incorrect for all items except turnover, and the figure for total earnings before interest and tax for 1996–97 was also incorrect.

Table 6.3—all 1996–97 figures for total acquisitions and net capital expenditure have changed and the net worth figures for 1995–96 'Other mining' and 'Total mining' and 1996–97 'Total mining' have also been corrected.

Table 6.16—the 1996–97 figures for total acquisitions and net capital expenditure have changed.

Tables 6.18 and 6.20—most 1996–97 figures for total acquisitions and net capital expenditure have changed.

Table 7.3—the 1996–97 ratios for acquisitions to disposals and net capital expenditure to assets have changed slightly, except for coal mining which was unaffected.

Table 7.4—some of the 1996–97 figures for net capital expenditure per person employed have changed slightly.

Table 7.5—the 1996–97 figures for net capital expenditure per person employed have changed, in most cases only slightly, but substantially for Western Australia. The metal ore mining figures for Northern Territory have now been included.

Table 8.4—the total number of persons for oil and gas extraction was incorrect.

This compendium brings together a range of Australian Bureau of Statistics (ABS) information related to mining. It also includes some tables that have been obtained from sources external to the ABS.



IN THIS ISSUE

Many of the statistics in this publication have been derived from the 1996–97 mining collection which is now a combination of census and sample survey collections.



DEFINITION OF MINING

Explanation on the scope and definition of mining is given in the Explanatory Notes, paragraphs 4–10. The ABS mining collection aims to meet the demands of users who require annual financial statistics which can be related to other industry sectors in Australia on a consistent basis.



REVISIONS

Some of the data published in the 1995–96 issue of this publication have been revised to take account of changes to previously reported data.

W. McLennan
Australian Statistician



LIST OF TABLES AND GRAPHS

page

OVERVIEW

1.1	Selected financial indicators—1990–91 to 1996–97 (graph)	7
1.2	Financial summary—1995–96 to 1996–97	8
1.3	Employment summary—1995–96 to 1996–97	8

STRUCTURE OF THE MINING INDUSTRY

2.1	Selected statistics and concentration ratios	9
2.2	Mining establishments, employment size	10
2.3	Mining establishments, employment size—State and Territory	11
2.4	Mining establishments, employment size (graph)	12
2.5	Concentration ratios, management unit level—industry subdivision	13

MINERAL AND PETROLEUM EXPLORATION

3.1	Exploration expenditure, main mineral sought— 1991–92 to 1996–97 (graph)	14
3.2	Exploration expenditure, mineral sought—1995–96 to 1996–97	15
3.3	Exploration expenditure, State and Territory—1995–96 to 1996–97	15
3.4	Mineral exploration, expenditure—1992–93 to 1996–97	16
3.5	Petroleum exploration expenditure, location—1992–93 to 1996–97	16
3.6	Expenditure of Australian resident companies overseas, location and mineral sought	17

IDENTIFIED MINERAL RESOURCES

4.1	Resources of major minerals and fuels—1996	22
-----	--	----

MINERAL PRODUCTION

5.1	Value of minerals produced, State and Territory—1994–95 to 1996–97	23
5.2	Minerals produced, quantity and value	24

FINANCIAL OPERATIONS

6.1	Management unit level, summary details—income and expenditure, industry subdivision—1995–96 to 1996–97	27
6.2	Management unit turnover—1991–92 to 1996–97 (graph)	27
6.3	Management unit level, summary details—balance sheet and capital expenditure, industry subdivision—1995–96 to 1996–97	28
6.4	Establishment level, summary details—industry class	30
6.5	Change in turnover—1995–96 to 1996–97 (graph)	30
6.6	Change in value added—1995–96 to 1996–97 (graph)	31
6.7	Change in net capital expenditure—1995–96 to 1996–97 (graph)	31
6.8	Establishment level, summary details—State and Territory	32
6.9	Change in turnover—1995–96 to 1996–97 (graph)	32
6.10	Change in value added—1995–96 to 1996–97 (graph)	32
6.11	Change in net capital expenditure—1995–96 to 1996–97 (graph)	33
6.12	Royalties paid, by State and Territory—1995–96 to 1996–97 (graph)	33
6.13	Management unit level, income and expenditure—industry subdivision— 1995–96 to 1996–97	34
6.14	Management unit level, industry gross product—industry subdivision— 1995–96 to 1996–97	35
6.15	Management unit level, assets and liabilities—industry subdivision— 1995–96 to 1996–97	36
6.16	Management unit level, acquisitions and disposals of fixed tangible assets— 1995–96 to 1996–97	36
6.17	Establishment level, income and expenditure—industry class— 1995–96 to 1996–97	37
6.18	Establishment level, fixed capital expenditure—industry class— 1995–96 to 1996–97	40
6.19	Establishment level, income and expenditure—State and Territory— 1995–96 to 1996–97	42
6.20	Establishment level, fixed capital expenditure—State and Territory— 1995–96 to 1996–97	49
6.21	Establishment level, mineral royalties paid—industry class— 1995–96 to 1996–97	56
6.22	Establishment level, mineral royalties paid—State and Territory— 1995–96 to 1996–97	57

INDUSTRY PERFORMANCE MEASURES

7.1	Trading profit margin, industry subdivision—1991–92 to 1996–97 (graph)	58
7.2	Return on funds, industry subdivision—1991–92 to 1996–97 (graph)	59
7.3	Management unit level, selected performance ratios— industry subdivision—1995–96 to 1996–97	60
7.4	Establishment level, selected operating ratios—industry class— 1995–96 to 1996–97	61
7.5	Establishment level, selected operating ratios—State and Territory— 1995–96 to 1996–97	62

	page
EMPLOYMENT	
8.1	Labour force employed in mining—1901 to 1997 (graph) 64
8.2	Mining employment—1992–93 to 1996–97 (graph) 65
8.3	Management unit level, employment—industry subdivision 66
8.4	Establishment level, employment and industry class—June 1997 67
8.5	Change in employment, industry—June 1996 to June 1997 (graph) 68
8.6	Establishment level, employment—State and Territory—June 1997 68
8.7	Change in employment, State and Territory— June 1996 to June 1997 (graph) 69
8.8	Employment characteristics of workers—May 1997 69
8.9	Management unit level, employment (at end of June)—industry class— 1995–96 to 1996–97 70
8.10	Establishment level, employment (at end of June)—industry class— 1995–96 to 1996–97 71
8.11	Establishment level, employment (at end of June)—State and Territory— 1995–96 to 1996–97 73
CONTRACTING IN THE MINING INDUSTRY	
9.1	Contract mining expenses, by industry—1995–96 to 1996–97 76
BROADER VIEW OF MINING	
10.1	Mining industry, Australian and New Zealand Industrial Classification view (diagram) 78
10.2	Mineral resources industries, broader view (diagram) 80
10.3	Broad view of mining, turnover and employment—1995–96 to 1996–97 81
ENVIRONMENTAL PROTECTION EXPENDITURE	
11.1	Expenditure on environment protection, industry subdivision 83
OVERSEAS TRADE	
12.1	Exports, industry of origin—1995–96 to 1996–97 84
12.2	Change in value of exports—1995–96 to 1996–97 (graph) 84
12.3	Exports, country of destination—1995–96 to 1996–97 86
12.4	Export price index—1995–96 to 1996–97 87
12.5	Imports, industry of origin—1995–96 to 1996–97 87
12.6	Import price index—1995–96 to 1996–97 88
WORLD COMPARISON	
13.1	Selected minerals, production—1997 89
13.2	Selected minerals, principal producing countries—1997 90

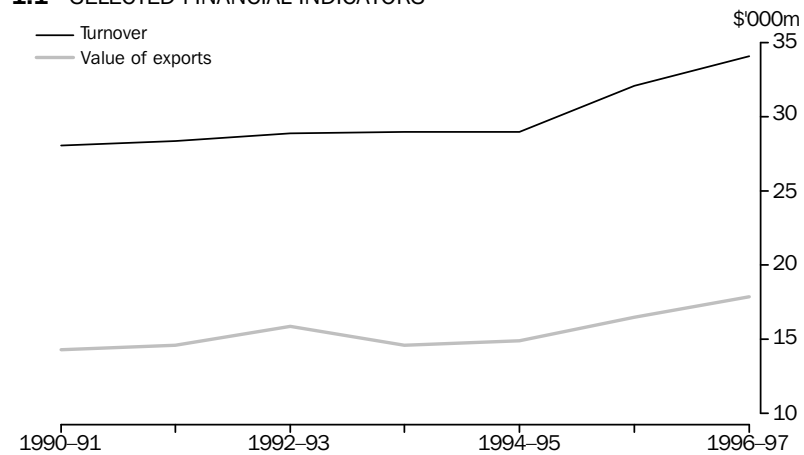
CHAPTER 1

OVERVIEW

SIZE OF INDUSTRY

Australia is one of the world's leading producers of minerals. It is the world's largest producer of bauxite, diamonds, lead, tantalum and the mineral sand concentrates ilmenite, rutile and zircon. There was little change in Australia's share of world production of most minerals between 1996 and 1997. However, both the turnover of mining businesses and the value of exports increased during 1996-97.

1.1 SELECTED FINANCIAL INDICATORS



Source: ABS (unpub.)a, 1997d.

EXPLORATION

A total of \$2b was spent during 1996-97 exploring for minerals and petroleum, with \$617m of this expended in searching for offshore crude oil. During 1996-97 Australian resident companies spent \$760m on overseas exploration for minerals and petroleum.

PRODUCTION

The ex-mine value of mineral commodities produced during 1996-97 was \$31.4b.

TRADE

The coal mining, oil and gas extraction, and metal ore mining industries had sales of \$32.4b during 1996-97, 55% of which was export revenue. Black coal was the largest mineral commodity export in 1996-97, with a total value of \$8.0b (44% of mining exports).

The Asian region is an important market for Australian commodities. The region bought \$6.1b of black coal during 1996-97, with Japan and the Republic of Korea being the major purchasers. Exports of refined gold and iron ore to Asia were also significant in this period.

TURNOVER

Total mining industries turnover for 1996–97 was \$34.1b, up \$2.0b (6%) from 1995–96. All sectors reported increases in turnover with oil and gas the highest with \$1.0b, followed by coal with \$631m and metal ore mining with \$385m. The coal mining industry was the largest contributor accounting for 32% of total turnover in 1996–97, while oil and gas extraction increased its contribution to 27%. Western Australia remained the largest contributor to national turnover, accounting for 43%, while Queensland with 22% was the next highest contributor.

1.2 FINANCIAL SUMMARY

	1995–96	1996–97	Change
	\$m	\$m	%
Exploration expenditure	1 685	2 029	20.0
Value of production	28 779	(a)31 358	n.a.
Establishment turnover	32 076	34 101	6.3
Value added	20 635	22 451	8.8
Value of exports	16 537	17 940	8.5
Net capital expenditure	4 862	4 501	-7.3

(a) Break in series. Refer to chapter 5 — Mineral production for further information.

Source: ABS (unpub.)a, 1997a, 1997d.

ENVIRONMENT

Protection of the environment is an important aspect of the mining industry. Expenditure for the primary purpose of pollution abatement and control was \$308m in 1996–97. The majority of this expenditure (56%) occurred in metal ore mining.

EMPLOYMENT

Total employment at 30 June reported in the coal, oil and gas extraction, and metal ore mining industries decreased by 2% to 55,700 persons in 1996–97. Wages and salaries paid in 1996–97 were \$4.1b, up 4% on 1995–96. Payments for contract mining expenses increased by 14% from \$1.9b to \$2.2b.

1.3 EMPLOYMENT SUMMARY

	1995–96	1996–97
Employment (no.)	56 810	55 713
Wages and salaries (\$m)	3 917	4 093
Unemployment rate (%)	5.7	8.6

Source: ABS (unpub.)a, 1997e, 1997f.

Mining employment continued to be predominantly male, with 92% of all employees being male (compared with around 57% in all industries).

INTRODUCTION

The annual ABS mining collection assembles data from management units and establishments classified to the coal mining, oil and gas extraction, and metal ore mining industries. Although data were also collected for the other mining and services to mining industries for 1996–97, details presented in this chapter only relate to the coal mining, oil and gas extraction, and metal ore mining industries.

In order to compile the concentration statistics and ratios presented in this chapter, management units were ranked in descending order according to the size of their contribution to the total turnover of the industry. Further explanation of the derivation of concentration ratios is provided in paragraphs 34–39 of the Explanatory Notes.

2.1 SELECTED STATISTICS AND CONCENTRATION RATIOS(a)

Management units	Employment at end of June...		Selected labour costs....		Turnover.....		Industry gross product.....		Operating profit before tax.....		Net worth.....	
	no.	%	\$m	%	\$m	%	\$m	%	\$m	%	\$m	%
Largest												
12	18 851	31	1 646	34	14 318	41	8 980	47	4 128	55	13 424	41
25	29 306	48	2 488	51	20 453	58	12 765	67	6 017	80	19 024	58
50	39 546	65	3 227	66	26 372	75	15 839	83	7 511	99	25 093	77
100	48 374	80	3 891	80	31 387	89	18 538	97	8 760	116	29 368	90
200	53 683	88	4 228	87	34 643	98	20 567	108	9 946	132	31 950	98
All (346)	60 820	100	4 879	100	35 199	100	19 048	100	7 550	100	32 635	100

(a) Excludes ANZSIC Subdivisions 14 and 15, Construction material mining and Services to mining.

Source: ABS (unpub.)a.

CONCENTRATION RATIOS

Ranking all management units by turnover confirmed the highly concentrated structure of the industry. In 1996–97 the 12 largest management units accounted for 41% of turnover and 41% of net worth. In addition, these units employed 31% of all persons employed in mining.

The mining industry overall displayed high levels of concentration. For example, in 1996–97 the largest four management units (9%) of the oil and gas industry accounted for 57% of turnover and 76% of employment in that industry. The bottom 73% of management units accounted for only 7% of turnover and 15% of employment.

The coal mining and metal ore mining industries were not as dramatically concentrated. The top four management units (3%) of the coal mining industry contributed 34% to turnover, while the top four management units (2%) of the metal ore mining industry contributed 33% to turnover.

Ranking establishments by employment size showed that approximately 30% of mining operations had employment in excess of 100 persons. There were a small number of extremely large operations (i.e. more than 1,000 employees), and their contribution to employment and turnover was significant. Most mining was conducted on a large scale although some industries such as gold mining had a substantial number of small establishments.

2.2 MINING ESTABLISHMENTS, Employment Size(a)

	<i>Establish- ments at 30 June 1997</i>	<i>Employment at end of June</i>	<i>Wages and salaries</i>	<i>Turnover</i>	<i>Value added</i>	<i>Fixed capital expenditure less disposals</i>
<i>Employment size at end of June</i>	no.	no.	\$m	\$m	\$m	\$m
Less than 10	77	217	44	1 086	775	184
10–19	22	314	24	352	133	118
20–49	49	1 623	94	911	318	130
50–99	40	2 828	169	1 289	267	210
100–499	111	26 651	1 896	9 436	4 059	1 240
500–999	17	11 029	846	5 025	3 033	642
1 000 or more	7	12 848	999	4 483	2 413	486
UJV participants(b)	177	203	20	11 519	11 453	1 491
Total	500	55 713	4 093	34 101	22 451	4 501

(a) Excludes ANZSIC Subdivisions 14 and 15, Construction material mining and Services to mining.

(b) Unincorporated joint venture participants.

Source: ABS (unpub.)a.

UNINCORPORATED JOINT VENTURES

Unincorporated joint ventures (UJVs) operating within the mining industry allow the sharing of expertise, resources and risk associated with the development of mineral deposits. This occurs through the participation of a number of organisations (by investment) in a mining operation, some of which may not otherwise be involved in the mining industry.

The ABS mining collection approaches both operators and participants in UJVs. Each individual participant and the operator of the UJV has an establishment relating to the UJV set up within their business structure, i.e. if there are six participants and an operator associated with a particular UJV, seven separate establishments will be recorded. Generally the participants supply data on their share of income and assets, while the operator reports all expenses and employment.

ESTABLISHMENTS BY STATE AND TERRITORY

An analysis of establishments by State and Territory illustrates the relative levels of mining activity in each State and Territory and the composition of that activity. In terms of number of establishments, the major mining States were Western Australia, Queensland and New South Wales.

2.3 MINING ESTABLISHMENTS, Employment Size—State and Territory(a)

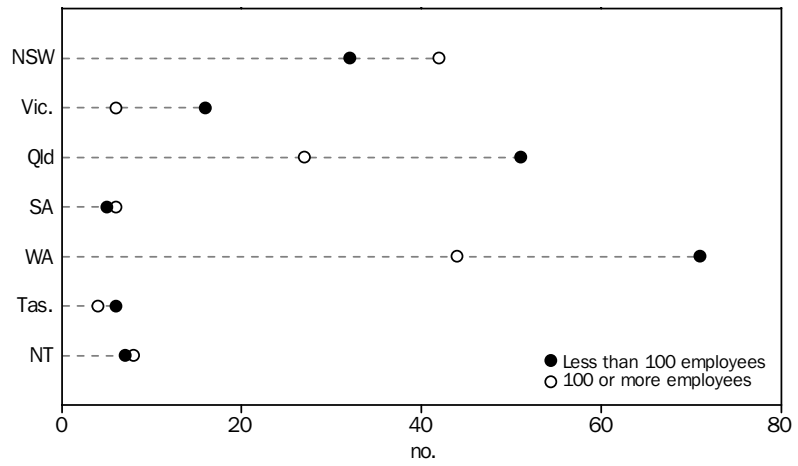
<i>Employment size at end of June</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>Aust.</i>
Less than 10	8	10	23	5	29	2	—	77
10–19	2	3	8	—	8	—	1	22
20–49	11	3	13	—	17	2	3	49
50–99	11	—	7	—	17	2	3	40
100–499	36	5	17	3	38	4	8	111
500 or more	6	1	10	1	6	—	—	24
UJV participants	47	3	49	6	60	—	12	177
Total	121	25	127	15	175	10	27	500

(a) Excludes ANZSIC Subdivisions 14 and 15, Construction material mining and Services to mining.

Source: ABS (unpub.)a.

UJV participants aside, the majority of establishments in New South Wales had an employment size of 100 or more employees. This reflects the coal mining activity that dominates the State. This contrasts with the profile for Western Australia, where the majority of establishments employed fewer than 100 persons, reflecting the importance of the gold mining industry. Western Australia also had 44 establishments with more than 100 employees which covered the activities of iron ore mining and the larger gold mines.

2.4 MINING ESTABLISHMENTS(a), Employment Size



(a) Excludes establishments that are participants only in UJVs.

Source: ABS (unpub.)a.

2.5 CONCENTRATION RATIOS, Management Unit Level(a)—Industry subdivision

ANZSIC code	Industry description/ largest management unit(b)	Management units at 30 June...		Employment.....		Selected labour costs.....		Turnover.....	
		no.	%	no.	%	no.	%	\$m	%
11	Coal mining								
	First	4	3	6 872	26	638	27	3 610	34
	Second	4	3	5 084	19	403	17	1 728	16
	Third	4	3	2 502	9	230	10	1 236	12
	Remainder	104	90	12 198	46	1 093	46	4 148	39
	<i>Industry total</i>	<i>116</i>	<i>100</i>	<i>26 656</i>	<i>100</i>	<i>2 365</i>	<i>100</i>	<i>10 722</i>	<i>100</i>
12	Oil and gas extraction								
	First	4	9	3 878	76	370	70	5 279	57
	Second	4	9	191	4	27	5	2 595	28
	Third	4	9	293	6	23	4	769	8
	Remainder	33	73	763	15	106	20	635	7
	<i>Industry total</i>	<i>45</i>	<i>100</i>	<i>5 125</i>	<i>100</i>	<i>525</i>	<i>100</i>	<i>9 278</i>	<i>100</i>
13	Metal ore mining								
	First	4	2	9 201	32	722	36	5 058	33
	Second	4	2	3 284	11	279	14	1 832	12
	Third	4	2	2 958	10	152	8	1 319	9
	Remainder	174	94	13 596	47	836	42	6 990	46
	<i>Industry total</i>	<i>186</i>	<i>100</i>	<i>29 039</i>	<i>100</i>	<i>1 989</i>	<i>100</i>	<i>15 199</i>	<i>100</i>

ANZSIC code	Industry description/ largest management unit(b)	Industry gross product.....		Operating profit before tax.....		Net worth.....	
		\$m	ratio	\$m	ratio	\$m	ratio
11	Coal mining						
	First	1 994	41	943	86	3 111	42
	Second	1 027	21	391	36	978	13
	Third	609	12	212	19	967	13
	Remainder	1 268	26	-456	-42	2 354	32
	<i>Industry total</i>	<i>4 897</i>	<i>100</i>	<i>1 090</i>	<i>100</i>	<i>7 410</i>	<i>100</i>
12	Oil and gas extraction						
	First	3 924	53	2 156	49	5 822	52
	Second	2 546	34	1 651	38	3 691	33
	Third	642	9	454	10	526	5
	Remainder	356	5	132	3	1 152	10
	<i>Industry total</i>	<i>7 468</i>	<i>100</i>	<i>4 393</i>	<i>100</i>	<i>11 192</i>	<i>100</i>
13	Metal ore mining						
	First	2 347	35	590	29	3 182	23
	Second	770	12	270	13	2 354	17
	Third	517	8	128	6	1 056	8
	Remainder	3 049	46	1 080	52	7 440	53
	<i>Industry total</i>	<i>6 683</i>	<i>100</i>	<i>2 067</i>	<i>100</i>	<i>14 033</i>	<i>100</i>

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Management units ranked by contribution to industry turnover in categories of four, see paragraphs 36–41 of the Explanatory Notes.

Source: ABS (unpub.)a.

EXPLORATION SUMMARY

The term 'exploration', as used here, refers to the search for new deposits of ore, oil or gas. It includes searches intended to significantly extend the limits of known deposits by geological, geophysical, geochemical, drilling or other methods. It excludes activity of a developmental or production nature.

During 1996–97 a total of \$2.0b was spent exploring for minerals and petroleum in Australia and in offshore waters, \$344m (20%) more than in 1995–96. Exploration expenditure for minerals was \$1.2b, \$255m for oil onshore, and \$617m for oil in offshore waters.

During 1996–97 Australian resident companies spent \$760m on overseas exploration for minerals and petroleum.

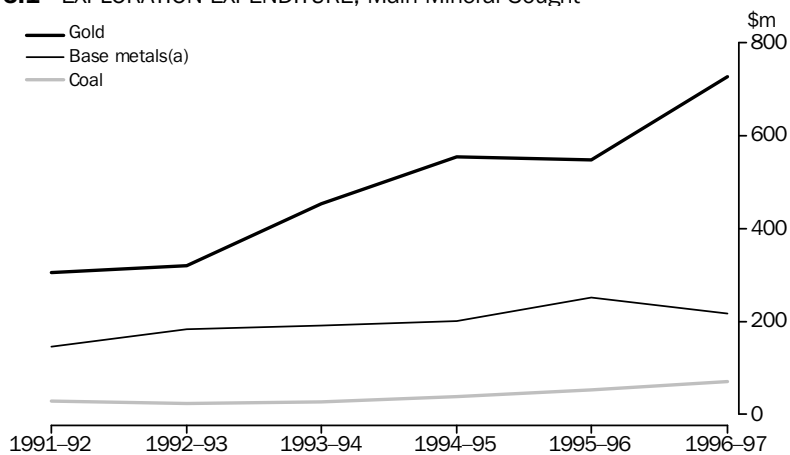
Detailed data are available on a quarterly basis in ABS (1997a).

MINERAL EXPLORATION

The \$1.2b expended in Australia in 1996–97 was an increase of 21% on the previous year. Gold continued to be the main mineral sought, with \$727m spent, a rise of \$180m from the previous year. Gold accounted for 63% of total mineral exploration in Australia for 1996–97.

Base metals were the next most sought minerals with \$217m spent (19%), followed by coal \$70m (6%) and diamonds \$59m (5%).

3.1 EXPLORATION EXPENDITURE, Main Mineral Sought



(a) Includes copper, silver-lead-zinc, nickel and cobalt.

Source: ABS 1997a.

