

AUSTRALIAN MINING INDUSTRY

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- For further information about these and related statistics, contact Helen Shannon on Adelaide 08 8237 7382, or any ABS office shown on the back cover of this publication.

NOTES

IN THIS ISSUE

This publication presents information relating to the mining industry. Many of the statistics in this publication have been derived from the 1995–96 mining collection which is now a combination of census and sample survey collections. The Australian and New Zealand Standard Industrial Classification (ANZSIC) Subdivision 15, Services to mining, was included as part of the mining collection rather than the Economic Activity Survey for the first time in 1995–96. It has not been possible to produce detailed estimates for this ANZSIC Subdivision due to the nature of the sample used.

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. Further explanation on the scope and definition of mining is given in the Explanatory Notes, paragraphs 4–10. The Australian Bureau of Statistics (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.

This compendium brings together a range of ABS information related to mining, including the annual mining collection, mineral commodity production estimates, the mineral exploration collection, environmental expenditure related to mining, overseas trade, employment, and industrial relations information. Information on Australia's mineral resources are included along with international comparisons. It also includes some tables that have been obtained from sources external to the ABS.



REVISIONS

Some of the data published in the 1994–95 issue of this publication have been revised to take account of changes to previously reported data.

W. McLennan
Australian Statistician

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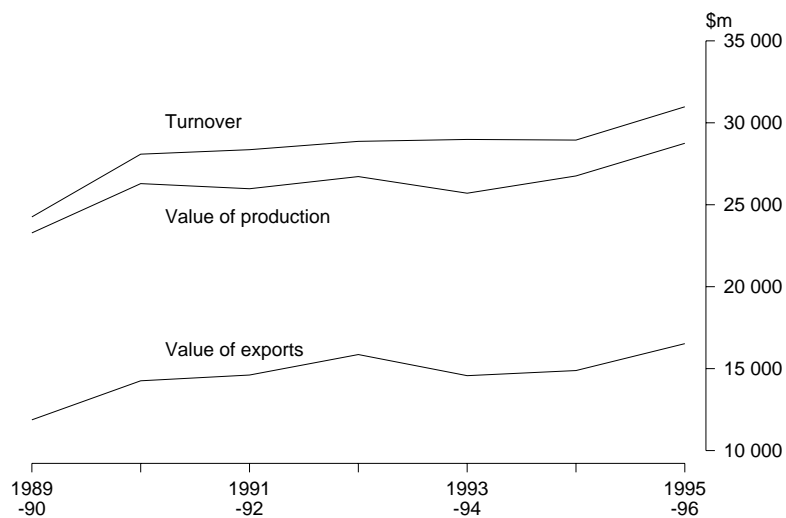
CHAPTER 1

OVERVIEW

SIZE OF INDUSTRY

Australia is one of the world's leading mining producers. 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 1995 and 1996.

1.1 SELECTED FINANCIAL INDICATORS



EXPLORATION

A total of \$1,685m was spent during 1995-96 exploring for minerals and petroleum, with \$550m of this expended in searching for offshore crude oil. During 1995-96 Australian resident companies spent \$486m on overseas exploration for minerals and petroleum.

PRODUCTION

The ex-mine value of mineral commodities produced during 1995-96 was \$28,779m, an increase of 8% from 1994-95. This resulted from a combination of production increases and prices for most minerals.

TRADE

The coal mining, oil and gas extraction, and metal ore mining industries had sales of \$30,066m during 1995-96. Much of the output was sold overseas. Black coal was the largest mineral commodity exported in 1995-96, with a total value of \$7,784m (47% of mining exports). The Asian region is an important market for Australian commodities. The region bought \$5,722m of black coal during 1995-96, 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 turnover for 1995–96 was \$31,014m, up \$2,132m (7%) from 1994–95. In contrast to the previous year, the coal mining, and oil and gas extraction industries reported increases in turnover, of \$655m and \$192m respectively, for 1995–96. The coal mining industry was the largest contributor to total turnover in 1995–96, accounting for 32% while oil and gas extraction contributed 25%. Western Australia remained the largest contributor to national turnover, accounting for 42% while Queensland with 24% was the next highest contributor.

1.2 FINANCIAL SUMMARY

	1994–95	1995–96	Change
	\$m	\$m	%
Exploration expenditure	1 575	1 685	7.0
Value of production	26 723	28 779	7.7
Establishment turnover	28 882	31 014	7.4
Value added	18 654	19 882	6.6
Value of exports	14 914	16 537	10.9
Net capital expenditure	4 654	4 850	4.2

Source: ABS (unpub.)a, 1996a, 1997a.

ENVIRONMENT

Protection of the environment is an important aspect of the mining industry. Expenditure for the primary purpose of pollution abatement and control was \$251m in 1995–96. The majority of this expenditure (57%) occurred in metal ore mining.

EMPLOYMENT

Total employment at 30 June reported in the coal, oil and gas extraction, and metal ore mining industries increased by 3% to 56,529 persons in 1995–96. Wages and salaries paid in 1995–96 were \$3,882m, up 8% on 1994–95. Payments for contract, subcontract and commission work increased by 18% from \$2,643m to \$3,124m.

Since 1989–90, wages and salaries have increased marginally (at current prices) while payments for contract, subcontract and commission work have increased significantly (\$1,615m in 1989–90 to \$3,124m in 1995–96).

1.3 EMPLOYMENT SUMMARY

	1994–95	1995–96
Employment (no.)	55 014	56 529
Wages and salaries (\$m)	3 594	3 882
Union participation (%)	46	38
Industrial disputes—working days lost per thousand employees (no.)	2 231	1 890

Source: ABS (unpub.)a, 1997b, 1997c.

EMPLOYMENT *continued*

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

Of all employees in mining, 38% were members of trade unions. This compares with an average of 31% trade union membership across all industries. Time lost per employee through industrial disputes was more than fourteen times the all industries figure. The 1,890 working days lost per thousand employees was principally attributable to workers in the coal mining industry where 7,171 working days per thousand employees were lost in 1995–96.

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 was also collected for the other mining and services to mining industries for 1995–96, 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, establishments belonging to the same management unit were brought together and the data reported for them were aggregated. In this way, it is possible to identify the contribution to industry totals by establishments operating under common ownership or control. Management units were then ranked in descending order according to the size of the contribution of their establishments to the total turnover of the industry. Further explanation of the derivation of concentration ratios is provided in paragraphs 36–41 of the Explanatory Notes.

The 1995–96 collection showed there were 511 mining establishments belonging to 335 in-scope management units. For the purpose of the following concentration statistics, the number of management units considered is 376 due to the inclusion of management units classified to industries other than mining which have in-scope mining establishments.

2.1 SELECTED STATISTICS AND CONCENTRATION RATIOS(a)(b)

Management units	Establishments at 30 June.....		Employment at end of June....		Wages and salaries.....		Turnover.....		Value added.....		Fixed capital expenditure less disposals...	
	no.	%	persons	%	\$m	%	\$m	%	\$m	%	\$m	%
Largest												
12	50	10	16 986	30	1 203	31	12 122	39	8 398	42	1 887	39
25	87	17	25 350	45	1 796	46	17 275	56	12 034	61	2 627	54
50	137	27	33 342	59	2 344	60	22 099	71	15 503	78	3 541	73
100	208	41	43 371	77	2 989	77	26 762	86	18 492	93	4 252	88
200	325	64	48 329	85	3 273	84	30 132	97	20 794	105	4 654	96
All (376)	511	100	56 529	100	3 882	100	31 014	100	19 882	100	4 850	100

(a) Note that the number of management units is greater in this table than the number of in-scope management units due to the inclusion of establishments which belong to management units classified to industries other than mining.

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

Source: ABS (unpub.)a.

CONCENTRATION RATIOS

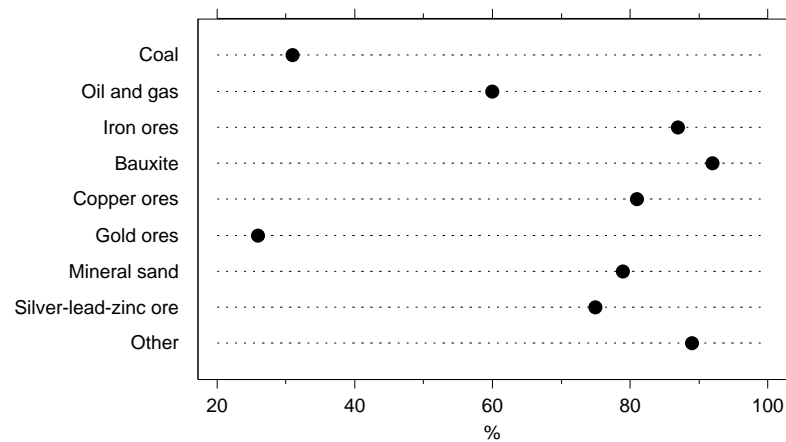
Ranking all management units by their aggregated establishment turnover confirms the highly concentrated structure of the industry. In 1995–96 the 12 largest management units accounted for 39% of turnover and 42% of value added. In addition, these units employed 30% of all persons employed in mining.

The top 100 management units accounted for 41% (208) of all establishments. This group accounted for 86% of turnover, 93% of value added, 88% of fixed capital expenditure less disposals and 77% of employment.

Table 2.6 provides a table of more detailed concentration statistics. A number of industries display activity that is highly concentrated. For example, in 1995–96 the largest four management units in the iron ore mining industry accounted for 87% of turnover and 94% of employment in that industry. A similar pattern of concentration exists in the bauxite mining industry where the largest four management units accounted for 92% of turnover and 88% of employment.

On the other hand, the coal mining and gold mining industries displayed low levels of concentration. The largest four management units in the coal mining industry accounted for 31% of turnover in 1995–96 while the largest four units in the gold ore mining industry accounted for 26% of turnover.

2.2 CONTRIBUTION TO TURNOVER OF LARGEST FOUR MANAGEMENT UNITS



Source: ABS (unpub.)a.

Ranking establishments by employment size shows that approximately 19% of mining operations have employment in excess of 100 persons. There are a small number of extremely large operations (i.e. more than 1,000 employees), and their contribution to employment and turnover is significant. Most mining is conducted on a large scale although some industries such as gold mining have a substantial number of small establishments.

2.3 MINING ESTABLISHMENTS, By Employment Size(a)

<i>Employment size at end of June</i>	<i>Establish- ments at 30 June 1996</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>
	no.	no.	\$m	\$m	\$m	\$m
Less than 10	105	252	31	1 132	678	27
10–19	29	445	25	235	23	64
20–49	45	1 632	89	795	338	111
50–99	38	2 814	177	1 157	485	233
100–499	99	24 641	1 641	8 472	4 007	1 212
500–999	19	12 787	903	4 908	2 546	980
1 000 or more	7	13 404	973	4 206	1 998	500
UJV participants(b)	169	554	44	10 108	9 806	1 723
Total	511	56 529	3 882	31 014	19 882	4 850

(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 spread of risk associated with the development of mineral deposits, through the participation (by investment) in a mining operation, of a number of organisations, 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 of expenses and employment.

This treatment results in concentration ratios which are spread. The oil and gas industry illustrates this, with one category showing 10% of turnover provided by 49% of employment and another showing 22% of turnover provided by 1% of employment. The 169 establishments which were participants only in UJVs accounted for \$10,108m (33%) of turnover but only 1% of employment.

ESTABLISHMENTS BY STATE

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

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

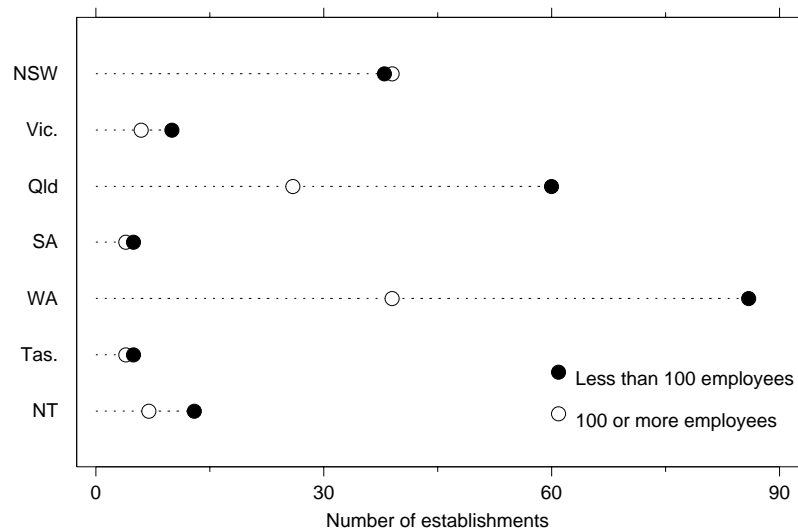
Employment size at end of June	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
Less than 10	14	6	34	3	41	1	6	105
10–19	6	2	9	2	9	—	1	29
20–49	9	2	11	—	17	2	4	45
50–99	9	—	6	—	19	2	2	38
100–499	33	5	16	3	31	4	7	99
500 or more	6	1	10	1	8	—	—	26
UJV participants	43	6	41	5	63	—	11	169
Total	120	22	127	14	188	9	31	511

(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 in that State. Western Australia also had 39 establishments with more than 100 employees which covered the activities of iron ore mining and the larger gold mines.

2.5 MINING ESTABLISHMENTS(a), By Employment Size



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

Source: ABS (unpub.)a.

2.6 CONCENTRATION RATIOS, Establishment Level(a)—Industry Class(b)

ANZSIC code	Industry description/ largest management unit(c)	Management units at 30 June		Establishments at 30 June.....		Employment at end of June.....		Wages and salaries.....	
		no.	%	no.	%	no.	%	\$m	%
11	Coal mining								
1100	Coal mining								
	First	4	3	16	9	6 915	27	598.4	30
	Second	4	3	15	9	2 768	11	217.8	11
	Third	4	3	11	6	2 433	10	178.4	9
	Remainder	112	90	130	76	13 371	53	1 009.4	51
	<i>Industry total</i>	124	100	172	100	25 487	100	2 003.9	100
12	Oil and gas extraction								
1200	Oil and gas extraction								
	First	4	8	24	26	2 116	50	138.3	44
	Second	4	8	4	4	27	1	3.2	1
	Third	4	8	6	7	7	—	0.5	—
	Remainder	39	76	57	63	2 078	49	172.3	55
	<i>Industry total</i>	51	100	91	100	4 228	100	314.2	100
13	Metal ore mining								
1311	Iron ore mining								
	First	4	22	7	32	6 128	94	381.8	95
	Second	4	22	4	18	312	5	17.2	4
	Remainder	10	56	11	50	46	1	2.5	1
	<i>Industry total</i>	18	100	22	100	6 486	100	401.5	100
1312	Bauxite mining								
	First	4	40	4	40	1 584	88	83.5	88
	Remainder	6	60	6	60	208	12	11.1	12
	<i>Industry total</i>	10	100	10	100	1 792	100	94.5	1
1313	Copper ore mining								
	First	4	27	5	31	1 919	77	108.8	76
	Remainder	11	73	11	69	570	23	34.5	24
	<i>Industry total</i>	15	100	16	100	2 489	100	143.4	100
1314	Gold ore mining								
	First	4	3	11	7	1 548	19	93.9	21
	Second	4	3	9	6	1 009	12	71.8	16
	Third	4	3	5	3	645	8	35.9	8
	Remainder	116	91	128	84	4 910	61	247.4	55
	<i>Industry total</i>	128	100	153	100	8 112	100	448.9	100
1315	Mineral sand mining								
	First	4	40	6	46	1 490	76	68.1	75
	Remainder	6	60	7	54	459	24	22.4	25
	<i>Industry total</i>	10	100	13	100	1 949	100	90.6	100
1317	Silver-lead-zinc ore mining								
	First	4	36	7	47	2 587	73	165.7	73
	Remainder	7	64	8	53	972	27	62.5	27
	<i>Industry total</i>	11	100	15	100	3 559	100	228.2	100
1316,	Metal ore mining n.e.c.								
1319	First	4	22	6	32	1 816	75	118.9	76
	Second	4	22	4	21	475	20	27.1	17
	Remainder	10	56	9	47	106	4	10.5	7
	<i>Industry total</i>	18	100	19	100	2 427	100.0	156.6	100

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

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

(b) Note that the number of management units in this table is greater than the number of management units in tables 8.4 and 8.10 due to the allocation of all establishments to their predominant industry classification prior to aggregating to management unit level.

Source: ABS (unpub.)a.

2.6 CONCENTRATION RATIOS, Establishment Level(a)—Industry Class(b) *continued*

ANZSIC code	Industry description/ largest management unit(c)	Turnover.....		Value added.....		Fixed capital expenditure less disposals....	
		\$m	ratio	\$m	ratio	\$m	ratio
11	Coal mining						
1100	Coal mining						
	First	3 134	31	1 248	24	390	34
	Second	1 581	16	1 265	24	176	15
	Third	957	10	700	13	129	11
	Remainder	4 325	43	2 048	39	466	40
	Industry total	9 997	100	5 260	100	1 162	100
12	Oil and gas extraction						
1200	Oil and gas extraction						
	First	4 695	60	4 324	60	886	62
	Second	1 707	22	1 704	24	162	11
	Third	682	9	681	10	328	23
	Remainder	789	10	439	6	148	10
	Industry total	7 874	100	7 148	100	1 523	100
13	Metal ore mining						
1311	Iron ore mining						
	First	2 859	87	1 795	84	434	94
	Second	270	8	238	11	25	5
	Remainder	175	5	115	5	2	—
	Industry total	3 305	100	2 149	100	460	100
1312	Bauxite mining						
	First	805	92	535	91	159	99
	Remainder	74	8	53	9	1	1
	Industry total	880	100	588	100	160	100
1313	Copper ore mining						
	First	969	81	617	87	72	31
	Remainder	225	19	95	13	157	69
	Industry total	1 194	100	712	100	229	100
1314	Gold ore mining						
	First	1 161	26	665	30	281	37
	Second	659	15	399	18	155	20
	Third	482	11	301	13	54	7
	Remainder	2 200	49	874	39	272	36
	Industry total	4 501	100	2 238	100	762	100
1315	Mineral sand mining						
	First	613	79	327	77	77	65
	Remainder	165	21	96	23	41	35
	Industry total	777	100	423	100	118	100
1317	Silver-lead-zinc ore mining						
	First	864	75	465	79	71	44
	Remainder	289	25	121	21	91	56
	Industry total	1 153	100	586	100	162	100
1316, 1319	Metal ore mining n.e.c.						
	First	1 191	89	722	93	283	103
	Second	119	9	49	6	35	13
	Remainder	24	2	9	1	-44	-16
	Industry total	1 334	100	780	100	275	100

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

(b) Note that the number of management units in this table is greater than the number of management units in tables 8.4 and 8.10 due to the allocation of all establishments to their predominant industry classification prior to aggregating to management unit level.

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

Source: ABS (unpub.)a.

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 1995–96 a total of \$1,685m was spent exploring for minerals and petroleum in Australia and in offshore waters, \$109m (7%) more than in 1994–95. Exploration expenditure for minerals was \$960m, \$175m for oil onshore, and \$550m for oil in offshore waters.

During 1995–96 Australian resident companies spent \$486m on overseas exploration for minerals and petroleum.

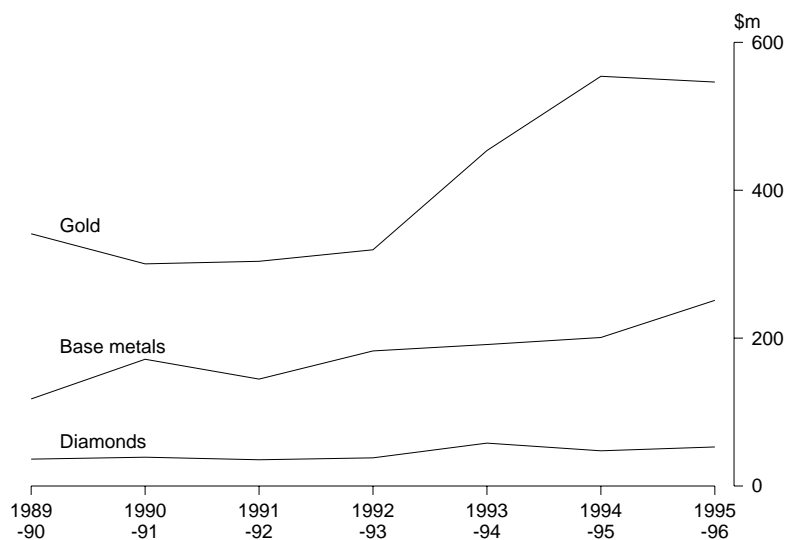
Detailed data is available on a quarterly basis in ABS publication (1997a).

MINERAL EXPLORATION

The \$960m expended in Australia in 1995–96 was an increase of 8% on the previous year. Gold continued to be the main mineral sought, with \$547m spent, slightly less than the previous year. This represented 57% of total mineral exploration in Australia for 1995–96.

Base metals were the next most sought minerals with \$252m spent (26%), followed by diamonds, \$53m (5%) and coal, \$53m (5%).

3.1 EXPLORATION EXPENDITURE, By Main Mineral Sought

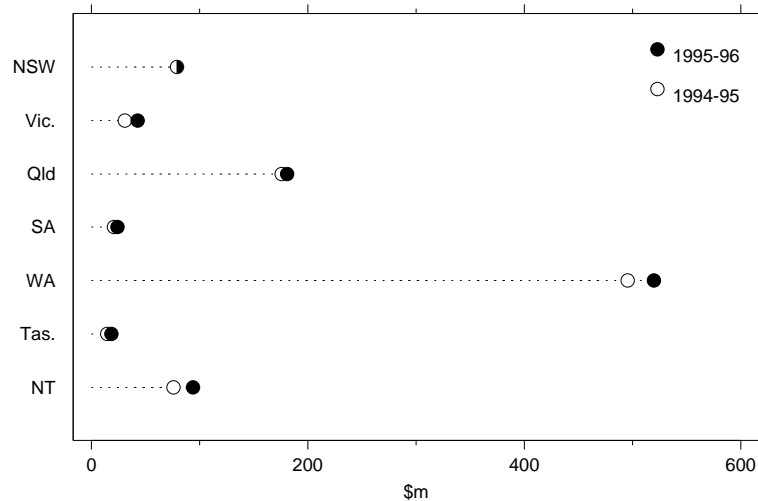


Source: ABS 1997a.

States and Territories

Expenditure on exploration for minerals rose in all States and Territories in 1995–96 compared with 1994–95. Increases ranged from 37% in Victoria to 1% in New South Wales. Expenditure in Western Australia, comprising 54% of total exploration, increased to \$520m (up 5%) for 1995–96. Other expenditures and increases were: Queensland \$181m (3%), Northern Territory \$94m (24%), South Australia \$24m (15%) and Tasmania \$19m (26%).

3.2 EXPLORATION EXPENDITURE(a)



(a) Excludes petroleum exploration.

Source: ABS 1997a.

In 1995–96, expenditure on production leases increased by 3% to \$209m while expenditure on all other leases increased by 9% to \$752m.

Drilling expenditure in 1995–96 totalled \$329m representing 34% of total mineral exploration expenditure (\$960m).

Metres drilled

The number of metres drilled on production leases in 1995–96 was 3.5 million metres, an increase of 6% compared with 1994–95. Drilling on production leases represented 33% of the total metres drilled. In comparison, drilling on all other areas remained fairly constant at 7 million metres in 1995–96.