3.2 EXPLORATION EXPENDITURE, Mineral Sought

	1995-96	1996-97
<i>Minerals</i>	\$m	\$m
Copper, silver-lead-zinc, nickel and cobalt	251.8	216.6
Gold	547.1	726.9
Iron ore	14.1	25.8
Mineral sands	9.3	13.9
Tin, tungsten, scheelite and wolfram	0.6	0.6
Uranium	7.2	13.0
Coal	52.6	70.5
Construction materials	0.7	0.9
Diamonds	52.9	59.3
Other	23.8	29.4
Total	960.2	1 157.0

Source: ABS 1997a.

States and Territories

Expenditure on exploration for minerals rose in all States and Territories in 1996-97 except for Queensland and the Northern Territory. Increases ranged from 73% in South Australia to 18% in New South Wales. Expenditure in Western Australia, comprising 60% of total exploration, increased to \$690m (up 33%) for 1996-97. Queensland recorded a decrease of \$19m in mineral exploration expenditure to \$162m while expenditure for the Northern Territory decreased 3% to \$91m.

3.3 EXPLORATION EXPENDITURE(a), State and Territory

	1995-96	1996-97
<i>State and Territory</i>	\$m	\$m
New South Wales	80.3	94.4
Victoria	42.6	52.3
Queensland	181.0	161.7
South Australia	24.1	41.6
Western Australia	519.5	690.1
Tasmania	18.7	26.0
Northern Territory	93.9	90.7
Australia	960.2	1 157.0

(a) Excludes petroleum exploration.

Source: ABS 1997a.

In 1996-97, expenditure on production leases increased by 46% to \$306m while expenditure on all other leases increased by 13% to \$851m.

3.4 MINERAL EXPLORATION, Expenditure

EXPENDITURE.....

Period	On production leases	On all other leases	Total
	\$m	\$m	\$m
1992-93	148	483	632
1993-94	184	608	793
1994-95	203	691	893
1995-96	209	752	960
1996-97	306	851	1 157

Source: ABS 1997a.

PETROLEUM EXPLORATION

Total expenditure on petroleum exploration for 1996-97 was \$872m, an increase of 20% from 1995-96. The increase was attributable to an increase in expenditure on exploration undertaken in areas other than those covered by production leases, of \$84m (13%) and a 77% increase in exploration expenditure on areas covered by production leases, up \$61m to \$140m.

Exploration in areas not covered by production leases accounted for 84% of total petroleum exploration expenditure in 1996-97.

Expenditure on exploration undertaken offshore increased by \$67m (12%) to \$617m in 1996-97 while expenditure onshore increased \$80m (46%) to \$255m over the same period. The majority of the expenditure in 1996-97 (71%) was for exploration undertaken offshore.

3.5 PETROLEUM EXPLORATION EXPENDITURE

Period	ONSHORE.....			OFFSHORE.....			TOTAL EXPENDITURE.....		
	Drilling	Other	Total	Drilling	Other	Total	On production leases	On all other areas	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1992-93	63	52	115	284	213	497	69	543	612
1993-94	84	60	145	208	154	362	70	437	507
1994-95	88	83	171	377	134	512	105	577	682
1995-96	96	79	175	367	183	550	79	647	725
1996-97	182	72	255	421	196	617	140	731	872

Source: ABS 1997a.

OVERSEAS EXPLORATION

In 1996–97, Australian resident companies spent \$760m on mineral and petroleum exploration outside Australia. This represents an increase of 14% from the \$669m spent in 1995–96. In 1996–97, petroleum exploration was the largest component (42%) of total overseas exploration expenditure. Exploration for gold was the next largest component with 30%.

3.6 EXPENDITURE OF AUSTRALIAN RESIDENT COMPANIES OVERSEAS

	North America (a)	Latin America (b)	Papua New Guinea	Indo- nesia	China	Other Asia	Africa	Other	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Petroleum	n.p.	n.p.	5.4	33.2	n.p.	n.p.	n.p.	15.5	321.0
Copper, lead, zinc, silver, nickel, and cobalt	n.p.	n.p.	n.p.	n.p.	n.p.	20.5	14.3	n.p.	174.4
Gold	47.0	44.2	n.p.	42.9	n.p.	30.8	32.9	21.1	227.2
Iron ore	—	—	—	—	—	—	—	—	—
Mineral sands	—	—	—	—	—	n.p.	n.p.	2.5	6.4
Tin, tungsten, scheelite and wolfram	—	—	—	—	—	—	—	—	—
Uranium	—	—	—	—	—	—	—	—	—
Coal	—	—	—	n.p.	n.p.	n.p.	—	—	n.p.
Construction materials	—	—	—	—	—	—	—	—	—
Diamonds	n.p.	—	—	n.p.	n.p.	n.p.	7.1	n.p.	19.2
Bauxite	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	n.p.	n.p.	n.p.	n.p.	n.p.
Total	254.1	120.3	10.7	109.0	8.7	65.6	118.2	72.9	759.6

(a) Includes Canada.

(b) Comprises Mexico, South America, Central America and the Caribbean.

Source: ABS 1997a.

CHAPTER 4

IDENTIFIED MINERAL RESOURCES

INTRODUCTION

The information in this section has been largely reproduced from a Bureau of Resource Sciences (BRS) publication (BRS 1997). Unless otherwise specified, quoted international Economic Demonstrated Resources (EDR) figures have been based on estimates published by the United States Bureau of Mines.

Australia continues to rank as one of the world's leading mineral resource nations. It has the world's largest EDR of bauxite, lead, mineral sands (ilmenite, rutile and zircon), silver, tantalum, uranium and zinc. In addition, its EDR is in the top six worldwide for black coal, brown coal, cobalt, copper, gold, iron ore, lithium, manganese ore, nickel, rare earth oxides, gem and near gem diamond and industrial diamond.

CLASSIFYING RESOURCES

Mineral resources are classified according to the geological certainty of their existence and their economic viability.

Those resources that are well known geologically are referred to as measured or indicated resources and those that are poorly known, as inferred resources.

Demonstrated resources are the sum of measured plus indicated resources. The tonnage and grade of demonstrated resources are determined from dimensions revealed in outcrops, trenches, workings, drill holes and associated sampling. Inferred resources are determined from a broad knowledge of the geological character of the deposit and few, if any, samples or measurements.

Economically viable resources are those for which at the time of determination, profitable extraction or production under defined investment assumptions has been established, analytically demonstrated or assumed with reasonable certainty.

Paramarginal resources border on being economically viable and require only a small increase in price or improvement in technology to become viable. In contrast, economic extraction of submarginal resources would require a substantially higher commodity price or a major cost-reducing advance in technology to become viable.

Classifying a mineral resource as an EDR reflects a high degree of certainty as to the size and quality of the resource and its economic viability. The term EDR is used instead of 'reserves' for national totals and provides a basis for meaningful international comparisons of the economic resources of other nations. With few exceptions, ore is mined from resources in the EDR category. EDR are reduced by mining and increased by new discoveries and by technical and economic changes which allow formerly subeconomic deposits to be reclassified as economic. A more complete discussion on subsoil assets can be found in ABS (1995).

CLASSIFYING RESOURCES *continued*

In 1996, Australia's EDR of cobalt, gold, nickel, phosphate rock and tantalum increased substantially, while EDR of bauxite, lead, lithium, platinum group metals, silver and zinc rose slightly. There was a significant reduction in EDR of gem and near gem diamond and industrial diamond due to ongoing high levels of production. Magnesite and tin EDR were also significantly reduced as a result of depletion due to production and reassessment of deposits. EDR of all other commodities remained unchanged or had minor reductions.

SELECTED COMMODITIES

Bauxite

Australia's identified resources of bauxite remained relatively unchanged in 1996 compared with those of the previous year. EDR, however, increased by 19% to represent just over 30% of identified resources. The increase in EDR resulted from successful exploration programs and the upgrading of some resources previously classified as inferred.

Black coal

Estimates of Australia's in situ and recoverable EDR of black coal remained unchanged in 1996 at 68 Gt and 49 Gt respectively. New South Wales accounted for 50% of the in situ EDR and Queensland 47%. The remaining 3%, although relatively small, is locally important to the economies of Western Australia, South Australia and Tasmania. About 40% of the in situ EDR is amenable to open-cut mining.

Copper

EDR for copper decreased by 2% to 23.6 Mt compared to 1995. However, total identified resources of copper increased by 5% to 54.8 Mt.

Australia has the world's third largest EDR of copper (8%), after Chile (28%) and the United States of America (15%). As a copper producer, Australia ranks sixth in the world after Chile, the United States of America, Canada, Russia and Indonesia.

Diamond

During 1996, EDR decreased by just over 16.0 Mct (16%) to 84.5 Mct for gem/near gem diamond and 38 Mct (30%) to 90.2 Mct for industrial diamond. Total identified resources of gem/near gem increased by 42 Mct (14%), but decreased by 12 Mct (3%) for industrial diamond.

Australia has the world's third largest EDR of industrial diamond after the Republic of Congo and Botswana and one of the largest in the world for both gem/near gem and industrial categories.

Gold

The gold industry was successful during 1996 in increasing total Australian resources in all categories. For EDR, increases in some States were only partly offset by reductions in others. These successes were achieved despite increased production. Internationally, Australia maintained its position as the world's third largest holder of EDR and the third largest producer. Based on figures produced by the United States Geological Survey (USGS), Australia's share of EDR is 10% compared with 41% for South Africa and 12% for the United States of America.

Iron ore

Australia's EDR of iron ore fell by less than 1% in 1996 as production only marginally exceeded additions to resources in the EDR category. Resources in the subeconomic categories rose by less than 1% during the year while inferred resources rose by just over 1%.

Western Australia remains the premier iron ore State with over 99% of Australia's EDR. Within Western Australia approximately 97% of EDR occurs in the Hamersley Basin in the Pilbara region. Small but locally important EDR of iron ore occur in Tasmania and South Australia.

Internationally, Australia has the second largest EDR of iron ore after Russia. On the basis of estimates published by the USGS, Australia has 12% of world iron ore EDR, a similar proportion as in 1995. In terms of contained iron, Australia has about 16% of the world total and is ranked second, again after Russia which has about 20% of the total.

Manganese ore

Australia's EDR of manganese ore decreased by about 3% in 1996, compared with 1995, from 121.2 Mt to 118 Mt mainly reflecting a depletion of resources through mining at Groote Eylandt.

Australia's principal manganese resource and major operating manganese mine is on Groote Eylandt, Northern Territory. The deposit is a world-class resource, which is being mined for both export and domestic consumption.

Based on a combination of BRS and USGS data, it is estimated that, in terms of contained manganese, Australia's EDR is ranked third after South Africa and the Ukraine.

Mineral sands

The estimate of Australia's EDR of ilmenite increased slightly in 1996 to 135 Mt. The increase resulted from reclassification of resources in Queensland and Western Australia, which more than offset depletion of resources through mining. The increase in the subeconomic demonstrated categories resulted from the discovery of new deposits of mineral sands in New South Wales and Victoria.

A reduction of less than 1% in EDR of rutile resulted from depletion of resources through production in all States. The depletion was partially offset, however, by reclassification of some inferred resources in Western Australia in response to more detailed information and stronger market conditions. Successful exploration in the Murray Basin of western New South Wales and north-west Victoria resulted in a substantial increase in the subeconomic demonstrated resource categories.

EDR of zircon was 21.4 Mt in 1996, 1 Mt less than that reported in 1995. An increase in zircon EDR in Queensland was not sufficient to offset depletion due to production at current mining operations. Resources of zircon discovered in the Murray Basin in New South Wales and Victoria during the year are classified as demonstrated subeconomic.

From USGS and BRS data, BRS estimates that at the end of 1996 Australia had 23%, 36%, and 35% of the world's EDR of ilmenite, rutile and zircon. Australia has the largest EDR for all three minerals, and is the world's largest producer and exporter of alluvial ilmenite, rutile and zircon.

Nickel

Australia's EDR of nickel increased by 70% in 1996 to a record 6.37 Mt. Demonstrated subeconomic resources fell by about 820,000 tonnes to 5.58 Mt, a decrease of 13%. Inferred resources of nickel increased by over 51% to 6.63 Mt. All of the increase in EDR occurred in Western Australia.

Internationally, Australia's share of world EDR increased to 10% in 1996 up from 9% in the previous year. As a result of successful exploration, Australia overtook New Caledonia to become the world's fourth largest holder of EDR after Cuba, Russia, and Canada.

Tantalum

Australia's EDR of tantalum rose by 30% to 8,057 t in 1996. The increase resulted from the assessment of newly available data for important deposits in Western Australia.

In world terms, Australia has the largest stock of EDR. Based on estimates published by the USGS for other world resources and BRS estimates of Australia's EDR, Australia has about 43% of world EDR.

Uranium

Australia has the world's largest resources of uranium in the Reasonably Assured Resources category, with 28% of world resources in this category.

Zinc, lead and silver

Estimates of EDR for zinc (39.9 Mt), lead (18.7 Mt) and silver (43.3 kt) increased in 1996 by between 2% and 4% compared to 1995. Total identified resources of zinc decreased by 1.1 Mt (1%), while those of lead and silver increased by 4.4 Mt (9%) and 2.3 kt (3%) respectively. The substantial increase in lead stocks occurred in the inferred category through the addition of lead from the Magellan deposit in the Pilbara region of Western Australia.

Australia has the world's largest EDR of zinc (29%), lead (27%) and silver (15%).

4.1 RESOURCES OF MAJOR MINERALS AND FUELS—1996

Mineral	AUSTRALIA—DEMONSTRATED....			AUSTRALIA—INFERRED...		WORLD....
	Economic	Subeconomic paramarginal	Subeconomic submarginal	Economic and subeconomic	Undifferentiated	Demonstrated economic
Antimony (kt)	89.9	37.0	35.8	11.6	15.1	—
Asbestos (Mt)	—	46.6	—	—	77.3	Large
Bauxite (Mt)	3 024	—	5 239	—	1 598	23 000
Black coal						
In situ (Gt)	68	2	6	—	Very large	—
Recoverable (Gt)	49	2	4	—	—	705
Brown coal						
In situ (Gt)	46	1	2	—	184	—
Recoverable (Gt)	41	1	2	—	166	312
Cadmium (kt)	132.1	10.6	16.4	21.2	0.8	540
Chromium (kt)	—	55.5	207.8	1 623.8	—	3 700 000
Cobalt (kt)	414.1	78.3	223.8	209.9	282.0	4 000
Copper (Mt)	23.6	14.5	2.5	10.2	4.0	310
Diamonds						
Gem and cheap gem (Mct)	85	220	3.5	28.2	6.2	—
Industrial (Mct)	90	229	11.2	30.4	20.8	980
Fluorine (Mt)	—	24.34	9.59	—	2.1	(a)102
Gold (t)	4 454.0	1 206	57.0	—	1 887	46 000
Iron ore (Gt)	17.8	13.8	0.4	—	17.4	151
Lead (Mt)	18.7	4.8	9.4	20.9	1	69
Lithium (kt)	166	79	3	—	7	2 800
Magnesite (Mt)	179.9	1.2	326.5	—	109.8	8 600
Manganese ore (Mt)	118	27.1	167	166.6	—	1 885
Mineral sands (Mt)						
Ilmenite (Mt)	135	68	0.7	—	89.2	586
Rutile (Mt)	15	34	0.6	—	25.2	41.99
Zircon (Mt)	21.4	24.6	0.5	—	20.8	60.95
Molybdenum (kt)	—	4.7	3.2	—	859.5	5 500
Nickel (Mt)	6.4	2.2	3.4	—	6.6	51
Niobium (kt)	4.0	67.6	—	—	1 995	3 500
Petroleum						
Crude oil (GL)	277	—	24	—	—	160 176
Natural (sales) gas (10 ⁹ m ³)	1 264	—	1 099	—	—	—
Condensate (GL)	183	—	67	—	—	139 703
LPG (natural) (GL)	144	—	92	—	—	—
Phosphate rock (Mt)	103	2 758	—	—	1 947	11 000
Platinum group (t)	19.1	17.5	27.7	85.8	2.1	56 000
Rare earths(b) (Mt)	1	3.5	10.7	—	4.2	100
Shale oil (GL)	—	—	4 822	—	40 360	n.a.
Silver (kt)	43.3	11.5	12.9	22.2	1.0	280
Tantalum (kt)	8.1	5.4	0.3	—	64.8	19
Tin (kt)	119.5	28	186	303	5.3	7 000
Tungsten (kt)	0.9	34.1	28	180.1	—	2 100
Uranium (t)	622	—	93	180	—	2 208
Vanadium (kt)	15	1 619	8 425	2 263	—	10 000
Zinc (Mt)	39.9	12.4	11.9	19.6	1.2	140

(a) Excludes the United States of America and Brazil.

(b) Includes rare earth oxides and Yttrium Oxide (Y₂O₃).

Source: BRS 1997.

CHAPTER 5

MINERAL PRODUCTION

SUMMARY

The 1996–97 statistics in this section are derived solely from information supplied to the ABS through the mining collection. Published data for prior years were derived from information supplied by the various State mines departments or directly to the ABS, supplemented in some cases by data from other sources.

5.1 VALUE OF MINERALS PRODUCED(a)

Type	NSW \$m	Vic. \$m	Qld \$m	SA \$m	WA \$m	Tas. \$m	NT \$m	Aust. \$m
Coal, oil and gas	3 966	3 188	4 602	736	5 184	n.p.	n.p.	17 936
Metallic minerals	723	77	1 850	293	9 047	n.p.	n.p.	13 422
Total 1996–97	4 688	3 265	6 452	1 029	14 231	387	1 306	31 358
1995–96	4 027	n.p.	5 922	1 117	12 847	n.p.	1 247	28 779
1994–95	3 867	n.p.	5 283	n.p.	11 835	327	1 047	26 723

(a) Due to differences in the collection methods and definitions used by the ABS and the State mines departments, a break in the time series occurs between 1996–97 and prior years. Refer to paragraphs 7 and 21–25 of the Explanatory Notes for further information.

Source: ABS (unpub.)a.

- The total value of minerals produced in the metallic minerals, coal, and oil and gas industries was \$31.4b in 1996–97.
- The metallic minerals group was the major contributor with 43% of the total, followed by the coal industry with 29% and the oil and gas industry with 28%.
- Western Australia was the largest producer of both energy minerals (coal, oil and gas) with 29% and metallic minerals with 67%. Overall that State contributed 45% to Australian production.

5.2 MINERALS PRODUCED

Commodity code	Mineral	Quantity
Metallic minerals		
500	Bauxite ('000 t)	46 874
502	Copper concentrate(a) ('000 t)	1 787
509	Gold bullion (dore) (kg)	287 676
(b)	Iron ore ('000 t)	162 480
535	Lead concentrate ('000 t)	774
Mineral sands		
521	Beneficiated ilmenite ('000 t)	520
522	Ilmenite concentrate ('000 t)	1 818
523	Leucoxene concentrate ('000 t)	32
525	Rutile concentrate ('000 t)	189
529	Zircon concentrate ('000 t)	485
543	Zinc concentrate ('000 t)	1 679
547	Zinc-lead concentrate(c) ('000 t)	328
	Other metallic minerals (t)	n.a.
Coal		
Saleable coal—other than lignite		
580	Bituminous coal ('000 t)	185 923
581	Semi-anthracite coal ('000 t)	3 960
582	Sub-bituminous coal ('000 t)	15 559
	Lignite ('000 t)	58 886
Oil and gas		
590	Crude oil(d) (ML)	29 130
591	Natural gas(e) (GL)	n.a.
594	Propane (ML)	2 150
595	Butane (ML)	1 593

(a) Includes copper precipitate.

(b) Commodity codes 507, 513, 515 and 520 (iron ore pellets).

(c) Includes lead-zinc concentrate.

(d) Includes condensate.

(e) Includes ethane and liquefied natural gas.

Source: ABS (unpub.)a.

5.2 MINERALS PRODUCED *continued*

Commodity code	Mineral	Value
		\$'000
Metallic minerals		
500	Bauxite	881 819
502	Copper concentrate(a)	1 344 791
509	Gold bullion (dore)	4 395 554
(b)	Iron ore	3 569 737
535	Lead concentrate	346 015
	Mineral sands	
521	Beneficiated ilmenite	257 345
522	Ilmenite concentrate	170 501
523	Leucoxene concentrate	17 451
525	Rutile concentrate	143 548
529	Zircon concentrate	256 133
543	Zinc concentrate	589 495
547	Zinc-lead concentrate(c)	163 183
	Other metallic minerals	1 286 669
Total metallic minerals		13 422 241
Coal		
	Saleable coal—other than lignite	
580	Bituminous coal	8 053 570
581	Semi-anthracite coal	140 717
582	Sub-bituminous coal	478 118
	<i>Total</i>	8 672 405
	Lignite	442 335
Total coal		9 114 740
Oil and gas		
590	Crude oil(d) (incl. condensate)	5 123 330
591	Natural gas(e)	3 128 360
594	Propane	322 284
595	Butane	247 270
Total oil and gas		8 821 244

(a) Includes copper precipitate.

(b) Commodity codes 507, 513, 515 and 520 (iron ore pellets).

(c) Includes lead-zinc concentrate.

(d) Includes condensate.

(e) Includes ethane and liquefied natural gas.

Source: ABS (unpub.)a.

CHAPTER 6

FINANCIAL OPERATIONS

INTRODUCTION

The data presented in this chapter are derived from the 1996–97 Collection of Mining Operations and from some comparative statistics relating to earlier years.

Some of the data published in the 1995–96 edition of this publication have been revised to take account of changes to previously reported data.

Statistics are presented at both the management unit and establishment levels (see paragraphs 11–13 of the Explanatory Notes). Statistics collected at the management unit level can contain data about activities normally associated with industries other than mining, because of the inclusion of establishments that are part of that management unit but are not predominantly engaged in the mining industry.

The tables presented in this chapter are summary tables only. The commentary refers to these tables while more detailed tables appear at the end of this chapter.

Tables 6.13–6.16 relate to management unit data while tables 6.17–6.22 relate to establishment data. The Glossary provides definitions for the terms used.

MANAGEMENT UNIT SUMMARY

The following analysis relates to Australian and New Zealand Standard Industrial Classification (ANZSIC) Subdivisions 11–13 only. This incorporates coal mining, oil and gas extraction, and metal ore mining:

- Total turnover increased by 7% to \$35.2b in 1996–97, with the majority of the increase occurring in the oil and gas industry. Prices for minerals such as bauxite, copper, gold, lead and nickel fell in 1996–97, leading to a smaller increase in the metal ore mining industry.
- Total trading profit increased by \$993m (6%) to \$18.5b in 1996–97. The improvement in trading profit resulted from an increase in the value of sales of goods and services of \$2.2b (7%), which was only partially offset by the increase in cost of sales of \$1.3b.
- The major factor in the increase in trading profit was a 17% rise in the oil and gas industry due to production increases in the North West Shelf coupled with price increases for crude oil of 13%.
- The metal ore mining industry offset the increase in the coal, and oil and gas industries with a fall of 6% in trading profit. Increases in freight and cartage expenses, contract mining expenses and other selected expenses in the metal ore mining industry counteracted the increase in sales of 2%.
- A payment to ESSO/BHPP for recovery of Petroleum Resource Rent Tax which appears in other income has compounded the rise in trading profit in the oil and gas industry with a resulting increase in operating profit before tax of 45.6%.
- Total net capital expenditure in 1996–97 decreased by \$501m (9%) with the decreases in all industries with the exception of the coal mining industry, which increased by 1%. An 84% increase in the disposal of assets across all industries was the main factor contributing to the fall.

6.1 MANAGEMENT UNIT LEVEL(a), Summary Details—Income and expenditure

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Turnover	10 277.6	10 721.7	7 740.0	9 278.4	14 815.3	15 198.5	32 832.9	35 198.6
Industry gross product	4 545.7	4 897.3	6 406.5	7 467.7	7 068.5	6 682.9	18 020.7	19 047.9
Trading profit	4 386.6	4 758.1	6 388.7	7 445.5	6 766.9	6 332.0	17 542.2	18 535.6
Earnings before interest and tax	1 291.8	1 395.6	3 477.1	4 826.2	3 725.3	2 968.6	8 494.2	9 190.4
Operating profit before tax	979.8	1 090.4	3 017.7	4 392.6	3 045.2	2 067.1	7 042.7	7 550.1

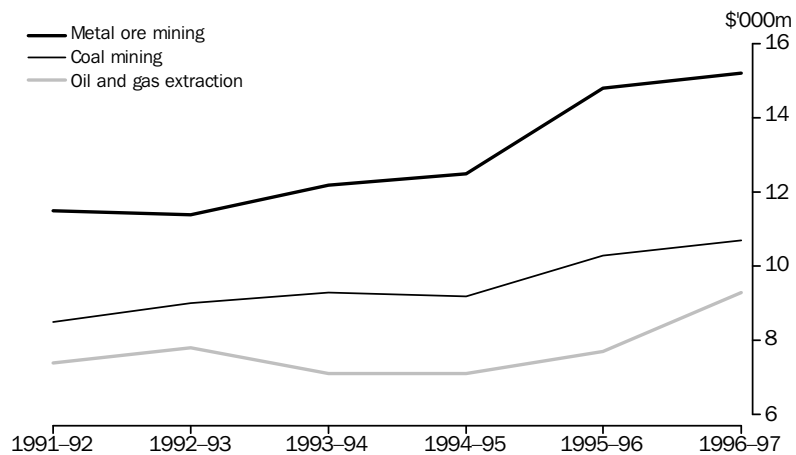
Items	OTHER MINING.....		SERVICES TO MINING(b)....		TOTAL MINING(b).....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
Turnover	2 216.3	2 110.7	2 460.8	3 187.0	37 510.0	40 496.3
Industry gross product	900.8	852.4	*844.5	951.8	19 766.0	20 852.1
Trading profit	876.3	833.1	*787.6	824.7	19 206.1	20 193.4
Earnings before interest and tax	308.9	295.9	**−240.3	*−217.9	8 562.8	9 268.4
Operating profit before tax	254.2	229.9	**−305.8	−314.2	6 991.1	7 465.8

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) See paragraphs 40–42 of the Explanatory Notes.

Source: ABS (unpub.)a.

6.2 MANAGEMENT UNIT TURNOVER



Source: ABS (unpub.)a.

6.3 MANAGEMENT UNIT LEVEL(a), Summary Details—Balance sheet and capital expenditure

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assets and liabilities								
Total assets	15 914.1	16 553.5	23 622.3	24 803.8	30 079.8	32 373.3	69 616.3	73 730.6
Total liabilities	9 720.6	9 143.1	13 748.5	13 611.8	17 000.3	18 340.3	40 469.4	41 095.2
Net worth	6 193.5	7 410.4	9 873.8	11 192.0	13 079.6	14 033.1	29 146.8	32 635.4
Capital expenditure								
Total acquisitions	1 210.7	1 356.7	1 563.4	1 406.1	3 131.9	2 943.3	5 906.0	5 706.1
Net capital expenditure	1 146.5	1 158.0	1 549.2	1 232.7	2 854.2	2 658.7	5 549.9	5 049.4
OTHER MINING.....								
SERVICES TO MINING(b)....								
TOTAL MINING(b).....								
Items	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assets and liabilities								
Total assets	3 411.1	3 311.6	3 349.5	8 539.3	76 376.9	85 581.5		
Total liabilities	1 532.6	1 737.5	3 498.3	5 989.6	45 500.3	48 822.3		
Net worth	1 878.5	1 574.0	**-148.8	**2 549.7	30 876.6	36 759.2		
Capital expenditure								
Total acquisitions	236.2	186.4	263.5	*1 494.5	6 405.7	7 387.0		
Net capital expenditure	205.3	154.9	**2.1	*1 434.6	5 757.3	6 638.9		

(a) See paragraphs 11-13 of the Explanatory Notes.

(b) See paragraphs 40-42 of the Explanatory Notes.

Source: ABS (unpub.)a.

ESTABLISHMENT SUMMARY

Statistics for detailed industry groupings and for each State and Territory are available at the establishment level for ANZSIC Subdivisions 11, 12 and 13 only. The following analysis relates to both the summary table below and the tables at the end of this chapter. The data for establishments vary from those of management units (see paragraphs 11–13 of the Explanatory Notes) in that they reflect a more homogenous picture of the industry:

- Turnover in 1996–97 was \$34.1b, an increase of \$2.0b (6%). This resulted from turnover increases for all industries with the exception of the bauxite mining and other metal ore mining industries.
- While prices have fallen for many minerals, increased sales volumes maintained sales values. The price of copper fell by 21% in 1996–97 while the resulting sales value for that mineral fell by only 1%. Bauxite was an exception with stable production allowing the fall in alumina prices to be reflected in the sales value.
- The coal mining, and oil and gas extraction industries recorded higher sales increases than the metal ore mining industry with resultant turnover increases of 13% for the oil and gas extraction industry, 6% for the coal mining industry and 3% for the metal ore mining industry.
- The coal mining industry was the largest contributor to turnover in 1996–97. Coal mining accounted for 32%, the same level as in 1995–96. Oil and gas extraction accounted for 27%. The other main contributors were the gold ore mining and iron ore mining industries which accounted for 14% and 11% respectively of total turnover in 1996–97.
- The oil and gas extraction industry remains the largest contributor to national value added for mining, accounting for 37% of the total in 1996–97. Coal was the second largest contributor accounting for 27%.
- Net capital expenditure, that is total expenditure less disposals, decreased by 7% to \$4.5b in 1996–97. A decrease of 2% in acquisition of assets was compounded by a 92% increase in disposals of assets.
- Decreases in net capital expenditure were general with only the coal mining and silver-lead-zinc mining industries showing increases, of \$137m (11%) and \$154m (214%) respectively. The largest decrease was in the oil and gas industry which fell by \$249m (17%).

6.4 ESTABLISHMENT LEVEL(a), Summary Details—Industry class

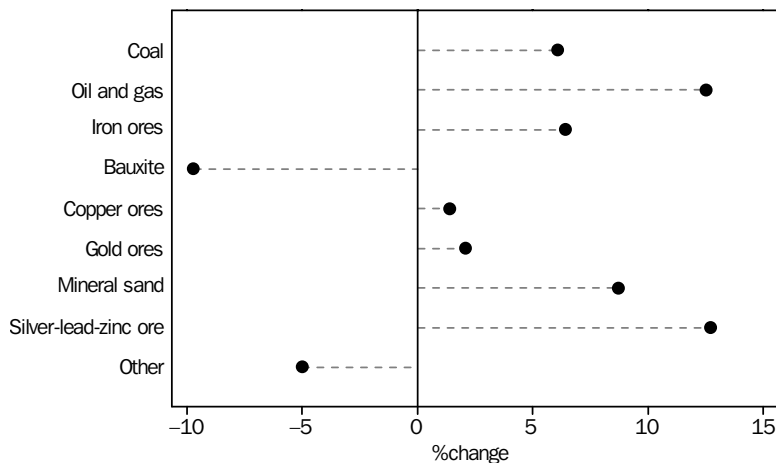
INDUSTRY CLASS		Turnover	Opening stocks	Closing stocks	Purchases and selected expenses	Value added	Net capital expenditure
ANZSIC code	Description	\$m	\$m	\$m	\$m	\$m	\$m
Coal mining							
110	Coal mining	10 912	826	999	4 963	6 123	1 329
Oil and gas extraction							
1200	Oil and gas extraction	9 047	304	263	750	8 256	1 191
Metal ore mining							
1311	Iron ore mining	3 746	330	384	1 385	2 415	283
1312	Bauxite mining	898	77	95	239	677	133
1313	Copper ore mining	1 332	165	295	540	921	177
1314	Gold ore mining	4 710	544	617	2 616	2 167	737
1315	Mineral sand mining	849	160	203	404	488	167
1317	Silver-lead-zinc ore mining	1 291	136	161	537	779	226
	Other(b)	1 315	272	314	731	626	258
131	Total	14 142	1 684	2 067	6 453	8 072	1 980
Total 1996–97		34 101	2 813	3 328	12 165	22 451	4 501
Total 1995–96		32 076	2 529	2 788	11 700	20 635	4 862

(a) See paragraphs 11–13 of the Explanatory Notes.

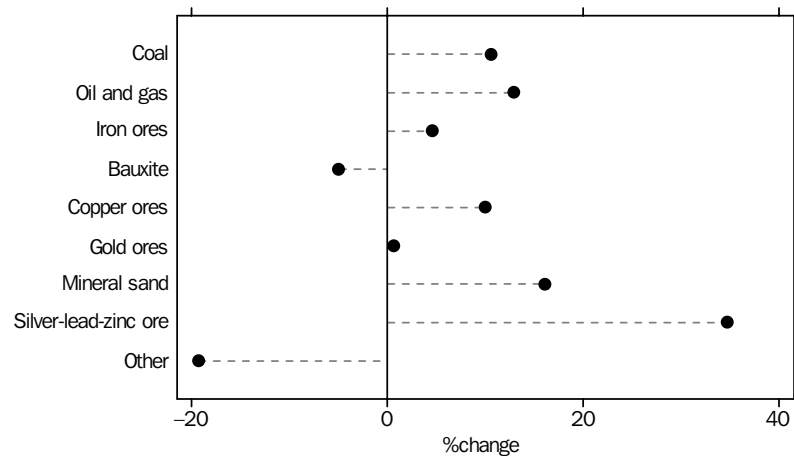
(b) Includes ANZSIC Classes 1316 and 1319.

Source: ABS (unpub.)a.

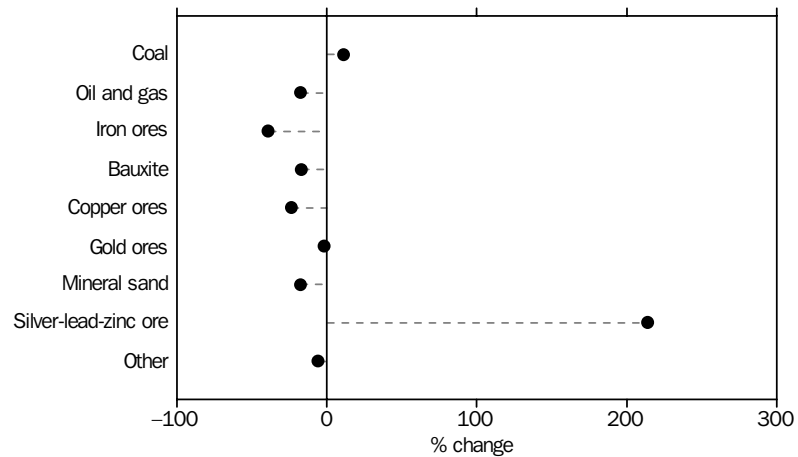
6.5 CHANGE IN TURNOVER—1995–96 to 1996–97



Source: ABS (unpub.)a.

6.6 CHANGE IN VALUE ADDED—1995–96 to 1996–97

Source: ABS (unpub.)a.

6.7 CHANGE IN NET CAPITAL EXPENDITURE—1995–96 to 1996–97

Source: ABS (unpub.)a.

STATE AND TERRITORY DATA

Table 6.8 summarises the data for each State and Territory for 1996–97. Detailed figures can be found in tables 6.19 and 6.20:

- Western Australia recorded the largest absolute increase in turnover, rising \$1.2b (8%) in 1996–97. Increased revenue from sales of goods, in particular within the oil and gas extraction industry following increased production from the North West Shelf, was largely responsible for the increase.
- Tasmania recorded a \$58m (15%) increase in turnover, the largest percentage increase of any State or Territory. Increased revenue from sales of goods within the metal ore mining industry was responsible for the rise.
- South Australia was the only State to record a decrease in turnover falling \$54m (5%) as a reflection of the fall of copper and gold prices.

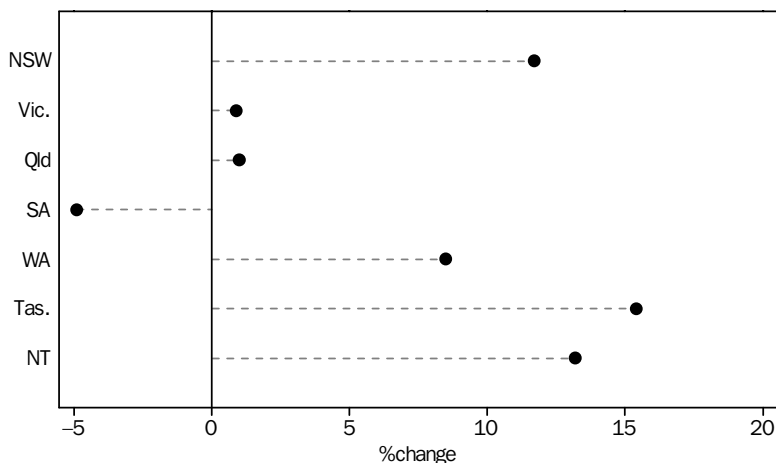
6.8 ESTABLISHMENT LEVEL(a), Summary Details—State and Territory

State and Territory	Turnover \$m	Opening stocks \$m	Closing stocks \$m	Purchases and selected expenses \$m	Value added \$m	Net capital expend- iture \$m
New South Wales	5 673	473	496	2 646	3 050	699
Victoria	3 308	52	61	244	3 073	465
Queensland	7 457	707	1 003	3 339	4 415	1 090
South Australia	1 048	153	95	253	737	193
Western Australia	14 717	1 156	1 388	4 960	9 988	1 828
Tasmania	434	55	60	219	220	40
Northern Territory	1 465	217	225	505	969	186
Australia	34 101	2 813	3 328	12 165	22 451	4 501

(a) See paragraphs 11–13 of the Explanatory Notes.

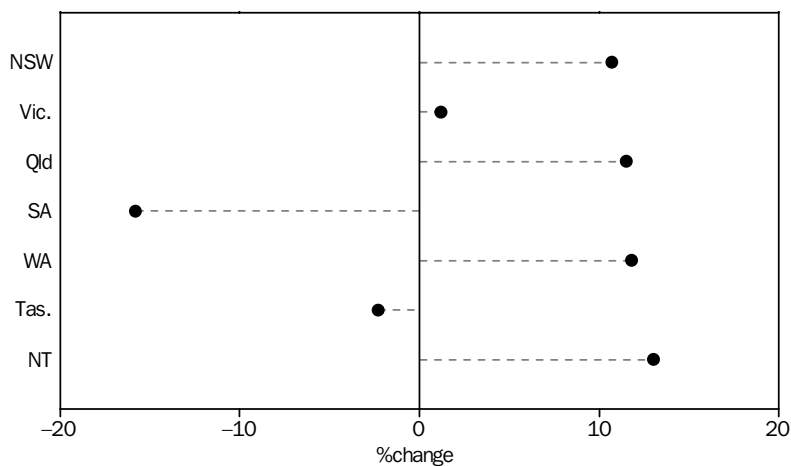
Source: ABS (unpub.)a.

6.9 CHANGE IN TURNOVER—1995–96 to 1996–97



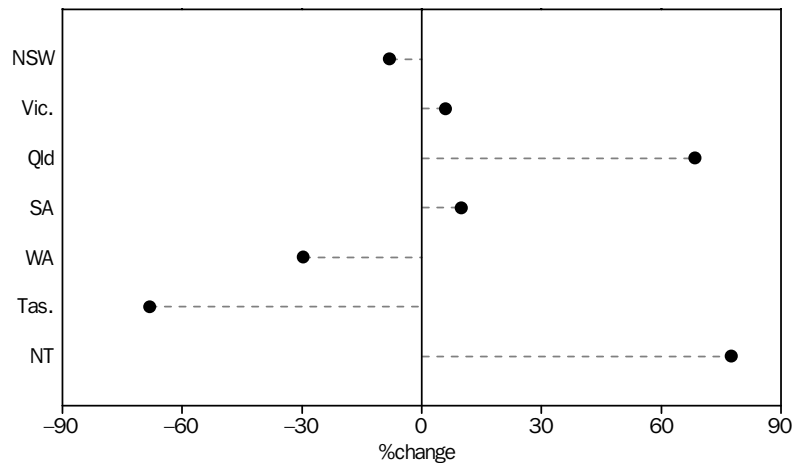
Source: ABS (unpub.)a.

6.10 CHANGE IN VALUE ADDED—1995–96 to 1996–97



Source: ABS (unpub.)a.

6.11 CHANGE IN NET CAPITAL EXPENDITURE—1995–96 to 1996–97

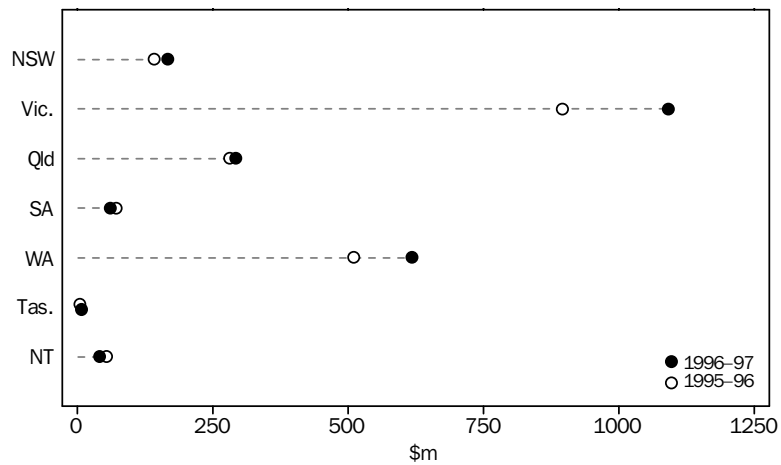


Source: ABS (unpub.)a.

ROYALTIES

Royalties data appear in tables 6.21 and 6.22 at the end of this chapter. Royalty payments are a reflection of production and/or sales for which data are collected at the establishment level.

6.12 ROYALTIES PAID, State and Territory—1995–96 to 1996–97



Source: ABS (unpub.)a.

6.13 MANAGEMENT UNIT LEVEL(a), Income and Expenditure—Industry subdivision

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods and services(b)	10 078.5	10 548.5	7 683.9	9 191.5	14 401.1	14 663.5	32 163.5	34 403.5
<i>Less</i>								
Purchases of goods and materials	1 758.5	1 928.8	165.9	501.0	3 106.8	3 174.7	5 031.2	5 604.4
Rent, leasing and hiring expenses	128.3	109.5	78.1	87.1	150.9	175.4	357.3	371.9
Outward freight and cartage	1 909.7	1 899.4	128.4	128.4	313.9	429.5	2 351.9	2 457.2
Motor vehicle expenses	17.2	14.7	9.9	9.4	47.6	51.6	74.7	75.7
Repair and maintenance expenses	760.4	672.8	117.0	152.1	1 047.9	1 105.3	1 925.3	1 930.2
Contract mining expenses	337.1	451.6	1.2	41.3	1 594.5	1 738.4	1 932.8	2 231.3
Payment for other contract, subcontract and commission work	354.4	342.6	268.8	315.2	677.9	742.1	1 301.1	1 399.7
Other selected expenses	529.9	604.1	587.5	589.8	969.7	1 402.3	2 087.1	2 596.2
<i>Purchases and selected expenses</i>	<i>5 795.5</i>	<i>6 023.4</i>	<i>1 356.7</i>	<i>1 824.2</i>	<i>7 909.2</i>	<i>8 819.2</i>	<i>15 061.4</i>	<i>16 666.7</i>
<i>Plus</i>								
Opening stocks	752.6	820.7	263.7	270.2	1 780.0	1 946.9	2 796.3	3 037.8
<i>Less</i>								
Closing stocks	816.2	1 019.7	286.9	283.7	1 942.4	2 250.5	3 045.5	3 553.9
<i>Cost of sales</i>	<i>5 731.9</i>	<i>5 824.3</i>	<i>1 333.5</i>	<i>1 810.7</i>	<i>7 746.8</i>	<i>8 515.6</i>	<i>14 812.2</i>	<i>16 150.7</i>
<i>Plus</i>								
Capitalised purchases	39.9	33.9	38.3	64.7	112.7	184.2	190.9	282.7
Trading profit	4 386.6	4 758.1	6 388.7	7 445.5	6 766.9	6 332.0	17 542.2	18 535.6
<i>Plus</i>								
Government subsidies								
Operational funding	3.7	0.8	0.0	0.0	6.1	1.2	9.8	2.0
Diesel fuel rebate	129.8	127.8	7.0	7.9	259.0	287.7	395.8	423.4
Interest income	103.7	84.7	48.5	88.8	484.0	447.1	636.3	620.5
Other income	239.8	173.8	129.5	927.9	140.3	229.7	509.6	1 331.4
<i>Less</i>								
Wages and salaries	2 143.0	2 120.8	460.1	503.0	1 722.4	1 854.4	4 325.5	4 478.2
Superannuation	142.5	171.8	15.3	19.2	64.7	88.5	222.5	279.5
Workers' compensation	54.7	72.0	5.1	3.1	38.7	46.5	98.5	121.6
<i>Selected labour costs</i>	<i>2 340.2</i>	<i>2 364.6</i>	<i>480.6</i>	<i>525.2</i>	<i>1 825.8</i>	<i>1 989.4</i>	<i>4 646.5</i>	<i>4 879.2</i>
<i>Less</i>								
Depreciation	913.6	972.1	1 423.9	1 587.9	1 678.5	1 934.0	4 016.0	4 494.0
Insurance premiums	54.3	57.9	46.5	40.8	54.9	55.7	155.7	154.4
Royalties expenses	314.0	364.4	1 264.2	1 504.1	422.8	405.8	2 001.0	2 274.3
Bad debts	0.4	1.2	0.2	0.0	1.5	6.3	2.2	7.5
<i>Plus</i>								
Capitalised wages	25.6	10.6	10.8	14.3	36.4	62.0	72.8	86.9
Earnings before interest and tax	1 291.8	1 395.6	3 477.1	4 826.2	3 725.3	2 968.6	8 494.2	9 190.4
<i>Less</i>								
Interest expenses	312.0	305.2	459.4	433.6	680.2	901.5	1 451.5	1 640.3
Operating profit before tax	979.8	1 090.4	3 017.7	4 392.6	3 045.2	2 067.1	7 042.7	7 550.1

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes rent, leasing and hiring income.

Source: ABS (unpub.).a.

6.14 MANAGEMENT UNIT LEVEL(a), Industry Gross Product—Industry subdivision

Items	COAL MINING.....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods and services(b)	10 078.5	10 548.5	7 683.9	9 191.5	14 401.1	14 663.5	32 163.5	34 403.5
Government subsidies								
Operational funding	3.7	0.8	—	—	6.1	1.2	9.8	2.0
Diesel fuel rebate	129.8	127.8	7.0	7.9	259.0	287.7	395.8	423.4
<i>Plus</i>								
Capital work done for own use	65.5	44.5	49.1	79.0	149.1	246.2	263.7	369.6
Turnover	10 277.6	10 721.7	7 740.0	9 278.4	14 815.3	15 198.5	32 832.9	35 198.6
<i>Plus</i>								
Closing stocks	816.2	1 019.7	286.9	283.7	1 942.4	2 250.5	3 045.5	3 553.9
<i>Less</i>								
Opening stocks	752.6	820.7	263.7	270.2	1 780.0	1 946.9	2 796.3	3 037.8
<i>Less</i>								
Purchases and selected expenses	5 795.5	6 023.4	1 356.7	1 824.2	7 909.2	8 819.2	15 061.4	16 666.7
Industry gross product	4 545.7	4 897.3	6 406.5	7 467.7	7 068.5	6 682.9	18 020.7	19 047.9

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes rent, leasing and hiring income.

Source: ABS (unpub.)a.

6.15 MANAGEMENT UNIT LEVEL(a), Assets and Liabilities—Industry subdivision

Items	COAL MINING.....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assets								
Current assets								
Closing stocks	816.2	1 019.7	286.9	283.7	1 942.4	2 250.5	3 045.5	3 553.9
Other current assets	2 501.1	2 562.6	2 131.2	2 471.1	8 989.5	8 383.9	13 621.8	13 417.5
Non-current assets	12 596.8	12 971.2	21 204.1	22 049.0	19 147.9	21 739.0	52 948.9	56 759.2
Total value of assets	15 914.1	16 553.5	23 622.3	24 803.8	30 079.8	32 373.3	69 616.3	73 730.6
Liabilities								
Current liabilities	3 779.5	3 498.0	3 822.8	5 159.5	5 741.1	5 213.2	13 343.4	13 870.7
Non-current liabilities	5 941.1	5 645.1	9 925.7	8 452.3	11 259.2	13 127.1	27 126.0	27 224.5
Total value of liabilities	9 720.6	9 143.1	13 748.5	13 611.8	17 000.3	18 340.3	40 469.4	41 095.2
Net worth	6 193.5	7 410.4	9 873.8	11 192.0	13 079.6	14 033.1	29 146.8	32 635.4

(a) See paragraphs 11–13 of the Explanatory Notes.