3.3 MINERAL EXPLORATION, Expenditure and Metres Drilled(a)

Period	EXPENDITURE.....			METRES DRILLED.....		
	<i>On production leases</i>	<i>On all other leases</i>	<i>Total</i>	<i>On production leases</i>	<i>On all other areas</i>	<i>Total</i>
	\$m	\$m	\$m	'000 m	'000 m	'000 m
1988-89	112	586	698	1 812	4 765	6 577
1989-90	90	517	608	1 598	4 735	6 332
1990-91	115	486	602	1 760	4 452	6 212
1991-92	131	473	604	1 626	4 253	5 877
1992-93	148	483	632	1 944	5 049	6 993
1993-94	184	608	793	2 770	6 810	9 580
1994-95	203	691	893	3 329	7 001	10 330
1995-96	209	752	960	3 520	6 995	10 514

(a) Other than for petroleum.

Source: ABS 1997a.

Drilling methods used

Of all drilling methods used, diamond drilling (\$139m) accounted for 42% of the total drilling expenditure in Australia. This was followed by reverse circulation drilling with \$118m (36%).

The average drilling costs per metre for all States and Territories were \$102 using diamond drilling, \$30 using reverse circulation, \$43 using percussion drilling and \$12 using rotary air blast drilling.

Western Australia maintained the highest expenditure on drilling. Approximately two-thirds of all drilling expenditure was in Western Australia in 1995-96 (\$216m). This was followed by Queensland with \$48m.

3.4 DRILLING METHODS, Total Expenditure

Drilling method	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Diamond	15.8	3.7	16.8	n.p.	87.3	n.p.	n.p.	138.8
Reverse circulation	5.1	2.5	12.2	n.p.	86.2	n.p.	10.8	117.9
Percussion	1.2	0.5	11.2	n.p.	n.p.	n.p.	n.p.	15.5
Rotary air blast	1.3	n.p.	7.1	0.9	32.7	n.p.	n.p.	46.9
Other	1.2	n.p.	0.4	n.p.	n.p.	—	n.p.	10.3
Total	24.6	6.9	47.8	2.9	215.8	5.9	25.5	329.4

Source: ABS 1997a.

3.5 DRILLING METHODS, Total Metres Drilled(a)

Drilling method	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
	'000 m	'000 m	'000 m	'000 m	'000 m	'000 m	'000 m	'000 m
Diamond	178	39	123	n.p.	898	n.p.	n.p.	1 358
Reverse circulation	142	91	313	n.p.	2 948	n.p.	385	3 919
Percussion	34	16	233	n.p.	n.p.	n.p.	n.p.	364
Rotary air blast	101	n.p.	428	90	3 028	n.p.	n.p.	4 027
Other	69	n.p.	23	n.p.	n.p.	—	n.p.	720
Total	524	154	1 120	130	7 474	70	917	10 388

(a) Information on metres drilled by drilling methods has been obtained from a special annual supplementary collection. The results differ from the data shown in table 3.3 which are collected quarterly.

Source: ABS 1997a.

PETROLEUM EXPLORATION

Total expenditure on petroleum exploration for 1995–96 was \$725m, an increase of 6% from 1994–95. The increase was attributable to an increase in expenditure on exploration undertaken in areas other than those covered by production leases, of \$70m (12%). This was offset by a 25% decrease in exploration expenditure on areas covered by production leases, down \$26m to \$79m.

Exploration in areas not covered by production leases accounted for 89% of total petroleum exploration expenditure in 1995–96.

Expenditure on exploration undertaken offshore increased by \$38m (7%) to \$550m in 1995–96 while expenditure onshore increased \$4m (2%) to \$175m over the same period. The majority of the expenditure in 1995–96 (76%) was for exploration undertaken offshore.

3.6 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
1988–89	136	98	234	299	106	406	130	509	639
1989–90	74	70	143	350	90	439	66	517	583
1990–91	129	88	217	257	108	365	131	451	583
1991–92	61	75	135	142	196	339	70	404	474
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

Source: ABS 1997a.

OVERSEAS EXPLORATION

In 1995–96, Australian resident companies spent \$486m on mineral and petroleum exploration outside Australia. This represents an increase of 13% from \$431m in 1994–95. In 1995–96, petroleum exploration was the largest component (65%) of total overseas exploration expenditure. Exploration for gold was the next largest component with 21%.

3.7 EXPENDITURE OF AUSTRALIAN RESIDENT COMPANIES OVERSEAS

	North America (a)	Latin America (b)	PNG	Indo- nesia	China	Other Asia	Africa	Other	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Petroleum	n.p.	n.p.	40.5	n.p.	n.p.	19.0	n.p.	n.p.	317.9
Copper, lead, zinc, silver, nickel, and cobalt	n.p.	14.7	—	2.4	n.p.	8.1	n.p.	n.p.	38.1
Gold	8.0	17.5	3.0	35.6	0.4	27.6	5.3	3.3	100.7
Iron ore	—	—	—	—	—	—	—	—	—
Mineral sands	n.p.	—	—	—	—	1.8	n.p.	n.p.	4.3
Tin, tungsten, scheelite and wolfram	—	—	—	—	—	—	—	—	—
Uranium	—	—	—	—	—	—	—	—	—
Coal	—	—	—	n.p.	—	n.p.	—	n.p.	2.7
Construction materials	—	—	—	—	—	n.p.	—	—	n.p.
Diamonds	n.p.	n.p.	—	n.p.	n.p.	n.p.	2.1	n.p.	18.7
Bauxite	—	—	—	—	—	—	—	—	—
Other	n.p.	—	—	—	—	n.p.	n.p.	n.p.	n.p.
Total	136.0	77.8	43.5	60.0	2.4	57.0	56.9	52.4	486.0

(a) Includes Canada.

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

Source: ABS 1997a.

The information in this section has been largely reproduced from the publication *Bureau of Resource Sciences (BRS) (1995)*. Unless otherwise specified, quoted international Economic Demonstrated Resources (EDR) figures have been based on estimates published by the United States Bureau of Mines (USBM).

Australia ranks as one of the world's leading mineral resource nations. According to estimates published by the USBM Australia is one of the world's top five countries for resources of bauxite, bismuth, cadmium, industrial diamond, gold, mineral sands, lead, lithium, manganese, rare earth oxides, silver, tantalum, and zinc. Australia has the world's fifth largest economic resources of brown coal, the sixth largest of black coal, and the world's largest low cost uranium resources.

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).

In 1995, EDR for gold increased substantially and those for bauxite, ilmenite, rutile, zircon, and nickel increased slightly. There was a significant reduction in the EDR for tin and minor reductions for black coal, iron ore, lithium, magnesite and platinum group metals.

SELECTED COMMODITIES

Bauxite

Australia's bauxite resources remained relatively unchanged in 1995 compared with those of the previous year. Bauxite EDR constituted approximately 33% of demonstrated resources and 26% of identified resources (demonstrated plus inferred resources).

The resources at Weipa, Queensland, and in the Darling Range, Western Australia, continued to rank among the world's largest bauxite deposits in terms of extractable alumina content.

Black coal

In 1994, Australia had about 7% of the world's recoverable EDR of black coal, and was ranked sixth behind the United States of America, former Union of Soviet Socialist Republic, China, India and South Africa.

Australia's in situ EDR of black coal declined slightly but recoverable EDR remained unchanged in 1995.

New South Wales and Queensland accounted for 97% of Australia's in situ black coal EDR, with 44% of the total EDR occurring in the Sydney Basin and 34% in the Bowen Basin. Relatively small, but locally important, EDR of black coal occur in South Australia, Western Australia and Tasmania.

Copper

The 1995 EDR estimate of 24 Mt of copper was 16% (4 Mt) higher than the estimate from the last major assessment, undertaken in 1993. Identified resource stocks of copper increased by 13% (6 Mt).

Australia has the world's third largest EDR of copper (9%), after Chile (28%) and the United States of America (15%). As a copper producer, Australia ranks fifth in the world. Production is mainly from mines at the Olympic Dam, Mount Isa, Northparkes, Osborne and Mt Lyell deposits.

Diamond

Australia has the world's second largest EDR of industrial diamond and probably the largest for gem/near gem diamond. Australia's diamond production is the largest in the world for both gem/near gem and industrial categories.

Australia's EDR for gem/near gem and industrial diamond fell by 29 Mct and 40 Mct respectively in 1995. Much of the reduction in EDR was the result of production at the Argyle Pipe mine which was only partially offset by the upgrading of some subeconomic resources.

Gold

Internationally, Australia has the world's third largest stock of gold EDR after South Africa and the United States of America. It has approximately 10% of world EDR.

The 1995 estimate of 4,263 t was 24% higher than the 1994 level.

Gold continued

With the exception of South Australia, which remained unchanged, all States and the Northern Territory saw increases in EDR in 1995. Western Australia remained the leading State with 58% of Australia's EDR. Queensland, New South Wales and the Northern Territory all had EDR of similar magnitude, which together accounted for 26% of Australia's EDR. The remaining 16% occurs in Victoria, South Australia and Tasmania.

Iron ore

Using the USBM estimates for other countries and the BRS assessment of Australia's EDR, Australia has 12% of world EDR and is ranked second after Russia.

Western Australia has over 99% of Australia's EDR. Of the Western Australian EDR, some 97% occurs in the Hamersley Basin in the Pilbara region. Smaller, but important, economic resources occur and are worked in South Australia and Tasmania.

Manganese ore

In 1995 Australia accounted for about 6% of the world's EDR of manganese ore and was ranked third after South Africa (50%) and Ukraine (18%).

The principal Australian mine and manganese resources are on Groote Eylandt, Northern Territory. Significant mining of manganese ore continued in the Woodie Woodie area in the east Pilbara of Western Australia.

Mineral sands

Based on a combination of USBM and BRS data, it is estimated that Australia had 24% of the world economic resources of ilmenite, and 36% each of world economic resources of rutile and zircon. It is ranked first in EDR for all three minerals, and is the world's largest producer and exporter of alluvial ilmenite, rutile and zircon.

Western Australia has about 50% of rutile and zircon, and over 70% of ilmenite EDR. Exploration in western New South Wales resulted in an increase in EDR of zircon and rutile in that State.

Nickel

Australia's share of world EDR increased to 8% in 1995, up from 6% in the previous year. As a result of successful exploration, Australia's EDR of nickel now ranks fifth in the world after Cuba, Russia, Canada, and New Caledonia, with Indonesia now sixth.

Australian nickel production is centred on mines at Kambalda, Leinster and Forrestania in Western Australia, smelting operations near Kalgoorlie, Western Australia, and refineries at Kwinana, Western Australia, and Yabulu in Queensland.

Platinum group metals

Australian EDR and mine production of platinum group metals is less than 1% of world totals. Most of these EDRs are contained in nickel sulphide deposits of the Kambalda field, Western Australia, and the remainder are at Coronation Hill in the Northern Territory.

Tantalum

Australia is the world's second largest tantalum resource nation. Based on BRS data and estimates prepared by the USBM, Australia has about 28% of the world's economic resources. All EDR are in Western Australia.

Uranium

Australia has the world's largest resources of uranium in the low cost reasonably assured resources category, with 30% of world resources in this category.

In Australia, uranium is currently produced at two mining/milling operations, namely Ranger (Northern Territory) and Olympic Dam (South Australia).

The Liberal–National Party Coalition, elected to government in March 1996, has abolished the 'three mines' uranium policy introduced by the previous government. Any proposals for new uranium mines and exports of uranium will be approved if they comply with environmental, heritage and nuclear safeguards requirements.

A number of uranium deposits which could not be developed under the 'three mines' policy are now likely to be proposed as new mining operations in the future. These include Jabiluka (Northern Territory), Kintyre (Western Australia), Koongarra (Northern Territory), Yeelirrie (Western Australia), Westmoreland (Queensland) and Beverley (South Australia).

Zinc and lead and silver

The 1995 EDR estimates for zinc (38.8 Mt), lead (18.2 Mt) and silver (41.5 kt) represented a decrease ranging from 7–10% for these metals since 1994.

Much of the 3.8 Mt decrease in zinc EDR and 1.5 Mt decrease in lead EDR resulted from the transfer of the old Hilton North resources (now reported as the George Fisher deposit), in Queensland, to inferred resources.

Silver EDR decreased by 5.4 kt due to decreases at the major Queensland and Tasmanian deposits.

MAJOR COMMODITIES

Table 4.1 summarises details of Australia's major commodity resources for 1995 and provides a world comparison figure for 1994.

4.1 RESOURCES OF MAJOR MINERALS AND FUELS

Mineral	AUSTRALIA, 1995— DEMONSTRATED.....			AUSTRALIA, 1995— INFERRED.....		WORLD, 1994.....
	Economic	Subeconomic paramarginal	Subeconomic submarginal	Economic and subeconomic	Undifferentiated	
Antimony (kt)	97.9	33.8	36.3	18.9	16.7	4 200
Asbestos (Mt)	—	46.6	—	—	77.3	Large
Bauxite (Mt)	2 540	—	5 245	—	2 134	23 000
Black coal						
In situ (Gt)	68	2	6	—	Very large	—
Recoverable (Gt)	49	2	4	—	—	708
Brown coal						
In situ (Gt)	46	1	2	—	184	—
Recoverable (Gt)	41	1	2	—	166	315
Cadmium (kt)	140.7	11.3	15.2	31.5	—	540
Chromium (kt)	—	55.5	207.8	1 623.8	—	3 700 000
Cobalt (kt)	274	231	99	227	0.8	4 000
Copper (Mt)	24	14.7	1.6	11.9	—	310
Diamonds	229	346	6.7	2.1	100	1 280
Gem and cheap gem (Mct)	101	156	1.3	2.1	39	300
Industrial (Mct)	128	190	5.4	—	61	980
Fluorine (Mt)	—	24.1	5.8	—	0.7	(a)102
Gold (t)	4 263	1 100	48	—	1 378	44 000
Iron ore (Gt)	17.8	13.8	0.4	—	17.2	150
Lead (Mt)	18.2	4.8	8.9	16	2	63
Lithium (kt)	152	—	3	—	7	2 200
Magnesite (Mt)	241.3	—	294.1	—	230	2 500
Manganese ore (Mt)	121.2	27.1	167	166.6	—	2 000
Mineral sands (Mt)	173.3	124.8	0.5	—	146.3	679
Ilmenite (Mt)	136	67	0.1	—	99.1	574.7
Rutile (Mt)	15	33	0.2	—	26.3	42.03
Zircon (Mt)	22.5	24.2	0.2	—	20.9	62.05
Molybdenum (kt)	—	4.7	3.2	—	832.6	5 500
Nickel (Mt)	3.7	3.6	2.8	—	4.4	47
Niobium (kt)	3.4	67.6	—	—	1 994	3 500
Petroleum						
Crude oil (GL)	297	—	29	—	—	158 844
Natural (sales) gas (10 ⁹ m ³)	1 292	—	1 249	—	—	142 042
Condensate (GL)	156	—	65	—	—	
LPG (natural) (GL)	154	—	90	—	—	
Phosphate rock (Mt)	—	2 095	—	—	1 947	11 000
Platinum group (t)	17.2	17	6.8	81.3	—	56 000
Rare earths(b) (Mt)	1	3.5	10.6	—	4	100
Shale oil (GL)	—	—	4 564	—	40 468	n.a.
Silver (kt)	41.5	9.8	11.1	17.8	8.3	280
Tantalum (kt)	6.2	5.5	0.1	—	65.1	22
Tin (kt)	136.2	46	143	339.2	5.3	7 000
Tungsten (kt)	1	34.1	28	180.1	—	2 100
Uranium (t)	629	—	77	194	—	2 120
Vanadium (kt)	15	1 739	8 425	2 282	—	10 000
Zinc (Mt)	38.8	13.6	11.3	20.8	1.5	140

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

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

Source: BRS 1995.

The statistics in this section have been derived from information supplied to the various State mines departments or directly to the ABS and are supplemented, in some cases, by data from other sources.

The information derived from the State mines departments is not directly comparable with the sales data presented in the next chapter, Financial Operations. The scope of both series are explained in paragraphs 4–10 of the Explanatory Notes.

The commodity data presented are the value of commodities extracted on an ex-mine basis (i.e. excludes freight charges). The following analysis discusses the data in the summary tables and also the tables at the end of this chapter.

MINING INDUSTRY

The total value of minerals produced in the metallic minerals, coal, and oil and gas industries rose by 8% in 1995–96, from \$26,723m to \$28,779m. The metallic minerals industry contributed most to the increase with a rise of 9% to \$12,793m in 1995–96. This was due to a combination of production increases and price rises. The value of oil and gas production rose by 5% from \$7,683m in 1994–95 to \$8,077m in 1995–96. The coal industry showed an increase in value of 8% to \$7,909m in 1995–96.

5.1 VALUE OF MINERALS PRODUCED

Type	NSW \$m	Vic. \$m	Qld \$m	SA \$m	WA \$m	Tas. \$m	NT \$m	Aust. \$m
Coal	3 408	465	3 688	n.p.	270	n.p.	—	7 909
Oil and gas	—	n.p.	342	n.p.	4 069	—	259	8 077
Metallic minerals	619	83	1 892	379	8 508	323	988	12 793
Total								
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	(a)327	1 047	(a)26 723
1993–94	3 863	n.p.	5 134	n.p.	10 231	(a)327	1 028	(a)25 702
1992–93	3 817	n.p.	5 519	n.p.	10 286	(a)310	1 350	(a)26 721
1991–92	3 721	n.p.	4 981	n.p.	9 994	(a)361	1 493	(a)25 985
1990–91	3 751	n.p.	4 961	n.p.	9 761	(a)355	1 866	(a)26 293

(a) Coal is included with metallic minerals for Tasmania up to and including 1994–95.

Source: ABS (unpub.)a.

METALLIC MINERALS

The total value of metallic minerals produced rose by 9% to \$12,793m in 1995–96 despite the fact that the 1995–96 data excludes Tasmanian coal production. Western Australia remains the major contributor in the metallic minerals sector in 1995–96, accounting for 67% of the total value of metallic minerals produced. Western Australia also showed the largest absolute increase in metallic mineral production with a rise of \$599m (8%) to \$8,508m in 1995–96. Gold and mineral sands were the largest contributors to the rise. The largest percentage rise was reported by Northern Territory with a rise of 29% to \$988m, primarily for uranium and zinc. Victoria recorded a fall of \$35m (29%) to \$83m in 1995–96, primarily caused by the reduction in copper concentrate production.

5.2 VALUE OF METALLIC MINERALS PRODUCED

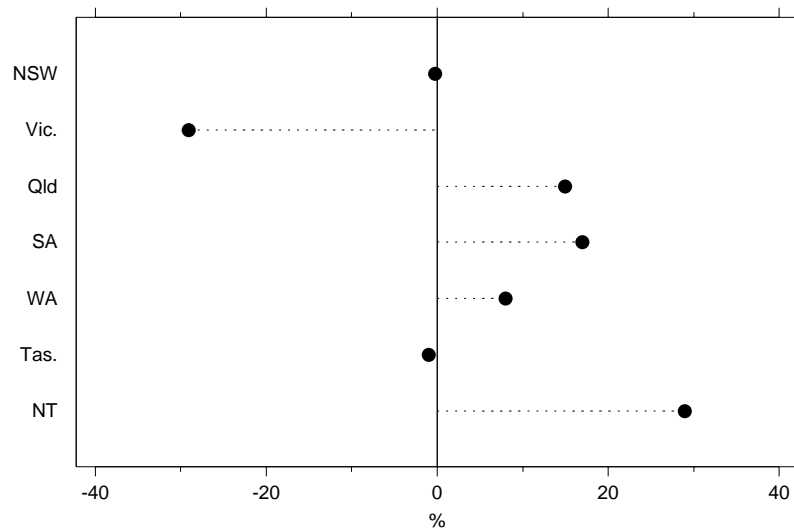
	1991–92	1992–93	1993–94	1994–95	1995–96
State and Territory	\$m	\$m	\$m	\$m	\$m
New South Wales	447	465	455	620	619
Victoria	46	90	106	117	83
Queensland	1 482	1 702	1 583	1 643	1 892
South Australia	283	287	301	323	379
Western Australia	7 518	7 391	7 402	7 908	8 508
Tasmania	(a)361	(a)410	(a)327	(a)327	323
Northern Territory	819	675	686	765	988
Australia	(b)10 957	(b)10 920	(b)10 861	(b)11 700	12 793

(a) Includes coal.

(b) Includes coal for Tasmania.

Source: ABS (unpub.)a.

5.3 CHANGE IN VALUE OF METALLIC MINERALS PRODUCED(a)—1994–95 to 1995–96



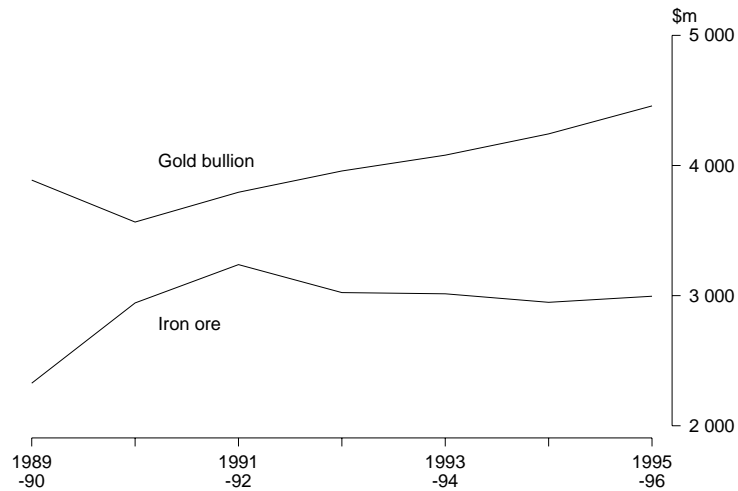
(a) Includes coal for Tasmania in 1994–95.

Source: ABS (unpub.)a.

METALLIC MINERALS *continued*

The value of gold bullion production increased by 5% from \$4,246m in 1995–95 to \$4,462m in 1995–96. Iron ore, as Australia's second most valuable metallic mineral, showed a rise of 2% to \$2,999m. Of the other major minerals, uranium showed an increase of 108%, the largest percentage increase of all the minerals in 1995–96.

5.4 VALUE OF IRON ORE AND GOLD BULLION PRODUCED



Source: ABS (unpub.)a.

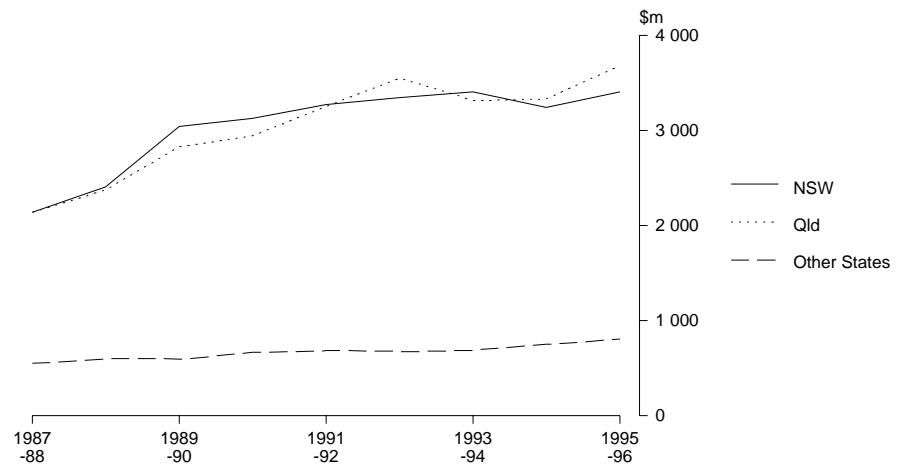
COAL

The total value of production by the coal industry was \$7,909m in 1995–96, a rise of 8% from 1994–95. The quantity of coal produced in 1995–96 was 249 million tonnes compared with 243 million tonnes in 1994–95.