Source: ABS (unpub.).a.

6.16 MANAGEMENT UNIT LEVEL(a), Acquisitions and Disposals of Fixed Tangible Assets(b)

Items	COAL MINING.....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Capital expenditure on								
Land	40.6	33.8	—	3.0	59.6	48.8	100.2	85.6
Dwellings, buildings and other structures	234.4	311.0	609.3	558.9	975.2	1 136.0	1 818.9	2 005.9
Plant, machinery and equipment	935.7	1 012.0	954.0	844.2	2 097.1	1 758.5	3 986.9	3 614.6
Total acquisitions	1 210.7	1 356.7	1 563.4	1 406.1	3 131.9	2 943.3	5 906.0	5 706.1
Disposal of assets	64.2	198.7	14.2	173.5	277.7	284.5	356.1	656.7
Net capital expenditure	1 146.5	1 158.0	1 549.2	1 232.7	2 854.2	2 658.7	5 549.9	5 049.4

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Items listed include value of capital work done for own use.

Source: ABS (unpub.).a.

6.17 ESTABLISHMENT LEVEL(a), Income and Expenditure—Industry class

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		IRON ORE MINING.....		BAUXITE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods								
Produced by this business(b)	9 827.8	10 371.1	7 848.9	8 818.4	3 211.4	3 414.5	952.8	883.4
Not produced by this business(b)	155.2	190.7	5.7	35.1	123.4	125.8	—	—
Service income	88.0	150.1	25.1	13.7	132.5	130.6	0.1	0.1
Rent, leasing and hiring income	26.7	18.5	105.6	101.4	7.8	17.9	0.1	0.1
Government subsidies								
Operational funding	2.3	0.8	—	—	—	0.7	4.1	0.1
Diesel fuel rebate	134.5	130.8	7.0	6.7	45.1	52.2	3.0	11.6
<i>Plus</i>								
Capital work done for own use	46.6	50.2	46.6	71.6	1.9	4.7	34.4	2.7
Turnover	10 281.1	10 912.2	8 038.9	9 047.0	3 522.1	3 746.4	994.5	898.0
<i>Plus</i>								
Closing stocks	818.4	998.9	262.7	262.8	329.3	383.6	76.7	94.7
<i>Less</i>								
Opening stocks	742.0	826.1	242.3	303.8	303.4	329.6	57.8	76.7
<i>Less</i>								
Purchases								
Materials, components, containers etc.(c)(d)	741.6	856.4	108.5	134.6	178.0	198.2	118.3	62.8
Electricity and fuels	543.7	580.9	34.9	39.9	177.0	213.9	85.8	70.2
Goods for resale(c)	176.9	176.2	5.1	5.0	51.5	58.2	0.0	0.0
Rent, leasing and hiring expenses	129.0	98.8	46.2	44.8	20.0	20.8	12.1	13.2
Outward freight and cartage	1 827.5	1 831.1	145.0	118.9	20.4	22.4	12.0	12.3
Motor vehicle expenses	17.1	14.1	6.8	7.1	10.3	11.2	1.7	2.4
Repair and maintenance expenses	740.7	678.6	114.6	100.6	414.8	463.4	36.6	38.9
Contract mining expenses	308.5	405.9	1.2	12.2	268.8	302.8	4.5	6.5
Payment for other contract, subcontract and commission work	335.1	320.5	284.7	286.6	97.2	94.3	30.1	32.6
<i>Purchases and selected expenses</i>	<i>4 820.3</i>	<i>4 962.6</i>	<i>747.0</i>	<i>749.7</i>	<i>1 237.9</i>	<i>1 385.2</i>	<i>301.1</i>	<i>239.0</i>
Value added	5 537.2	6 122.5	7 312.3	8 256.3	2 310.1	2 415.3	712.3	676.9

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.).a.

6.17 ESTABLISHMENT LEVEL(a), Income and Expenditure—Industry class *continued*

Items	COPPER ORE MINING.....		GOLD ORE MINING.....		MINERAL SAND MINING.....		SILVER-LEAD-ZINC ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
Sales of goods								
Produced by this business(b)	1 277.3	1 265.9	4 447.6	4 388.8	759.2	830.4	1 078.5	1 226.1
Not produced by this business(b)	—	13.8	0.5	4.3	6.4	5.1	6.2	—
Service income	0.9	0.5	13.0	75.2	0.7	0.7	0.2	0.5
Rent, leasing and hiring income	0.5	0.3	2.5	2.1	0.6	0.1	1.4	1.3
Government subsidies								
Operational funding	0.5	0.2	—	1.8	—	—	0.5	0.4
Diesel fuel rebate	15.3	21.9	117.3	150.4	4.4	5.0	16.3	10.6
Plus								
Capital work done for own use	18.9	29.5	34.2	87.9	10.2	7.7	42.2	52.1
Turnover	1 313.4	1 332.2	4 615.1	4 710.3	781.4	849.1	1 145.3	1 291.1
Plus								
Closing stocks	159.4	294.5	565.7	617.1	160.0	202.6	139.5	160.6
Less								
Opening stocks	158.4	165.4	476.3	544.3	138.2	160.0	123.2	135.9
Less								
Purchases								
Materials, components, containers etc.(c)(d)	138.3	144.5	494.5	485.8	120.3	120.2	174.9	177.9
Electricity and fuels	82.3	71.6	439.9	462.9	88.2	91.6	102.3	76.8
Goods for resale(c)	—	—	0.5	3.7	6.3	5.0	41.6	—
Rent, leasing and hiring expenses	6.5	12.2	58.7	61.9	13.6	17.7	6.4	5.2
Outward freight and cartage	11.4	18.9	47.7	105.0	30.7	32.2	104.1	76.7
Motor vehicle expenses	5.9	3.5	19.5	23.9	2.4	2.5	3.5	3.6
Repair and maintenance expenses	85.7	93.8	273.1	232.3	57.4	64.5	69.9	68.9
Contract mining expenses	87.1	109.0	1 035.8	1 019.0	43.9	41.8	14.5	22.0
Payment for other contract, subcontract and commission work	60.0	86.8	181.6	221.8	20.5	28.7	66.2	105.9
Purchases and selected expenses	477.3	540.4	2 551.3	2 616.2	383.3	404.1	583.4	536.9
Value added	837.2	920.9	2 153.2	2 166.8	420.0	487.6	578.1	778.9

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.17 ESTABLISHMENT LEVEL(a), Income and Expenditure—Industry class *continued*

Items	OTHER METAL ORE MINING.....		TOTAL METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
Sales of goods						
Produced by this business(b)	1 274.6	1 244.5	13 001.3	13 253.7	30 678.0	32 443.2
Not produced by this business(b)	27.9	20.6	164.5	169.6	325.3	395.4
Service income	22.7	18.3	170.1	225.8	283.3	389.6
Rent, leasing and hiring income	1.0	0.7	13.8	22.4	146.1	142.3
Government subsidies						
Operational funding	0.2	—	5.3	3.2	7.6	4.0
Diesel fuel rebate	47.9	26.3	249.2	278.1	390.8	415.6
<i>Plus</i>						
Capital work done for own use	10.0	4.1	151.8	188.8	245.0	310.6
Turnover	1 384.3	1 314.5	13 756.1	14 141.5	32 076.1	34 100.8
<i>Plus</i>						
Closing stocks	276.6	313.6	1 707.3	2 066.6	2 788.3	3 328.3
<i>Less</i>						
Opening stocks	287.2	271.5	1 544.6	1 683.5	2 528.8	2 813.4
<i>Less</i>						
Purchases						
Materials, components, containers etc.(c)(d)	112.1	94.0	1 336.4	1 283.4	2 186.6	2 274.5
Electricity and fuels	140.2	134.4	1 115.6	1 121.4	1 694.2	1 742.1
Goods for resale(c)	28.6	22.3	128.5	89.2	310.5	270.4
Rent, leasing and hiring expenses	6.2	16.1	123.5	147.2	298.8	290.8
Outward freight and cartage	47.6	50.8	273.8	318.2	2 246.3	2 268.3
Motor vehicle expenses	3.8	2.9	47.1	49.9	71.1	71.1
Repair and maintenance expenses	73.1	94.1	1 010.7	1 055.9	1 866.0	1 835.1
Contract mining expenses	141.4	245.6	1 596.0	1 746.7	1 905.7	2 164.8
Payment for other contract, subcontract and commission work	45.6	70.7	501.3	640.8	1 121.1	1 247.9
<i>Purchases and selected expenses</i>	<i>598.6</i>	<i>731.0</i>	<i>6 132.9</i>	<i>6 452.7</i>	<i>11 700.2</i>	<i>12 165.0</i>
Value added	775.0	625.6	7 785.9	8 071.9	20 635.4	22 450.7

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.).a.

6.18 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—Industry class *continued*

Items	OTHER METAL ORE MINING.....		TOTAL METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
Capital expenditure on						
Land	—	—	48.8	72.4	74.2	98.2
Dwellings, buildings and other structures	123.5	185.3	783.3	883.3	1,611.7	1 901.5
Plant, machinery and equipment	202.3	187.8	1 609.7	1 231.7	3 458.7	3 042.4
<i>Total</i>	325.7	373.1	2 441.8	2 187.5	5 144.5	5 042.1
Disposals of assets	51.3	115.2	213.6	207.3	282.8	541.7
Net capital expenditure	274.6	257.9	2 228.2	1 980.2	4 861.8	4 500.5
Capital expenditure less disposals						
Land, buildings and other structures	121.5	167.1	746.5	914.7	1 585.7	1 858.2
Plant machinery and equipment	153.1	90.8	1 481.7	1 065.5	3 276.1	2 642.2

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.17.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Income and Expenditure—State and Territory

Items	COAL MINING.....		METAL ORE MINING.....		TOTAL COAL MINING AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
NEW SOUTH WALES						
Sales of goods						
Produced by this business(b)	4 135.8	4 557.4	633.3	735.7	4 769.1	5 293.1
Not produced by this business(b)	109.3	127.5	—	13.8	109.3	141.3
Service income	33.7	79.6	43.5	40.5	77.2	120.1
Rent, leasing and hiring income	5.7	3.5	1.3	1.1	7.0	4.6
Government subsidies						
Operational funding	1.3	0.2	0.1	0.7	1.4	0.9
Diesel fuel rebate	50.9	50.6	3.4	4.4	54.2	55.0
<i>Plus</i>						
Capital work done for own use	37.4	25.5	24.7	32.4	62.1	57.9
Turnover	4 374.1	4 844.3	706.3	828.5	5 080.3	5 672.9
<i>Plus</i>						
Closing stocks	381.3	393.7	82.0	102.4	463.3	496.1
<i>Less</i>						
Opening stocks	301.4	389.8	61.8	82.8	363.1	472.6
<i>Less</i>						
Purchases						
Materials, components, containers etc.(c)(d)	290.6	372.2	103.7	108.5	394.3	480.7
Electricity and fuels	278.6	328.2	47.8	46.6	326.4	374.8
Goods for resale(c)	144.1	124.1	—	—	144.1	124.1
Rent, leasing and hiring expenses	62.5	63.6	2.5	5.4	65.1	69.0
Outward freight and cartage	616.3	641.8	24.3	27.0	640.6	668.8
Motor vehicle expenses	8.8	6.5	2.8	3.1	11.6	9.7
Repair and maintenance expenses	463.5	436.0	62.8	65.8	526.3	501.8
Contract mining expenses	118.1	176.4	81.3	80.5	199.4	256.9
Payment for other contract, subcontract and commission work	101.3	111.3	16.5	49.2	117.7	160.5
<i>Purchases and selected expenses</i>	<i>2 083.8</i>	<i>2 260.1</i>	<i>341.7</i>	<i>386.1</i>	<i>2 425.5</i>	<i>2 646.2</i>
Value added	2 370.2	2 588.2	384.8	462.1	2 755.0	3 050.3

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Income and Expenditure—State and Territory *continued*

Items	COAL MINING AND METAL ORE MINING.....		OIL AND GAS EXTRACTION.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
VICTORIA						
Sales of goods						
Produced by this business(b)	536.3	526.1	2 721.4	2 742.2	3 257.6	3 268.3
Not produced by this business(b)	0.1	—	0.6	—	0.7	—
Service income	2.0	2.4	3.2	—	5.2	2.4
Rent, leasing and hiring income	0.1	0.1	0.3	0.3	0.4	0.4
Government subsidies						
Operational funding	(0.1)	—	—	—	(0.1)	—
Diesel fuel rebate	1.9	1.8	—	0.1	2.0	1.9
<i>Plus</i>						
Capital work done for own use	5.1	5.5	6.5	29.1	11.6	34.6
Turnover	545.4	535.9	2 732.0	2 771.7	3 277.5	3 307.7
<i>Plus</i>						
Closing stocks	9.9	13.3	41.9	47.6	51.8	61.0
<i>Less</i>						
Opening stocks	9.0	10.2	42.6	41.9	51.6	52.0
<i>Less</i>						
Purchases						
Materials, components, containers etc.(c)(d)	29.8	38.7	23.8	47.4	53.6	86.1
Electricity and fuels	19.0	11.9	1.1	1.0	20.1	12.8
Goods for resale(c)	0.1	—	0.5	—	0.6	—
Rent, leasing and hiring expenses	3.6	0.4	0.8	2.3	4.4	2.7
Outward freight and cartage	7.0	8.6	—	—	7.0	8.6
Motor vehicle expenses	1.0	1.2	0.5	0.6	1.5	1.8
Repair and maintenance expenses	22.5	22.8	31.7	14.6	54.2	37.4
Contract mining expenses	40.0	42.9	—	0.6	40.0	43.5
Payment for other contract, subcontract and commission work	44.2	35.4	16.7	15.0	60.9	50.5
<i>Purchases and selected expenses</i>	<i>167.1</i>	<i>163.7</i>	<i>75.1</i>	<i>79.7</i>	<i>242.2</i>	<i>243.5</i>
Value added	379.3	375.4	2 656.2	2 697.8	3 035.5	3 073.2

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Income and Expenditure—State and Territory *continued*

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
QUEENSLAND								
Sales of goods								
Produced by this business(b)	4 870.7	5 008.7	335.1	281.7	1 849.8	1 772.5	7 055.7	7 062.9
Not produced by this business(b)	44.9	62.8	—	—	9.9	4.2	54.8	67.0
Service income	50.2	66.3	16.5	10.1	3.5	5.2	70.2	81.7
Rent, leasing and hiring income	19.8	14.1	0.1	—	0.8	0.7	20.7	14.8
Government subsidies								
Operational funding	1.1	0.6	—	—	5.0	0.7	6.1	1.2
Diesel fuel rebate	70.1	65.2	—	—	26.6	41.4	96.7	106.6
<i>Plus</i>								
Capital work done for own use	6.9	18.7	34.8	38.3	35.4	66.0	77.1	123.0
Turnover	5 063.8	5 236.4	386.5	330.2	1 930.9	1 890.6	7 381.2	7 457.3
<i>Plus</i>								
Closing stocks	412.9	580.7	20.6	30.2	262.6	392.5	696.1	1 003.4
<i>Less</i>								
Opening stocks	418.6	412.1	15.3	21.2	255.3	274.1	689.1	707.4
<i>Less</i>								
Purchases								
Materials, components, containers etc.(c)(d)	419.5	442.2	34.3	39.1	225.3	208.1	679.0	689.4
Electricity and fuels	223.1	217.7	0.9	0.6	144.0	124.4	368.0	342.8
Goods for resale(c)	29.0	51.9	—	—	45.3	4.3	74.3	56.2
Rent, leasing and hiring expenses	59.3	30.3	0.7	1.2	17.7	19.3	77.7	50.8
Outward freight and cartage	1 184.7	1 154.0	115.1	86.6	61.1	39.1	1 360.8	1 279.7
Motor vehicle expenses	5.5	4.6	0.4	0.5	8.2	7.6	14.1	12.6
Repair and maintenance expenses	236.7	194.4	5.5	0.7	68.8	76.4	311.0	271.5
Contract mining expenses	161.5	199.9	0.3	10.4	77.2	90.1	239.1	300.5
Payment for other contract, subcontract and commission work	188.0	174.3	1.4	1.8	116.6	159.2	306.1	335.2
<i>Purchases and selected expenses</i>	<i>2 507.2</i>	<i>2 469.4</i>	<i>158.6</i>	<i>140.9</i>	<i>764.2</i>	<i>728.4</i>	<i>3 430.0</i>	<i>3 338.8</i>
Value added	2 550.9	2 935.7	233.3	198.2	1 174.0	1 280.7	3 958.2	4 414.5

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Income and Expenditure—State and Territory *continued*

Items	TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING...	
	1995–96 \$m	1996–97 \$m
SOUTH AUSTRALIA		
Sales of goods		
Produced by this business(b)	1 086.7	1 039.4
Not produced by this business(b)	0.9	0.3
Service income	1.4	—
Rent, leasing and hiring income	3.1	0.8
Government subsidies		
Operational funding	—	—
Diesel fuel rebate	5.9	6.3
<i>Plus</i>		
Capital work done for own use	3.8	1.6
Turnover	1 101.8	1 048.3
<i>Plus</i>		
Closing stocks	104.5	95.1
<i>Less</i>		
Opening stocks	91.6	153.3
<i>Less</i>		
Purchases		
Materials, components, containers etc.(c)(d)	51.9	60.9
Electricity and fuels	31.7	41.3
Goods for resale(c)	3.7	0.1
Rent, leasing and hiring expenses	11.1	6.3
Outward freight and cartage	23.2	25.6
Motor vehicle expenses	5.6	5.4
Repair and maintenance expenses	71.6	70.0
Contract mining expenses	8.1	17.8
Payment for other contract, subcontract and commission work	33.0	26.2
<i>Purchases and selected expenses</i>	239.9	253.4
Value added	874.8	736.7

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.).a.

6.19 ESTABLISHMENT LEVEL(a), Income and Expenditure—State and Territory *continued*

Items	COAL MINING AND OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
WESTERN AUSTRALIA						
Sales of goods						
Produced by this business(b)	4 083.8	5 104.7	8 829.7	8 868.3	12 913.5	13 973.0
Not produced by this business(b)	5.0	34.6	126.7	131.1	131.7	165.7
Service income	6.2	5.5	116.5	172.7	122.8	178.2
Rent, leasing and hiring income	102.9	101.1	10.5	19.8	113.4	120.8
Government subsidies						
Operational funding	—	—	0.1	1.8	0.1	1.8
Diesel fuel rebate	16.2	17.1	198.8	207.8	215.0	224.9
<i>Plus</i>						
Capital work done for own use	1.7	4.0	68.0	48.1	69.7	52.2
Turnover	4 216.0	5 267.1	9 350.2	9 449.5	13 566.1	14 716.5
<i>Plus</i>						
Closing stocks	117.7	120.3	1 074.3	1 267.2	1 192.0	1 387.5
<i>Less</i>						
Opening stocks	108.4	104.4	957.1	1 051.8	1 065.4	1 156.2
<i>Less</i>						
Purchases						
Materials, components, containers etc.(c)(d)	40.7	37.7	841.7	755.0	882.3	792.7
Electricity and fuels	44.0	42.1	805.3	805.4	849.3	847.6
Goods for resale(c)	4.6	5.0	54.6	62.6	59.2	67.6
Rent, leasing and hiring expenses	41.4	41.0	91.1	207.8	132.4	224.9
Outward freight and cartage	14.2	15.7	125.5	190.0	139.8	205.7
Motor vehicle expenses	3.0	2.9	30.2	33.0	33.1	35.9
Repair and maintenance expenses	61.0	69.9	770.8	804.3	831.8	874.3
Contract mining expenses	3.4	0.5	1 301.7	1 397.9	1 305.1	1 398.4
Payment for other contract, subcontract and commission work	223.0	229.1	306.7	351.8	529.7	580.9
<i>Purchases and selected expenses</i>	<i>435.1</i>	<i>444.0</i>	<i>4 327.5</i>	<i>4 516.0</i>	<i>4 762.7</i>	<i>4 960.1</i>
Value added	3 790.1	4 838.9	5 140.0	5 148.9	8 930.1	9 987.8

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.).a.

6.19 ESTABLISHMENT LEVEL(a), Income & Expenditure—State and Territory *continued*

Items	TOTAL COAL MINING AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m
TASMANIA		
Sales of goods		
Produced by this business(b)	365.6	417.9
Not produced by this business(b)	—	—
Service income	0.2	—
Rent, leasing and hiring income	0.4	0.2
Government subsidies		
Operational funding	0.1	—
Diesel fuel rebate	3.8	3.1
<i>Plus</i>		
Capital work done for own use	5.7	12.2
Turnover	375.7	433.5
<i>Plus</i>		
Closing stocks	55.4	60.3
<i>Less</i>		
Opening stocks	49.4	55.3
<i>Less</i>		
Purchases		
Materials, components, containers etc.(c)(d)	34.0	67.9
Electricity and fuels	34.6	34.6
Goods for resale(c)	—	—
Rent, leasing and hiring expenses	3.8	1.1
Outward freight and cartage	20.0	20.4
Motor vehicle expenses	1.4	1.3
Repair and maintenance expenses	41.9	55.8
Contract mining expenses	11.8	25.4
Payment for other contract, subcontract and commission work	10.7	12.1
<i>Purchases and selected expenses</i>	<i>156.7</i>	<i>218.6</i>
Value added	225.0	219.8

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Income & Expenditure—State and Territory *continued*

Items	OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
NORTHERN TERRITORY						
Sales of goods						
Produced by this business(b)	280.8	263.6	949.0	1 125.1	1 229.7	1 388.6
Not produced by this business(b)	—	0.5	27.9	20.5	27.9	21.0
Service income	—	—	6.3	7.2	6.3	7.2
Rent, leasing and hiring income	0.3	0.0	0.8	0.7	1.1	0.7
Government subsidies						
Operational funding	—	—	0.1	0.1	0.1	0.1
Diesel fuel rebate	—	—	13.2	18.0	13.2	18.0
<i>Plus</i>						
Capital work done for own use	—	—	15.0	29.1	15.0	29.1
Turnover	281.1	264.1	1 012.3	1 200.6	1 293.4	1 464.7
<i>Plus</i>						
Closing stocks	29.4	14.1	195.6	210.8	225.0	224.9
<i>Less</i>						
Opening stocks	31.0	26.3	187.5	190.4	218.5	216.7
<i>Less</i>						
Purchases						
Materials, components, containers etc.(c)(d)	5.5	5.7	85.9	91.2	91.4	96.9
Electricity and fuels	0.2	0.1	64.0	88.2	64.2	88.2
Goods for resale(c)	—	—	28.6	22.3	28.6	22.3
Rent, leasing and hiring expenses	0.2	0.1	5.7	3.9	5.8	4.0
Outward freight and cartage	12.6	13.8	42.4	45.6	55.0	59.5
Motor vehicle expenses	0.1	0.1	3.6	4.3	3.7	4.5
Repair and maintenance expenses	7.2	4.3	22.0	19.8	29.2	24.2
Contract mining expenses	—	0.7	102.3	121.7	102.3	122.4
Payment for other contract, subcontract and commission work	21.9	17.2	41.1	65.4	63.0	82.6
<i>Purchases and selected expenses</i>	<i>47.7</i>	<i>42.0</i>	<i>395.5</i>	<i>462.5</i>	<i>443.2</i>	<i>504.5</i>
Value added	231.9	209.9	624.9	758.5	856.8	968.5

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes transfers out to other establishments of the same management unit where appropriate.

(c) Includes transfers in from other establishments of the same management unit where appropriate.

(d) Includes minerals for further processing.