The average unit value for black coal rose 6% to \$38.27 per tonne, from the \$36.08 per tonne obtained in 1994–95.

Queensland contributed 46% and New South Wales 43% to the total value of coal production in 1995–96.

5.5 VALUE OF COAL PRODUCED(a)



(a) Excludes Tasmanian coal up to and including 1994–95.

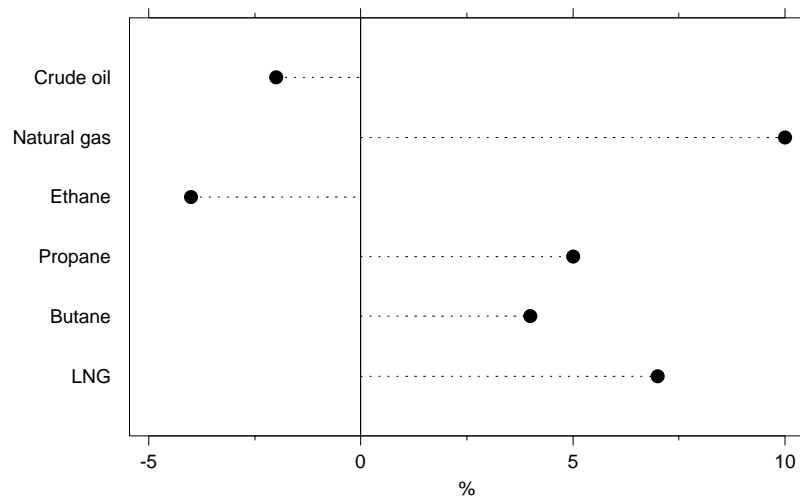
Source: ABS (unpub.)a.

OIL AND GAS

The contribution of oil and gas to total value of minerals produced was \$8,077m in 1995–96, a rise of 5% from the 1994–95 figure of \$7,683m. The decline in production from the Bass Strait from 14.6 GL to 12.7 GL, and increases in Western Australia from 12.5 GL to 14.3 GL, has seen Western Australia replace Victoria as the largest producer of crude oil. Western Australia now contributes just over 50% to the total value of oil and gas production.

Despite the decrease in production quantity of crude oil, by 2%, and ethane, by 4%, the value of each oil and gas commodity increased in 1995–96.

5.6 CHANGE IN OIL AND GAS PRODUCTION—1994–95 to 1995–96



Source: ABS (unpub.)a.

5.7 METALLIC MINERALS PRODUCED

Commodity code	Mineral	1993-94	1994-95	1995-96
QUANTITY				
556	Antimony concentrate (t)	812	1 129	1 301
500	Bauxite ('000 t)	43 306	45 384	50 724
502	Copper concentrate ('000 t)	(a)1 322	(a)9 405	(a)1 297
503	Copper ore (t)	468	—	803
506	Copper precipitate(b) (t)	16 192	18 888	19 838
509	Gold bullion (dore)(c) (kg)	274 687	298 697	287 524
511	Gold concentrate (t)	n.p.	n.p.	2 850
510	Gold ore (t)	(a)7	(a)—	(a)—
(d)	Iron ore ('000 t)	123 631	137 525	137 267
	Iron oxide for			
516	Cement manufacture (t)	14 226	16 468	—
517	Coal washing (t)	175 216	178 169	178 343
535	Lead concentrate ('000 t)	873	766	774
537	Lead ore (t)	—	4 627	701
546	Lead-zinc concentrate (t)	57 517	45 317	38 565
	Manganese ore			
563	Metallurgical grade ('000 t)	815	n.p.	1 298
565	Other grades ('000 t)	963	1 011	813
	Mineral sands			
521	Synthetic rutile ('000 t)	—	396	376
522	Ilmenite concentrate(e) ('000 t)	1 627	1 165	1 302
523	Leucoxene concentrate ('000 t)	17	19	22
524	Monazite concentrate ('000 t)	6	—	11
525	Rutile concentrate ('000 t)	167	220	219
529	Zircon concentrate ('000 t)	435	575	561
532	Nickel concentrate ('000 t)	563	733	762
533	Nickel ore ('000 t)	200	222	3
569	Pyrite concentrate ('000 t)	88	23	—
571	Scheelite concentrate (t)	27	40	78
570	Tantalite-columbite concentrate (t)	246	379	447
549	Tin concentrate (t)	(f)13 521	(f)14 368	16 636
551	Tin-tantalite concentrate (t)	—	—	25
575	Uranium concentrate (U ₃ O ₈) (t)	(a)1 457	(a)—	(a)3 200
543	Zinc concentrate ('000 t)	1 795	1 642	1 581
544	Zinc ore (t)	—	3 078	—
547	Zinc-lead concentrate ('000 t)	95	57	207
579	Other metallic minerals (t)	161	n.p.	—

(a) Excludes South Australia.

(b) Includes copper in other forms.

(c) Includes alluvial gold.

(d) Commodity codes 507, 513, 515. Includes iron ore pellets.

(e) Includes ilmenite from which titanium dioxide is not commercially extractable.
Beneficiated ilmenite is also included.

(f) Excludes Western Australia.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.7 METALLIC MINERALS PRODUCED *continued*

Commodity code	Mineral	1993-94	1994-95	1995-96
VALUE				
		\$'000	\$'000	\$'000
556	Antimony concentrate	1 130	2 203	3 319
500	Bauxite	773 289	840 001	838 086
502	Copper concentrate	(a)791 766	(a)912 680	(a)1 156 337
503	Copper ore	17	—	8
506	Copper precipitate(b)	49 556	71 480	(c)25 752
509	Gold bullion (dore)(d)	(c)4 079 963	(c)4 246 007	4 462 268
511	Gold concentrate	n.p.	n.p.	n.p.
510	Gold ore	(a)1 924	—	n.p.
(e)	Iron ore	3 018 284	2 952 430	2 999 257
	Iron oxide for			
516	Cement manufacture	85	125	—
517	Coal washing	n.p.	19 648	n.p.
535	Lead concentrate	252 416	n.p.	367 436
537	Lead ore	—	274	45
546	Lead-zinc concentrate	9 014	6 433	6 433
	Manganese ore			
563	Metallurgical grade	80 083	n.p.	n.p.
565	Other grades	n.p.	n.p.	95 962
	Mineral sands			
521	Synthetic rutile	—	197 603	251 792
522	Ilmenite concentrate(f)	} 470 930	} 377 052	} 509 508
523	Leucoxene concentrate			
524	Monazite concentrate			
525	Rutile concentrate			
529	Zircon concentrate			
532	Nickel concentrate	n.p.	n.p.	n.p.
533	Nickel ore	6 386	5 501	96
569	Pyrite concentrate	n.p.	n.p.	—
571	Scheelite concentrate	n.p.	n.p.	—
570	Tantalite-columbite concentrate	n.p.	n.p.	n.p.
549	Tin concentrate	n.p.	n.p.	56 203
551	Tin-tantalite concentrate	—	—	759
575	Uranium concentrate (U ₃ O ₈)	156 188	96 816	201 594
543	Zinc concentrate	422 423	477 100	461 262
544	Zinc ore	—	464	—
547	Zinc-lead concentrate	6 543	4 876	n.p.
579	Other metallic minerals	23	n.p.	—
	Total metallic minerals	(g)10 860 682	(g)11 700 352	12 792 644

(a) Excludes South Australia.

(b) Includes copper in other forms.

(c) Excludes New South Wales.

(d) Includes alluvial gold.

(e) Commodity codes 507, 513, 515. Includes iron ore pellets.

(f) Includes ilmenite from which titanium dioxide is not commercially extractable.
Beneficiated ilmenite is also included.

(g) Includes Tasmanian coal production.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.8 METALLIC MINERALS PRODUCED, State and Territory

Commodity code	Mineral	NSW	Vic.	Qld	SA	WA	Tas.	NT
QUANTITY								
556	Antimony concentrate (t)	1 301	—	—	—	—	—	—
500	Bauxite ('000 t)	6 043	1	9 179	—	(a)29 623	—	5 878
502	Copper concentrate ('000 t)	143	8	1 008	n.a.	35	54	49
503	Copper ore (t)	—	—	803	—	—	—	—
506	Copper precipitate(b) (t)	12 990	—	6 848	—	—	—	—
509	Gold bullion (dore)(c) (kg)	10 427	4 838	38 108	—	214 086	229	19 836
511	Gold concentrate (t)	2 850	—	—	—	—	—	—
510	Gold ore (t)	—	—	—	n.a.	—	—	—
(d)	Iron ore ('000 t)	—	—	—	2 567	132 900	1 800	—
	Iron oxide for							
516	Cement manufacture (t)	—	—	—	—	—	—	—
517	Coal washing (t)	38 274	—	25 557	—	—	114 512	—
535	Lead concentrate ('000 t)	274	—	359	—	17	106	18
537	Lead ore (t)	—	—	701	—	—	—	—
546	Lead-zinc concentrate (t)	—	—	—	—	—	38 565	—
	Manganese ore							
563	Metallurgical grade ('000 t)	—	—	—	—	336	—	962
565	Other grades ('000 t)	—	—	—	—	—	—	813
	Mineral sands							
521	Synthetic rutile ('000 t)	—	—	—	—	376	—	—
522	Ilmenite concentrate(e) ('000 t)	9	—	191	—	1 102	—	—
523	Leucoxene concentrate ('000 t)	—	—	—	—	22	—	—
524	Monazite concentrate ('000 t)	11	—	—	—	—	—	—
525	Rutile concentrate ('000 t)	39	—	61	—	119	—	—
529	Zircon concentrate ('000 t)	18	—	56	—	487	—	—
532	Nickel concentrate ('000 t)	—	—	—	—	762	—	—
533	Nickel ore ('000 t)	—	—	3	—	—	—	—
569	Pyrite concentrate ('000 t)	—	—	—	—	—	—	—
571	Scheelite concentrate (t)	—	—	—	—	—	78	—
570	Tantalite-columbite concentrate (t)	—	—	—	—	447	—	—
549	Tin concentrate (t)	—	—	82	—	446	16 108	—
551	Tin-tantalite concentrate (t)	—	—	—	—	—	—	25
575	Uranium concentrate (U ₃ O ₈) (t)	—	—	—	n.a.	—	—	3 200
543	Zinc concentrate ('000 t)	493	14	446	—	186	361	81
544	Zinc ore (t)	—	—	—	—	—	—	—
547	Zinc-lead concentrate ('000 t)	—	—	48	—	—	—	159
579	Other metallic minerals (t)	—	—	—	—	—	—	—

(a) Estimated by the ABS.

(b) Includes copper in other forms.

(c) Includes alluvial gold.

(d) Commodity codes 507, 513, 515. Includes iron ore pellets.

(e) Includes ilmenite from which titanium dioxide is not commercially extractable.
Beneficiated ilmenite is also included.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.8 METALLIC MINERALS PRODUCED, State and Territory *continued*

Commodity code	Mineral	NSW	Vic.	Qld	SA	WA	Tas.	NT
		VALUE						
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
556	Antimony concentrate	3 319	—	—	—	—	—	—
500	Bauxite	—	—	229 955	—	(a)475 281	—	132 850
502	Copper concentrate	n.p.	3 325	824 938	n.a.	n.p.	n.p.	47 230
503	Copper ore	—	—	8	—	—	—	—
506	Copper precipitate(b)	n.a.	—	25 752	—	—	—	—
509	Gold bullion (dore)(c)	n.p.	76 064	439 596	—	3 462 729	n.p.	348 881
511	Gold concentrate	n.p.	—	—	—	—	—	—
510	Gold ore	—	—	—	n.a.	—	—	—
(d)	Iron ore	—	—	—	23 102	2 910 809	65 346	—
	Iron oxide for							
516	Cement manufacture	—	—	—	—	—	—	—
517	Coal washing	—	—	3 041	—	—	n.p.	—
535	Lead concentrate	n.p.	—	197 418	—	n.p.	n.p.	6 260
537	Lead ore	—	—	45	—	—	—	—
546	Lead-zinc concentrate	—	—	—	—	—	6 433	—
	Manganese ore							
563	Metallurgical grade	—	—	—	—	n.p.	—	115 203
565	Other grades	—	—	—	—	—	—	95 962
	Mineral sands							
521	Synthetic rutile	—	—	—	—	251 792	—	—
522	Ilmenite concentrate(e)	n.p.	—	—	—	151 390	—	—
523	Leucoxene concentrate	—	—	—	—	11 229	—	—
524	Monazite concentrate	—	—	—	—	—	—	—
525	Rutile concentrate	n.p.	—	—	—	n.p.	—	—
529	Zircon concentrate	n.p.	—	—	—	174 291	—	—
532	Nickel concentrate	—	—	—	—	n.p.	—	—
533	Nickel ore	—	—	96	—	—	—	—
569	Pyrite concentrate	—	—	—	—	—	—	—
571	Scheelite concentrate	—	—	—	—	—	—	—
570	Tantalite-columbite concentrate	—	—	—	—	n.p.	—	—
549	Tin concentrate	—	—	368	—	n.p.	n.p.	—
551	Tin-tantalite concentrate	—	—	—	—	—	—	759
575	Uranium concentrate (U ₃ O ₈)	—	—	—	74 212	—	—	127 382
543	Zinc concentrate	n.p.	3 140	89 759	—	n.p.	n.p.	46 082
544	Zinc ore	—	—	—	—	—	—	—
547	Zinc-lead concentrate	n.p.	—	2 403	—	—	—	67 515
579	Other metallic minerals	—	—	—	—	—	—	—
	Total metallic minerals	618 943	82 529	1 892 338	379 472	8 507 939	323 299	988 124

(a) Imputed by the ABS based on metallic content and unit values obtained from other States.

(b) Includes copper in other forms.

(c) Includes alluvial gold.

(d) Commodity codes 507, 513, 515. Includes iron ore pellets.

(e) Includes ilmenite from which titanium dioxide is not commercially extractable. Beneficiated ilmenite is also included.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.9 COAL PRODUCED

Commodity code	Mineral	1993-94	1994-95	1995-96
QUANTITY				
		'000 t	'000 t	'000 t
	Coal (other than lignite)			
	Saleable coal(a)			
581	Semi-anthracite	305	389	2 518
580	Bituminous	164 808	177 205	177 463
582	Sub-bituminous	12 761	14 309	14 515
	<i>Total</i>	<i>177 874</i>	<i>191 903</i>	<i>194 496</i>
	Washery rejects(a)	(b)(c)42 463	(b)(c)46 459	(b)(c)49 724
	Underground	(c)(d)56 671	(c)(d)64 806	(c)68 185
	Open cut	(c)(d)133 675	(c)(d)166 891	(c)170 138
	Lignite			
	Saleable coal			
588	For briquettes	1 470	750	n.a.
589	Other	48 214	49 929	54 281
586	Briquettes	—	n.a.	n.a.
VALUE				
		\$'000	\$'000	\$'000
	Coal (other than lignite)			
	Saleable coal(a)			
581	Semi-anthracite	4 999	11 780	81 943
580	Bituminous	(d)6 594 925	(d)6 431 498	(d)6 857 105
582	Sub-bituminous	417 145	(d)481 816	487 167
	<i>Total</i>	<i>(d)7 017 069</i>	<i>(d)6 925 094</i>	<i>7 444 215</i>
	Lignite			
588	For briquettes	5 310	2 775	—
589	Other	395 678	411 914	465 188
586	Briquettes	—	n.a.	—
	Total coal	(d)(e)7 418 057	(d)(e)7 339 783	(e)7 909 403

(a) Raw coal is saleable coal plus washery rejects.

(b) Excludes South Australia.

(c) Excludes Western Australia.

(d) Excludes Tasmania.

(e) Excludes briquettes.

Source: ABS (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mines and Energy, South Australia 1996; Joint Coal Board (unpub.); Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997; The Queensland Coal Board (unpub.).

5.10 COAL PRODUCED, State and Territory

Commodity code	Mineral	NSW	Vic.	Qld	SA	WA	Tas.	NT
QUANTITY								
		'000 t	'000 t	'000 t	'000 t	'000 t	'000 t	'000 t
	Coal (other than lignite)							
	Saleable coal(a)							
581	Semi-anthracite	—	—	2 518	—	—	—	—
580	Bituminous	91 947	—	85 126	—	—	390	—
582	Sub-bituminous	—	—	6 119	2 499	5 897	—	—
	<i>Total</i>	91 947	—	93 763	2 499	5 897	390	—
	Washery rejects(a)	21 142	—	28 406	n.a.	n.a.	176	—
	Underground	54 314	—	13 573	—	n.a.	298	—
	Open cut	58 775	—	108 596	2 499	n.a.	268	—
	Lignite							
	Saleable coal							
588	For briquettes	—	n.a.	—	—	—	—	—
589	Other	—	54 281	—	—	—	—	—
586	Briquettes	—	n.a.	—	—	—	—	—
VALUE								
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
	Coal (other than lignite)							
	Saleable coal(a)							
581	Semi-anthracite	—	—	81 943	—	—	—	—
580	Bituminous	3 408 328	—	3 449 508	—	—	n.p.	—
582	Sub-bituminous	—	—	156 933	n.p.	270 360	—	—
	<i>Total</i>	3 408 328	—	3 688 384	n.p.	270 360	n.p.	—
	Lignite							
588	For briquettes	—	n.a.	—	—	—	—	—
589	Other	—	465 188	—	—	—	—	—
586	Briquettes	—	n.a.	—	—	—	—	—
	Total coal	3 408 328	(b)465 188	3 688 384	n.p.	270 360	n.p.	—

(a) Raw coal is saleable coal plus washery rejects.

(b) Excludes briquettes.

Source: ABS (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mines and Energy, South Australia 1996; Joint Coal Board (unpub.); Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997; The Queensland Coal Board (unpub.).

5.11 OIL AND GAS PRODUCED

Commodity code	Mineral	1993-94	1994-95	1995-96
QUANTITY				
590 & 592	Crude oil-stabilised (incl. condensate) (ML)	29 583	31 301	30 763
591	Natural gas(a) (GL)	15 959	17 486	19 169
593	Ethane (GL)	202	208	199
Liquefied petroleum gases(b)				
594	Propane (ML)	2 115	1 999	2 092
595	Butane (ML)	1 622	1 480	1 544
596	Liquefied natural gases ('000 t)	5 732	6 888	7 346
VALUE				
		\$'000	\$'000	\$'000
590 & 592	Crude oil-stabilised (incl. condensate)	4 747 186	4 669 745	4 751 864
591	Natural gas(a)	1 181 529	1 246 943	1 377 280
593	Ethane	33 300	34 218	36 545
Liquefied petroleum gases(b)				
594	Propane	250 853	265 850	315 802
595	Butane	194 345	203 552	244 351
596	Liquefied natural gases	1 015 679	1 262 513	1 350 916
Total oil and gas		7 422 892	7 682 821	8 076 758

(a) Includes field and plant usage.

(b) Excludes refinery production.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996.

5.12 OIL AND GAS PRODUCED, State and Territory

Commodity code	Mineral	NSW	Vic.	Qld	SA	WA	Tas.	NT
QUANTITY								
590 & 592	Crude oil-stabilised (incl. condensate) (ML)	—	12 732	1 091	1 097	14 296	—	1 547
591	Natural gas(a) (GL)	—	6 299	2 164	3 989	6 310	—	407
593	Ethane (GL)	—	180	—	19	—	—	—
Liquefied petroleum gases(b)								
594	Propane (ML)	—	1 275	191	454	172	—	—
595	Butane (ML)	—	1 037	118	218	171	—	—
596	Liquefied natural gases ('000 t)	—	—	—	—	7 346	—	—
VALUE								
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
590 & 592	Crude oil-stabilised (incl. condensate)	—	n.p.	122 650	n.p.	2 221 269	—	232 550
591	Natural gas(a)	—	n.p.	174 529	n.p.	454 764	—	26 951
593	Ethane	—	n.p.	—	n.p.	—	—	—
Liquefied petroleum gases(b)								
594	Propane	—	n.p.	28 329	n.p.	(c)19 733	—	—
595	Butane	—	n.p.	16 840	n.p.	(c)22 709	—	—
596	Liquefied natural gases	—	—	—	—	1 350 916	—	—
Total oil and gas		—	n.p.	342 348	n.p.	4 069 391	—	259 501

(a) Includes field and plant usage.

(b) Excludes refinery production.

(c) Includes freight.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996.

5.13 CONTENTS OF METALLIC MINERALS PRODUCED(a)

Commodity code	Mineral	1993-94	1994-95	1995-96
Alumina (Al₂O₃)				
500	Bauxite ('000 t)	10 708	(b)(c)10 979	(b)(c)11 199
Antimony				
556	Antimony concentrate (t)	532	707	761
511	Gold concentrate (t)	31	20	273
535	Lead concentrate (t)	932	695	746
543	Zinc concentrate (t)	19	7	220
	<i>Total (t)</i>	1 514	1 429	2 000
Cadmium				
535	Lead concentrate (t)	195	156	1 034
543	Zinc concentrate (t)	1 688	1 435	1 465
547	Zinc-lead concentrate (t)	95	58	54
	<i>Total (t)</i>	1 978	1 649	2 553
Cobalt				
532	Nickel concentrate (t)	370	786	870
533	Nickel ore (t)	275	333	5
543	Zinc concentrate (t)	28	21	—
	<i>Total (t)</i>	673	1 140	875
Copper				
502	Copper concentrate (t)	413 874	344 946	417 722
503	Copper ore (t)	16	—	24
506	Copper precipitate (t)	16 149	18 868	15 858
511	Gold concentrate (t)	n.a.	n.a.	(d)762
535	Lead concentrate (t)	5 762	5 588	5 729
532	Nickel concentrate (t)	4 035	4 489	5 195
579	Pyrite ore (t)	8	—	—
543	Zinc concentrate (t)	2 338	4 033	1 938
	<i>Total (t)</i>	442 182	377 925	447 228
Gold				
556	Antimony concentrate (kg)	27	36	14
502	Copper concentrate (kg)	(d)7 053	(d)6 213	8 757
509	Gold bullion (dore)(e) (kg)	(d)54 217	(b)(d)48 965	(b)45 293
511	Gold concentrate (kg)	73	62	1 119
510	Gold ore (kg)	106	—	—
535	Lead concentrate (kg)	467	434	387
543	Zinc concentrate (kg)	136	264	2 540
	<i>Total (kg)</i>	255 757	(b)243 213	(b)263 916

(a) See paragraph 27 of the Explanatory Notes.

(b) Excludes Victoria.

(c) Excludes Queensland.

(d) Excludes Western Australia.

(e) Includes alluvial gold.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.13 CONTENTS OF METALLIC MINERALS PRODUCED(a) *continued*

Commodity code	Mineral	1993-94	1994-95	1995-96
Iron				
(b)	Iron ore ('000 t)	76 960	(c)83 370	(c)83 577
Lead				
502	Copper concentrate (t)	2 729	3 338	2 839
535	Lead concentrate (t)	483 459	415 752	385 295
537	Lead ore (t)	—	565	4 688
546	Lead-zinc concentrate (t)	6 246	6 136	28 735
543	Zinc concentrate (t)	25 967	23 444	48 866
547	Zinc-lead concentrate (t)	11 120	6 903	24 733
	<i>Total (t)</i>	529 521	456 138	441 688
Manganese				
Manganese ore				
563	Metallurgical grade (t)	396 984	458 808	466 662
565	Other grades (t)	480 659	502 044	566 779
	<i>Total (t)</i>	877 643	960 852	1 033 441
Mercury				
543	Zinc concentrate (t)	10	14	13
Monazite				
524	Monazite concentrate (t)	5 470	280	7 677
Nickel				
502	Copper concentrate (t)	—	—	13
532	Nickel concentrate (t)	61 097	93 002	103 301
533	Nickel ore (t)	3 141	3 707	41
543	Zinc concentrate (t)	3	3	6
	<i>Total (t)</i>	64 241	96 712	103 361
Palladium				
532	Nickel concentrate (kg)	373	514	558
Platinum				
532	Nickel concentrate (kg)	64	121	87
Selenium				
502	Copper concentrate (t)	45	47	4 270
535	Lead concentrate (t)	30	22	32 059
543	Zinc concentrate (t)	1	6	2 258
	<i>Total (t)</i>	76	75	38 587
Silicon dioxide (SiO₂)				
500	Bauxite (t)	212	226	235

(a) See paragraph 27 of the Explanatory Notes.

(b) Commodity codes 507, 513, 515. Includes iron ore pellets (commodity code 520).

(c) Excludes South Australia.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.13 CONTENTS OF METALLIC MINERALS PRODUCED(a) *continued*

Commodity code	Mineral	1993-94	1994-95	1995-96
Silver				
502	Copper concentrate (kg)	172 765	(b)156 524	(b)165488
509	Gold bullion (dore)(c) (kg)	(d)57 285	(b)62 982	(b)46 636
511	Gold concentrate (kg)	—	—	1 285
535	Lead concentrate (kg)	703 932	538 748	567 885
546	Lead-zinc concentrate (kg)	10 856	13 865	9 828
532	Nickel concentrate (kg)	241	199	194
579	Pyrite ore (kg)	4	—	—
543	Zinc concentrate (kg)	99 414	88 104	132 355
547	Zinc-lead concentrate (kg)	35 677	21 473	19 526
	<i>Total (kg)</i>	<i>1 080 174</i>	<i>(b)881 895</i>	<i>(b)943 197</i>
Sulphur				
502	Copper concentrate (t)	51 675	47 947	43 746
535	Lead concentrate (t)	59 949	57 530	44 768
543	Zinc concentrate (t)	328 886	284 198	246 856
547	Zinc-lead concentrate (t)	27 793	16 177	13 325
	<i>Total (t)</i>	<i>468 303</i>	<i>405 852</i>	<i>348 695</i>
Tantalite (Ta₂O₅)				
551	Tin-tantalite concentrate (kg)	—	—	4 463
Tantalite				
570	Tantalite-columbite concentrate (kg)	90 999	198 975	234 675
Tin				
535	Lead concentrate (t)	21	11	4 994
549	Tin concentrate (incl. tin-wolfram concentrate) (t)	7 575	7 960	9 109
543	Zinc concentrate (t)	53	31	16
551	Tin-tantalite concentrate (t)	—	—	9
	<i>Total (t)</i>	<i>7 649</i>	<i>8 002</i>	<i>14 128</i>
Titanium dioxide (TiO₂)				
500	Bauxite (t)	178	190	182
521	Synthetic rutile (t)	—	364 572	375 839
522	Ilmenite concentrate (incl. beneficiated ilmenite) (t)	987 649	648 276	(e)713 438
523	Leucoxene concentrate (t)	15 965	17 641	21 306
525	Rutile concentrate (t)	159 257	208 649	(e)171 625
	<i>Total (t)</i>	<i>1 163 049</i>	<i>1 239 328</i>	<i>(e)1 282 390</i>

(a) See paragraph 27 of the Explanatory Notes.

(b) Excludes Victoria.

(c) Includes alluvial gold.

(d) Excludes Tasmania.

(e) Excludes New South Wales.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

5.13 CONTENTS OF METALLIC MINERALS PRODUCED(a) *continued*

Commodity code	Mineral	1993-94	1994-95	1995-96
Tungstic oxide (WO₃)				
571	Scheelite concentrate (units of 10 kg)	—	(b)—	—
Uranium				
575	Uranium concentrate (t)	3 348	790	5 050
Zinc				
502	Copper concentrate (t)	1 827	2 764	2 760
535	Lead concentrate (t)	54 441	43 766	42 921
546	Lead-zinc concentrate (t)	20 134	14 999	12 640
579	Pyrite ore (t)	1	—	—
543	Zinc concentrate (t)	887 952	828 407	771 751
547	Zinc-lead concentrate (t)	32 936	18 688	78 748
	<i>Total (t)</i>	<i>997 291</i>	<i>908 624</i>	<i>908 820</i>
Zirconium dioxide (ZrO₂)				
529	Zircon concentrate (t)	297 116	386 380	372 886

(a) See paragraph 27 of the Explanatory Notes.

(b) Excludes Tasmania.

Source: ABS (unpub.); Department of Minerals and Energy, Queensland (unpub.); Department of Minerals and Energy, Western Australia 1996; Department of Mineral Resources, New South Wales (unpub.); Department of Mines and Energy, Northern Territory 1997; Department of Mines and Energy, South Australia 1996; Mineral Resources, Tasmania 1996; Natural Resources and Environment, Victoria 1997.

The data presented in this chapter are derived from the 1995–96 Collection of Mining Operations and from some comparative statistics relating to earlier years.

Some of the data published in the 1994–95 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 6.14–6.17 relate to management unit data while tables 6.18–6.23 relate to establishment data. The Glossary provides definitions for the terms used.

MANAGEMENT UNIT SUMMARY

The following analysis relates to ANZSIC Subdivisions 11–13 only. This incorporates coal mining, oil and gas extraction, and metal ore mining.

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.....	
	1994–95	1995–96	1994–95	1995–96	1994–95	1995–96	1994–95	1995–96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Trading profit	3 565.0	4 380.7	5 741.5	6 216.0	5 828.6	6 835.7	15 135.1	17 432.5
Earnings before interest and tax	632.4	1 017.7	3 318.2	3 350.2	2 735.0	3 630.4	6 685.6	7 998.3
Operating profit before tax	309.0	722.6	2 981.4	2 937.4	2 122.3	2 950.8	5 412.7	6 610.8
Turnover	9 171.5	10 270.4	7 080.3	7 461.2	12 478.8	14 390.3	28 730.6	32 121.9
Industry gross product	3 672.7	4 489.1	5 813.9	6 338.4	5 989.6	7 020.6	15 476.2	17 848.2

Items	OTHER MINING.....		SERVICES TO MINING(b)....		TOTAL MINING(b).....	
	1994–95	1995–96	1994–95	1995–96	1994–95	1995–96
	\$m	\$m	\$m	\$m	\$m	\$m
Trading profit	n.a.	1 309.3	n.a.	*903.3	n.a.	19 645.1
Earnings before interest and tax	n.a.	651.3	n.a.	**–243.9	n.a.	8 405.7
Operating profit before tax	n.a.	590.2	n.a.	**–309.8	n.a.	6 891.2
Turnover	n.a.	2 871.8	n.a.	2 711.5	n.a.	37 705.2
Industry gross product	n.a.	1 333.9	n.a.	*1 005.7	n.a.	20 187.8

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

(b) See paragraphs 42–44 of the Explanatory Notes.

Source: ABS (unpub.)a.

Trading profit

Total trading profit increased by \$2,298m (15%), from \$15,135m in 1994–95 to \$17,433m in 1995–96. The improvement in trading profit resulted from an increase in the value of sales of goods and services of \$3,316m (12%) to \$31,706m, which was only partially offset by the increase in the cost of purchases and selected expenses of \$1,312m to \$14,539m.

Coal mining reported the largest percentage increase in trading profit, of 23% to \$4,381m in 1995–96. The value of sales of goods and services in the coal mining industry increased by \$1,098m between 1994–95 and 1995–96. The cost of purchases and selected expenses increased by \$323m. The next largest increase in trading profit occurred in the metal ore mining industry, which increased 17% to \$6,836m in 1995–96. The \$1,888m rise in the value of sales of goods and services between 1994–95 and 1995–96 was largely offset by the \$1,138m rise in the cost of purchases and selected expenses for the same period.

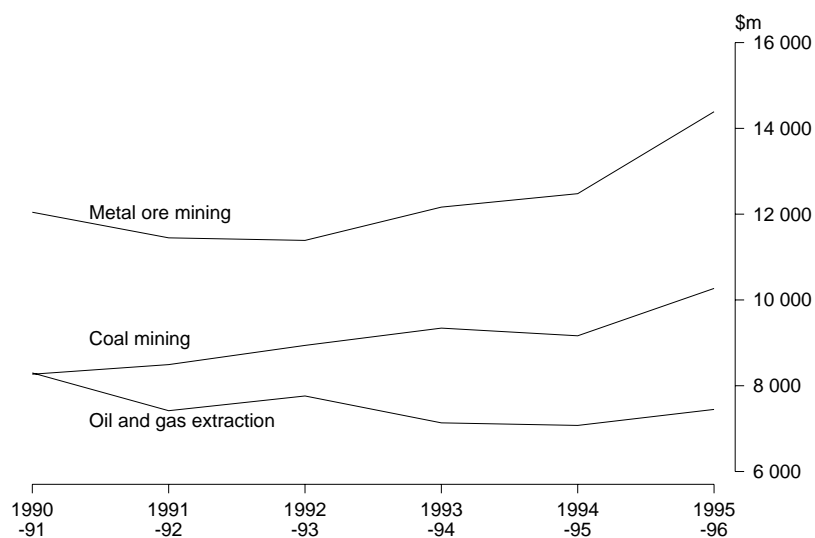
Turnover

Total turnover for 1995–96 was \$32,122m, an increase of \$3,391m from 1994–95. This 12% rise in turnover can be largely attributed to the \$3,317m increase in the value of sales of goods and services for the reporting period.

The metal ore mining industry recorded the largest increase in turnover of \$1,912m (15%) to \$14,390m in 1995–96. Coal mining rose \$1,099m (12%) to \$10,270m and the oil and gas extraction industry increased \$381m (5%) to \$7,461m in 1995–96.

Coal mining has shown continuing improvement in turnover since 1992–93. The large movement between 1994–95 and 1995–96 was a result of increased production together with an increase in the base contract price. Oil and gas showed only a slight improvement despite a significant production increase in Western Australia. Crude oil production from the Victorian fields continued to decline from its peak in 1992–93, counteracting the Western Australian gains. Price rises in most metal ore commodities together with increased production prompted the overall rise in metal ore mining turnover.

6.2 MANAGEMENT UNIT TURNOVER



Source: ABS (unpub.)a.

Industry gross product

Industry gross product (IGP) increased by \$2,372m (15%) from \$15,476m in 1994–95 to \$17,848m in 1995–96.

The coal mining, oil and gas extraction, and metal ore mining industries all reported an increase in IGP between 1994–95 and 1995–96. The metal ore mining industry increased \$1,031m (17%) to \$7,021m in 1995–96, coal mining increased \$816m (22%) and the oil and gas extraction industry increased by \$525m (9%).

The metal ore mining industry was the largest contributor to IGP in 1995–96, accounting for 39%. The oil and gas extraction industry accounted for 36%, down 1 percentage point on its contribution in 1994–95.

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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assets and liabilities								
Total assets	15 066.7	15 770.1	22 337.8	22 227.9	25 785.5	32 134.3	63 190.0	70 132.3
Total liabilities	8 865.7	9 404.3	10 704.3	13 240.4	11 213.9	15 959.8	30 783.9	38 604.5
Net worth	6 201.0	6 365.8	11 633.5	8 987.5	14 571.5	16 174.4	32 406.0	31 527.8
Capital expenditure								
Total acquisitions	1 077.4	1 177.2	1 477.1	1 751.7	2 859.7	3 130.2	5 414.2	6 059.1
Net capital expenditure	989.9	1 112.9	1 306.1	1 736.7	2 737.1	2 856.8	5 033.1	5 706.5
OTHER MINING.....								
SERVICES TO MINING(b)....								
TOTAL MINING(b).....								
Items	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96		
	\$m	\$m	\$m	\$m	\$m	\$m		
Assets and liabilities								
Total assets	n.a.	3 306.4	n.a.	3 700.1	n.a.	77 138.8		
Total liabilities	n.a.	1 485.8	n.a.	3 976.1	n.a.	44 066.4		
Net worth	n.a.	1 820.6	n.a.	**276.0	n.a.	33 072.4		
Capital expenditure								
Total acquisitions	n.a.	288.5	n.a.	300.7	n.a.	6 648.3		
Net capital expenditure	n.a.	257.3	n.a.	**48.9	n.a.	6 012.7		

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

(b) See paragraphs 42–44 of the Explanatory Notes.

Source: ABS (unpub.)a.

Net worth

Net worth is an indicator of the unencumbered value of assets. It is derived by deducting total liabilities (gross indebtedness) from the total value of assets. Total net worth for the core mining industry in 1995–96 was \$31,528m, a decrease of \$878m over the \$32,406m reported in 1994–95. Just over half (51%) of total net worth value was accounted for by the metal ore mining industry. The oil and gas extraction industry's contribution to total net worth declined from 36% in 1994–95 to 29% in 1995–96.

Net worth for the oil and gas extraction industry decreased \$2,646m (23%) between 1994–95 and 1995–96. This decline was primarily due to the 24% increase in the total value of liabilities for the same period. Net worth for the coal mining industry increased by \$165m (3%).

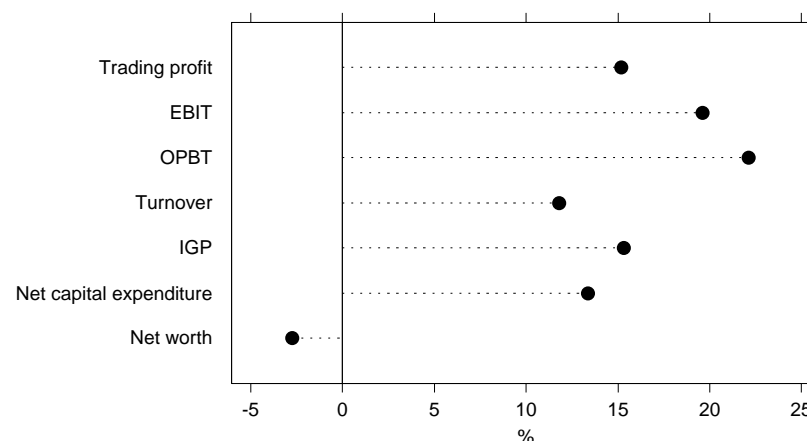
Net capital expenditure

Total net capital expenditure in 1995–96 increased by \$673m (13%) to \$5,707m in 1995–96, compared with an increase of \$1,117m in 1994–95. The largest increase in net capital expenditure of \$431m (33%) occurred in the oil and gas extraction industry. This was a result of increased expenditure on plant, machinery and equipment and a 91% decrease in disposal of assets. The coal mining industry recorded an increase of \$123m (12%) in 1995–96 with the capital expenditure on land increasing by \$24m (128%) and plant, machinery and equipment increasing by \$159m (21%). The only industry to record an increase in the disposal of assets was metal ore mining which rose \$151m (123%) to \$273m in 1995–96.

The metal ore mining industry was the largest contributor to net capital expenditure accounting for \$2,857m (50%) in 1995–96. The oil and gas extraction industry was the next largest contributor with \$1,737m (30%).

Expenditure on plant, machinery and equipment remained the largest component of capital expenditure, accounting for \$4,366m (72%) of the overall total of \$6,059m in 1995–96. Capital expenditure on land rose \$58m (134%) to \$102m whereas capital expenditure on dwellings, buildings and other structures decreased \$518m (25%) to \$1,592m.

6.4 CHANGE IN SELECTED INDICATORS—1994–95 to 1995–96



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 for management units (see paragraphs 11–13 of the Explanatory Notes) in that they reflect a more homogenous picture of the industry.

6.5 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	9 997	731	811	4 817	5 260	1 162
Oil and gas extraction							
1200	Oil and gas extraction	7 874	229	242	739	7 148	1 523
Metal ore mining							
1311	Iron ore mining	3 305	303	322	1 176	2 149	460
1312	Bauxite mining	880	42	59	309	588	160
1313	Copper ore mining	1 194	158	130	454	712	229
1314	Gold ore mining	4 501	484	616	2 395	2 238	762
1315	Mineral sand mining	777	138	160	377	422	118
1317	Silver-lead-zinc ore mining	1 153	129	145	583	586	162
	Other(b)	1 334	287	277	543	780	275
131	Total	13 143	1 542	1 708	5 835	7 475	2 165
Total 1995–96		31 014	2 501	2 761	11 392	19 882	4 850
Total 1994–95		28 882	2 517	2 508	10 219	18 654	4 654

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

(b) Includes ANZSIC Classes 1316 and 1319.

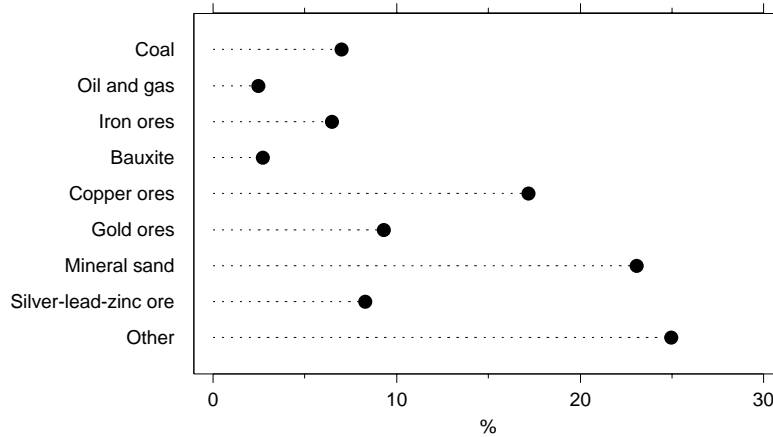
Source: ABS (unpub.)a.

Turnover

Turnover in 1995–96 was \$31,014m compared with \$28,882m for 1994–95, an increase of \$2,132m (7%). The coal mining and oil and gas extraction industries reported increases in turnover of \$655m and \$192m respectively for 1995–96, contrary to the previous year when they both experienced a decline in turnover. Increased production from new mines and higher prices for gold resulted in turnover increasing in the gold mining industry by \$384m (9%) to \$4,501m in 1995–96. The largest percentage rise in turnover occurred in mineral sand mining, up 23% to \$777m in 1995–96 due to sales increases resulting from higher prices.

The coal mining industry was the largest contributor to turnover in 1995–96. Coal mining accounted for 32%, the same level as in 1994–95. Oil and gas extraction accounted for 25% a decline of 2% from 1994–95. The other main contributors were the gold ore mining and the iron ore mining industries which accounted for 15% and 11% respectively of total turnover in 1995–96.

6.6 CHANGE IN TURNOVER—1994–95 to 1995–96



Source: ABS (unpub.)a.

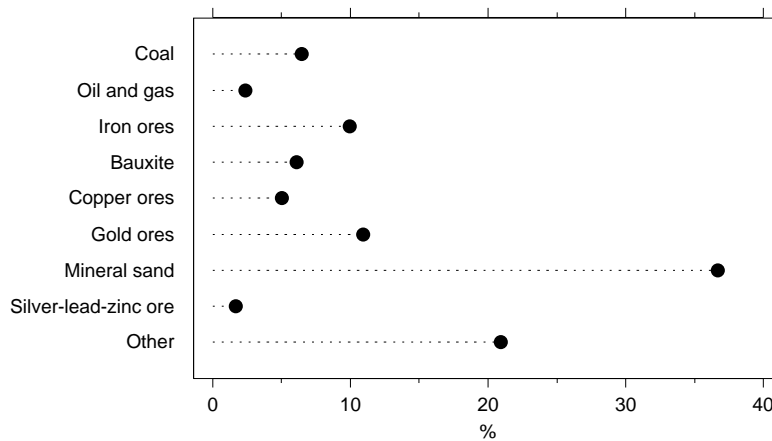
Value added

Value added increased by 7% (\$1,228m), from \$18,654m in 1994–95 to \$19,882m in 1995–96.

Industries which recorded increases in value added for 1995–96 included coal mining up \$319m (6%) to \$5,260m, iron ore up \$195m (10%) to \$2,149m, oil and gas extraction up \$167m (2%) to \$7,148m, and mineral sand mining which increased \$113m (37%) to \$422m.

The oil and gas extraction mining industry remains the largest contributor to national value added, accounting for 36% of the total in 1995–96. Coal was the second largest contributor accounting for 26%.

6.7 CHANGE IN VALUE ADDED—1994–95 to 1995–96



Source: ABS (unpub.)a.

Capital expenditure

Net capital expenditure, that is total expenditure less disposals, increased by \$196m (4%), from \$4,654m in 1994–95 to \$4,850m in 1995–96. The largest absolute increase occurred in the oil and gas extraction industry with a rise of \$296m (24%) to \$1,523m in 1995–96. The largest increase in percentage terms was copper ore mining, up \$163m (250%) to \$229m. Other industries to record increases included the coal mining industry, up \$136m (13%) for 1995–96 and bauxite, up \$104m (185%). The main factor for the rise in capital expenditure in the copper ore mining industry was the increase in capital expenditure on dwellings, buildings and other structures, up \$142m to \$162m in 1995–96.

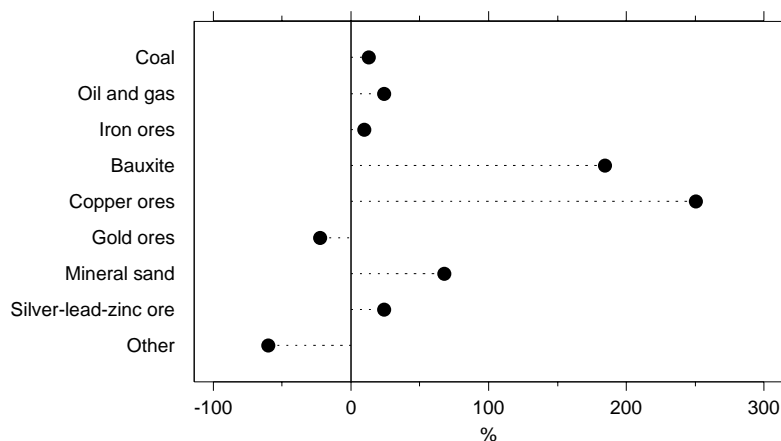
Contrary to the previous two reporting periods (1992–93 to 1993–94 and 1993–94 to 1994–95), net capital expenditure for the gold ore mining industry fell \$218m (22%) to \$762m in 1995–96. Decreased capital expenditure on dwellings, buildings and other structures, down \$261m (41%) and an increase of \$51m in disposals of fixed tangible assets accounted for the drop.

Fluctuations in total capital expenditure were also due to variations in the level of expenditure on plant, machinery and equipment. This is especially so in the coal mining industry where expenditure on plant machinery and equipment rose by \$182m (24%).

Total expenditure on plant, machinery and equipment rose by \$485m to \$3,579m, accounting for 70% of total mining industry capital expenditure in 1995–96. Expenditure on dwellings, buildings and other structures accounted for 29% of total capital expenditure.

Establishments in the oil and gas extraction industry accounted for \$1,523m (31%) of total net capital expenditure across all mining industries. Coal mining with \$1,162m (24%) was the next major contributor.