Source: ABS (unpub.).a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory

Items	COAL MINING.....		METAL ORE MINING.....		TOTAL COAL MINING AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
NEW SOUTH WALES						
Capital expenditure on						
Land	4.4	5.6	—	0.8	4.4	6.3
Dwellings, buildings and other structures	129.2	130.5	105.2	42.6	234.4	173.0
Plant, machinery and equipment	492.3	553.6	55.3	56.2	547.6	609.8
<i>Total</i>	625.8	689.6	160.5	99.5	786.4	789.1
Disposals of assets	19.4	86.8	7.5	3.6	26.9	90.4
Net capital expenditure	606.5	602.8	153.0	95.9	759.5	698.7
Capital expenditure less disposals						
Land, buildings and other structures	130.7	117.9	102.1	41.2	232.8	159.1
Plant machinery and equipment	475.8	484.9	51.0	54.7	526.7	539.7

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

Items	COAL MINING AND METAL ORE MINING.....		OIL AND GAS EXTRACTION.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m	1995-96 \$m	1996-97 \$m
VICTORIA						
Capital expenditure on						
Land	0.9	2.5	—	—	0.9	2.5
Dwellings, buildings and other structures	3.9	6.4	180.3	185.5	184.2	191.9
Plant, machinery and equipment	12.9	23.1	244.2	250.9	257.0	274.0
<i>Total</i>	<i>17.7</i>	<i>32.0</i>	<i>424.4</i>	<i>436.4</i>	<i>442.1</i>	<i>468.4</i>
Disposals of assets	0.6	0.9	2.1	2.1	2.8	3.0
Net capital expenditure	17.1	31.1	422.3	434.3	439.3	465.4
Capital expenditure less disposals						
Land, buildings and other structures	4.8	9.0	180.3	185.5	185.1	194.4
Plant machinery and equipment	12.2	22.2	242.0	248.8	254.3	271.0

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
QUEENSLAND								
Capital expenditure on								
Land	19.9	15.5	—	—	0.4	7.5	20.3	23.0
Dwellings, buildings and other structures	105.4	294.4	29.8	55.9	43.1	189.7	178.3	540.0
Plant, machinery and equipment	399.6	439.4	14.2	62.3	72.7	128.5	486.5	630.2
<i>Total</i>	524.9	749.3	44.0	118.2	116.2	325.7	685.1	1 193.2
Disposals of assets	24.8	95.2	0.2	0.6	12.8	7.5	37.8	103.4
Net capital expenditure	500.1	654.1	43.8	117.6	103.4	318.2	647.2	1 089.8
Capital expenditure less disposals								
Land, buildings and other structures	116.0	259.4	29.8	55.9	41.1	195.9	186.8	511.1
Plant machinery and equipment	384.1	394.7	14.0	61.7	62.3	122.3	460.4	578.7

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

<i>Items</i>	TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING...	
	1995–96	1996–97
	\$m	\$m
SOUTH AUSTRALIA		
Capital expenditure on		
Land	—	—
Dwellings, buildings and other structures	93.1	147.2
Plant, machinery and equipment	85.0	48.6
<i>Total</i>	178.1	195.8
Disposals of assets	2.7	3.4
Net capital expenditure	175.4	192.5
Capital expenditure less disposals		
Land, buildings and other structures	90.9	145.7
Plant machinery and equipment	84.5	46.8

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.).a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

<i>Items</i>	COAL MINING AND OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
WESTERN AUSTRALIA						
Capital expenditure on						
Land	0.4	2.9	46.1	62.4	46.5	65.2
Dwellings, buildings and other structures	315.1	215.8	502.2	560.6	817.4	776.4
Plant, machinery and equipment	617.9	436.8	1 330.1	882.7	1 948.0	1 319.5
<i>Total</i>	933.4	655.4	1 878.5	1 505.7	2 811.9	2 161.1
Disposals of assets	19.2	144.1	183.6	188.8	202.9	332.9
Net capital expenditure	914.2	511.3	1 694.8	1 316.8	2 609.0	1 828.1
Capital expenditure less disposals						
Land, buildings and other structures	315.4	188.3	469.0	586.6	784.5	775.0
Plant machinery and equipment	598.7	322.9	1 225.8	730.2	1 824.5	1 053.2

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

Items	TOTAL COAL MINING AND METAL ORE MINING.....	
	1995-96	1996-97
	\$m	\$m
TASMANIA		
Capital expenditure on		
Land	—	—
Dwellings, buildings and other structures	59.4	20.2
Plant, machinery and equipment	68.1	23.8
<i>Total</i>	<i>127.6</i>	<i>44.0</i>
Disposals of assets	1.5	4.3
Net capital expenditure	126.2	39.7
Capital expenditure less disposals		
Land, buildings and other structures	58.8	19.7
Plant machinery and equipment	67.4	20.0

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.20 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—State and Territory *continued*

<i>Items</i>	OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
.....						
NORTHERN TERRITORY						
Capital expenditure on						
Land	—	—	2.0	1.1	2.0	1.1
Dwellings, buildings and other structures	15.0	14.3	30.0	38.5	45.0	52.8
Plant, machinery and equipment	3.0	5.9	63.4	130.7	66.4	136.6
<i>Total</i>	18.0	20.2	95.4	170.3	113.4	190.5
Disposals of assets	0.1	1.3	8.2	3.0	8.2	4.3
Net capital expenditure	17.9	18.9	87.2	167.3	105.1	186.2
Capital expenditure less disposals						
Land, buildings and other structures	15.0	14.3	32.0	39.0	47.0	53.3
Plant machinery and equipment	2.9	4.7	55.2	128.2	58.2	132.9
.....						

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes capital work done for own use—reported in table 6.19.

Source: ABS (unpub.)a.

6.21 ESTABLISHMENT LEVEL(a), Mineral Royalties Paid—Industry class

Industry class	PAID TO GOVERNMENTS....		PAID TO OTHERS(b).....		TOTAL.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
Coal mining	327.1	371.0	13.6	13.2	340.7	384.2
Oil and gas extraction	1 152.3	1 442.5	60.6	53.0	1 212.9	1 495.6
Metal ore mining						
Iron ore	176.5	175.6	42.0	30.7	218.5	206.3
Bauxite	38.7	46.3	—	—	38.7	46.3
Copper ore	33.5	30.5	1.2	3.4	34.8	33.9
Gold ore	20.9	13.6	15.2	20.0	36.1	33.6
Mineral sand	23.6	27.6	2.7	4.7	26.2	32.3
Silver-lead-zinc ore	25.0	21.5	—	—	25.0	21.5
Other metal ore	16.9	17.5	13.4	11.5	30.2	29.0
Total	335.0	332.7	74.4	70.3	409.4	403.1
Total	1 814.4	2 146.3	148.6	136.6	1 963.0	2 282.8

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes mineral royalties paid to others and other royalties.

Source: ABS (unpub.)a.

6.22 ESTABLISHMENT LEVEL(a), Mineral Royalties Paid—State and Territory

Industry class	PAID TO GOVERNMENTS....		PAID TO OTHERS(b).....		TOTAL.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
	\$m	\$m	\$m	\$m	\$m	\$m
NEW SOUTH WALES						
Coal mining	126.8	145.7	3.1	4.5	129.9	150.3
Metal ore mining	11.8	15.8	0.4	0.8	12.2	16.6
Total	138.6	161.5	3.6	5.4	142.2	166.9
VICTORIA						
Coal mining and metal ore mining	13.6	15.5	0.0	0.3	13.6	15.8
Oil and gas extraction	856.7	1 039.7	26.0	36.1	882.7	1 075.8
Total	870.3	1 055.2	26.0	36.4	896.4	1 091.5
QUEENSLAND						
Coal mining	171.5	194.8	10.2	8.5	181.7	203.3
Oil and gas extraction	16.1	21.5	10.1	6.8	26.3	28.3
Metal ore mining	67.6	56.9	6.1	4.5	73.7	61.4
Total	255.2	273.3	26.4	19.8	281.6	293.0
SOUTH AUSTRALIA						
Total coal mining, oil and gas extraction and metal ore mining	50.3	53.1	22.1	8.4	72.4	61.5
WESTERN AUSTRALIA						
Coal mining and oil and gas extraction	236.7	339.3	0.3	0.2	237.1	339.5
Metal ore mining	216.3	228.2	57.0	51.5	273.4	279.7
Total	453.0	567.5	57.4	51.7	510.4	619.2
TASMANIA						
Total coal mining and metal ore mining	5.1	8.0	0.8	0.7	6.0	8.7
NORTHERN TERRITORY						
Oil and gas extraction	11.2	9.6	2.3	1.7	13.5	11.3
Metal ore mining	30.6	18.1	10.0	12.6	40.6	30.7
Total	41.8	27.8	12.3	14.2	54.1	42.0

(a) See paragraphs 11-13 of the Explanatory Notes.

(b) Includes mineral royalties paid to others and other royalties.

Source: ABS (unpub.)a.

CHAPTER 7

INDUSTRY PERFORMANCE MEASURES

INTRODUCTION

A range of performance measures, usually expressed as ratios, are produced from the data available from profit and loss accounts and balance sheets of businesses. A selection of these are presented in the tables at the end of this chapter for the coal mining, oil and gas extraction, and metal ore mining industries. Information on the uses and limitations of these measures can be found in paragraphs 26–33 of the Explanatory Notes.

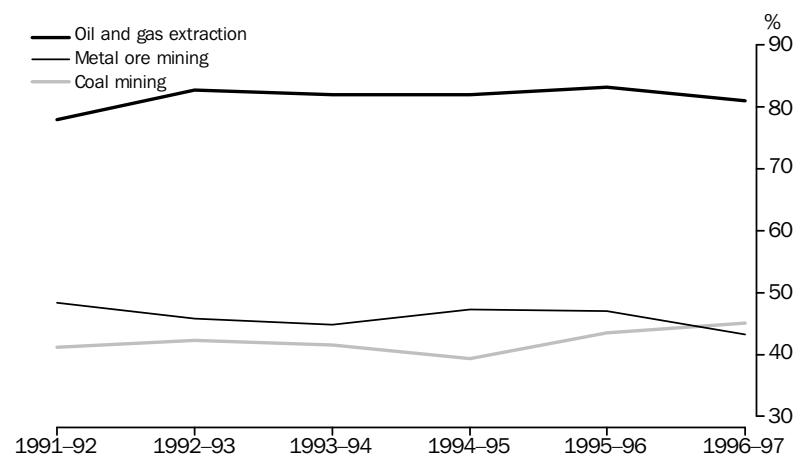
PERFORMANCE RATIOS

The following principal features for 1996–97 of performance ratios presented at the management unit level appear in detail in table 7.3:

- Despite movements in profitability ratios for industry subdivisions there was little movement for the overall mining industry as trading profit margin decreased from 55% to 54%, return on funds was stable at 15% and return on assets at 11%.
- The oil and gas extraction industry recorded an increase in return on funds from 18% to 25% and return on assets from 13% to 18%. In contrast the metal ore mining industry did not perform as well with return on funds falling from 15% to 11% and return on assets from 11% to 7%.
- Debt ratios fell with interest coverage down from 5.9 to 5.6, as interest expenses showed a greater increase than earnings before interest and tax (EBIT). The debt to asset ratio fell from 61% to 59%, with the rise in the value of assets larger than the rise in the value of liabilities.

Analysis of a number of these ratios between 1991–92 and 1996–97 for each of the major mining industry subdivisions shows different patterns of performance. For example, trading profit margin for the oil and gas extraction industry was higher than for either coal mining or metal ore mining during this period. This reflects the lower level of purchases and capital intensive nature of the oil and gas extraction industry.

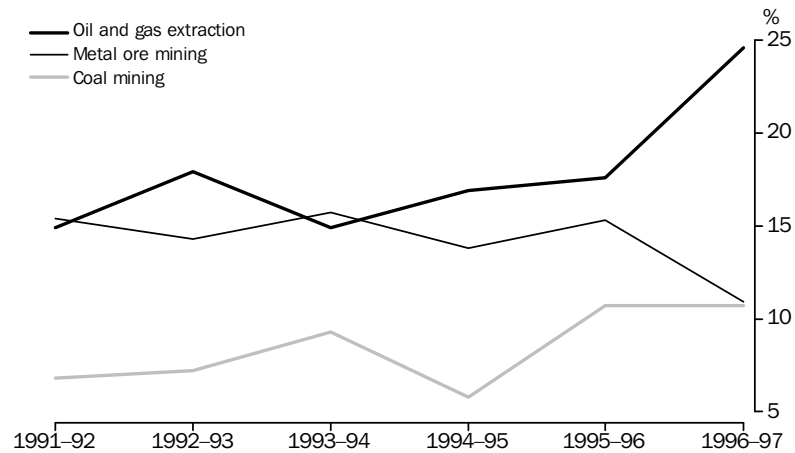
7.1 TRADING PROFIT MARGIN



Source: ABS (unpub.)a.

PERFORMANCE RATIOS *continued*

While the coal industry maintained its level of return on funds in 1996–97, the oil and gas extraction industry and the metal ore mining industry diverged. The increase in EBIT for the oil and gas industry and the decrease for the metal ore mining industry were responsible for the divergence.

7.2 RETURN ON FUNDS

Source: ABS (unpub.)a.

OPERATING RATIOS

There are a number of operating ratios that can be calculated from data collected at the establishment level. The following principal features for 1996–97 appear in detail in tables 7.4 and 7.5.

At the industry class level the main features of the operating ratios for 1996–97 were:

- The oil and gas extraction industry replaced the coal mining industry with the highest level of wages and salaries paid per person employed at \$90,200. The mineral mining industry had the lowest with \$48,800.
- The oil and gas industry also had the highest turnover per person employed at \$2,188,500 compared with the mineral sand mining industry with \$385,300.

At the State level the main features of the operating ratios in 1996–97 were:

- The oil and gas extraction industry in Victoria recorded the highest turnover per person employed of \$4.4m.
- The coal mining industry in Queensland had turnover per person employed of \$525,500 compared with that in New South Wales of \$350,200. The New South Wales figure was the lowest recorded of any sector of the mining industry.

7.3 MANAGEMENT UNIT LEVEL(a), Selected Performance Ratios—Industry subdivision

Ratios	COAL MINING...		OIL AND GAS EXTRACTION.....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
Turnover								
Asset turnover (times)	0.6	0.6	0.3	0.4	0.5	0.5	0.5	0.5
Profitability								
Trading profit margin (%)	43.5	45.1	83.1	81.0	47.0	43.2	54.5	53.9
Return on funds (%)	10.7	10.7	17.6	24.6	15.3	10.9	15.1	15.4
Return on assets (%)	6.5	7.0	12.9	17.9	10.8	6.9	10.6	10.8
Liquidity								
Liquidity ratio (times)	0.7	0.7	0.6	0.5	1.6	1.6	1.0	1.0
Current ratio (times)	0.9	1.0	0.6	0.5	1.9	2.0	1.3	1.2
Debt								
Interest coverage (times)	4.1	4.6	7.6	11.1	5.5	3.3	5.9	5.6
Debt to assets (%)	64.4	58.9	58.9	55.5	60.4	60.9	60.8	58.6
Capital expenditure								
Acquisitions to disposals (times)	18.9	6.8	110.4	8.1	11.3	10.3	16.6	8.7
Net capital expenditure to assets (%)	7.6	7.5	6.6	5.0	10.1	8.8	8.3	7.2

(a) See paragraphs 11–13 of the Explanatory Notes.

Source: ABS (unpub.)a.

7.4 ESTABLISHMENT LEVEL(a), Selected Operating Ratios—Industry class

Industry class	VALUE PER PERSON EMPLOYED(b).....				RATIO OF.....	
	<i>Wages and salaries(c)</i>	<i>Turnover</i>	<i>Value added</i>	<i>Net capital expenditure(d)</i>	<i>Value added to turnover</i>	<i>Wages and salaries to value added(c)</i>
	\$'000	\$'000	\$'000	\$'000	times	times
Coal mining						
1995–96	77.7	395.2	212.8	45.9	0.5	0.4
1996–97	80.3	419.7	235.5	51.1	0.6	0.3
Oil and gas extraction						
1995–96	76.6	1 870.0	1 700.9	335.1	0.9	0.1
1996–97	90.2	2 188.5	1 997.2	288.1	0.9	0.1
Iron ore mining						
1995–96	67.1	583.1	382.5	77.0	0.7	0.2
1996–97	76.3	652.7	420.8	49.2	0.6	0.2
Bauxite mining						
1995–96	52.8	555.0	397.5	89.2	0.7	0.1
1996–97	64.2	502.8	379.0	74.5	0.8	0.2
Copper ore mining						
1995–96	54.6	490.8	312.9	86.7	0.6	0.2
1996–97	56.8	511.4	353.5	68.1	0.7	0.2
Gold ore mining						
1995–96	55.6	568.8	265.4	93.0	0.5	0.2
1996–97	55.7	577.8	265.8	90.4	0.5	0.2
Mineral sand mining						
1995–96	46.5	401.0	215.5	104.0	0.5	0.2
1996–97	48.8	385.3	221.2	75.7	0.5	0.2
Silver-lead-zinc ore mining						
1995–96	63.7	327.6	165.4	40.0	0.5	0.4
1996–97	67.5	410.4	247.6	71.9	0.6	0.3
Other metal ore mining						
1995–96	128.1	1 136.4	637.6	223.4	1.1	0.4
1996–97	167.4	1 405.5	640.3	282.6	1.0	0.5
Total metal ore mining						
1995–96	59.1	519.2	293.9	84.1	0.6	0.2
1996–97	63.8	552.9	315.6	77.4	0.6	0.2
Total coal mining, oil and gas extraction, and metal ore mining						
1995–96	69.0	564.6	363.2	85.6	0.6	0.2
1996–97	73.5	612.1	403.0	80.8	0.7	0.2

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

(d) Fixed capital expenditure less disposals.

Source: ABS (unpub.)a.

7.5 ESTABLISHMENT LEVEL(a), Selected Operating Ratios—State and Territory

Industry class	VALUE PER PERSON EMPLOYED(b).....				RATIO OF.....	
	Wages and salaries(c)	Turnover	Value added	Net capital expenditure(d)	Value added to turnover	Wages and salaries to value added(c)
	\$'000	\$'000	\$'000	\$'000	times	times
NEW SOUTH WALES						
Coal mining						
1995–96	76.1	322.9	175.0	44.8	0.5	0.4
1996–97	79.7	350.2	187.1	43.6	0.5	0.4
Metal ore mining						
1995–96	63.7	318.9	173.7	69.1	0.5	0.4
1996–97	68.8	388.4	216.6	45.0	0.6	0.3
Total						
1995–96	74.4	322.4	174.8	48.2	0.5	0.4
1996–97	78.3	355.3	191.1	43.8	0.5	0.4
VICTORIA						
Coal mining and metal ore mining						
1995–96	57.4	401.0	278.9	12.6	1.2	0.6
1996–97	58.0	399.6	279.9	23.2	1.2	0.6
Oil and gas extraction						
1995–96	68.9	5 059.3	4 918.9	782.0	1.0	0.0
1996–97	70.5	4 399.5	4 282.2	689.4	1.0	0.0
Total						
1995–96	60.7	1 725.0	1 597.6	231.2	0.9	0.0
1996–97	62.0	1 678.2	1 559.2	236.1	0.9	0.0
QUEENSLAND						
Coal mining						
1995–96	83.1	499.9	251.8	49.4	0.5	0.3
1996–97	84.6	525.5	294.6	65.6	0.6	0.3
Oil and gas extraction						
1995–96	55.9	1 070.7	646.3	121.3	0.6	0.1
1996–97	68.6	1 223.0	734.0	435.5	0.6	0.1
Metal ore mining						
1995–96	52.8	392.3	238.5	21.0	0.6	0.2
1996–97	56.0	399.0	270.3	67.2	0.7	0.2
Total						
1995–96	72.8	478.9	256.8	42.0	0.5	0.3
1996–97	75.2	498.1	294.8	72.8	0.6	0.3

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

(d) Fixed capital expenditure less disposals.

Source: ABS (unpub.)a.

7.5 ESTABLISHMENT LEVEL(a), Selected Operating Ratios—State and Territory *continued*

Industry class	VALUE PER PERSON EMPLOYED(b).....				RATIO OF.....	
	Wages and salaries(c) \$'000	Turnover \$'000	Value added \$'000	Net capital expenditure(d) \$'000	Value added to turnover times	Wages and salaries to value added(c) times
SOUTH AUSTRALIA						
Total coal mining, oil and gas extraction and metal ore mining						
1995–96	52.0	549.2	436.1	87.4	0.8	0.1
1996–97	61.4	565.4	397.4	103.8	0.7	0.2
WESTERN AUSTRALIA						
Coal mining and oil and gas extraction						
1995–96	85.5	1 484.0	1 334.1	321.8	1.7	0.3
1996–97	106.2	2 001.9	1 839.2	309.6	1.7	0.3
Metal ore mining						
1995–96	60.4	589.0	323.8	106.8	0.6	0.2
1996–97	64.7	616.2	335.7	85.9	0.5	0.2
Total						
1995–96	64.7	724.9	477.2	139.4	0.7	0.1
1996–97	70.8	819.1	555.9	101.8	0.7	0.1
TASMANIA						
Total coal mining and metal ore mining						
1995–96	58.8	311.6	186.6	104.6	0.6	0.3
1996–97	81.8	417.2	211.6	38.2	0.5	0.4
NORTHERN TERRITORY						
Oil and gas extraction						
1995–96	89.5	1 176.2	970.4	75.1	0.8	0.1
1996–97	67.0	1 069.3	849.9	76.6	0.8	0.1
Metal ore mining						
1995–96	63.9	636.0	400.1	55.5	0.6	0.2
1996–97	63.4	707.5	447.0	98.6	0.6	0.1
Total						
1995–96	67.3	714.6	473.4	58.1	0.7	0.1
1996–97	63.9	753.5	498.2	95.8	0.7	0.1

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

(d) Fixed capital expenditure less disposals.

Source: ABS (unpub.)a.

CHAPTER 8

EMPLOYMENT

HISTORICAL EMPLOYMENT

The proportion of Australians employed in mining is estimated to have declined during this century from a high of around 7% in 1901 to 1% in 1996. Graph 8.1 illustrates the changes in the proportion of employed persons involved in mining in Australia.

8.1 LABOUR FORCE EMPLOYED IN MINING



Source: ABS 1997f.

The number of persons working in mining decreased from a high of over 100,000 persons at the beginning of the century to less than half that number by the early 1960s. Mining employment slowly edged up until the mid-1980s but in recent years the annual ABS mining collection has recorded a tapering off in the number employed in the coal mining, oil and gas extraction, and metal ore mining industries from 65,800 in 1991 to 55,700 in 1997.

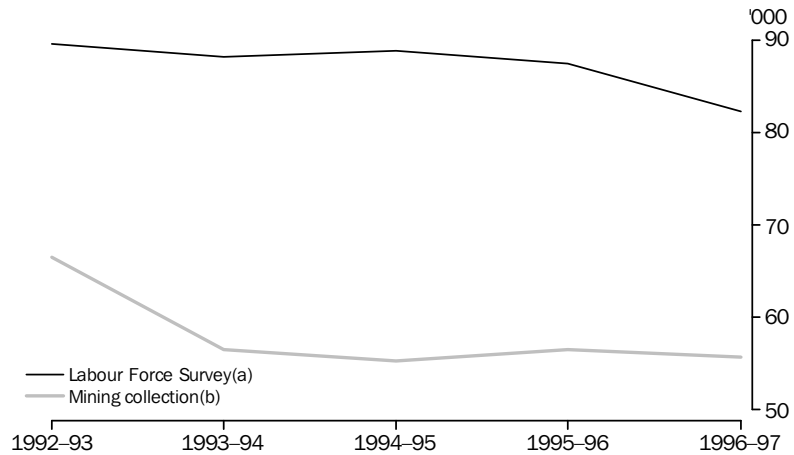
This tapering off in recorded employment in these industries during the 1990s may be explained by changes occurring within the mining industry. One factor was increased productivity, including changes to working practices at a number of mines. Another was greater use of contractors, whose industry of employment is specific to the activities they undertake rather than the mining industry.

USE OF CONTRACTORS

Contractors are engaged to perform tasks such as the stripping of overburden, the crushing of ore or the setting up of mine site infrastructure. Many of these contractors are primarily classified to industry categories that are out of scope of the mining collection (see paragraphs 8–9 of the Explanatory Notes). The use of such contract arrangements has been noted by industry commentators as occurring in gold, coal and iron ore mining.