6.8 CHANGE IN NET CAPITAL EXPENDITURE—1994–95 to 1995–96



Source: ABS (unpub.)a.

STATE DATA

Table 6.9 summarises the data for each State and Territory for 1995–96. Detailed figures can be found in tables 6.20 and 6.21.

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

<i>State and Territory</i>	<i>Turnover</i>	<i>Opening stocks</i>	<i>Closing stocks</i>	<i>Purchases and selected expenses</i>	<i>Value added</i>	<i>Net capital expenditure</i>
	\$m	\$m	\$m	\$m	\$m	\$m
New South Wales	4 808	358	458	2 253	2 655	730
Victoria	3 276	52	52	237	3 039	657
Queensland	7 299	704	714	3 561	3 748	680
South Australia	1 027	92	103	237	801	175
Western Australia	12 952	1 028	1 154	4 514	8 563	2 376
Tasmania	372	53	58	160	217	126
Northern Territory	1 280	215	224	429	860	105
Australia	31 014	2 501	2 761	11 392	19 882	4 850

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

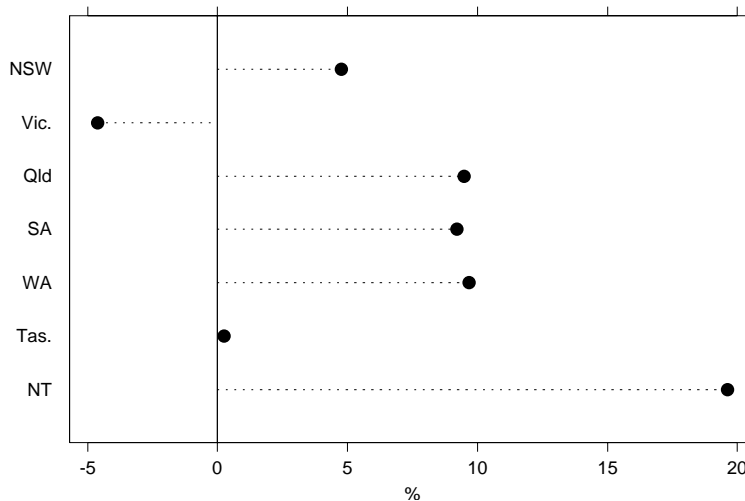
Source: ABS (unpub.)a.

Turnover

Western Australia recorded the largest absolute increase in turnover, rising \$1,142m (10%) to \$12,952m in 1995–96. Increased revenue from sales of goods, in particular gold and iron ore, within the metal ore mining industry was largely responsible for this increase. Queensland recorded the next largest increase in turnover, up \$633m (9%) followed by New South Wales, up \$219m (5%). Northern Territory recorded a 20% (\$210m) 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. Victoria was the only State to record a decrease in turnover, falling \$159m (5%) to \$3,276m in 1995–96, a result of a reduction in oil and gas extraction sales.

Western Australia retained its position as the largest contributor to national turnover, accounting for \$12,952m (42%). Queensland with \$7,299m (24%) was the second largest contributor.

6.10 CHANGE IN TURNOVER—1994–95 to 1995–96



Source: ABS (unpub.)a.

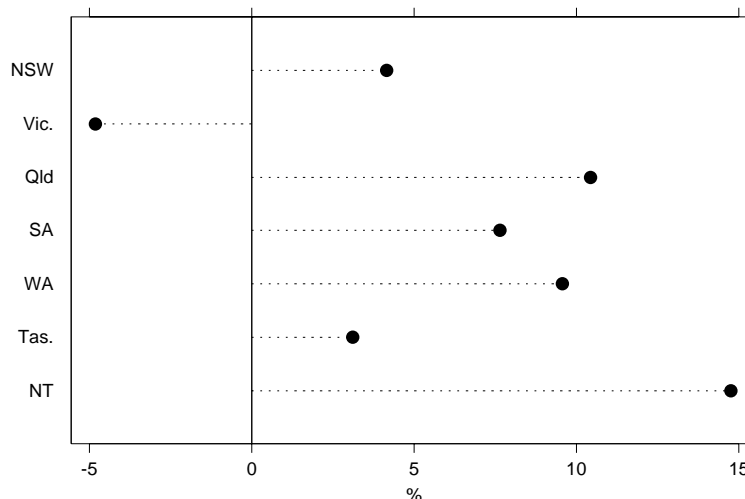
Value added

Movements in value added generally reflected those of turnover. Value added in Western Australia increased \$748m (10%), rising from \$7,816m in 1994–95 to \$8,563m in 1995–96. Increases in value added were also recorded in Queensland, up \$354m (10%) to \$3,748m and in New South Wales, up \$106m (4%) to \$2,655m in 1995–96.

Value added in Victoria decreased by \$153m (5%) to \$3,039m in 1995–96 due to decreased revenue from sales of oil and gas.

Western Australia was the largest contributor to national value added, accounting for \$8,563m (43%). Queensland with \$3,748m and Victoria with \$3,039m contributed 19% and 15% respectively during 1995–96.

6.11 CHANGE IN VALUE ADDED—1994–95 to 1995–96



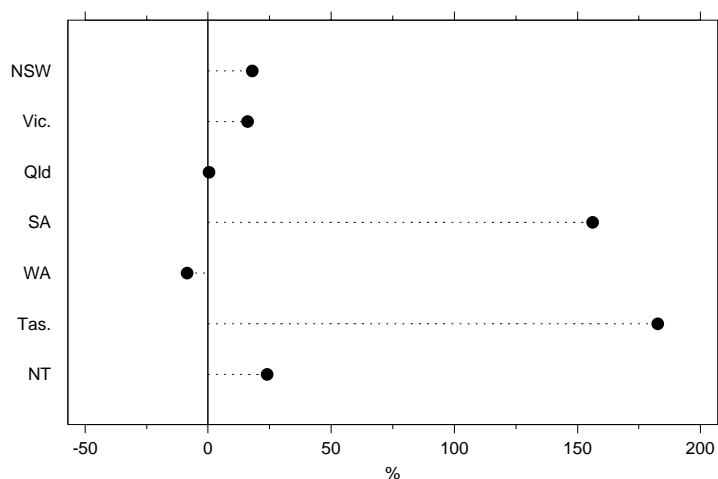
Source: ABS (unpub.)a.

Capital expenditure

New South Wales recorded the highest absolute increase in net capital expenditure of \$111m, rising 18% to \$730m in 1995–96. An increase in the value of capital expenditure spent on dwellings, buildings and other structures as well as plant, machinery and equipment in the coal mining industry was the main reason for the increase.

South Australia recorded the next highest increase in net capital expenditure, rising \$107m (156%) to \$175m in 1995–96 mainly due to the trebling in the value of capital expenditure spent on dwellings, buildings and other structures.

Western Australia recorded a decrease of \$218m (8%) in net capital expenditure which was largely a result of capital expenditure on dwellings, buildings and other structures falling \$470m (46%) to \$563m in 1995–96. Despite the decrease, Western Australia was the largest contributor to net capital expenditure during 1995–96, accounting for \$2,376m (49%).

6.12 CHANGE IN NET CAPITAL EXPENDITURE—1994–95 to 1995–96

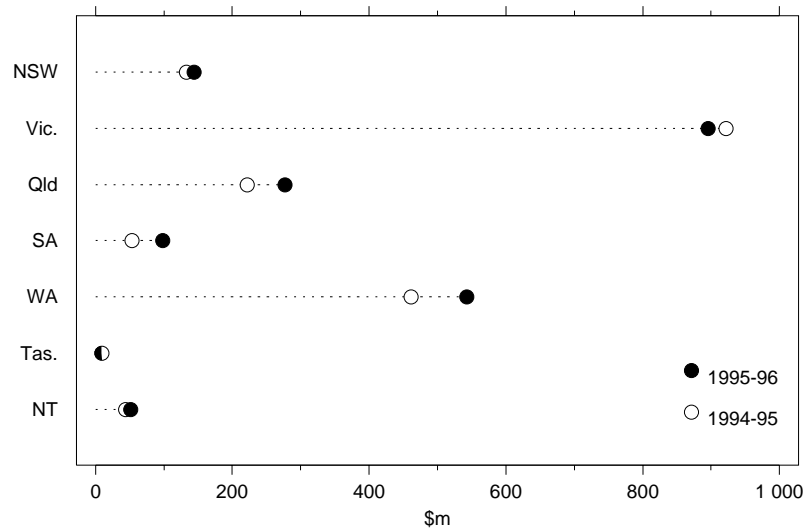
Source: ABS (unpub.)a.

Royalties

Royalties data appear in tables 6.22 and 6.23 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.

Royalties totalling \$2,018m were paid during 1995–96. This represented an increase of \$170m (9%) on the \$1,847m reported in 1994–95. The coal mining industry recorded the largest absolute increase, with royalties paid rising \$56m (19%) to \$353m. The value of royalties paid in the oil and gas extraction industry rose by \$39m (3%). Iron ore mining showed the highest rise in the metal ore mining industries with royalties rising \$31m (16%).

The oil and gas extraction industry remained the largest contributor to royalties paid, accounting for 63% in 1995–96.

6.13 ROYALTIES PAID, By State and Territory

Source: ABS (unpub.)a.

On a State and Territory basis, Victoria was the largest contributor to total royalties paid, accounting for \$896m (44%) of royalty payments. Western Australia contributed \$543m (27%) in 1995–96.

6.14 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods and services	9 063.8	10 162.0	7 007.9	7 338.7	12 317.8	14 205.4	28 389.5	31 706.2
<i>Less</i>								
Purchases of goods and materials	1 589.4	1 712.5	154.2	125.0	2 298.3	2 882.9	4 042.0	4 720.4
Rent, leasing and hiring expenses								
Motor vehicles	9.2	6.9	2.3	1.0	9.8	14.6	21.3	22.5
Plant, machinery and other equipment	48.6	59.4	9.7	14.5	66.6	89.3	124.9	163.2
Land, buildings and other structures	42.8	42.1	44.6	58.2	26.3	41.2	113.8	141.5
Other rent, leasing and hiring	15.6	6.5	0.6	0.7	6.6	5.1	22.8	12.3
Outward freight and cartage	1 730.9	1 799.5	122.0	19.6	270.7	315.1	2 123.6	2 134.1
Motor vehicle expenses	12.7	16.8	11.3	6.0	43.3	41.5	67.4	64.3
Repair and maintenance expenses	776.8	796.3	110.0	80.7	800.6	953.3	1 687.4	1 830.3
Payment for contract, subcontract and commission work	587.3	684.9	282.6	244.8	1 893.7	2 120.0	2 763.6	3 049.7
Other selected expenses	704.9	715.9	547.6	585.8	1 007.6	1 098.5	2 260.2	2 400.2
<i>Purchases and selected expenses</i>	<i>5 518.3</i>	<i>5 840.8</i>	<i>1 285.0</i>	<i>1 136.3</i>	<i>6 423.6</i>	<i>7 561.4</i>	<i>13 226.9</i>	<i>14 538.5</i>
<i>Plus</i>								
Opening stocks	753.8	798.6	232.6	251.8	1 898.5	1 764.1	2 885.0	2 814.5
<i>Less</i>								
Closing stocks	773.4	858.1	251.2	265.4	1 832.9	1 955.8	2 857.5	3 079.2
<i>Cost of sales</i>	<i>5 498.8</i>	<i>5 781.3</i>	<i>1 266.4</i>	<i>1 122.7</i>	<i>6 489.2</i>	<i>7 369.7</i>	<i>13 254.4</i>	<i>14 273.7</i>
Trading profit	3 565.0	4 380.7	5 741.5	6 216.0	5 828.6	6 835.7	15 135.1	17 432.5
<i>Plus</i>								
Rent, leasing and hiring income	31.0	24.4	63.6	74.5	25.4	15.8	120.0	114.7
Government subsidies(b)	0.7	3.8	—	—	21.6	19.9	22.4	23.7
Interest income	71.2	103.0	46.2	46.7	430.4	484.1	547.7	633.8
Other income	198.7	267.1	557.7	159.7	71.0	190.1	827.4	616.9
<i>Less</i>								
Wages and salaries	1 871.7	2 191.3	410.9	421.0	1 555.1	1 751.8	3 837.7	4 364.2
Superannuation	123.0	142.8	21.9	30.5	67.4	65.5	212.3	238.8
Workers' compensation	46.6	54.8	2.8	5.1	37.9	38.9	87.3	98.8
<i>Selected labour costs</i>	<i>2 041.4</i>	<i>2 389.0</i>	<i>435.6</i>	<i>456.7</i>	<i>1 660.4</i>	<i>1 856.2</i>	<i>4 137.4</i>	<i>4 701.8</i>
<i>Less</i>								
Depreciation	873.2	978.7	1 321.8	1 367.8	1 512.3	1 580.8	3 707.3	3 927.2
Insurance on premiums	55.8	55.5	56.2	45.8	56.9	52.7	168.9	154.0
Royalties expenses	262.5	337.8	1 277.1	1 276.2	410.8	424.1	1 950.4	2 038.1
Bad debts	1.3	0.4	0.1	0.2	1.7	1.5	3.1	2.1
Earnings before interest and tax	632.4	1 017.7	3 318.2	3 350.2	2 735.0	3 630.4	6 685.6	7 998.3
<i>Less</i>								
Interest expenses	323.4	295.1	336.8	412.8	612.7	679.5	1 272.9	1 387.5
Operating profit before tax	309.0	722.6	2 981.4	2 937.4	2 122.3	2 950.8	5 412.7	6 610.8

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

(b) Excludes diesel fuel rebate.

Source: ABS (unpub.)a.

6.15 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods and services	9 063.8	10 162.0	7 007.9	7 338.7	12 317.8	14 205.4	28 389.5	31 706.2
Rent, leasing and hiring expenses	31.0	24.4	63.6	74.5	25.4	15.8	120.0	114.7
Government subsidies(b)	0.7	3.8	—	—	21.6	19.9	22.4	23.7
<i>Plus</i>								
Capital work done for own use	76.0	80.2	8.7	48.0	113.9	149.2	198.7	277.3
Turnover	9 171.5	10 270.4	7 080.3	7 461.2	12 478.8	14 390.3	28 730.6	32 121.9
<i>Plus</i>								
Closing stocks	773.4	858.1	251.2	265.4	1 832.9	1 955.8	2 857.5	3 079.2
<i>Less</i>								
Opening stocks	753.8	798.6	232.6	251.8	1 898.5	1 764.1	2 885.0	2 814.5
<i>Less</i>								
Purchases and selected expenses	5 518.3	5 840.8	1 285.0	1 136.3	6 423.6	7 561.4	13 226.9	14 538.5
Industry gross product	3 672.7	4 489.1	5 813.9	6 338.4	5 989.6	7 020.6	15 476.2	17 848.2

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

(b) Excludes diesel fuel rebate.

Source: ABS (unpub.)a.

6.16 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assets								
Current assets								
Closing stocks	773.4	858.1	251.2	265.4	1 832.9	1 955.8	2 857.5	3 079.2
Other current assets	3 082.9	2 894.8	1 801.0	2 141.1	6 438.9	8 737.5	11 322.8	13 773.4
Non-current assets	11 210.4	12 017.3	20 285.6	19 821.3	17 513.6	21 441.0	49 009.7	53 279.6
Total value of assets	15 066.7	15 770.1	22 337.8	22 227.9	25 785.5	32 134.3	63 190.0	70 132.3
Liabilities								
Current liabilities	4 180.6	3 726.5	2 689.2	3 476.3	5 920.1	8 841.1	12 789.8	16 043.8
Non-current liabilities	4 685.1	5 677.8	8 015.1	9 764.1	5 293.9	7 118.8	17 994.1	22 560.7
Total value of liabilities	8 865.7	9 404.3	10 704.3	13 240.4	11 213.9	15 959.8	30 783.9	38 604.5
Net worth	6 201.0	6 365.8	11 633.5	8 987.5	14 571.5	16 174.4	32 406.0	31 527.8

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

Source: ABS (unpub.)a.

6.17 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Capital expenditure on								
Land	18.5	42.1	—	—	25.1	59.6	43.5	101.6
Dwellings, buildings and other structures	315.3	232.2	455.1	412.3	1 339.5	947.4	2 109.9	1 592.0
Plant, machinery and equipment	743.7	902.9	1 022.0	1 339.4	1 495.1	2 123.2	3 260.8	4 365.5
Total acquisitions	1 077.4	1 177.2	1 477.1	1 751.7	2 859.7	3 130.2	5 414.2	6 059.1
Disposal of assets	87.6	64.3	171.0	14.9	122.6	273.4	381.1	352.6
Net capital expenditure	989.9	1 112.9	1 306.1	1 736.7	2 737.1	2 856.8	5 033.1	5 706.5

(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.

6.18 ESTABLISHMENT LEVEL(a), Income and Expenditure—Industry Class

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		IRON ORE MINING.....		BAUXITE MINING.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods								
Produced by this business(b)	9 019.6	9 640.8	7 600.8	7 755.6	2 907.7	3 080.5	823.9	845.0
Not produced by this business(b)	151.6	181.9	7.0	8.2	89.5	124.4	—	—
Service income	77.4	81.3	26.0	22.1	84.6	89.7	—	0.1
Rent, leasing and hiring income	11.7	27.8	28.4	41.1	9.0	7.8	0.1	0.1
Government subsidies(c)	4.4	3.3	—	—	0.4	—	0.1	0.1
<i>Plus</i>								
Capital work done for own use	77.2	61.9	19.2	46.7	11.8	2.2	32.2	34.4
Turnover	9 341.9	9 997.0	7 681.4	7 873.7	3 103.0	3 304.6	856.3	879.6
<i>Plus</i>								
Closing stocks	741.5	810.9	240.1	242.4	279.5	322.1	40.3	59.2
<i>Less</i>								
Opening stocks	719.9	730.7	214.5	228.9	327.2	302.6	54.9	41.8
<i>Less</i>								
Purchases								
Materials, components, containers etc.(d)(e)	806.7	826.1	126.2	108.6	229.3	171.9	112.9	118.3
Electricity and fuels	377.6	390.8	24.3	27.9	142.8	125.5	77.4	78.8
Goods for resale(d)	145.4	170.0	—	5.1	40.2	52.3	—	—
Rent, leasing and hiring expenses								
Motor vehicles	11.1	7.0	1.9	2.0	1.0	2.7	0.2	0.2
Plant, machinery and other equipment	52.4	66.1	9.4	15.1	8.6	7.6	4.9	6.0
Land, buildings and other structures	28.0	37.4	28.0	29.1	6.4	8.5	0.5	0.5
Other rent, leasing and hiring	5.3	19.4	0.6	—	4.8	4.4	18.5	20.3
Outward freight and cartage	1 696.5	1 805.6	129.7	145.3	21.8	41.7	12.3	12.0
Motor vehicle expenses	14.1	17.2	8.5	6.8	8.7	9.1	1.6	1.7
Repair and maintenance expenses	748.2	800.6	109.9	114.6	242.3	365.2	33.2	36.6
Payment for contract, subcontract and commission work	537.5	677.3	287.3	284.8	395.7	386.7	26.1	34.5
<i>Purchases and selected expenses</i>	<i>4 422.8</i>	<i>4 817.5</i>	<i>725.9</i>	<i>739.3</i>	<i>1 101.7</i>	<i>1 175.5</i>	<i>287.5</i>	<i>309.0</i>
Value added	4 940.7	5 259.7	6 981.1	7 147.9	1 953.7	2 148.5	554.1	588.0

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.18 ESTABLISHMENT LEVEL(a), Income and Expenditure—Industry Class *continued*

Items	COPPER ORE MINING.....		GOLD ORE MINING.....		MINERAL SAND MINING.....		SILVER-LEAD-ZINC ORE MINING.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales of goods								
Produced by this business(b)	988.6	1 166.0	4 060.1	4 454.1	614.8	759.2	1 020.8	1 090.4
Not produced by this business(b)	—	—	0.5	—	8.1	6.4	15.7	6.2
Service income	0.3	0.9	5.4	10.6	—	0.7	1.3	0.2
Rent, leasing and hiring income	0.5	0.5	2.5	2.5	0.6	0.6	1.7	1.5
Government subsidies(c)	6.7	7.9	0.1	—	—	—	6.0	6.7
<i>Plus</i>								
Capital work done for own use	22.9	18.8	48.9	34.2	7.7	10.2	18.8	47.7
Turnover	1 019.0	1 194.1	4 117.5	4 501.4	631.3	777.1	1 064.2	1 152.8
<i>Plus</i>								
Closing stocks	150.5	129.6	515.7	615.5	142.3	160.0	114.3	144.9
<i>Less</i>								
Opening stocks	140.4	158.4	509.3	484.4	152.4	138.2	143.0	128.9
<i>Less</i>								
Purchases								
Materials, components, containers etc.(d)(e)	102.3	134.1	437.6	444.0	92.9	120.3	139.8	178.5
Electricity and fuels	52.1	66.9	290.6	326.4	72.5	83.8	68.5	86.4
Goods for resale(d)	—	—	0.5	—	8.0	6.3	18.2	41.6
Rent, leasing and hiring expenses								
Motor vehicles	1.3	0.8	4.1	5.7	0.2	—	1.7	2.1
Plant, machinery and other equipment	4.2	4.6	36.7	40.6	9.7	13.0	2.6	3.3
Land, buildings and other structures	0.1	0.9	7.6	9.6	1.5	3.1	0.2	2.3
Other rent, leasing and hiring	—	—	1.3	2.7	0.2	0.2	1.4	—
Outward freight and cartage	16.1	10.8	28.8	29.7	26.4	25.6	81.8	105.3
Motor vehicle expenses	6.5	5.9	14.5	19.4	2.5	2.4	3.6	3.5
Repair and maintenance expenses	78.4	83.6	248.1	263.8	42.6	57.4	90.1	69.9
Payment for contract, subcontract and commission work	90.6	146.1	1 037.6	1 253.0	55.6	64.5	51.3	89.8
<i>Purchases and selected expenses</i>	<i>351.5</i>	<i>453.5</i>	<i>2 107.3</i>	<i>2 394.8</i>	<i>312.1</i>	<i>376.5</i>	<i>459.1</i>	<i>582.7</i>
Value added	677.7	711.8	2 016.6	2 237.7	309.0	422.4	576.3	586.1

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.18 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
Sales of goods						
Produced by this business(b)	1 044.7	1 274.5	11 460.6	12 669.5	28 081.0	30 065.9
Not produced by this business(b)	—	27.9	113.8	165.0	272.3	355.1
Service income	13.9	18.8	105.4	120.9	208.8	224.3
Rent, leasing and hiring income	6.7	1.0	21.0	13.9	61.1	82.8
Government subsidies(c)	—	0.2	13.4	15.0	17.9	18.2
<i>Plus</i>						
Capital work done for own use	1.8	11.3	144.2	158.8	240.6	267.4
Turnover	1 067.1	1 333.6	11 858.3	13 143.2	28 881.7	31 013.8
<i>Plus</i>						
Closing stocks	283.9	276.7	1 526.4	1 708.0	2 508.0	2 761.3
<i>Less</i>						
Opening stocks	255.0	287.2	1 582.2	1 541.6	2 516.7	2 501.2
<i>Less</i>						
Purchases						
Materials, components, containers etc.(d)(e)	100.7	112.1	1 215.5	1 279.1	2 148.3	2 213.8
Electricity and fuels	83.7	92.3	787.6	860.1	1 189.5	1 278.8
Goods for resale(d)	—	28.6	66.9	128.8	212.3	303.9
Rent, leasing and hiring expenses						
Motor vehicles	0.2	0.2	8.6	11.8	21.7	20.8
Plant, machinery and other equipment	6.3	1.3	73.0	76.3	134.8	157.5
Land, buildings and other structures	1.3	4.5	17.5	29.3	73.6	95.7
Other rent, leasing and hiring	—	0.2	26.1	27.8	32.0	47.3
Outward freight and cartage	38.7	45.7	225.9	270.6	2 052.2	2 221.4
Motor vehicle expenses	5.3	3.8	42.7	45.8	65.3	69.7
Repair and maintenance expenses	53.2	67.1	787.7	943.6	1 645.9	1 858.8
Payment for contract, subcontract and commission work	161.5	187.0	1 818.3	2 161.6	2 643.1	3 123.7
<i>Purchases and selected expenses</i>	<i>450.7</i>	<i>542.7</i>	<i>5 069.9</i>	<i>5 834.7</i>	<i>10 218.6</i>	<i>11 391.5</i>
Value added	645.3	780.4	6 732.6	7 474.9	18 654.4	19 882.4

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—Industry Class

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		IRON ORE MINING.....		BAUXITE MINING.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
Capital expenditure on								
Land	27.8	26.4	—	—	1.5	19.6	0.1	0.2
Dwellings, buildings and other structures	317.4	249.0	445.3	426.1	126.6	26.2	9.7	0.8
Plant, machinery and equipment	756.1	938.0	968.9	1 105.7	308.1	435.1	49.5	161.9
<i>Total</i>	<i>1 101.3</i>	<i>1 213.4</i>	<i>1 414.2</i>	<i>1 531.9</i>	<i>436.2</i>	<i>480.9</i>	<i>59.2</i>	<i>162.9</i>
Disposals of assets	75.7	51.7	187.3	9.1	17.0	20.9	3.1	3.1
Net capital expenditure	1 025.7	1 161.8	1 226.8	1 522.8	419.2	460.0	56.1	159.8
Capital expenditure less disposals								
Land, buildings and other structures	334.8	261.1	443.8	426.1	123.7	40.7	8.6	(0.7)
Plant machinery and equipment	690.8	900.7	783.0	1 096.7	295.6	419.3	47.5	160.5
.....								
Items	COPPER ORE MINING.....		GOLD ORE MINING.....		MINERAL SAND MINING.....		SILVER-LEAD-ZINC ORE MINING.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
Capital expenditure on								
Land	1.2	0.1	17.9	27.5	1.0	3.1	0.5	0.0
Dwellings, buildings and other structures	19.4	161.9	632.2	370.8	32.9	31.1	57.1	74.9
Plant, machinery and equipment	56.2	74.3	398.5	483.5	38.6	86.2	77.4	91.8
<i>Total</i>	<i>76.9</i>	<i>236.2</i>	<i>1 048.6</i>	<i>881.8</i>	<i>72.5</i>	<i>120.4</i>	<i>135.1</i>	<i>166.8</i>
Disposals of assets	11.6	7.6	68.2	119.6	2.2	2.6	4.6	4.5
Net capital expenditure	65.3	228.7	980.4	762.2	70.2	117.8	130.4	162.2
Capital expenditure less disposals								
Land, buildings and other structures	16.4	161.5	632.5	325.3	33.4	33.4	56.5	74.5
Plant machinery and equipment	48.9	67.2	347.9	436.9	36.8	84.4	73.9	87.8

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

(b) Includes capital work done for own use—reported in table 6.18.