USE OF CONTRACTORS *continued*

While employment numbers from the mining collection are determined according to the ANZSIC definition of the mining industry, the Labour Force Survey allows for self-definition by the individual of the industry in which they are employed. This allows those people undertaking mining service activities on a contract basis, e.g. transport, construction, and catering, to determine their primary employing industry as the mining industry when the business which employs them may, based on ANZSIC, be classified to an industry other than mining.

8.2 MINING EMPLOYMENT

(a) At end of May.

(b) Metallic minerals, coal, oil and gas.

Source: ABS (unpub.)a, 1997f.

The ABS is undertaking investigations to determine the extent of contract employment in the mining industry. Refer to chapter 9 for further information.

MANAGEMENT UNIT EMPLOYMENT

Employment information is collected at the management unit level, which may cover activities other than the operation of mine sites. Therefore the total employment recorded at this level will often be greater than that recorded at the establishment unit level. Details reported for management unit level by industry class for 1996–97 appear in table 8.10.

8.3 MANAGEMENT UNIT LEVEL(a), Employment—Industry subdivision

<i>ANZSIC subdivision</i>	<i>Management units</i>	<i>Employment(b)</i>	<i>Wages and salaries(c)</i>
	no.	no.	\$m
11 Coal mining	116	26 656	2 120.8
12 Oil and gas extraction	45	5 125	503.0
13 Metal ore mining	185	29 039	1 854.4
<i>Total coal mining, oil and gas extraction and metal ore mining 1996–97</i>	346	60 820	4 478.2
<i>Total coal mining, oil and gas extraction and metal ore mining 1995–96</i>	339	60 357	4 325.5
14 Other mining	476	7 084	303.9
15 Services to mining	752	18 118	998.6
Total mining 1996–97	1 575	86 022	5 780.7

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

ESTABLISHMENT EMPLOYMENT

Data gathered in the 1996–97 Collection of Mining Operations for establishment employment are presented in tables 8.11 and 8.12 and summarised below. Information for ANZSIC Subdivisions 11, 12 and 13 only are shown.

8.4 ESTABLISHMENT LEVEL(a), Employment—June 1997

INDUSTRY CLASS		EMPLOYMENT(b).....				Wages and salaries(c)
ANZSIC code	Description	Establish- ments no.	Males no.	Females no.	Persons no.	\$m
Coal mining						
110	Coal mining	173	25 149	851	26 000	2 088
Oil and gas extraction						
1200	Oil and gas extraction	86	3 586	548	4 134	373
Metal ore mining						
1311	Iron ore mining	21	5 089	651	5 740	438
1312	Bauxite mining	10	1 713	73	1 786	115
1313	Copper ore mining	19	2 350	255	2 605	148
1314	Gold ore mining	142	6 817	1 335	8 152	454
1315	Mineral sand mining	14	1 881	323	2 204	108
1317	Silver-lead-zinc ore mining	15	2 914	232	3 146	212
	Other(d)	20	1 649	297	1 946	157
131	<i>Total metal ore mining</i>	241	22 413	3 166	25 579	1 631
Total coal mining, oil and gas extraction and metal ore mining 1996–97		500	51 148	4 565	55 713	4 093
Total coal mining, oil and gas extraction and metal ore mining 1995–96		513	52 415	4 395	56 810	3 917

(a) See paragraphs 11–13 of the Explanatory Notes.

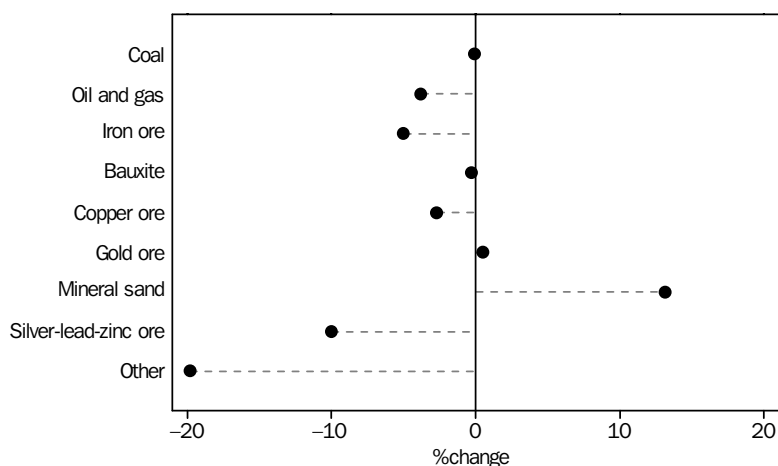
(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

(d) Includes ANZSIC Classes 1316 and 1319.

Source: ABS (unpub.)a.

8.5 CHANGE IN EMPLOYMENT—June 1996 to June 1997



Source: ABS (unpub.)a.

8.6 ESTABLISHMENT LEVEL(a), Employment—June 1997

EMPLOYMENT(b).....

State and Territory	Establish-ments	Males	Females	Persons	Wages and salaries(c)
	no.	no.	no.	no.	\$m
New South Wales	121	15 473	492	15 965	1 250
Victoria	25	1 878	93	1 971	122
Queensland	127	14 079	894	14 973	1 127
South Australia	15	1 622	232	1 854	114
Western Australia	175	15 477	2 490	17 967	1 271
Tasmania	10	955	84	1 039	85
Northern Territory	27	1 664	280	1 944	124
Australia	500	51 148	4 565	55 713	4 093
Total June 1996	513	52 415	4 395	56 810	3 917

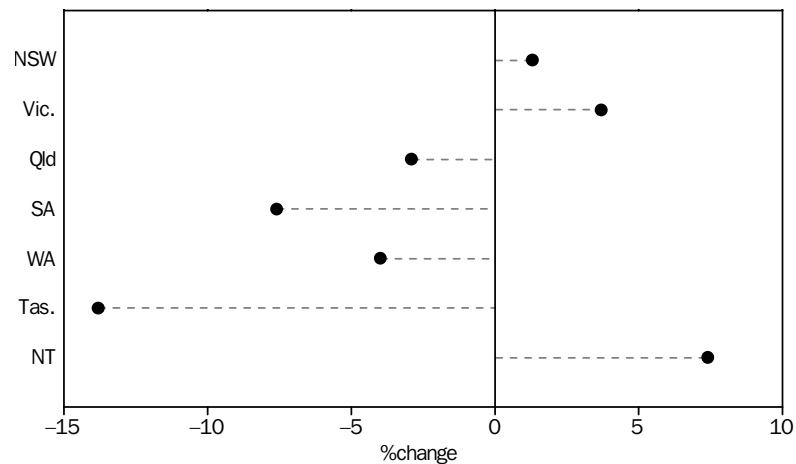
(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

8.7 CHANGE IN EMPLOYMENT—June 1996 to June 1997



Source: ABS (unpub.)a.

EMPLOYMENT CHARACTERISTICS

The following information is drawn from a range of ABS labour surveys. While details are not strictly comparable with information from the mining collection, they enable a broad comparison of the mining industry to be made against all industries.

8.8 EMPLOYMENT CHARACTERISTICS OF WORKERS—May 1997

	<i>Mining industry</i>	<i>All industries</i>
Sex of employed persons		
Male workers (%)	89.9	56.7
Female workers (%)	10.1	43.3
Occupation of employed persons		
Intermediate production and transport workers (%)	37.4	9.2
Tradespersons and related workers (%)	22.5	13.7
Professionals (%)	13.4	17.1
Associate professionals (%)	10.1	10.9
Labourers and related workers (%)	4.1	10.0
Clerical, sales and service workers (%)	7.3	31.5
Managers and administrators (%)	5.2	7.6
Overtime		
Average weekly overtime hours worked per employee (h)	2.8	1.1
Percentage of employees working overtime (%)	25.0	15.6
Average weekly overtime hours per employee working overtime (h)	11.2	7.0
Other		
Average weekly hours worked (h)	42.3	35.7
Unemployment rate(a) (%)	5.7	8.6

(a) Ratio of those unemployed who listed mining as the employment category of their last job, to those currently employed in mining.

Source: ABS 1997e, 1997f.

8.9 MANAGEMENT UNIT LEVEL(a), Employment (at End of June)—Industry class

Items	COAL MINING...		OIL AND GAS EXTRACTION....		METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
Management units(a) at 30 June (no.)	109	116	39	45	191	185	339	346
Employment at end of June(b) (no.)	26 694	26 656	5 176	5 125	28 487	29 039	60 357	60 820
Persons employed per management unit (no.)	244.9	229.8	132.7	113.9	149.2	157.0	178.0	175.8
Labour ratios								
Profit to employment (\$'000/employee)	36.7	40.9	583.0	857.1	106.9	71.2	116.7	124.1
Industry gross product								
To employment (\$'000/employee)	170.3	183.7	1 237.7	1 457.1	248.1	230.1	298.6	313.2
To selected labour costs (times)	1.9	2.1	13.3	14.2	3.9	3.4	3.9	3.9
Selected labour costs to employment (\$'000/employee)	87.7	88.7	92.9	102.5	64.1	68.5	77.0	80.2

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

Source: ABS (unpub.).a.

8.10 ESTABLISHMENT LEVEL(a), Employment (at End of June)—Industry class

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		IRON ORE MINING.....		BAUXITE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
Establishments at 30 June (no.)	171	173	91	86	22	21	10	10
Employment at end of June(b)								
Males (no.)	25 196	25 149	3 754	3 586	5 389	5 089	1 732	1 713
Females (no.)	821	851	545	548	651	651	60	73
Persons (no.)	26 017	26 000	4 299	4 134	6 040	5 740	1 792	1 786
Persons employed per establishment(b) (no.)	152.2	150.3	47.2	48.1	274.6	273.3	179.2	178.6
Employees working below ground (no.)	8 530	8 497	—	—	—	—	—	—
Wages and salaries(c) (\$m)	2 021.9	2 088.3	329.4	372.8	405.2	438.2	94.5	114.6
Items	COPPER ORE MINING.....		GOLD ORE MINING.....		MINERAL SAND MINING.....		SILVER-LEAD-ZINC ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
Establishments at 30 June (no.)	17	19	156	142	13	14	14	15
Employment at end of June(b)								
Males (no.)	2 424	2 350	6 903	6 817	1 666	1 881	3 241	2 914
Females (no.)	252	255	1 211	1 335	283	323	255	232
Persons (no.)	2 676	2 605	8 114	8 152	1 949	2 204	3 496	3 146
Persons employed per establishment(b) (no.)	157.4	137.1	52.0	57.4	149.9	157.4	249.7	209.7
Employees working below ground (no.)	1 267	1 175	1 221	1 107	—	—	1 875	1 602
Wages and salaries(c) (\$m)	146.0	147.9	451.3	453.9	90.6	107.6	222.6	212.3

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

8.10 ESTABLISHMENT LEVEL(a), Employment (at End of June)—Industry class *continued*

<i>Items</i>	OTHER METAL ORE MINING.....		TOTAL METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1995-96	1996-97	1995-96	1996-97	1995-96	1996-97
Establishments at 30 June (no.)	19	20	251	241	513	500
Employment at end of June(b)						
Males (no.)	2 110	1 649	23 465	22 413	52 415	51 148
Females (no.)	317	297	3 029	3 166	4 395	4 565
Persons (no.)	2 427	1 946	26 494	25 579	56 810	55 713
Persons employed per establishment(b) (no.)	389.3	237.9	105.6	106.1	110.7	111.4
Employees working below ground (no.)	484	244	4 847	4 128	13 377	12 625
Wages and salaries(c) (\$m)	155.3	157.0	1 565.6	1 631.4	3 916.8	4 092.5

(a) See paragraphs 11-13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

8.11 ESTABLISHMENT LEVEL(a), Employment (at End of June)—State and Territory

<i>Industry class</i>	<i>Establish-ments</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Persons per establish-ment(b)</i>	<i>Employees working below ground</i>	<i>Wages and salaries(c)</i>
	no.	no.	no.	no.	no.	no.	\$m
NEW SOUTH WALES							
Coal mining							
1995–96	95	13 257	288	13 545	143	6 974	1 031.0
1996–97	99	13 506	326	13 832	140	6 600	1 102.9
Metal ore mining							
1995–96	25	2 052	163	2 215	89	862	141.0
1996–97	22	1 967	166	2 133	97	839	146.7
Total coal mining and metal ore mining							
1995–96	120	15 309	451	15 760	131	7 836	1 172.0
1996–97	121	15 473	492	15 965	132	7 439	1 249.5
VICTORIA							
Coal mining and metal ore mining							
1995–96	19	1 302	58	1 360	72	116	78.1
1996–97	22	1 288	53	1 341	61	88	77.8
Oil and gas extraction							
1995–96	3	510	30	540	180	—	37.2
1996–97	3	590	40	630	210	—	44.4
Total coal mining, oil and gas extraction and metal ore mining							
1995–96	22	1 812	88	1 900	86	116	115.3
1996–97	25	1 878	93	1 971	79	88	122.2
QUEENSLAND							
Coal mining							
1995–96	64	9 705	425	10 130	158	1 528	842.1
1996–97	61	9 519	446	9 965	163	1 870	842.6
Oil and gas extraction							
1995–96	25	310	51	361	14	—	20.2
1996–97	25	240	30	270	11	—	18.5
Metal ore mining							
1995–96	38	4 495	427	4 922	130	1 746	260.0
1996–97	41	4 320	418	4 738	116	1 530	265.4
Total coal mining, oil and gas extraction and metal ore mining							
1995–96	127	14 510	903	15 413	121	3 274	1 122.2
1996–97	127	14 079	894	14 973	118	3 400	1 126.5

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

8.11 ESTABLISHMENT LEVEL(a), Employment (at End of June)—State and Territory *continued*

<i>Industry class</i>	<i>Establish-ments</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Persons per establishment(b)</i>	<i>Employees working below ground</i>	<i>Wages and salaries(c)</i>
<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>\$m</i>
SOUTH AUSTRALIA							
Total coal mining, oil and gas extraction and metal ore mining							
1995–96	14	1 744	262	2 006	143	158	104.3
1996–97	15	1 622	232	1 854	124	133	113.8
WESTERN AUSTRALIA							
Coal mining and oil and gas extraction							
1995–96	39	2 532	309	2 841	73	—	251.4
1996–97	40	2 312	319	2 631	66	—	279.5
Metal ore mining							
1995–96	151	13 791	2 083	15 874	105	1 400	959.0
1996–97	135	13 165	2 171	15 336	114	974	992.0
Total coal mining, oil and gas extraction and metal ore mining							
1995–96	190	16 323	2 392	18 715	99	1 400	1 210.3
1996–97	175	15 477	2 490	17 967	103	974	1 271.4
TASMANIA							
Total coal mining and metal ore mining							
1995–96	9	1 115	91	1 206	134	392	70.9
1996–97	10	955	84	1 039	104	415	85.0
NORTHERN TERRITORY							
Oil and gas extraction							
1995–96	17	225	14	239	14	—	21.4
1996–97	12	232	15	247	21	—	16.6
Metal ore mining							
1995–96	14	1 377	194	1 571	—	201	100.3
1996–97	15	1 432	265	1 697	—	176	107.6
Total oil and gas extraction and metal ore mining							
1995–96	31	1 602	208	1 810	58	201	121.7
1996–97	27	1 664	280	1 944	72	176	124.1

(a) See paragraphs 11–13 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.).a.

BACKGROUND

Data collected and published for the mining industry by the ABS in recent years indicate that employment in the mining sector has been decreasing. The number employed in 1991 was 65,800 and in 1993, it was 58,000. The number declined further to 55,000 in 1995, before rising slightly to 56,500 in 1996. A likely reason for the decrease in reported employment is an increase in contract employment arrangements and in some cases changes in work practices.

To assess the impact of contract employment the ABS has undertaken further analysis of the data collected and has taken steps to obtain additional information in order to determine the extent of use of contracting in the industry.

POSSIBLE CONTRACT ARRANGEMENTS

Contract mining companies are engaged to do a single task or a range of tasks. It might be expected that these companies would generally have an ANZSIC classification of 'Services to mining'. However the value of output of the Services to mining industry is too small to account for the amounts reported in the mining industry collection by companies primary to other mining industries as 'payments to contractors'. Many of these contract mining companies are classified to other industries, such as construction, transport or employment services. The classification of contractors depends very much on the way in which the contract services are delivered and the scale of the services.

There are four possible contract arrangements which may exist in the mining industry:

- Individual employees are placed on contract and basically carry out the contract service 'on own account'. In this situation it would seem logical to still treat these persons as employees of the company but with different employment arrangements. Employment data in this publication may include some employees working on contracts but paid through the payroll.
- Services are performed by individuals working for a contract staff services company on a fee or contract basis:
 - ◆ as long as these people work on short-term contracts and the work is done under the supervision of staff of the mining company, the supplying company would be classified to ANZSIC 7862, Staff contract services; and
 - ◆ if the staff work on a longer terms basis and are supervised by staff from the services company, then the services company could be classified to the same ANZSIC class as the mining company, and hence included in industry estimates.

POSSIBLE CONTRACT ARRANGEMENTS *continued*

- The contract services are provided by another company but comprise only part of the mining operation; in this case, the company supplying the staff could be classified to the ANZSIC class reflecting the primary activity of that company, which could be Construction, Transport, etc. or ANZSIC 1520, Other mining services. This situation is probably the most common within the industry. There are many contracting companies employed to undertake a single task or a range of tasks, within a mine site.
- The entire mine operation is carried out by a contracting company. In this case, the contracting company would be classified according to the deposit type and therefore would be a component part of the industry.

CONTRACT MINING EXPENSES IN 1995–96 AND 1996–97

In 1995–96 and 1996–97 the ABS collected contract mining expenses as a separate data item. In 1995–96 the ABS also asked for the name of the major contractor involved in the operations of a mine site and details of contract mining expenses.

While the information collected in 1995–96 enabled identification of most of the major contractors involved, the expenses data collected in 1995–96 and 1996–97 did not allow for the extraction of labour expenses. The information collected was also insufficient to determine the correct treatment of contract mining activities.

At the establishment level, the total contract mining expenses in 1995–96 and 1996–97 were \$1.9b and \$2.2b respectively, accounting for 12% and 13% of the total operating expenses.

Table 9.1 contains contract mining expense data by industry for 1995–96 and 1996–97.

9.1 CONTRACT MINING EXPENSES

<i>Industry</i>	1995–96 \$m	1996–97 \$m
Coal mining	308.5	405.9
Oil and gas extraction	1.2	12.2
Iron ore mining	268.8	302.8
Bauxite mining	4.5	6.5
Copper ore mining	87.1	109.0
Gold ore mining	1 035.8	1 019.0
Mineral sand mining	43.9	41.8
Silver-lead-zinc ore mining	14.5	22.0
Other metal ore mining	141.4	245.6
<i>Total metal ore mining</i>	<i>1 596.0</i>	<i>1 746.7</i>
Total coal mining, oil and gas extraction and metal ore mining	1 905.7	2 164.8
Total operating expenses(a)	15 167.0	16 257.5

(a) Includes purchases and selected expenses and wages and salaries.

Source: ABS (unpub.)a.

1997–98 COLLECTION

For the 1997–98 collection, the ABS has developed a more detailed set of questions which include:

- total contract mining expenses;
- the nature of the work undertaken and the amount of the two largest items included in contract mining expenses; and
- the names of the main contractors involved in the work.

These questions will provide information about the industries to which the contractors may be classified and the likely ABS collections for which they may be in scope. The ABS will be investigating the feasibility of integrating the data for the relevant businesses from these other collections with data collected via the mining industry collection to provide an estimate of total employment within the industry.

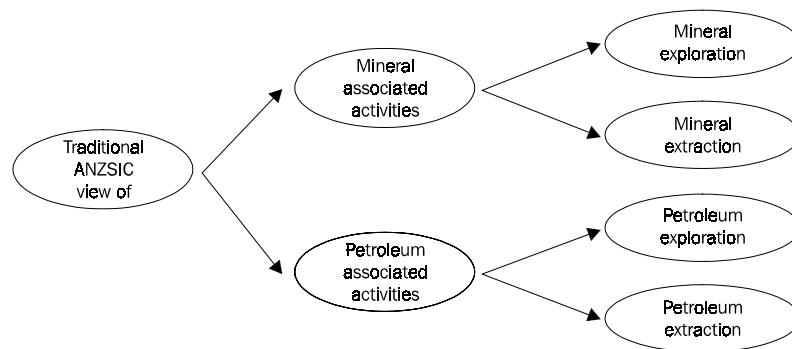
The results of this analysis will be published in the 1997–98 issue of this publication, due for release in 1999.

INTRODUCTION

The ABS currently defines the mining industry according to ANZSIC.

Under this classification, mining covers the group of industries shown in the diagram below.

10.1 MINING INDUSTRY, ANZSIC View



In ANZSIC, mining broadly relates to the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas, by such processes as:

- underground mining;
- open-cut extraction methods;
- quarrying;
- operation of wells or evaporation pans;
- dredging or recovering from ore dumps or tailings; and
- all supplementary activities aimed at preparing the crude materials for marketing.

Supplementary activities are included if they are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption and purifying plants are also included.

Refining or smelting of minerals or ores (other than preliminary smelting of gold), or manufacturing of such products of mineral origin as coke, cement and fertilisers are excluded from mining. For example, the primary activities included in the Metal ore mining subdivision are ore mining, ore dressing or beneficiating, ore leaching, and dredging. The main metal ores included are iron, bauxite, copper, gold, nickel, silver-lead-zinc as well as mineral sand mining. This subdivision excludes units mainly engaged in custom smelting or refining of the ore which are included in the Manufacturing division.

INTRODUCTION *continued*

Some downstream mining and petroleum activities, principally smelting and some final processing stages such as refining, are classified as manufacturing activities. This primary upgrading of mining commodities and their associated activities is included in manufacturing classes although these operations are dependent on output from mining.

Under ANZSIC a business is assigned a single industry classification on a predominant basis, even though it may often engage in a number of activities. For example, a mining business classified to iron ore mining, can be involved in exploration, mineral extraction, site preparation as well as metal refining and smelting.

BROADENING THE VIEW

The traditional ANZSIC definition of mining can be collated with other related industries to reflect a broader picture of the mineral and resources sector. The predominant industries of interest include Manufacturing, Construction, Transport and storage, as well as selected Property and business services.

A complication arises from the fact that relevant information for some activities would not be available at the level required. For example, Site preparation services are classified to the Construction industry. This class includes activities such as mine site preparation but also demolition of buildings and other structures as well as explosive laying. An associated issue relates to contract work where a mining company contracts out part of its operations. Unless these contractors actually undertake mineral extraction, they are classified to the industry of their business activity, which may not be mining. For example, companies assisting in the set up of mine site infrastructure may be classified to Non-building construction and Non-residential building construction. The provision of catering services would be included in Cafes and restaurants.

Activities such as Transport and storage also include statistical information relating to industries other than mineral and mining industries. While the minerals industry is a major user of Australia's port facilities and surface transportation system, a significant proportion of the transport is provided by businesses in other industries.

However, it may be possible to dissect out the resources-related activities of the Transport and storage industry. In particular, pipeline transport activities are dominated by resource usage, and so may be included in a broader view. Water transport and port services may be readily identifiable, as it is believed that minerals and metals represent more than 80% of outward bound cargoes through ports dedicated to resource exports. Rail services provided to the resource industry may also be available from the respective State rail authorities.

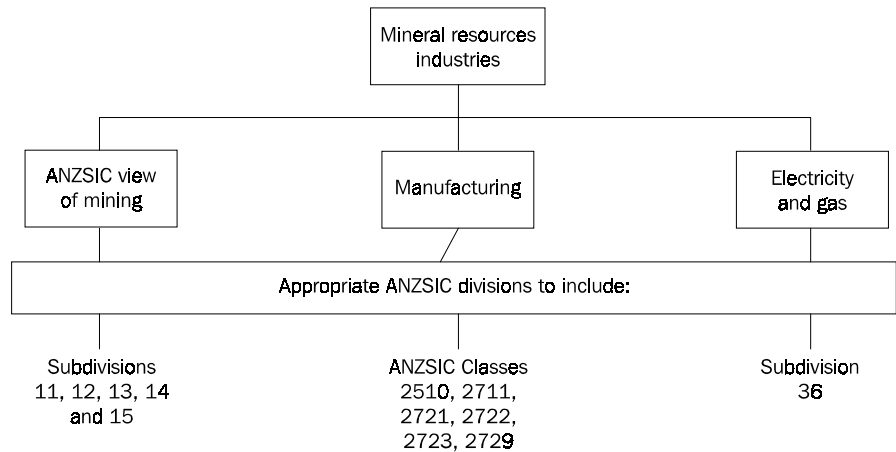
Other such services are Surveying services, Consultant engineering services and Technical services. Activities within these ANZSICs relate to the mining industry and other industries.