Source: ABS (unpub.)a.

6.19 ESTABLISHMENT LEVEL(a), Fixed Capital Expenditure(b)—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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m
Capital expenditure on						
Land	1.3	—	23.5	50.4	51.3	76.8
Dwellings, buildings and other structures	244.1	123.5	1 122.1	789.3	1 884.8	1 464.4
Plant, machinery and equipment	440.6	202.3	1 369.0	1 535.0	3 094.0	3 578.8
<i>Total</i>	686.1	325.8	2 514.6	2 374.7	5 030.1	5 120.0
Disposals of assets	6.1	51.2	112.9	209.5	375.9	270.2
Net capital expenditure	680.0	274.5	2 401.7	2 165.3	4 654.2	4 849.8
Capital expenditure less disposals						
Land, buildings and other structures	245.2	121.5	1 116.3	756.2	1 894.9	1 443.4
Plant machinery and equipment	434.8	153.0	1 285.4	1 409.1	2 759.2	3 406.5

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

(b) Includes capital work done for own use—reported in table 6.18.

Source: ABS (unpub.)a.

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

Items	COAL MINING.....		METAL ORE MINING.....		TOTAL COAL MINING AND METAL ORE MINING.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
NEW SOUTH WALES						
Sales of goods						
Produced by this business(b)	3 781.7	3 920.1	593.8	637.8	4 375.5	4 557.8
Not produced by this business(b)	122.4	136.0	—	—	122.4	136.0
Service income	22.0	33.7	0.5	0.7	22.5	34.4
Rent, leasing and hiring income	2.1	5.7	1.5	1.4	3.6	7.1
Government subsidies(c)	0.1	1.8	0.1	0.1	0.2	1.9
<i>Plus</i>						
Capital work done for own use	57.1	44.8	8.1	26.2	65.2	71.0
Turnover	3 985.4	4 142.1	603.9	666.1	4 589.4	4 808.2
<i>Plus</i>						
Closing stocks	288.8	374.4	61.1	83.8	349.9	458.2
<i>Less</i>						
Opening stocks	307.7	297.0	72.4	61.4	380.1	358.4
<i>Less</i>						
Purchases						
Materials, components, containers etc.(d)(e)	304.0	301.5	87.4	103.1	391.4	404.6
Electricity and fuels	154.8	193.8	38.1	44.4	192.9	238.1
Goods for resale(d)	120.7	130.0	—	—	120.7	130.0
Rent, leasing and hiring expenses						
Motor vehicles	3.4	3.6	0.7	0.7	4.1	4.2
Plant, machinery & other equipment	25.0	35.8	0.1	1.5	25.1	37.3
Land, buildings & other structures	16.5	18.7	0.5	1.5	17.1	20.2
Other rent, leasing and hiring	0.0	2.2	1.6	0.2	1.6	2.4
Outward freight and cartage	574.1	599.0	20.2	23.1	594.2	622.2
Motor vehicle expenses	4.9	8.6	2.4	2.8	7.4	11.3
Repair and maintenance expenses	386.2	463.1	55.6	61.4	441.8	524.5
Payment for contract, subcontract and commission work	169.3	184.9	44.5	73.5	213.7	258.5
<i>Purchases and selected expenses</i>	<i>1 759.0</i>	<i>1 941.0</i>	<i>251.1</i>	<i>312.1</i>	<i>2 010.1</i>	<i>2 253.1</i>
Value added	2 207.5	2 278.5	341.6	376.4	2 549.0	2 654.9

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.20 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
VICTORIA						
Sales of goods						
Produced by this business(b)	539.0	536.3	2 875.9	2 721.4	3 414.9	3 257.6
Not produced by this business(b)	—	0.1	—	0.6	—	0.7
Service income	1.2	2.0	3.3	3.2	4.5	5.2
Rent, leasing and hiring income	0.1	0.1	0.4	0.3	0.4	0.4
Government subsidies(c)	3.7	—	—	—	3.7	—
<i>Plus</i>						
Capital work done for own use	4.6	5.1	6.5	6.5	11.1	11.6
Turnover	548.5	543.6	2 886.1	2 732.0	3 434.6	3 275.6
<i>Plus</i>						
Closing stocks	9.6	9.7	42.6	41.9	52.3	51.6
<i>Less</i>						
Opening stocks	9.0	8.9	32.4	42.6	41.4	51.6
<i>Less</i>						
Purchases						
Materials, components, containers etc. (d)(e)	29.7	29.8	56.3	23.8	86.1	53.6
Electricity and fuels	11.6	17.2	1.0	1.1	12.6	18.3
Goods for resale(d)	0.0	0.1	0.0	0.5	—	0.6
Rent, leasing and hiring expenses						
Motor vehicles	1.1	0.5	0.1	0.4	1.3	0.8
Plant, machinery & other equipment	2.4	2.8	0.3	0.3	2.7	3.0
Land, buildings & other structures	0.1	0.4	0.5	0.1	0.5	0.5
Other rent, leasing and hiring	—	—	—	—	—	—
Outward freight and cartage	11.2	7.0	3.5	0.0	14.7	7.0
Motor vehicle expenses	1.8	1.0	1.8	0.5	3.6	1.5
Repair and maintenance expenses	26.7	22.5	34.1	31.7	60.8	54.2
Payment for contract, subcontract and commission work	47.1	80.4	23.8	16.7	70.9	97.0
<i>Purchases and selected expenses</i>	<i>131.7</i>	<i>161.5</i>	<i>121.4</i>	<i>75.1</i>	<i>253.1</i>	<i>236.5</i>
Value added	417.4	382.9	2 774.9	2 656.2	3 192.3	3 039.1

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.20 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
QUEENSLAND								
Sales of goods								
Produced by this business(b)	4 440.9	4 899.5	351.0	339.9	1 665.6	1 817.3	6 457.4	7 056.7
Not produced by this business(b)	29.2	44.9	—	—	18.9	9.4	48.1	54.3
Service income	54.0	45.4	17.1	13.4	1.8	1.1	72.9	59.9
Rent, leasing and hiring income	8.3	21.0	0.1	0.1	0.8	0.8	9.2	21.8
Government subsidies(c)	0.8	1.4	—	—	12.6	14.6	13.4	16.0
<i>Plus</i>								
Capital work done for own use	16.6	14.7	9.4	34.8	39.3	40.9	65.3	90.5
Turnover	4 549.7	5 027.0	377.6	388.2	1 739.1	1 884.1	6 666.3	7 299.3
<i>Plus</i>								
Closing stocks	430.7	412.5	19.9	19.9	264.9	281.2	715.6	713.6
<i>Less</i>								
Opening stocks	399.3	411.7	19.2	15.8	288.4	276.5	706.9	704.0
<i>Less</i>								
Purchases								
Materials, components, containers etc.(d)(e)	474.1	493.1	19.2	34.3	154.5	225.6	647.8	753.0
Electricity and fuels	198.6	168.4	1.4	0.9	105.6	113.6	305.6	282.9
Goods for resale(d)	24.6	36.2	—	—	21.3	44.8	45.9	81.1
Rent, leasing and hiring expenses								
Motor vehicles	4.8	2.3	0.4	—	2.4	2.1	7.5	4.5
Plant, machinery & other equipment	20.8	24.8	0.7	0.6	12.3	14.0	33.8	39.4
Land, buildings & other structures	11.0	18.1	—	—	2.8	1.2	13.8	19.3
Other rent, leasing and hiring	3.7	17.3	0.0	0.0	13.8	14.9	17.5	32.2
Outward freight and cartage	1 094.9	1 181.1	107.4	115.0	60.0	60.5	1 262.3	1 356.6
Motor vehicle expenses	4.7	5.8	0.5	0.4	8.0	8.1	13.2	14.2
Repair and maintenance expenses	317.8	297.0	9.7	5.5	93.9	66.3	421.3	368.9
Payment for contract, subcontract and commission work	331.2	420.3	2.6	0.7	178.5	188.3	512.3	609.3
<i>Purchases and selected expenses</i>	<i>2 486.3</i>	<i>2 664.4</i>	<i>141.8</i>	<i>157.5</i>	<i>652.9</i>	<i>739.5</i>	<i>3 281.1</i>	<i>3 561.4</i>
Value added	2 094.8	2 363.4	236.5	234.9	1 062.6	1 149.3	3 393.9	3 747.6

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

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

Items	TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING...	
	1994-95 \$m	1995-96 \$m
SOUTH AUSTRALIA		
Sales of goods		
Produced by this business(b)	934.9	1 017.7
Not produced by this business(b)	—	0.9
Service income	4.1	1.4
Rent, leasing and hiring income	1.1	3.1
Government subsidies(c)	0.0	—
<i>Plus</i>		
Capital work done for own use	0.3	3.8
Turnover	940.3	1 026.9
<i>Plus</i>		
Closing stocks	89.3	102.7
<i>Less</i>		
Opening stocks	77.1	91.6
<i>Less</i>		
Purchases		
Materials, components, containers etc.(d)(e)	31.6	51.9
Electricity and fuels	25.0	25.8
Goods for resale(d)	—	3.7
Rent, leasing and hiring expenses		
Motor vehicles	2.5	1.4
Plant, machinery & other equipment	4.2	4.7
Land, buildings & other structures	4.5	5.3
Other rent, leasing and hiring	3.1	3.0
Outward freight and cartage	27.4	23.2
Motor vehicle expenses	6.9	5.6
Repair and maintenance expenses	69.8	71.6
Payment for contract, subcontract and commission work	33.8	41.1
<i>Purchases and selected expenses</i>	208.8	237.5
Value added	743.7	800.5

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.20 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
WESTERN AUSTRALIA						
Sales of goods						
Produced by this business(b)	3 657.2	3 985.8	7 821.2	8 594.9	11 478.4	12 580.7
Not produced by this business(b)	7.0	7.6	94.9	127.7	101.8	135.3
Service income	1.9	4.4	96.6	112.5	98.5	116.9
Rent, leasing and hiring income	28.1	38.3	17.2	10.5	45.3	48.9
Government subsidies(c)	—	—	0.5	0.1	0.5	0.1
Capital work done for own use	3.9	1.8	81.3	68.0	85.2	69.7
Turnover	3 698.1	4 037.8	8 111.7	8 913.7	11 809.7	12 951.5
<i>Plus</i>						
Closing stocks						
<i>Less</i>						
Opening stocks	102.4	103.2	923.6	1 050.6	1 026.0	1 153.8
	91.4	97.8	952.5	929.9	1 043.9	1 027.6
<i>Less</i>						
Purchases						
Materials, components, containers etc.(d)(e)	44.9	40.6	819.7	784.7	864.6	825.3
Electricity and fuels	21.7	27.8	548.2	604.0	569.9	631.9
Goods for resale(d)	—	4.6	45.6	55.4	45.6	60.0
Rent, leasing and hiring expenses						
Motor vehicles	1.2	1.3	4.9	7.4	6.1	8.7
Plant, machinery & other equipment	11.6	16.0	51.1	53.4	62.8	69.4
Land, buildings & other structures	23.4	24.1	12.6	23.3	36.0	47.4
Other rent, leasing and hiring	2.2	—	5.9	9.4	8.1	9.4
Outward freight and cartage	2.9	14.5	111.4	130.5	114.3	145.0
Motor vehicle expenses	3.2	3.0	27.0	28.9	30.3	31.9
Repair and maintenance expenses	47.3	61.0	525.4	707.6	572.7	768.5
Payment for contract, subcontract and commission work	228.9	226.4	1 436.9	1 690.6	1 665.8	1 917.0
<i>Purchases and selected expenses</i>	<i>387.3</i>	<i>419.3</i>	<i>3 589.0</i>	<i>4 095.2</i>	<i>3 976.3</i>	<i>4 514.5</i>
Value added	3 321.7	3 624.0	4 493.8	4 939.2	7 815.5	8 563.2

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

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

Items	TOTAL COAL MINING AND METAL ORE MINING.....	
	1994-95 \$m	1995-96 \$m
TASMANIA		
Sales of goods		
Produced by this business(b)	363.3	365.6
Not produced by this business(b)	—	—
Service income	—	0.2
Rent, leasing and hiring income	0.5	0.4
Government subsidies(c)	—	0.1
<i>Plus</i>		
Capital work done for own use	7.2	5.7
Turnover	371.0	371.9
<i>Plus</i>		
Closing stocks	49.4	57.6
<i>Less</i>		
Opening stocks	60.9	52.8
<i>Less</i>		
Purchases		
Materials, components, containers etc.(d)(e)	38.8	34.0
Electricity and fuels	29.6	30.8
Goods for resale(d)	—	—
Rent, leasing and hiring expenses		
Motor vehicles	0.1	0.3
Plant, machinery & other equipment	3.1	1.3
Land, buildings & other structures	—	0.7
Other rent, leasing and hiring	1.7	—
Outward freight and cartage	19.5	18.9
Motor vehicle expenses	1.4	1.4
Repair and maintenance expenses	38.7	41.9
Payment for contract, subcontract and commission work	16.5	30.7
<i>Purchases and selected expenses</i>	<i>149.4</i>	<i>160.0</i>
Value added	210.1	216.7

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

6.20 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
NORTHERN TERRITORY						
Sales of goods						
Produced by this business(b)	307.8	280.8	748.9	949.0	1 056.7	1 229.7
Not produced by this business(b)	—	—	—	27.9	—	27.9
Service income	—	—	6.2	6.3	6.2	6.3
Rent, leasing and hiring income	—	0.3	1.0	0.8	1.0	1.1
Government subsidies(c)	—	—	—	0.1	—	0.1
<i>Plus</i>						
Capital work done for own use	0.9	0.1	5.4	15.0	6.4	15.1
Turnover	308.8	281.2	761.5	999.1	1 070.3	1 280.3
<i>Plus</i>						
Closing stocks	32.2	26.2	193.3	197.7	225.5	223.8
<i>Less</i>						
Opening stocks	28.4	27.7	178.0	187.5	206.3	215.2
<i>Less</i>						
Purchases						
Materials, components, containers etc.(d)(e)	6.1	5.6	82.0	85.9	88.1	91.5
Electricity and fuels	2.2	0.2	51.7	50.8	53.8	51.0
Goods for resale(d)	—	—	—	28.6	—	28.6
Rent, leasing and hiring expenses						
Motor vehicles	—	—	—	0.8	—	0.8
Plant, machinery & other equipment	0.4	0.2	2.6	2.3	3.0	2.5
Land, buildings & other structures	—	—	1.6	2.3	1.6	2.3
Other rent, leasing and hiring	—	—	—	0.3	—	0.3
Outward freight and cartage	12.5	12.6	7.2	36.0	19.7	48.6
Motor vehicle expenses	0.2	0.1	2.4	3.6	2.6	3.7
Repair and maintenance expenses	9.0	7.2	31.7	22.0	40.7	29.2
Payment for contract, sub-contract and commission work	17.9	21.9	112.3	148.2	130.2	170.1
<i>Purchases and selected expenses</i>	<i>48.3</i>	<i>47.8</i>	<i>291.4</i>	<i>380.8</i>	<i>339.7</i>	<i>428.5</i>
Value added	264.3	231.9	485.4	628.5	749.7	860.4

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

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

(c) Excludes diesel fuel rebate.

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

(e) Includes minerals for further processing.

Source: ABS (unpub.)a.

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

Items	COAL MINING.....		METAL ORE MINING.....		TOTAL COAL MINING AND METAL ORE MINING.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
NEW SOUTH WALES						
Capital expenditure on						
Land	8.9	4.1	2.3	—	11.2	4.2
Dwellings, buildings and other structures	106.8	125.4	102.5	103.7	209.3	229.1
Plant, machinery and equipment	387.6	458.7	66.1	60.7	453.7	519.3
<i>Total</i>	503.3	588.2	170.9	164.4	674.2	752.6
Disposals of assets	50.1	18.4	4.5	4.0	54.7	22.5
Net capital expenditure	453.2	569.8	166.4	160.4	619.6	730.1
Capital expenditure less disposals						
Land, buildings and other structures	110.3	126.7	103.1	102.5	213.3	229.3
Plant machinery and equipment	342.9	443.1	63.3	57.8	406.2	500.9

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.21 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
VICTORIA						
Capital expenditure on						
Land	0.1	0.9	—	—	0.1	0.9
Dwellings, buildings and other structures	8.1	6.3	265.4	264.2	273.5	270.5
Plant, machinery and equipment	14.7	14.7	282.5	374.6	297.1	389.3
<i>Total</i>	22.9	21.9	547.9	638.8	570.8	660.7
Disposals of assets	0.7	0.8	4.5	2.9	5.2	3.7
Net capital expenditure	22.2	21.1	543.4	635.9	565.6	657.0
Capital expenditure less disposals						
Land, buildings and other structures	8.1	7.2	265.4	264.2	273.5	271.4
Plant machinery and equipment	14.1	13.9	278.0	371.7	292.1	385.6

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.21 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
QUEENSLAND								
Capital expenditure on								
Land	18.7	21.2	—	—	0.1	0.4	18.8	21.6
Dwellings, buildings and other structures	203.3	109.4	30.5	46.1	38.8	48.7	272.6	204.2
Plant, machinery and equipment	337.4	399.1	7.7	14.2	69.0	78.2	414.2	491.4
<i>Total</i>	559.4	529.7	38.2	60.3	108.0	127.2	705.5	717.2
Disposals of assets	21.2	24.2	2.3	0.2	5.2	12.8	28.7	37.1
Net capital expenditure	538.2	505.5	35.9	60.1	102.8	114.4	676.9	680.1
Capital expenditure less disposals								
Land, buildings and other structures	217.1	121.4	29.1	46.1	37.5	46.6	283.7	214.1
Plant machinery and equipment	321.1	384.1	6.8	14.0	65.3	67.9	393.2	466.0

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.21 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...	
	1994-95 \$m	1995-96 \$m
SOUTH AUSTRALIA		
Capital expenditure on		
Land	—	—
Dwellings, buildings and other structures	30.3	93.1
Plant, machinery and equipment	46.4	85.0
<i>Total</i>	76.7	178.1
Disposals of assets	8.2	2.7
Net capital expenditure	68.5	175.4
Capital expenditure less disposals		
Land, buildings and other structures	27.4	90.9
Plant machinery and equipment	41.1	84.5

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.21 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m
WESTERN AUSTRALIA						
Capital expenditure on						
Land	0.3	0.4	20.9	47.7	21.2	48.1
Dwellings, buildings and other structures	108.7	61.4	924.7	501.8	1,033.5	563.2
Plant, machinery and equipment	675.3	716.3	1 126.9	1 242.9	1 802.2	1 959.2
<i>Total</i>	784.3	778.1	2 072.5	1 792.3	2 856.8	2 570.4
Disposals of assets	181.6	11.7	81.0	182.9	262.6	194.6
Net capital expenditure	602.7	766.4	1 991.5	1 609.5	2 594.2	2 375.8
Capital expenditure less disposals						
Land, buildings and other structures	109.0	61.7	925.3	470.3	1 034.3	531.9
Plant machinery and equipment	493.7	704.7	1 066.2	1 139.2	1 559.9	1 843.9

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

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

Items	TOTAL COAL MINING AND METAL ORE MINING.....	
	1994-95 \$m	1995-96 \$m
TASMANIA		
Capital expenditure on		
Land	—	—
Dwellings, buildings and other structures	26.7	59.4
Plant, machinery and equipment	24.2	68.1
<i>Total</i>	50.8	127.6
Disposals of assets	6.2	1.5
Net capital expenditure	44.6	126.2
Capital expenditure less disposals		
Land, buildings and other structures	24.9	58.8
Plant machinery and equipment	19.8	67.4

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.21 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.....	
	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m	1994-95 \$m	1995-96 \$m
.....						
NORTHERN TERRITORY						
Capital expenditure on						
Land	—	—	—	2.0	—	2.0
Dwellings, buildings and other structures	15.1	15.0	23.8	30.0	39.0	45.0
Plant, machinery and equipment	7.8	3.0	48.5	63.4	56.3	66.4
<i>Total</i>	22.9	18.0	72.3	95.4	95.2	113.4
Disposals of assets	—	0.1	10.4	8.2	10.5	8.2
Net capital expenditure	22.9	17.9	61.9	87.2	84.8	105.1
Capital expenditure less disposals						
Land, buildings and other structures	15.1	15.0	22.7	32.0	37.8	47.0
Plant machinery and equipment	7.7	2.9	39.2	55.2	46.9	58.2
.....						

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

(b) Includes capital work done for own use—reported in table 6.20.

Source: ABS (unpub.)a.

6.22 ESTABLISHMENT LEVEL(a), Mineral Royalties Paid—Industry Class

Industry class	PAID TO GOVERNMENTS....		PAID TO OTHERS(b).....		TOTAL.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m
Coal mining	280.1	339.0	17.0	13.6	297.1	352.6
Oil and gas extraction	1 178.2	1 201.7	45.4	61.2	1 223.6	1 262.9
Metal ore mining						
Iron ore	160.3	175.0	28.6	44.3	188.9	219.4
Bauxite	19.7	23.8	—	—	19.7	23.8
Copper ore	33.2	42.6	0.2	0.1	33.4	42.7
Gold ore	15.0	20.9	7.5	15.2	22.5	36.1
Mineral sand	17.2	23.6	1.0	2.7	18.2	26.2
Silver-lead-zinc ore	23.2	23.8	—	—	23.2	23.8
Other metal ore	18.0	16.8	2.9	13.4	20.9	30.2
Total	286.5	326.6	40.2	75.6	326.7	402.3
Total	1 744.7	1 867.3	102.6	150.5	1 847.4	2 017.8

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

(b) Includes Mineral royalties paid to others and Other royalties.

Source: ABS (unpub.)a.

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

Industry class	PAID TO GOVERNMENTS....		PAID TO OTHERS(b).....		TOTAL.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
	\$m	\$m	\$m	\$m	\$m	\$m
NEW SOUTH WALES						
Coal mining	118.4	130.1	6.1	3.1	124.5	133.2
Metal ore mining	8.7	10.6	0.1	0.7	8.8	11.3
Total	127.1	140.7	6.1	3.8	133.3	144.5
VICTORIA						
Coal mining and metal ore mining	7.7	13.6	1.1	—	8.8	13.7
Oil and gas extraction	883.9	856.7	30.0	26.0	913.9	882.7
Total	891.6	870.3	31.0	26.0	922.6	896.4
QUEENSLAND						
Coal mining	139.0	180.1	9.9	10.2	148.9	190.3
Oil and gas extraction	18.8	20.0	7.2	10.5	26.0	30.5
Metal ore mining	45.8	51.8	1.8	5.0	47.5	56.7
Total	203.6	251.9	18.8	25.7	222.5	277.6
SOUTH AUSTRALIA						
Total coal mining, oil and gas extraction and metal ore mining	45.9	76.2	7.9	22.1	53.8	98.3
WESTERN AUSTRALIA						
Coal mining and oil and gas extraction	233.0	265.2	0.1	0.6	233.2	265.8
Metal ore mining	195.0	218.3	34.1	59.1	229.1	277.4
Total	428.0	483.5	34.2	59.7	462.2	543.2
TASMANIA						
Total coal mining and metal ore mining	8.5	5.1	0.7	0.8	9.3	6.0
NORTHERN TERRITORY						
Oil and gas extraction	14.9	8.9	0.4	2.3	15.3	11.2
Metal ore mining	25.0	30.6	3.4	10.0	28.4	40.6
Total	40.0	39.5	3.8	12.3	43.8	51.8

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

(b) Includes Mineral royalties paid to others and Other royalties.

Source: ABS (unpub.)a.

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 28–35 of the Explanatory Notes.

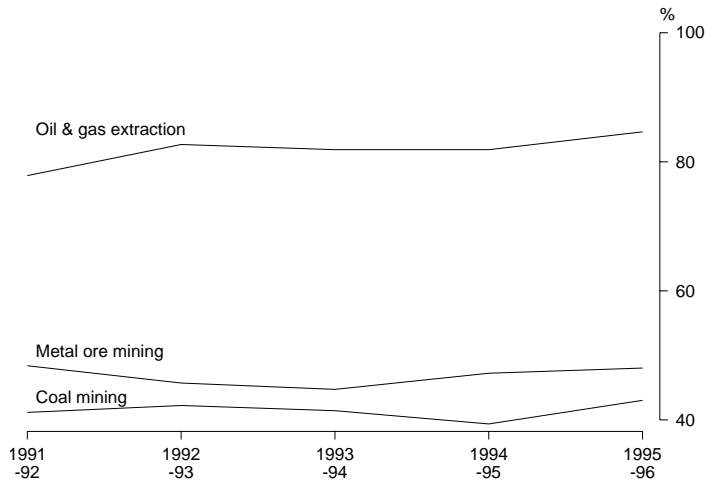
PERFORMANCE RATIOS

Performance ratios presented at the management unit level are based on data items relating to businesses. The following principal features for 1995–96 appear in detail in table 7.3:

- The profitability ratio of trading profit margin increased from 53% to 55%. The coal mining industry recorded the largest increase, rising almost 4 percentage points to 43%.
- The profitability ratio of return on assets increased slightly from 9% to 10%. Return on assets in the coal mining industry increased by almost 3 percentage points to 5%.
- The liquidity and current ratios remained steady at 0.9 and 1.1 respectively.
- The debt ratio of interest coverage increased slightly from 5.3 to 5.8.
- The debt ratio of debts to assets increased from 51% to 58%. In the oil and gas extraction industry the ratio increased from 49% to 60%, while in the metal ore industry the ratio increased from 47% to 53%.
- The capital expenditure ratio of acquisitions to disposals increased from 14.2 to 17.2 primarily due to the oil and gas extraction industry where the ratio increased from 8.6 to 117.3.

Analysis of a number of these ratios between 1991–92 and 1995–96 for each of the major mining industry subdivisions show different patterns of performance. For example trading profit margin for the oil and gas extraction industry is 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.

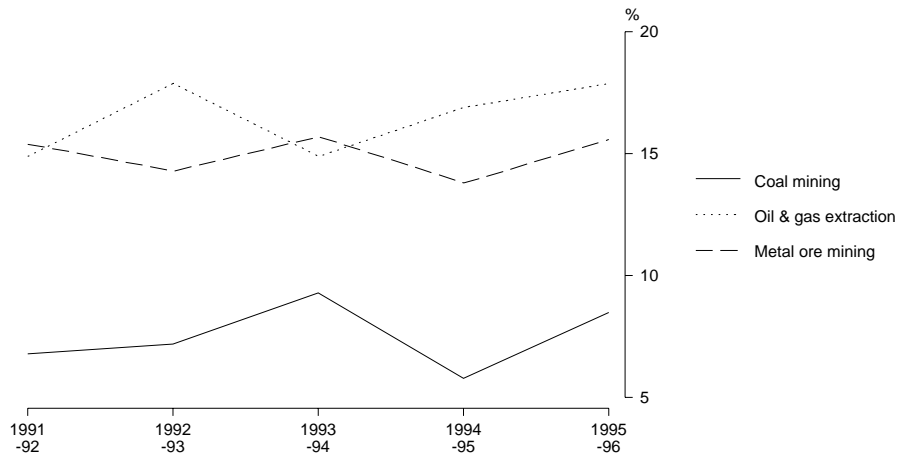
7.1 TRADING PROFIT MARGIN



Source: ABS (unpub.)a.

Return on funds displays a different pattern. The return on funds is much lower for coal mining than for other mining industries. Although the return for oil and gas extraction was greatest in 1992-93 the return for the metal ore mining industry was higher in 1993-94. In 1994-95 the return on funds for oil and gas increased while metal ore mining and coal mining declined. In 1995-96 the return on funds for all industries rose with the coal mining industry recording the largest increase followed by metal ore mining.

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 1995–96 appear in detail in tables 7.4 and 7.5:

- turnover per person employed increased from \$525,000 to \$548,600 (up 4%);
- value added per person employed increased from \$339,100 to \$351,700 (up 4%); and
- wages and salaries per person employed increased from \$65,300 to \$68,700 (up 5%).

At an industry class level the main features of the operating ratios in 1995–96 were:

- oil and gas extraction had the highest turnover per person employed (\$1,862,300) while the silver-lead-zinc ore mining industry had the lowest (\$323,900);
- the oil and gas extraction industry had the highest level of value added per person employed (\$1,690,600) while the silver-lead-zinc ore mining industry recorded the lowest level (\$164,700); and
- wages and salaries paid per person employed was \$78,600 in the coal mining industry compared with \$46,500 in the mineral sand mining industry.

At the State level the main features of the operating ratios in 1995–96 were:

- Victoria recorded the highest level of turnover per person employed (\$1,724,000) while Tasmania recorded the lowest level (\$308,400 per person employed);
- value added per person employed was greatest in Victoria (\$1,599,500) and lowest in New South Wales (\$171,200 per person employed); and
- wages and salaries paid per person employed ranged from \$75,100 in New South Wales down to \$52,000 per person employed in South Australia.

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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
Turnover								
Asset turnover (times)	0.6	0.6	0.3	0.3	0.5	0.4	0.5	0.5
Profitability								
Trading profit margin (%)	39.3	43.1	81.9	84.7	47.3	48.1	53.3	55.0
Return on funds (%)	5.8	8.5	16.9	17.9	13.8	15.6	13.3	14.8
Return on assets (%)	2.2	4.9	13.5	13.4	8.9	9.8	9.0	9.9
Liquidity								
Liquidity ratio (times)	0.7	0.8	0.7	0.6	1.1	1.0	0.9	0.9
Current ratio (times)	0.9	1.0	0.8	0.7	1.4	1.2	1.1	1.1
Debt								
Interest coverage (times)	2.0	3.5	9.9	8.1	4.5	5.3	5.3	5.8
Debt to assets (%)	62.0	63.1	48.5	60.3	46.8	52.9	51.0	57.6
Capital expenditure								
Acquisitions to disposals (times)	12.3	18.3	8.6	117.3	23.3	11.5	14.2	17.2
Net capital expenditure to assets (%)	6.9	7.5	5.9	7.9	11.4	9.5	8.3	8.5

(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.....	
	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
Coal mining						
1994–95	73.1	369.3	195.3	40.6	0.5	0.4
1995–96	78.6	392.2	206.4	45.6	0.5	0.4
Oil and gas extraction						
1994–95	76.0	1 825.9	1 659.4	291.6	0.9	0.1
1995–96	74.3	1 862.3	1 690.6	360.2	0.9	0.0
Iron ore mining						
1994–95	66.0	509.5	320.8	68.8	0.6	0.2
1995–96	61.9	509.5	331.3	70.9	0.7	0.2
Bauxite mining						
1994–95	53.6	499.9	323.5	32.8	0.7	0.2
1995–96	52.8	490.9	328.1	89.2	0.7	0.2
Copper ore mining						
1994–95	59.4	455.7	303.1	29.2	0.7	0.2
1995–96	57.6	479.8	286.0	91.9	0.6	0.2
Gold ore mining						
1994–95	50.3	508.5	249.0	121.1	0.5	0.2
1995–96	55.3	554.9	275.9	94.0	0.5	0.2
Mineral sand mining						
1994–95	43.0	334.4	163.7	37.2	0.5	0.3
1995–96	46.5	398.7	216.7	60.5	0.5	0.2
Silver-lead-zinc ore mining						
1994–95	56.9	324.9	176.0	39.8	0.5	0.3
1995–96	64.1	323.9	164.7	45.6	0.5	0.4
Other metal ore mining						
1994–95	56.3	482.4	291.7	307.4	0.6	0.2
1995–96	64.5	549.5	321.5	113.1	0.6	0.2
Total metal ore mining						
1994–95	55.9	464.8	263.9	94.1	0.6	0.2
1995–96	58.3	490.2	278.8	80.8	0.6	0.2
Total coal mining, oil and gas extraction, and metal ore mining						
1994–95	65.3	525.0	339.1	84.6	0.7	0.2
1995–96	68.7	548.6	351.7	85.8	0.6	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						
1994–95	72.4	313.5	173.6	35.6	0.6	0.4
1995–96	77.0	311.2	171.2	42.8	0.6	0.5
Metal ore mining						
1994–95	53.8	280.3	158.5	77.2	0.6	0.3
1995–96	63.4	302.9	171.2	72.9	0.6	0.4
Total						
1994–95	71.2	308.7	171.4	41.7	0.6	0.4
1995–96	75.1	310.0	171.2	47.1	0.6	0.4
VICTORIA						
Coal mining						
1994–95	68.5	373.2	284.0	15.6	0.8	0.2
1995–96	57.6	376.5	266.9	18.6	0.7	0.2
Oil and gas extraction						
1994–95	68.6	5 099.1	4 902.7	960.0	1.0	0.0
1995–96	68.9	5 059.3	4 918.9	1 177.6	1.0	0.0
Total coal mining, oil and gas extraction and metal ore mining						
1994–95	68.5	1 687.0	1 568.0	277.8	0.9	0.0
1995–96	60.7	1 724.0	1 599.5	345.8	0.9	0.0
QUEENSLAND						
Coal mining						
1994–95	72.6	448.1	206.3	53.0	0.5	0.4
1995–96	84.4	511.1	240.3	51.4	0.5	0.4
Oil and gas extraction						
1994–95	54.0	1 187.4	743.6	112.9	0.6	0.1
1995–96	56.3	1 075.3	650.7	166.5	0.6	0.1
Metal ore mining						
1994–95	53.3	405.9	248.0	24.0	0.6	0.2
1995–96	54.6	399.4	243.7	24.3	0.6	0.2
Total						
1994–95	66.6	451.8	230.0	45.9	0.5	0.3
1995–96	74.3	489.5	251.3	45.6	0.5	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						
1994–95	50.6	442.9	350.3	32.3	0.8	0.1
1995–96	52.0	511.9	399.1	87.4	0.8	0.1
WESTERN AUSTRALIA						
Coal mining and oil and gas extraction						
1994–95	87.6	1 338.4	1 202.2	283.9	0.9	0.1
1995–96	84.4	1 444.1	1 296.1	278.3	0.9	0.1
Metal ore mining						
1994–95	56.4	514.9	285.3	126.4	0.6	0.2
1995–96	58.5	543.0	300.9	98.1	0.6	0.2
Total						
1994–95	61.0	637.8	422.1	140.1	0.7	0.1
1995–96	62.3	674.2	445.8	123.7	0.7	0.1
TASMANIA						
Total coal mining and metal ore mining						
1994–95	70.9	341.6	193.5	41.1	0.6	0.4
1995–96	58.9	308.4	179.7	104.6	0.6	0.3
NORTHERN TERRITORY						
Oil and gas extraction						
1994–95	87.6	1 506.4	1 289.3	111.5	0.9	0.1
1995–96	100.4	1 320.2	1 088.8	84.2	0.8	0.1
Metal ore mining						
1994–95	56.7	535.5	341.4	43.6	0.6	0.2
1995–96	63.9	636.0	400.1	55.5	0.6	0.2
Total						
1994–95	60.5	657.9	460.8	52.1	0.7	0.1
1995–96	68.2	717.7	482.3	58.9	0.7	0.1

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

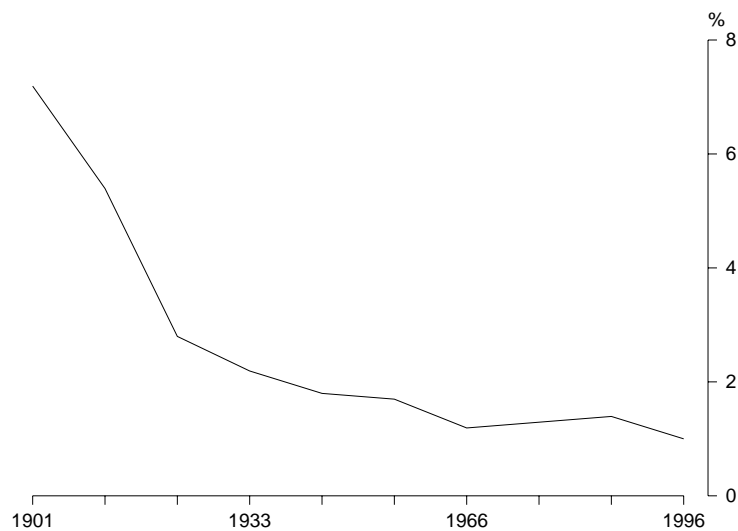
(d) Fixed capital expenditure less disposals.

Source: ABS (unpub.)a.

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 PROPORTION OF LABOUR FORCE EMPLOYED IN MINING



Source: ABS 1997d.

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 in the number employed in the coal mining, oil and gas extraction, and metal ore mining industries as shown in table 8.2. There was a slight increase in employment for these industries in 1996.

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

8.2 EMPLOYMENT IN MINING(a)

1991	65 778
1992	61 348
1993	58 047
1994	56 440
1995	55 014
1996	56 529

(a) Excludes ANZSIC Subdivision
14 Other mining and
15 Services to mining.

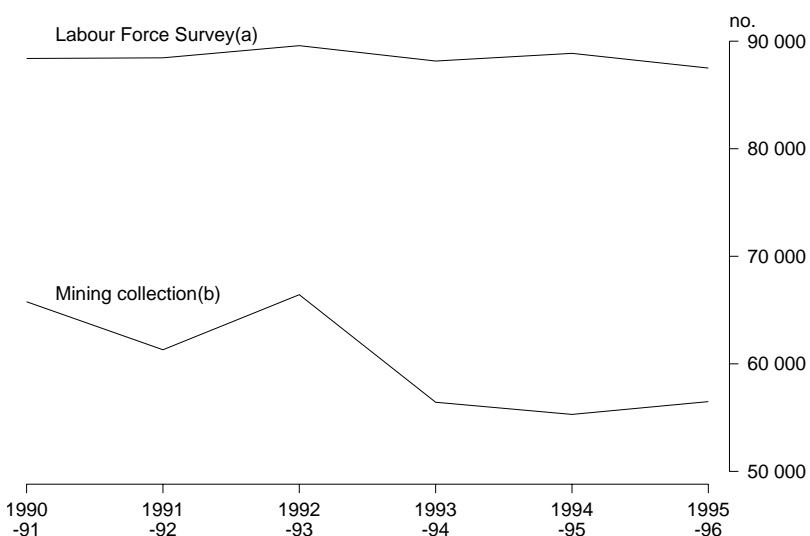
Source: ABS (unpub.)a.

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 7–8 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. The ABS is intending to undertake investigations to determine the extent of contract employment in the mining industry.

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 in classifying the industry in which they are employed. This allows those people undertaking the mining service activities e.g. transport, construction, and contract mining, to determine their primary employing industry as the mining industry. The gap between these two series may be explained by the growth in contract employment.

8.3 MINING EMPLOYMENT



(a) At end of May.
(b) Metallic minerals, coal, oil and gas.

Source: ABS 1996b, (unpub.)a.

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 1995–96 appear in table 8.10.

Total employment for the coal mining, oil and gas extraction, and metal ore mining industries at the management unit level at the end of June 1996 increased by 1,099 persons (2%) to 61,066 persons. Only the oil and gas extraction industry recorded a decrease in employment, falling 308 persons (6%) to 5,165 persons. The coal mining industry reported the largest increase, a rise of 912 persons (3%) to 26,977 persons. Employment also increased in the metal ore mining industry by 495 persons (2%).

8.4 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	109	26 977	2 191.3
12 Oil and gas extraction	38	5 165	421.0
13 Metal ore mining	188	28 924	1 751.8
<i>Total coal mining, oil and gas extraction and metal ore mining 1995–96</i>	335	61 066	4 364.2
<i>Total coal mining, oil and gas extraction and metal ore mining 1994–95</i>	323	59 967	3 837.7
14 Other mining	554	9 295	387.0
15 Services to mining	1 413	15 151	789.1
Total mining 1995–96	2 302	85 512	5 540.3

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

ESTABLISHMENT EMPLOYMENT

Data gathered in the 1995–96 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. At the establishment level, employment for the coal mining, oil and gas extraction, and metal ore mining industries increased 3% to 56,529 persons at the end of June 1996.

8.5 ESTABLISHMENT LEVEL(a), Employment by Industry Class— June 1996

		EMPLOYMENT(b).....				Wages and salaries(c)
		Establish- ments	Males	Females	Persons	
Industry class		no.	no.	no.	no.	\$m
Coal mining						
110	Coal mining	172	24 616	871	25 487	2 004
Oil and gas extraction						
1200	Oil and gas extraction	91	3 695	533	4 228	314
Metal ore mining						
1311	Iron ore mining	22	5 748	738	6 486	402
1312	Bauxite mining	10	1 732	60	1 792	95
1313	Copper ore mining	16	2 248	241	2 489	143
1314	Gold ore mining	153	6 900	1 212	8 112	449
1315	Mineral sand mining	13	1 666	283	1 949	91
1317	Silver-lead-zinc ore mining	15	3 305	254	3 559	228
	Other(d)	19	2 110	317	2 427	157
131	Total metal ore mining	248	23 709	3 105	26 814	1 564
Total coal mining, oil and gas extraction and metal ore mining 1995–96		511	52 020	4 509	56 529	3 882
Total coal mining, oil and gas extraction and metal ore mining 1994–95		499	50 932	4 082	55 014	3 594

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

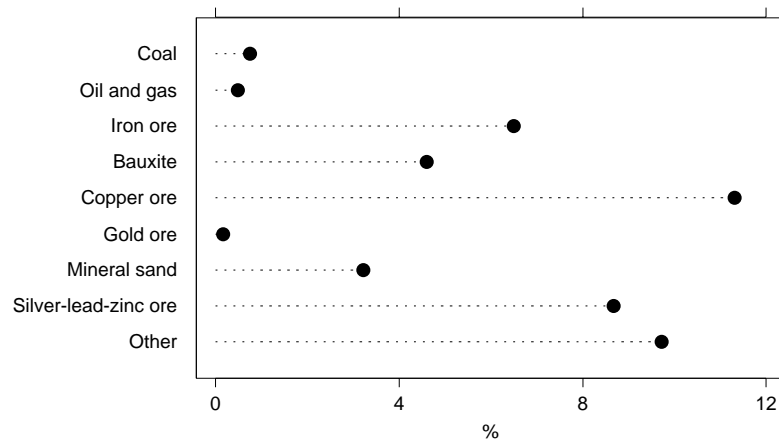
(d) Includes ANZSIC Classes 1316 and 1319.

Source: ABS (unpub.)a.

The metal ore mining industry showed an increase of 1,302 persons (5%). Major increases in employment were in the iron ore mining industry, of 396 persons (7%), the copper mining industry, 253 persons (11%) and the silver-lead-zinc ore mining industry, 284 persons (9%).

Employment in the coal mining industry increased by 192 persons (1%) and in the oil and gas extraction industry by 21 persons (less than 1%).

8.6 CHANGE IN EMPLOYMENT—June 1995 to June 1996



Source: ABS (unpub.)a.

The coal mining industry remained the largest contributor to national mining employment, accounting for 25,487 persons (45%). Gold ore mining was next with 14% of the total employed followed by iron ore mining with 11%.

The total number of production and other employees increased by 1,288 persons (3%). The number of administrative, office and sales employees increased by 132 persons (2%) to 8,867 persons.

EMPLOYMENT BY STATE AND TERRITORY

Employment for the coal mining, oil and gas extraction, and metal ore mining industries in Western Australia increased by 694 persons (4%) to 19,211 persons during 1995–96. Most of these were employees within the metal ore mining industry. New South Wales employment increased by 640 persons (4%) to 15,509 persons. Only Victoria (7%) and South Australia (6%) showed decreases in employment during 1995–96.