BROADENING THE VIEW *continued*

The classes mentioned above are all in some way associated with mineral activity. However, they cannot simply be aggregated to reflect a resources picture because of the other components that are included in them. To identify individual activities would involve extensive changes to current collection procedures where respondents would be expected to provide additional information relating to the activities they are primarily involved in. This is not a feasible option in the short term.

A pragmatic and achievable view of the mineral and resources industries is summarised below. It includes the mining industry and related mineral activity from the manufacturing industries plus the energy sector to reflect a better picture of the mineral and resources industries in terms of exports, imports, employment, capital expenditure, profits, sales and overall industry performance. It should be noted that initially only the summarised data will be available, relating to the total framework, and data requests for lower level data would need to be reviewed for confidentiality prior to release.

10.2 MINERAL RESOURCES INDUSTRIES, Broader View



Note: This model could also be expanded to include ANZSIC 6501, Pipeline transport and 662 Services to transport.

Table 10.3 illustrates how the available data can be aggregated to provide a broader view of mining.

10.3 BROAD VIEW OF MINING

ANZSIC	Industry	1995-96.....		1996-97.....	
		Turnover	Employment	Turnover	Employment
		\$m	no.	\$m	no.
Subdivision	Mining				
11	Coal mining	10 281	25 487	10 912	25 760
12	Oil and gas extraction	8 039	4 228	9 047	3 567
13	Metal ore mining	13 756	26 824	14 142	27 059
14(a)	Construction material mining	2 216	7 651	2 111	7 084
15(a)	Services to mining	2 461	14 793	3 187	18 118
	<i>Total</i>	36 753	78 983	39 399	81 588
Class	Manufacturing				
2510	Petroleum refining	6 622	3 584	7 647	3 673
2711	Basic iron and steel manufacturing	9 011	20 791	8 980	20 420
2721	Alumina production	3 171	6 110	3 013	5 752
2722	Aluminium smelting	3 832	5 479	3 159	5 221
2723	Cooper, silver, lead, zinc smelting and refining	2 825	3 328	2 403	3 010
2729	Basic non-ferrous metal manufacturing n.e.c.	1 783	1 983	1 736	1 626
	<i>Total</i>	27 244	41 275	26 938	39 702
Subdivision	Electricity and gas				
36	Electricity and gas supply	24 066	43 658	24 207	40 290
	Total	88 063	163 916	90 544	161 580

(a) Establishment level data not available, management unit level data is quoted.

Source: ABS (unpub.)a; ABS 1998a.

INTRODUCTION

For the 1996–97 financial year, mining management units were asked a range of questions in order to determine their total expenditure on measures to prevent, reduce or eliminate wastes and pollution or any other degradation of the environment. These included capital and current expenditure on environmental protection, and research and development (R&D) expenditure on environmental protection. These questions were comparable with those asked in previous years, but were based on a different framework. For an explanation of the change in collection framework, refer to the ABS (1998b).

Capital expenditure on environmental protection in the mining industry was defined as: expenditure on any element of the production processes specifically concerned with protecting the environment by prevention, reduction or elimination of pollution, wastes or other environmental degradation. This could be either by remedial (end-of-line) or by preventative (change-in-production) measures.

Remedial measures included the cost of treating pollutants after they have been produced by installing distinct abatement and control facilities; expenses to remove and dispose of wastes; and construction of civil works and/or facilities to recreate ecosystems by ripping compacted surfaces or revegetation.

Change-in-production measures, on the other hand, reduce or eliminate the production of wastes or pollution by preventing its occurrence. This can be achieved by improved mining techniques or equipment alteration including the use of equipment converted to use fuels that generate less pollution.

These two methods could be further elaborated by considering the type of environmental protection activity involved, i.e. rehabilitation of mine sites and protection of native plants and animals, management of hazardous and non-hazardous solid wastes, protection of air and climate, reduction or prevention of water pollution, protection of soil and groundwater, and other environmental protection activities.

Current expenditure on environmental protection in the mining industry was defined as: expenditure to operate or maintain plant and equipment to prevent, reduce or eliminate pollution or other degradation of the environment, including wages and salaries of employees; payments to contractors to remove and dispose of waste; costs associated with wind and water erosion, on-going site rehabilitation, and regular sampling tests; related R&D expenditure; outlays on environmental impact assessments and audits; and payments to government agencies for environmental taxes, levies, fines and licences.

Table 11.1 summarises current and capital environment expenditure during 1996–97.

CURRENT EXPENDITURE

Reported data indicate that 90% (\$165m) of current expenditure was in the other category (e.g. environmental impact statements, environmental audits, energy audits). This category also included the cost of mine site rehabilitation which was a significant environmental remediation measure undertaken by mining operations.

CAPITAL EXPENDITURE

Capital expenditure on pollution abatement and control is split into two separate elements, end-of-line and change-in-production. End-of-line techniques accounted for 92% of capital expenditure while change-in-production accounted for the remaining 8%. End-of-line measures are seen as most appropriate for mining activity. The ability to accurately report change-in-production expenditure specifically attributable to environmental protection is problematic as this may be undertaken for other reasons, including cost savings.

11.1 EXPENDITURE ON ENVIRONMENT PROTECTION, Industry Subdivision

<i>Items</i>	<i>Total coal mining, oil and gas extraction and metal ore mining</i>			
	<i>Coal mining</i>	<i>Oil and gas extraction</i>	<i>Metal ore mining</i>	
Current expenditure				
Government fees, charges and taxes (\$m)	1.9	0.5	3.5	5.9
Research and development (\$m)	5.1	0.4	7.9	13.3
Other expenditure (\$m)	51.6	21.0	92.5	165.1
<i>Total (\$m)</i>	58.5	21.9	103.9	184.3
Capital expenditure				
End-of-line techniques (\$m)	41.2	10.2	63.4	114.7
Change-in-production processes (\$m)	3.2	0.2	5.8	9.2
<i>Total (\$m)</i>	44.4	10.4	69.2	123.9
Total expenditure (\$m)	102.9	32.3	173.0	308.2
Expenditure on environment protection compared with total mining expenditure				
Current expenditure on environment (\$m)	58.5	21.9	103.9	184.3
<i>Total current expenditure (\$m)</i>	6 023.4	1 824.2	8 819.2	16 666.7
Proportion spent on environment (%)	1.0	1.2	1.2	1.1
Capital expenditure on environment (\$m)	44.4	10.4	69.2	123.9
<i>Total capital expenditure (\$m)</i>	1 357.6	1 434.0	2 953.3	5 744.9
Proportion spent on environment (%)	3.3	0.7	2.3	2.2

Source: ABS (unpub.)b.

CHAPTER 12

OVERSEAS TRADE

EXPORTS

Exports of mining products rose in value in 1996–97 by 8% to \$17.9b. Mining products accounted for 23% of Australia's goods exports in 1996–97.

Both oil and gas, and metal ore mining increased in revenue in absolute and relative terms.

The mining export price index rose in 1996–97 by 1% with metal ore mining contributing most to the increase.

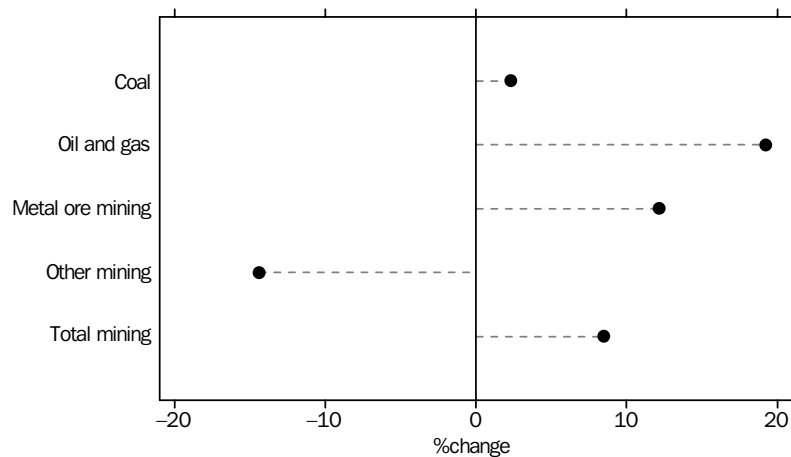
12.1 EXPORTS, Industry of Origin

ANZSIC division/subdivision	1995–96.....		1996–97.....	
	\$m	%	\$m	%
Mining				
11 Coal mining	7 784	10	7 964	10
12 Oil and gas extraction	3 162	4	3 771	5
13 Metal ore mining	5 342	7	5 991	8
14 Other mining	250	—	214	—
<i>Total</i>	<i>16 537</i>	<i>22</i>	<i>17 940</i>	<i>23</i>
Manufacturing	48 604	64	48 494	61
Agriculture, forestry, fishing and hunting	9 107	12	10 779	14
Other industries(a)	1 717	2	1 724	2
Total exports	75 965	100	78 937	100

(a) Includes commodities subject to a 'No commodity details' restriction. See Explanatory Notes in ABS 1997d.

Source: ABS 1997d; FASTTRACCS (database), ABS.

12.2 CHANGE IN VALUE OF EXPORTS—1995–96 to 1996–97



Source: ABS 1997d.

EXPORTS *continued*

The Northeast Asia region was the main market for Australian mining commodities, taking 56% of the total value of mining exports in 1996–97. Shares for other regions were: Europe 11%, Southern Asia (includes India) 4%, and Southeast Asia (including Indonesia, Singapore, Thailand) 4%.

The Northeast Asia sales were predominantly to Japan, and to a lesser extent, Republic of Korea, Taiwan and China. In 1996–97, 45% of coal, 13% of oil and gas, and 33% of metal ore was exported to Japan; 12% of coal and 10% of metal ore was exported to the Republic of Korea; 7% of coal was exported to Taiwan; and 13% of metal ore was exported to China.

There were significant exports classified as having 'No country of destination' for 1996–97, for both coal mining, and oil and gas extraction. This affects the above regional trade comparisons.

12.3 EXPORTS, Country of Destination

	1995-96	1996-97
<i>Principal country/region</i>	\$m	\$m
Coal mining		
Oceania	11	8
Europe	967	1 039
United Kingdom	219	243
France	154	152
Belgium-Luxembourg	119	141
Middle East and North Africa	211	219
Southeast Asia	68	78
Northeast Asia	4 964	5 344
Japan	3 331	3 622
Republic of Korea	980	967
Taiwan	519	595
Southern Asia	690	683
India	657	652
Northern America	8	8
South and Central America	272	276
Brazil	186	158
Africa (excluding North Africa)	—	9
No country details(a)	594	301
<i>Total</i>	<i>7 784</i>	<i>7 964</i>
Oil and gas extraction		
Oceania	94	165
New Zealand	89	164
Europe	23	8
Southeast Asia	478	446
Indonesia	234	216
Singapore	144	95
Northeast Asia	1 196	1 229
Japan	664	501
Taiwan	344	352
Republic of Korea	106	196
North America	146	370
South America	—	15
No country details(a)	1 225	1 537
<i>Total</i>	<i>3 162</i>	<i>3 771</i>
Metal ore mining		
Europe and the former USSR	687	890
Germany	164	230
Finland	151	179
United Kingdom	134	171
Middle East	27	24
Southeast Asia	94	136
Northeast Asia	3 199	3 511
Japan	1 759	1 957
China	718	806
Republic of Korea	569	582
Taiwan	150	165
Southern Asia	51	69
Northern America	27	83
South and Central America	—	7
Africa (excluding North Africa)	—	9
No country details(a)	1 258	1 262
<i>Total</i>	<i>5 342</i>	<i>5 991</i>
Other mining	250	214
Total mining exports(b)	16 537	17 940

(a) Includes commodities subject to a 'No country details' restriction.

(b) Excludes commodities subject to a 'No commodity details' restriction. See Explanatory Notes in ABS 1997d.

Source: ABS 1997d.

EXPORTS *continued*

The export price index measures changes in the prices of all merchandise exports from Australia.

12.4 EXPORT PRICE INDEX(a)(b)

ANZSIC subdivision	1995-96	1996-97
Mining	100.0	101.3
11 Coal mining	103.5	102.9
12 Oil and gas extraction	117.7	119.1
13 Metal ore mining	93.5	94.9
Manufacturing	98.0	92.5
Agriculture, forestry, fishing and hunting	85.1	80.6

(a) Base: 1989-90 = 100.0.

(b) The indexes of aggregate Australian export prices are compiled by weighting together components of the Export Price Index.

Source: ABS 1997b.

IMPORTS

The value of imports of mining products rose by \$959m (30%) to \$4.2b in 1996-97. The increase was almost wholly due to imports of petroleum products from the oil and gas extraction industry which was the largest mining product importer.

12.5 IMPORTS, Industry of Origin

ANZSIC division/subdivision	1995-96.....		1996-97.....	
	\$m	%	\$m	%
Mining				
11 Coal mining	12	—	10	—
12 Oil and gas extraction	2 911	4	3 880	5
13 Metal ore mining	129	—	132	—
14 Other mining	150	—	138	—
Total	3 201	4	4 160	5
Manufacturing	73 585	95	73 775	93
Agriculture, forestry, fishing and hunting	795	1	741	1
Other industries(a)	253	—	301	—
Total imports	77 834	100	78 977	100

(a) Includes commodities subject to a 'No commodity details' restriction. See Explanatory Notes in ABS 1997d.

Source: ABS 1997d.

12.6 IMPORT PRICE INDEX(a)(b)

<i>ANZSIC division/subdivision</i>	1995-96	1996-97
Mining	104.5	115.5
12 Oil and gas extraction	103.5	117.8
Manufacturing	113.5	106.8
Agriculture, forestry and fishing	136.3	128.0

(a) Base: 1989-90 = 100.0

(b) The indexes of aggregate Australian import prices are compiled by weighting together components of the ABS Import Price Index.

Source: ABS 1997c.

The data in this section are extracted from United States Department of the Interior (1998) which provides estimates for the 1997 non-fuel mineral industry.

As a leading mineral resource nation, Australia is the world's largest producer of bauxite, diamonds, lead, tantalum and the mineral sand concentrates ilmenite, rutile and zircon.

13.1 SELECTED MINERALS, Production—1997
.....

<i>Mineral</i>	<i>Australian proportion of estimated world production</i>	<i>Australia's ranking in world production</i>
	<i>%</i>	<i>rank</i>
Bauxite(a)	37.8	1
Copper in ores and concentrates	4.6	=6
Diamond(b)	37.1	1
Gold in ores and concentrates	12.6	3
Iron ore	14.6	3
Lead in ores and concentrates	18.3	1
Lithium in ores and concentrates(a)(c)	18.2	3
Manganese in ores and concentrates	13.3	2
Mineral sands		
Ilmenite(a)(d)(e)	34.0	1
Rutile(a)(d)	45.9	1
Zircon(a)(f)	55.4	1
Nickel in ores and concentrates	11.1	4
Salt	4.2	7
Silver in ores and concentrates	7.2	5
Tantalum(g)	73.4	1
Tin in ores and concentrates	4.5	6
Zinc in ores and concentrates	14.1	2

- (a) Excludes United States of America production.
- (b) Includes industrial diamond.
- (c) Lithium content.
- (d) Titanium dioxide content.
- (e) Includes synthetic rutile.
- (f) Lithium content.
- (g) Tantalum content. Figures exclude production of tantalum contained in tin slags.

Source: United States Department of the Interior 1998.

13.2 SELECTED MINERALS, Principal Producing Countries—1997

<i>Mineral</i>	<i>Country</i>	<i>Production</i>
Bauxite		44 Mt
Copper in ores and concentrates	Australia	3 380 kt
Diamond(a)	Chile	23 Mct
Gold in ores and concentrates	Australia	490 t
Iron ore	South Africa	260 Mt
Lead in ores and concentrates	China	530 kt
Lithium in ores and concentrates(b)	Australia	4 500 t
Manganese in ores and concentrates	Chile	1 320 kt
Mineral sands	South Africa	
Ilmenite(c)(d)		1 190 kt
Rutile(c)	Australia	190 kt
Zircon(e)	Australia	500 kt
Nickel in ores and concentrates	Australia	230 kt
Salt	Russia	42 Mt
Silver in ores and concentrates	United States	2 500 t
Tantalum(f)	Mexico	290 000 kg
Tin in ores and concentrates	Australia	60 kt
Zinc in ores and concentrates	China	1 200 kt

(a) Includes industrial diamond.

(b) Lithium content.

(c) Titanium dioxide content.

(d) Includes synthetic rutile.

(e) Zirconium content.

(f) Tantalum content.

Source: United States Department of the Interior 1998.

EXPLANATORY NOTES

INTRODUCTION

1 A range of financial statistics appearing in this publication have been derived from the 1996–97 Collection of Mining Operations. The collection aims to meet demands of users who require annual financial statistics which can be related to other industry sectors in Australia on a consistent basis. In addition, some tables contain statistical information that has been obtained from other ABS collections or sources external to the ABS.

2 The Collection of Mining Operations is conducted as a component of the ABS integrated economic statistics system. Data collected at the industry level within this framework conform to the same basic conceptual standards, allowing comparative analysis between different industries and industry sectors.

3 The data for 1995–96 are now final and replace those previously issued in the 1995–96 issue of this publication, released in April 1998.

SCOPE

4 The 1993 version of ANZSIC has been used to classify management units (and establishments) included in the Collection of Mining Operations. The mining classifications as listed in Division B are as follows:

- 110 Coal mining
 - 1101 Black coal mining
 - 1102 Brown coal mining
- 120 Oil and gas extraction
 - 1200 Oil and gas extraction
- 131 Metal ore mining
 - 1311 Iron ore mining
 - 1312 Bauxite mining
 - 1313 Copper ore mining
 - 1314 Gold ore mining
 - 1315 Mineral sand mining
 - 1316 Nickel ore mining
 - 1317 Silver-lead-zinc ore mining
 - 1319 Metal ore mining n.e.c.
- 141 Construction material mining
 - 1411 Gravel and sand quarrying
 - 1419 Construction material mining n.e.c.
- 142 Mining n.e.c.
 - 1420 Mining n.e.c.
- 151 Exploration
 - 1511 Petroleum exploration (own account)
 - 1512 Petroleum exploration services
 - 1513 Mineral exploration (own account)
 - 1514 Mineral exploration services
- 152 Other mining
 - 1520 Other mining services

SCOPE *continued*

5 Mining broadly relates to the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas, by such processes as underground mining, open-cut extraction methods, quarrying, operation of wells or evaporation pans, dredging or recovering from ore dumps or tailings. Activities such as dressing or beneficiating ores or other minerals by crushing, milling, screening, washing, flotation or other processes (including chemical beneficiation) or briquetting, are included because they are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption and purifying plants are also included.

6 Establishments mainly engaged in refining or smelting of minerals or ores (other than preliminary smelting of gold), or in the manufacturing of such products of mineral origin as coke, cement and fertilisers are excluded. Also excluded from the collection are any establishments with no employees (i.e. sole proprietors). These have been omitted because they are not considered to be statistically significant. Typical of these are itinerant and part-time miners, particularly in the gemstone industry and, to a lesser extent, in the copper and tin industries.

7 Mining activity is sometimes undertaken within an establishment mainly engaged in other activities (e.g. a manufacturing establishment). Statistics relating to the mining activity in this situation is not treated as part of the mining industry, and therefore not included in this publication, unless the transfers out of minerals exceed a specific value (\$7.2m in 1996–97). While this does not have a great impact on the data produced for the coal, oil and gas, and metallic minerals industries due to the predominance of large operations within those industries, it does affect to a greater extent the non-metallic and construction materials industries.

8 It should be noted that companies engaged in providing contract mining services are not always collected within the scope of the annual collection. Under the principles set down within ANZSIC, contract mining organisations will only be included if they are responsible for all facets of the mining operation at a particular site.

9 In situations where companies provide contract mining services to the mining industry, these companies are classified to the activity they are performing rather than to the industry they are serving. Hence companies that are ‘contracted’ to perform tasks such as mine site preparation (and/or construction), and removal of overburden are classified to the Construction industry and are outside the scope of the annual collection.

10 The annual Collection of Mining Operations now covers all ANZSIC classes from Division B. Subdivision 15 (Services to mining) was collected for the first time in 1995–96 using a sample survey and will continue to be collected this way on an annual basis. All of Subdivision 14 (Other mining) was collected in 1996–97. ANZSIC Group 141 (Construction material mining) was collected using a sample survey.

STATISTICAL UNIT

11 This publication principally presents statistics relating to management units. Such statistics are compiled differently from establishment statistics. Each management unit is classified to a single industry irrespective of any diversity of activities undertaken. The industry allocated is the one which provides the main source of income for the management unit. This means, for example, that a management unit which derives most of its income from mining activities would have all operations included in the aggregates and ratios for the mining industry group, even if significant secondary activities (e.g. manufacturing, construction) were undertaken.

12 This publication also includes some data on the establishment basis. Prior to the 1989–90 collection, this unit covered, in general, all the operations carried on under the ownership of one enterprise (business) at a single physical location. A combination of factors (including better communication and transport facilities and greater automation allowing management to be spread over a number of locations) has changed the way businesses are managed and made it increasingly difficult to obtain information under the locational definition. This has required increasing degrees of estimation to maintain the statistical series.

13 To overcome these quite significant reporting problems, the ABS modified its units definitions to align them more closely with industry practices.

MANAGEMENT UNIT

14 The management unit is the highest-level unit within a business, having regard to industry homogeneity requirements, for which accounts are maintained; in nearly all cases it coincides with the legal entity owning the business (i.e. company, partnership, trust, sole operator, etc.). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.

ESTABLISHMENT

15 The establishment is the smallest accounting unit of a business, within a State or Territory, controlling its productive activities and maintaining a specified range of detailed data including data enabling calculation of value added. In general an establishment covers all operations at a physical location, but may consist of a group of locations provided they are within the same State or Territory and classified to a single industry. The majority of establishments operate at one location only.

16 The differences in definition of management unit and establishment sometime result in different values being obtained for certain data items. For example, employment at the establishment level only includes those employees that are involved in that industry, whilst employment at the management unit level includes all employees of that business unit. This often includes employees who would be included in a different industry at the establishment level (e.g. sales staff, head office staff and staff involved in manufacturing activity using mining products).

ESTABLISHMENT *continued*

17 Separately located administrative offices and ancillary units such as storage premises, laboratories and producers sales branches continue to have their activities included with mining activities, unless these ancillaries constitute a separate accounting unit, in which case they are defined as a separate establishment.

18 The statistical treatment of UJVs from 1989–90 has included the creation of separate establishments for individual participants in a joint venture. This has resulted in inflation of establishment counts in a number of industries. For this reason, establishment counts should not be taken to represent the operations at a single physical location.

REFERENCE PERIOD

19 The period covered by the collection is, in general, the 12 months ended 30 June. Where businesses are unable to supply information on this basis, an accounting period for which data can be provided is used for data other than that relating to employment.

20 Presented data relate to management units and establishments which operated at any time during the year. Unless otherwise stated, details for management units and establishments which are being set up but are not yet in productive operation also are included.

MINERAL PRODUCTION DATA

21 Details are presented about the quantity and value of minerals produced during the year ended June 1997.

22 From 1996–97, data published for mineral production will be derived solely from information supplied directly to the ABS through the mining collection. The scope of the ABS collection is confined to establishments which are classified to ANZSIC Division B, Mining and excludes establishments which may be producing minerals as a secondary activity (refer to paragraph 7 of these Explanatory Notes).

PRINCIPLES FOR MEASURING QUANTITY AND VALUE OF MINERALS

23 The quantities of individual minerals produced are recorded, in general, in the form in which the minerals are dispatched from the mine or from associated treatment works in the locality of the mine. For metallic minerals, the output is recorded as ore if no treatment is undertaken at or near the mine, and as concentrate if ore dressing operations are carried out in associated works in the locality of the mine.

24 Quantity statistics in this publication are quantities produced during the year. The data cover, in addition to quantities produced for sale, quantities for transfer to other establishments of the management unit and quantities for consumption by the mine itself. In the case of some minerals (e.g. those which do not have a marketable value until they are sold or dispatched from a mine) the quantities reported are dispatches or sales from the mine, rather than production, and the corresponding value of production refers to value of minerals dispatched or sold.

25 The production of individual minerals is valued at the mine or at associated treatment works in the locality of the mine. The valuation is derived, in general, by valuing the quantity produced during the year at the unit selling value, less any transport costs from the mine or associated treatment works to the point of sale.

INDUSTRY PERFORMANCE MEASURES

26 A range of performance measures expressed as ratios are produced from the data available from profit and loss statements and balance sheets of businesses.

This publication presents only a selection of these. While these are a useful way of presenting summaries of performance, users of these statistics should note the limitations referred to below before making any judgments based on these results. Comment from analysts on the need for, and use of these or other measures would be welcomed by the ABS.

27 Users should take particular note of the following limitations in respect of the ratios presented in this publication. Assessment of individual business performance based on comparisons with industry estimates may be misleading. There may be circumstances peculiar to the business in question which should be taken into account. For example, it may be undertaking a program of expansion, contraction, diversification or amalgamation during the period under review. Analysis of movements in performance indicators of the business and industry over a number of years would be more appropriate.

28 Differences in accounting policy and practices across businesses and industries lead to some inconsistencies in the data input to these estimates. While much of the accounting process is subject to standards, there is still some flexibility left to managers in the accounting policy and practices they adopt. For example, acceptable methods of asset valuation include historical cost, replacement cost and current market value. The timing of asset revaluations also varies considerably across businesses.

29 The way profit is measured is affected by management policy on such things as depreciation rates, bad debt provisions and write off and goodwill write off. The varying degrees to which businesses decide to consolidate their accounts may affect the quality of the ratios calculated. In general, the effect of consolidation is to 'net out' some of the transactions between related business units and this may affect some ratios. In arriving at industry estimates of ratios at the management unit level, assets and liabilities may not have been 'netted out' between related businesses in the same industry.

30 Finally, use of a single ratio in any analysis is to be avoided because taken alone it could be misleading. Often the interpretation of one ratio is influenced by the value of others.

31 The above limitations are not meant to imply that analysis based on ratios should be avoided. However, they should be borne in mind when making any commentary or decisions based on these types of statistics.

32 The ratios presented in this publication are categorised as follows:

- turnover ratios indicate the efficiency of selling activities (including the sale of services as well as goods);
- profitability ratios measure rates of profit on sales, funds and assets;
- liquidity ratios measure the ability of businesses to meet short-term financial obligations, i.e. how quickly it can convert selected assets into cash;
- debt ratios indicate the extent to which debt is used as an alternative to financing through equity and the ability of businesses to meet the cost of such financing;
- labour ratios measure the relative profitability, product and costs of labour; and
- capital expenditure ratios indicate the extent to which businesses invest in capital assets.

33 A further explanation of each ratio can be found in the Glossary.

CONCENTRATION STATISTICS

34 Industry concentration statistics provide measures of the extent to which a few management units predominate in individual industries. They are useful in

assessing the degree of competition in an industry. These statistics provide measures of concentration in industries as a whole and therefore are not measures of concentration in the market for commodities or activities. The concentration statistics provided in this publication relate to Australia as a whole. Similar information is not available for States and Territories or other regional areas.

35 The following steps outline the method used to calculate concentration ratios for each industry:

- Management units were ranked in descending order according to the size of their contribution to the total turnover of the industry.
- For the purpose of the total concentration statistics table, the ranked management units were brought together into the following cumulative categories:
 - ◆ largest 12 management units;
 - ◆ largest 25 management units;
 - ◆ largest 50 management units;
 - ◆ largest 100 management units; and
 - ◆ largest 200 management units.
- For the purpose of the industry class concentration statistics table, the ranked management units were brought together into categories of four units, in the following sequence:
 - ◆ largest four management units;
 - ◆ second largest four management units;
 - ◆ third largest four management units; and
 - ◆ remaining management units owning or controlling establishments in the industry.

36 However, this break up is not available for a number of the industries because of the need to avoid disclosure of confidential data.

37 Each of the categories of four management units comprises statistics of units which were in operation in the industry concerned at any time during the year 1995–96. Included also are particulars of establishments which had not commenced operation by the end of June 1996, but had paid wages and salaries and/or had incurred capital expenditure. In a small number of cases, however, the item ‘number of management units’ for a category is not ‘four’ for the following reasons.

38 Where a management unit ceased operation before the end of June 1996 within the industry concerned, the management unit is not counted in the ‘number of management units’, but its activities are included where appropriate, in the items turnover, value added etc. Where there are fewer than 20 management units owning or controlling establishments in an industry, the last category in which data are shown is a residual category.

39 For each of the categories of management units in paragraph 37 the contribution of the category to the total for the industry was determined for each of the data items. The contribution is shown in the tables as an absolute amount and as a proportion of the total for the industry. Categories of four management units were chosen to conform with international practice and to facilitate comparison of concentration patterns in Australian industries with those in other countries.

RELIABILITY OF ESTIMATES

40 Data presented in this publication for Services to mining are based on information collected from a sample of businesses and are, therefore, subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all businesses in the population. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because the data were obtained from only a sample of units. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the data had been obtained from all units, and about 19 chances in 20 that the difference will be less than two standard errors.

41 The standard error can also be expressed as a percentage of the estimate, and is known as the relative standard error. Estimates highlighted with an asterisk (*) indicate they are subject to sampling variability between 25% and 50%. Those estimates highlighted with ** are subject to sampling variability greater than 50%. Detailed estimates of relative standard errors can be made available upon request.

42 The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of inadequacies in available sources from which the population frame was compiled, imperfections in reporting from providers, errors made in collection such as recording and coding data, and errors made in processing data. Inaccuracies of this kind are referred to collectively as non-sampling error and they may occur in any enumeration, whether it be a census or a sample. Every effort is made to reduce non-sampling error to a minimum by careful design of questionnaires, editing processes, and efficient operating procedures.

ACKNOWLEDGMENT

43 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is appreciated: without it, the 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

44 The following is a list of ABS publications containing mining and related statistics for Australia either used in the preparation of this publication or containing related information:

Data for Merchandise Exports and Imports were obtained using the ABS electronic system FASTTRACCS

1991 Census—Census Characteristics of Australia (Cat. no. 2710.0)

Actual and Expected Private Mineral Exploration, Australia
(Cat. no. 8412.0)—quarterly

Business Operations and Industry Performance, Australia (Cat. no. 8140.0)

Electricity, Gas, Water and Sewerage Industries, Australia (Cat. no. 8208.0)

Environment Protection Expenditure, Australia (Cat. no. 4603.0)

Export Price Index, Australia (Cat. no. 6405.0)—quarterly

Import Price Index, Australia (Cat. no. 6414.0)—quarterly

International Merchandise Trade, Australia (Cat. no. 5422.0)—quarterly

Job Vacancies and Overtime, Australia (Cat. no. 6354.0)—quarterly

Labour Force, Australia (Cat. no. 6203.0)—monthly

Manufacturing Industry, Australia (Cat. no. 8221.0)

RELATED PUBLICATIONS *continued*

Manufacturing Production, Australia (Cat. no. 8301.0) which includes details of the production quantity of 27 important manufactured commodities (including electricity and gas)—issued approximately four weeks after the month to which it relates

Mining, Electricity and Gas Operations, Australia, Preliminary
(Cat. no. 8401.0)

Mining Technology Statistics, Australia (Cat. no. 8413.0)

Research and Experimental Development Business Enterprises, (Inter-Year Survey), Australia (Cat. no. 8114.0)

Year Book Australia (Cat. no. 1301.0)

45 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 the Release Advice are available from any ABS office.

Other data

46 The following publications containing other mining and related statistics for Australia are published by organisations other than the ABS.

Australian Commodities: Forecasts and Issues (ABARE)

Australian Commodity Statistics (ABARE)

Australian Mineral Statistics (ABARE)

Australian Petroleum Exploration and Development Statistics (BRS)

Australia's Identified Mineral Resources (BRS)

Ecologically Sustainable Development Working Groups—Final Report—Mining, November 1991, AGPS, 1991

Mineral Commodity Summaries, United States Department of the Interior,
Bureau of Mines

Oil and Gas Resources of Australia (BRS)

UNPUBLISHED STATISTICS

47 While the statistics presented in this publication provide a comprehensive picture of the mining industry, additional information is available from the mining collection and other ABS data sources. Unpublished information is generally made available on request, subject to it satisfying quality and confidentiality guidelines associated with the release of such data. The charges for these services vary according to the time required to extract, tabulate and evaluate the data.

48 Inquiries should be made to the officer named on the front cover of this publication.

ABBREVIATIONS AND SYMBOLS

49 The following abbreviations and symbols have been used in this publication:

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BRS	Bureau of Resource Sciences
EBIT	Earnings before interest and tax
EDR	Economic demonstrated resource
R&D	Research and development
UJV	Unincorporated joint venture
USGS	United States Geological Survey
\$b	billion dollars—1,000 million
GL	Gigalitres
Gt	Gigatonnes
h	hours
kg	kilograms
kt	kilotonnes
Mct	Megacarats
ML	Megalitres
Mt	megatonnes
n.a.	not available
n.e.c.	not elsewhere classified
n.p.	not available for separate publication (but included in totals where applicable)
t	tonnes
*	data subject to sampling variability between 25% and 50%
**	data subject to sampling variability greater than 50%
—	nil or rounded to zero

50 Where figures have been rounded, discrepancies may occur between the sum of component items and the total.

51 The figures shown for previous years have been revised where necessary and, as a consequence, may not agree with similar data shown in previous publications.

GLOSSARY

As the data presented in this publication have been compiled from the standard financial accounts of businesses, the definition of each reported item aligns closely with that adopted in standard business accounting practice. In those instances where more than one standard or definition is available, the following paragraphs indicate which one has been chosen.

Acquisitions to disposals	The number of times that dollars spent on acquiring assets exceed dollars received for disposal of assets, i.e. Total acquisitions/Total disposals.
Asset turnover ratio	A measure of the number of times the value of sales exceeds the value of assets, i.e. Sales of goods and services/Total assets.
Bad debts	Represents the amount of bad debts written-off, net of bad debts previously written-off but recovered.
Capital expenditure	Includes all capitalised costs and progress payments made to contractors for capital work on land, dwellings, buildings and structures, and plant, machinery and equipment (both new and second-hand).
Capitalised purchases	Goods drawn from stock for use as fixed tangible assets.
Capitalised wages	Capitalised work done by own employees in manufacturing, constructing or installing assets.
Capital work done for own use	Work that is done by the employees of the business for its own use or, for rental or lease purposes. This value includes the wages of the employees as well as materials withdrawn from stock.
Change-in-production processes	The reducing or eliminating of pollutants by employing material substitution, improved catalysts, re-use of waste or water and equipment alteration. These changes may involve converting equipment to handle the use of substitute fuels that generate fewer pollutants.
Contract mining	Contract payment for mining services.
Cost of sales	The sum of purchases, selected expenses and opening stocks minus closing stocks.
Current assets	Refers to the value of closing trading stock (i.e. at the end of the financial year) plus the value of other current assets such as cash, short-term deposits, prepayments and short-term loans to employees.
Current liabilities	The book value of current liabilities at the end of the financial year. This includes provisions for employee entitlements, taxation, leave, claims, trade creditors and other accounts payable and bank overdrafts.
Current ratio	The number of times current assets exceed current liabilities, i.e. Current assets/Current liabilities.
Debt to assets	The percentage of assets financed by debt instead of equity, i.e. (Total liabilities/Total assets) x 100.

Depreciation	Includes depreciation allowed on buildings and other fixed tangible assets.
Disposal of assets	Includes the proceeds from the sale of land, dwellings, buildings, plant, machinery and equipment.
Earnings before interest and tax	A measure of profit prior to the deduction of interest expense and income tax.
Employment	Includes working proprietors, working partners, permanent, part-time, temporary and casual employees, employees on paid leave and managerial and executive employees working for a business during the last pay period ending in June.
End-of-line techniques	Treating pollutants after generation in production processes by the use of separately identifiable abatement facilities. These are installed exclusively for the purpose of abating pollutant emissions from plants or property.
Environment protection expenses	Expenses associated with the control and abatement of pollution. All activities directly aimed at the prevention, reduction and elimination of pollution arising from the production process or the consumption of goods and services are included.
Establishments at 30 June	Refers to the number of establishments in operation at 30 June.
Government subsidies: diesel fuel rebate	Reimbursement under the Diesel Fuel Rebate Scheme.
Government subsidies: operational funding	Includes bounties, subsidies and export grants but excludes diesel fuel rebate.
Industry gross product (IGP)	<p>A measure of the unduplicated gross product of a business derived by subtracting from the gross output of the business its intermediate consumption of goods and services. The formula for IGP is as follows:</p> $\begin{aligned} \text{IGP} = & \text{Sales of goods and services} \\ & \textit{plus} \\ & \text{Rent, leasing and hiring income} \\ & \text{Government subsidies} \\ & \text{Capital work done for own use} \\ & \text{Closing stocks} \\ & \textit{less} \\ & \text{Opening stocks} \\ & \text{Purchases and selected expenses.} \end{aligned}$
Industry gross product to employment	The average amount, expressed in thousands of dollars, of industry gross product for each employee, working proprietor and working partner, i.e. Industry gross product/Employment.
Industry gross product to selected labour costs	The average amount of the value of each dollar of gross product generated by each dollar input of labour, i.e. Industry gross product/Selected labour costs.
Insurance premiums	Includes premiums for fire, general, accident, public liability, optional third-party and comprehensive motor vehicle insurance, professional indemnity insurance and common law liability.
Interest coverage	The number of times that businesses can meet their interest expenses from their earnings before interest, i.e. Earnings before interest and tax/Interest expenses.

Interest expenses	Includes interest paid on loans from banks, finance companies, insurance companies and related companies.
Interest income	Includes interest received from bank accounts, loans and finance leases and earnings on discounted bills. Excludes charges between companies of the same management unit.
Liquidity ratio	The number of times current assets other than stocks exceed current liabilities, i.e. (Current assets — Closing stocks)/Current liabilities.
Management units at 30 June	Refers to the number of management units in operation at 30 June. (See paragraphs 11–13 of the Explanatory Notes for the definition of management unit.)
Motor vehicle expenses	Includes expenditure on registration fees, compulsory third-party insurance, fuel and repairs.
Net capital expenditure	The difference between total acquisitions and disposals of fixed tangible assets.
Net capital expenditure to assets	The percentage of the total book value of assets spent on net capital expenditure, i.e. (Net capital expenditure/Total assets) x 100.
Net worth	Total assets minus total liabilities, and is equal to the interest of shareholders or other owners in the assets of the business.
Non-current assets	The book value of non-current assets at the end of the financial year. This includes plant and machinery needed for normal operations, capitalised interest, property and goodwill.
Non-current liabilities	The book value of non-current liabilities at the end of the financial year. This includes employee entitlements, bank loans, debentures and unsecured notes.
Operating profit before tax	A measure of profit before extraordinary items are brought to account and prior to the deduction of income tax and appropriations to owners (e.g. dividends paid).
Other income	Includes royalty income, dividends, net profit (or loss) on the sale of fixed tangible assets and net profit (or loss) on foreign exchange. It excludes extraordinary profits or losses such as those associated with the sale of a segment of the business or goodwill revaluations.
Other selected expenses	Includes expenditure on management fees/charges paid to related and unrelated businesses, office supplies and printing costs, telephone and postage charges, travelling and entertainment expenses, accounting and legal services, advertising costs, payroll tax, fringe benefits tax, land tax, rates and computer software expenses.
Outward freight and cartage	Excludes the cost of delivery by own vehicles and employees.
Payment for contract, subcontract and commission expenses	Includes payments to other businesses and self-employed persons for work done or sales made on a contract or commission basis. Payments to persons paid by commission without a retainer also are included. Excludes contract mining.
Profit to employment	The average amount of operating profit before tax contributed by each employee, working proprietor and working partner, i.e. Operating profit before tax/Employment.

Purchases and selected expenses	At the establishment level, includes purchases of goods and materials, rent, leasing and hiring expenses, outward freight and cartage, motor vehicle expenses, repair and maintenance expenses, and payment for contract, subcontract and commission work. At the management unit level, other selected expenses also are included.
Purchases of goods and materials	<p>Include purchases of materials, components, containers, packaging materials, fuels, electricity and water, and purchases of other goods for resale. Also includes capitalised purchases.</p> <p>Note that at the establishment level, purchases of goods and materials includes the value of any transfers in of fuels, materials and/or other goods for resale.</p>
Rent, leasing and hiring expenses	Includes expenses for land, buildings and other structures; motor vehicles; and plant, machinery and other equipment.
Rent, leasing and hiring income	Includes proceeds from the rent, lease or hiring of land, buildings, machinery, vehicles and equipment.
Repair and maintenance expenses	Excludes wages and salaries paid to own employees and the repair and maintenance costs of motor vehicles.
Return on assets	Derived by expressing total operating profit before tax as a percentage of the total book value of assets, i.e. $(\text{Operating profit before tax} / \text{Total assets}) \times 100$.
Return on funds	Derived by expressing earnings before interest and tax as a percentage of the total of shareholders funds and non-current liabilities, i.e. $(\text{Earnings before interest and tax}) / (\text{Net worth} + \text{Non-current liabilities}) \times 100$.
Royalties expenses	Includes any payments made for the use of rights, information or material owned by another company or person.
Sales of goods and services	<p>Includes revenue from the sale of minerals (net of coal export levy and petroleum production excise duty) and other goods (e.g. minerals bought for re-sale, waste materials), service income (e.g. repair and service income, contract, subcontract and commission income, installation charges) and rent, leasing and hiring income.</p> <p>Note that at the establishment level sales of goods and services includes the value of transfers out of minerals and/or other goods for resale. These transfers are valued, for statistical purposes, at prices commensurate with the prices which would have been received or paid if the establishments concerned had been under separate ownership, i.e. at commercial selling price.</p>
Selected labour costs	The sum of wages and salaries, superannuation and workers' compensation. Wages and salaries include gross wages and salaries and amounts paid as severance, termination and redundancy payments to permanent, temporary, casual and part-time employees. Superannuation includes all employer contributions to superannuation schemes and any benefits paid by employers operating unfunded schemes. Workers' compensation includes premiums and any other costs incurred by the employer, not reimbursed by an insurance company. Other labour costs (e.g. payroll tax, fringe benefits tax, accommodation, meal and travelling allowances) are excluded.

Selected labour costs to employment	The average amount, expressed in thousands of dollars, of selected labour costs incurred by business (including wages, salaries, superannuation, workers' compensation premiums) for each employee, working proprietor and working partner, i.e. Selected labour costs/Employment.
Stocks — opening/closing	The value of all stocks of finished goods, work-in-progress, raw materials, fuels, containers, etc. at the beginning and end of the financial year, respectively.
Superannuation	Includes all employer contributions to superannuation schemes and any benefits paid by employers operating unfunded schemes.
Trading profit	<p>A measure of profit directly attributable to trading in goods and services. It is derived by subtracting the cost of sales from the value of sales of goods and services.</p> <p>It should not be inferred that all of this profit is available surplus as other expenses such as selected labour costs, depreciation, insurance premiums, royalties, bad debts and interest have not been taken into account. In addition other income items such as rent, leasing and hiring income, government subsidies and interest income have not been included.</p>
Trading profit margin	Derived by expressing total trading profit as a percentage of total sales of goods and services, i.e. $(\text{Trading profit}/\text{Sales of goods and services}) \times 100$.
Turnover	Includes all proceeds from operating revenue (i.e. sales, transfers out for establishment data, service income, rent, leasing and hiring income, and government subsidies) plus the value of capital work done for own use, or for rental or lease.
Value added	A measure of the production attributable to each industry. Its derivation is the same as industry gross product except that it does not take into account other selected expenses.
Wages and salaries	Refers to payments made to all permanent, part-time and temporary employees on the payroll during the financial year. Such payments include severance, termination and redundancy payments, overtime earnings, penalty payments and shift allowances, all paid leave, leave loadings and bonuses. Also includes capitalised wages.
Waste management	Includes the collection, transportation and disposal of unwanted by-products of the production process. It also includes the payments to contractors and/or fees and levies paid to local government or other agencies to remove and dispose of waste.
Workers' compensation	Includes premiums and any other costs incurred by the employer not reimbursed by an insurance company.

LIST OF REFERENCES

ABS Australian Bureau of Statistics
BRS Bureau of Resource Sciences
USBM United States Bureau of Mines

Where ABS publications have been cited, in each case only the latest edition used in this publication has been cited. Earlier or later editions are available from any ABS office library and selected other libraries.

- Australian Bureau of Statistics (unpub.)a, Collection of Mining Operations, 1996–97.
- Australian Bureau of Statistics (unpub.)b, Waste Management and Environmental Protection Collection, 1996–97.
- Australian Bureau of Statistics 1995, *Occasional Paper: National Balance Sheets for Australia—Issues and Experimental Estimates, 1989 to 1992*, Cat. no. 5241.0, ABS, Canberra.
- Australian Bureau of Statistics 1997a, *Actual and Expected Private Mineral Exploration, Australia, September Quarter 1997*, Cat. no. 8412.0, ABS, Canberra.
- Australian Bureau of Statistics 1997b, *Export Price Index, Australia, June Quarter 1997*, Cat. no. 6405.0, ABS, Canberra.
- Australian Bureau of Statistics 1997c, *Import Price Index, Australia, June Quarter 1997*, Cat. no. 6414.0, ABS, Canberra.
- Australian Bureau of Statistics 1997d, *International Merchandise Trade, Australia, June Quarter 1997*, Cat. no. 5422.0, ABS, Canberra.
- Australian Bureau of Statistics 1997e, *Job Vacancies and Overtime, Australia, May 1997*, Cat. no. 6354.0, ABS, Canberra.
- Australian Bureau of Statistics 1997f, *Labour Force, Australia, May 1997*, Cat. no. 6203.0, ABS, Canberra.
- Australian Bureau of Statistics 1998a, *Manufacturing Industry, Australia, 1996–97*, Cat. no. 8221.0, ABS, Canberra.
- Australian Bureau of Statistics 1998b, *Environment Protection Expenditure, Australia, 1994–95 and 1995–96*, Cat. no. 4603.0, ABS, Canberra.
- Bureau of Resource Sciences 1997, *Australia's Identified Mineral Resources, 1997*, BRS, Canberra.
- FASTTRACCS (database), ABS, monthly updating.
- United States Department of the Interior 1998, United States Geological Survey, *Mineral Commodity Summaries 1997*.

SELF-HELP ACCESS TO STATISTICS

- CPI INFOLINE* For current and historical Consumer Price Index data, call 1902 981 074 (call cost 75c per minute).
- DIAL-A-STATISTIC* For the latest figures for National Accounts, Balance of Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400 (call cost 75c per minute).
- INTERNET* www.abs.gov.au
- LIBRARY* A range of ABS publications is available from public and tertiary libraries Australia-wide. Contact your nearest library to determine whether it has the ABS statistics you require.

WHY NOT SUBSCRIBE?

- PHONE* +61 1300 366 323
- FAX* +61 03 9615 7848

CONSULTANCY SERVICES

ABS offers consultancy services on a user pays basis to help you access published and unpublished data. Data that is already published and can be provided within 5 minutes is free of charge. Statistical methodological services are also available. Please contact:

<i>INQUIRIES</i>	<i>City</i>	<i>By phone</i>	<i>By fax</i>
	Canberra	02 6252 6627	02 6207 0282
	Sydney	02 9268 4611	02 9268 4668
	Melbourne	03 9615 7755	03 9615 7798
	Brisbane	07 3222 6351	07 3222 6283
	Perth	08 9360 5140	08 9360 5955
	Adelaide	08 8237 7400	08 8237 7566
	Hobart	03 6222 5800	03 6222 5995
	Darwin	08 8943 2111	08 8981 1218

POST Client Services, ABS, PO Box 10, Belconnen ACT 2616

EMAIL client.services@abs.gov.au



2841400013966
ISSN 1322-7459

RRP \$26.00