8.7 ESTABLISHMENT LEVEL(a), Employment—June 1996

State and Territory	EMPLOYMENT(b).....				Wages and salaries(c)
	Establishments	Males	Females	Persons	
	no.	no.	no.	no.	\$m
New South Wales	120	14 999	510	15 509	1 164
Victoria	22	1 812	88	1 900	115
Queensland	127	14 033	880	14 913	1 108
South Australia	14	1 744	262	2 006	104
Western Australia	188	16 729	2 482	19 211	1 197
Tasmania	9	1 115	91	1 206	71
Northern Territory	31	1 588	196	1 784	122
Australia	511	52 020	4 509	56 529	3 882
Total June 1995	499	50 932	4 082	55 014	3 594

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

(b) Includes working proprietors.

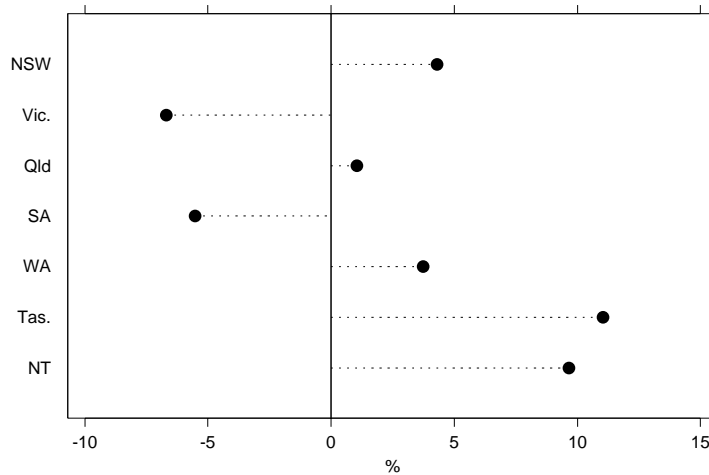
(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

EMPLOYMENT BY STATE AND TERRITORY *continued*

Businesses in Western Australia employed the majority of persons within the mining industry (19,211 persons, or 34% of the total). New South Wales with 15,509 persons (27%) and Queensland with 14,913 persons (26%) were the next largest States of employment.

8.8 CHANGE IN EMPLOYMENT—June 1995 to June 1996



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.

8.9 EMPLOYMENT CHARACTERISTICS OF WORKERS—May 1996

	<i>Mining industry</i>	<i>All industries</i>
Sex of employed persons		
Proportion of male workers (%)	88.6	57.0
Proportion of female workers (%)	11.4	43.0
Occupation of employed persons		
Plant and machine operators (%)	28.1	6.8
Tradespersons (%)	19.7	14.3
Professionals (%)	11.4	14.1
Labour and related workers (%)	20.4	14.7
Clerks (%)	7.4	16.3
Managers and administrators (%)	6.1	10.6
Other (%)	6.9	23.2
Overtime		
Average weekly overtime hours worked per employee (hrs)	4.2	1.1
Percentage of employees working overtime (%)	34.6	15.6
Average weekly overtime hours per employee working overtime (hrs)	12.1	7.3
Composition of average weekly earnings(a)		
Base pay (\$)	937.6	667.9
Payment by measured result (\$)	111.0	9.0
Over-award pay (\$)	12.0	6.3
Overtime (\$)	111.2	40.8
Other		
Average weekly hours worked (hrs)	43.7	35.7
Unemployment rate(b) (%)	3.6	8.3

(a) Full-time adult employees.

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

Source: ABS 1996b, 1996c, 1997e.

8.10 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.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
Management units(a) at 30 June (no.)	99	109	45	38	179	188	323	335
Employment at end of June(b) (no.)	26 065	26 977	5 473	5 165	28 429	28 924	59 967	61 066
Persons employed per management unit (no.)	263.3	247.5	121.6	135.9	158.8	153.9	185.7	182.3
Labour ratios								
Profit to employment (\$'000/employee)	11.9	26.8	544.7	568.7	74.7	102.0	90.3	108.3
Industry gross product								
To employment (\$'000/employee)	140.9	166.4	1 062.3	1 227.2	210.7	242.7	258.1	292.3
To selected labour costs (times)	1.8	1.9	13.4	13.9	3.6	3.8	3.7	3.8
Selected labour costs to employment (\$'000/employee)	78.3	88.6	79.6	88.4	58.4	64.2	69.0	77.0

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

(b) Includes working proprietors.

Source: ABS (unpub.)a.

8.11 ESTABLISHMENT LEVEL(a), Employment (at End of June)—Industry Class

Items	COAL MINING....		OIL AND GAS EXTRACTION.....		IRON ORE MINING.....		BAUXITE MINING.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
Establishments at 30 June (no.)	162	172	96	91	21	22	10	10
Employment at end of June(b)								
Males (no.)	24 603	24 616	3 592	3 695	5 416	5 748	1 683	1 732
Females (no.)	692	871	615	533	674	738	30	60
Persons (no.)	25 295	25 487	4 207	4 228	6 090	6 486	1 713	1 792
Persons employed per establishment(b) (no.)	156.1	148.2	43.8	46.5	290.0	294.8	171.3	179.2
Employment type								
Administrative, office and sales employees(b) (no.)	3 495	3 209	1 561	1 541	1 341	1 253	68.0	90.0
Production and all other employees (no.)	21 788	22 243	2 642	2 633	4 749	5 229	1 645	1 702
Employees working below ground (no.)	8 317	8 749	—	—	—	—	—	—
Wages and salaries(c) (\$m)	1 848.7	2 003.9	319.7	314.2	402.0	401.5	91.7	94.5
Items	COPPER ORE MINING.....		GOLD ORE MINING.....		MINERAL SAND MINING.....		SILVER-LEAD-ZINC ORE MINING.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
Establishments at 30 June (no.)	14	16	149	153	12	13	16	15
Employment at end of June(b)								
Males (no.)	2 079	2 248	7 006	6 900	1 613	1 666	3 056	3 305
Females (no.)	157	241	1 092	1 212	275	283	219	254
Persons (no.)	2 236	2 489	8 098	8 112	1 888	1 949	3 275	3 559
Persons employed per establishment(b) (no.)	159.7	155.6	54.4	53.0	157.3	149.9	204.7	237.3
Employment type								
Administrative, office and sales employees(b) (no.)	109	202	1 075	1 191	363	394	336	404
Production and all other employees (no.)	2 127	2 287	7 020	6 905	1 525	1 555	2 939	3 151
Employees working below ground (no.)	1 184	1 186	1 161	1 221	—	—	1 875	1 870
Wages and salaries(c) (\$m)	132.8	143.4	406.9	448.9	81.2	90.6	186.4	228.2

(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)—Industry Class *continued*

Items	OTHER METAL ORE MINING.....		TOTAL METAL ORE MINING.....		TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING.....	
	1994-95	1995-96	1994-95	1995-96	1994-95	1995-96
Establishments at 30 June (no.)	19	19	241	248	499	511
Employment at end of June(b)						
Males (no.)	1 884	2 110	22 737	23 709	50 932	52 020
Females (no.)	328	317	2 775	3 105	4 082	4 509
Persons (no.)	2 212	2 427	25 512	26 814	55 014	56 529
Persons employed per establishment(b) (no.)	116.4	127.7	105.9	108.1	110.3	110.6
Employment type						
Administrative, office and sales employees(b) (no.)	387	583	3 679	4 117	8 735	8 867
Production and all other employees (no.)	1 825	1 843	21 830	22 672	46 260	47 548
Employees working below ground (no.)	564	484	4 784	4 761	13 101	13 510
Wages and salaries(c) (\$m)	124.6	156.6	1 425.6	1 563.7	3 594.0	3 881.9

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

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

Industry class	EMPLOYMENT.....					EMPLOYMENT TYPE.....				Wages and salaries(c) \$m
	Establish-ments no.	Males no.	Females no.	Persons no.	Persons per establi- ment(b) no.	Adminis- trative, office and sales no.	Production and all other no.	Employees working below ground no.		
NEW SOUTH WALES										
Coal mining										
1994–95	88	12 503	211	12 714	144.5	1 886	10 816	6 586	943.1	
1995–96	95	12 961	349	13 310	140.1	1 599	11 687	7 164	1 025.1	
Metal ore mining										
1994–95	22	2 013	142	2 155	98.0	225	1 927	924	116.0	
1995–96	25	2 038	161	2 199	88.0	275	1 921	857	139.4	
Total coal mining and metal ore mining										
1994–95	110	14 516	353	14 869	135.2	2 111	12 743	7 510	1 059.1	
1995–96	120	14 999	510	15 509	129.2	1 874	13 608	8 021	1 164.5	
VICTORIA										
Coal mining and metal ore mining										
1994–95	21	1 400	70	1 470	70.0	164	1 306	90	100.7	
1995–96	19	1 302	58	1 360	75.8	190	1 170	116	78.1	
Oil and gas extraction										
1994–95	3	526	40	566	188.7	188	378	—	38.8	
1995–96	3	510	30	540	180.0	180	360	—	37.2	
Total coal mining, oil and gas extraction and metal ore mining										
1994–95	24	1 926	110	2 036	84.8	352	1 685	90	139.5	
1995–96	22	1 812	88	1 900	86.4	370	1 530	116	115.3	
QUEENSLAND										
Coal mining										
1994–95	63	9 770	384	10 154	161.2	1 240	8 914	1 704	737.1	
1995–96	65	9 421	414	9 835	151.3	1 231	8 593	1 557	830.1	
Oil and gas extraction										
1994–95	25	257	61	318	13	130.0	184	—	17.2	
1995–96	25	310	51	361	14.4	127	208	—	20.3	
Metal ore mining										
1994–95	36	3 968	316	4 284	119.0	334	3 950	1 641	228.2	
1995–96	37	4 302	415	4 717	127.5	394	4 319	1 665	257.5	
Total coal mining, oil and gas extraction and metal ore mining										
1994–95	124	13 995	761	14 756	119.0	1 704	13 048	3 345	982.5	
1995–96	127	14 033	880	14 913	117.4	1 752	13 120	3 222	1 107.9	

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

Source: ABS (unpub.)a.

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

Industry class	EMPLOYMENT.....					EMPLOYMENT TYPE.....				Wages and salaries(c)
	Establish-ments	Males	Females	Persons	Persons per establish-ment(b)	Adminis-trative, office and sales	Production and all other	Employees working below ground		
no.	no.	no.	no.	no.	no.	no.	no.	no.	\$m	
SOUTH AUSTRALIA										
Total coal mining, oil and gas extraction and metal ore mining										
1994–95	15	1 876	247	2 123	141.5	263	1 860	165	107.4	
1995–96	14	1 744	262	2 006	143.3	281	1 725	158	104.3	
WESTERN AUSTRALIA										
Coal mining and oil and gas extraction										
1994–95	43	1 421	342	2 763	64.3	1 241	1 522	—	242.1	
1995–96	39	2 487	309	2 796	71.7	1 179	1 589	—	236.1	
Metal ore mining										
1994–95	144	13 727	2 027	15 754	109.4	2 599	13 155	1 445	887.9	
1995–96	149	14 242	2 173	16 415	110.2	2 750	13 647	1 400	961.0	
Total coal mining, oil and gas extraction and metal ore mining										
1994–95	187	16 148	2 369	18 517	99.0	3 840	14 677	1 445	1 130.0	
1995–96	188	16 729	2 482	19 211	102.2	3 929	15 236	1 400	1 197.1	
TASMANIA										
Total coal mining and metal ore mining										
1994–95	9	1 007	79	1 086	120.7	187	899	363	77.0	
1995–96	9	1 115	91	1 206	134.0	266	940	392	71.1	
NORTHERN TERRITORY										
Oil and gas extraction										
1994–95	17	202	3	205	12.1	9	196	—	17.8	
1995–96	17	211	2	213	12.5	13	200	—	21.4	
Metal ore mining										
1994–95	13	1 262	160	1 422	109.4	269	1 153	183	80.7	
1995–96	14	1 377	194	1 571	112.2	382	1 189	201	100.3	
Total oil and gas extraction and metal ore mining										
1994–95	30	1 464	163	1 627	54.2	278	1 349	183	98.4	
1995–96	31	1 588	196	1 784	57.6	395	1 389	201	121.7	

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

(b) Includes working proprietors.

(c) Excludes amounts drawn by working proprietors.

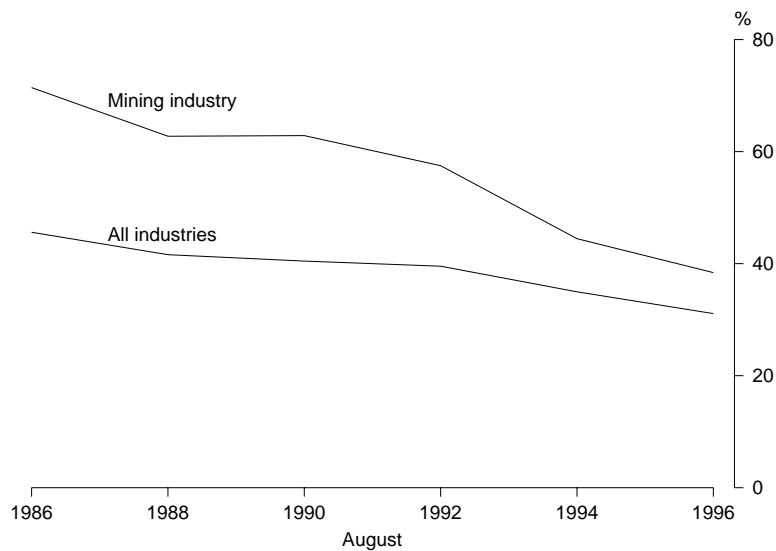
Source: ABS (unpub.)a.

TRADE UNION MEMBERSHIP

In August 1996, 38.5% of employees aged 15 years and over in the mining industry were members of a trade union (in connection with their main job). This compared with 31% for all Australian employees.

The level of unionisation in the mining industry has been falling, reflecting a national trend across all industries which has been evident since August 1986. In 1986, 72% of mining employees and 46% of all employees were union members. By 1996 the level of unionisation had dropped to 38.5% and 31% respectively.

9.1 TRADE UNION MEMBERSHIP



Source: ABS 1997b.

INDUSTRIAL DISPUTES

In 1996 the mining industry suffered a loss of 1,890 working days per thousand employees, which was 14 times the level of all industries (131 days). This high level of disputation continues to be principally attributable to workers in the coal industry where the level of working days lost per thousand employees in 1996 was 98 times the level of other than coal mining (7,171 days compared with 73 days).

Of the 214 industrial disputes reported in the mining industry in 1996, 208 were from coal mining, representing 97% of all mining disputes.

9.2 WORKING DAYS LOST PER THOUSAND EMPLOYEES

	<i>Coal mining</i>	<i>Other mining</i>	<i>Total mining</i>	<i>All industries</i>
1991	4 507	735	1 801	265
1992	2 970	997	1 443	158
1993	3 288	322	1 045	108
1994	6 803	460	1 962	86
1995	4 660	1 359	2 231	79
1996	7 171	73	1 890	131

Source: ABS 1997c.

CHAPTER 10

RESEARCH AND DEVELOPMENT EXPENDITURE

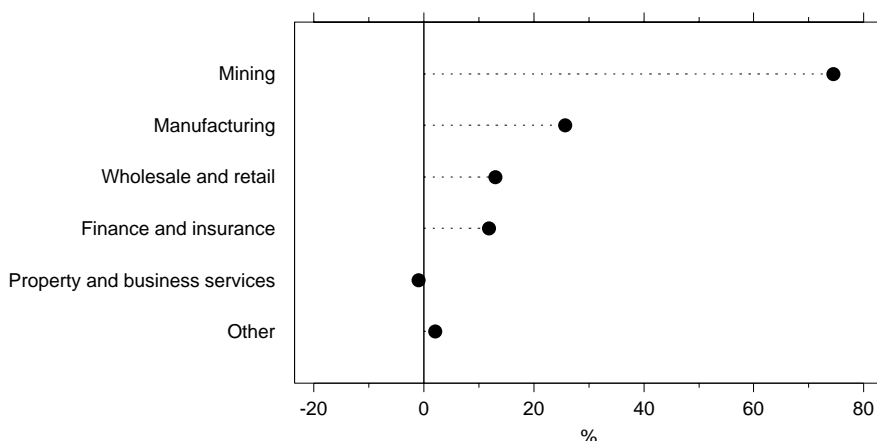
The value of research and development (R&D) expenditure by the mining industry in 1995–96 was \$500m, an increase of 74% in current prices over 1994–95. Mining R&D expenditure accounted for 12% of total expenditure by all industries, up from 8.2% in the previous year. The majority (57%) of total R&D expenditure by all industries was accounted for by the manufacturing industry.

10.1 R&D EXPENDITURE, By Industry

Industry of enterprise	EXPENDITURE ON R&D.....		PERSON YEARS OF EFFORT ON R&D.....	
	1994–95 \$m	1995–96 \$m	1994–95 years	1995–96 years
Mining	287	500	903	975
Manufacturing	1 932	2 430	14 876	15 650
Wholesale and retail trade	207	234	1 689	1 705
Finance and insurance	101	113	979	1 095
Property and business services	583	578	4 916	4 893
Total other	379	387	2 321	2 252
All industries	3 490	4 243	25 684	26 570

Source: ABS 1997f.

10.2 CHANGE IN R&D EXPENDITURE, By Industry—1994–95 to 1995–96



Source: ABS 1997f.

Human resources devoted to R&D in the mining industry, measured in person years of effort, increased by 8% (72 person years) in 1995–96. However this coincided with a rise of 33% (\$16.4m) in expenditure incurred in labour costs. Mining represented 4% of human resources devoted to R&D.

TYPE AND SOURCE OF EXPENDITURE

Mining R&D capital expenditure increased 46% to \$68m in 1995–96. Other current expenditure increased from \$145m in 1994–95 to \$366m in 1995–96. This includes expenditure on materials, fuels, rent and leasing, repairs and maintenance, data processing etc. and a proportion of expenditure on general services and overheads, attributable to R&D activity.

10.3 TYPE OF R&D EXPENDITURE, Source of Funds—Mining Industry

	1994–95	1996–96
	\$'000	\$'000
Type of expenditure		
Capital expenditure	46 392	67 541
Labour costs	50 461	66 890
Other current expenditure	144 797	366 023
<i>Total</i>	<i>241 650</i>	<i>500 454</i>
Source of funds		
Own funds	238 756	472 480
Other	2 894	27 974
<i>Total</i>	<i>241 650</i>	<i>500 454</i>

Source: ABS 1997f.

The funding for R&D expenditure in the mining industry more than doubled between 1994–95 (\$242m) and 1995–96 (\$500m).

The majority of funding for R&D expenditure in the mining industry is from the mining companies themselves, accounting for 94% of total funds.

EXPENDITURE BY LOCATION

The leading States in terms of R&D expenditure in the mining industry in 1995–96 were Western Australia (\$172m) and New South Wales (\$139m), accounting for 34% and 28% of R&D total expenditure, respectively. All States recorded significant increases in R&D expenditure in 1995–96.

10.4 R&D EXPENDITURE, By Location—Mining Industry

	1994-95	1995-96
<i>Location</i>	\$'000	\$'000
New South Wales	18 952	138 834
Victoria	38 728	51 337
Queensland	57 976	117 912
South Australia	3 512	7 083
Western Australia	114 034	171 702
Tasmania, Australian Capital Territory and Northern Territory	6 980	11 152
Overseas	1 468	2 434
Total	241 650	500 454

Source: ABS 1997f.

For the 1995–96 financial year, mining establishments 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 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 (1998).

Capital expenditure on environmental protection in the mining industry is 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 include the cost of treating pollutants after they have been produced by installing distinct abatement and control facilities; expenses to remove and dispose of wastes; 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 is 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, 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 1995–96.

CURRENT EXPENDITURE

For the 1995–96 financial year, total environment protection expenditure in the mining industry was \$251m. Current expenditure accounted for 60% of total pollution abatement expenditure with capital expenditure accounting for the remaining 40%.

The highest total pollution abatement and control expenditure was recorded by the metal ore mining (\$144m) and the coal mining (\$66m) industries. The former accounted for 57% of total environment protection expenditure and the latter 26%.

Reported data indicates that \$131m (87%) of current expenditure is in the other category (e.g. environmental impact statements, environmental audits, energy audits). This category also includes the cost of mine site rehabilitation which is a significant environmental remediation measure undertaken by mining establishments.

Expenditure specifically on environment protection accounted for 1% (\$151m) of total current expenditure (\$14,539m) in 1995–96.

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 78% of capital expenditure while change-in-production accounted for the remaining 22%. 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.

The metal ore mining industry accounted for 59% (\$59m) of total capital expenditure on environmental expenditure.

Capital expenditure specifically on environment protection accounted for almost 2% (\$100m) of total capital expenditure (\$6,059m) in 1995–96.

11.1 EXPENDITURE ON ENVIRONMENT PROTECTION, Industry Subdivision

<i>Items</i>	<i>Coal mining</i>	<i>Oil and gas extraction</i>	<i>Metal ore mining</i>	<i>Total coal mining, oil and gas extraction and metal ore mining</i>
Current expenditure				
Government fees, charges and taxes (\$m)	2.3	0.5	2.3	5.1
Research and development (\$m)	3.9	0.6	9.9	14.4
Other expenditure (\$m)	39.6	18.4	73.3	131.3
<i>Total (\$m)</i>	<i>45.8</i>	<i>19.6</i>	<i>85.5</i>	<i>150.8</i>
Capital expenditure				
End-of-line techniques (\$m)	14.0	20.0	44.0	78.0
Change-in-production processes (\$m)	6.4	1.1	14.6	22.1
<i>Total (\$m)</i>	<i>20.4</i>	<i>21.1</i>	<i>58.6</i>	<i>100.1</i>
Total expenditure (\$m)	66.2	40.7	144.1	251.0
Expenditure on environment protection compared with total mining expenditure				
Current expenditure on environment (\$m)	45.8	19.6	85.5	150.8
Total current expenditure (\$m)	5 840.8	1 136.3	7 561.4	14 538.5
Percentage spent on environment (%)	0.8	1.7	1.1	1.0
Capital expenditure on environment (\$m)	20.4	21.1	58.6	100.1
Total capital expenditure (\$m)	1 177.2	1 751.7	3 130.2	6 059.1
Percentage spent on environment (%)	1.7	1.2	1.9	1.7

Source: ABS (unpub.)b.

EXPORTS

Exports of mining products rose in value by 11%, from \$14,914m in 1994–95 to \$16,537m in 1995–96. Mining products accounted for 22% of Australia's goods exports in 1995–96. The value of coal exports increased by 13%, from \$6,893m in 1994–95 to \$7,784m in 1995–96. The value of oil and gas exports rose by \$164m (5%). Metal ore exports rose by 12% from \$4,787m in 1994–95 to \$5,342m in 1995–96.

12.1 EXPORTS, By Industry of Origin
.....

ANZSIC division/subdivision	1994-95.....		1995-96.....	
	\$m	%	\$m	%
.....				
Mining				
11 Coal mining	6 893	10	7 784	10
12 Oil and gas extraction	2 998	5	3 162	4
13 Metal ore mining	4 787	7	5 342	7
14 Other mining	237	—	250	—
Total	14 914	22	16 537	22
Manufacturing	43 685	65	48 604	64
Agriculture, forestry, fishing and hunting	6 982	10	9 107	12
Other industries(a)	1 454	2	1 717	2
Total exports	67 037	100	75 965	100

(a) Includes commodities subject to a 'No Commodity Details' restriction. See Explanatory Notes in ABS 1996a.

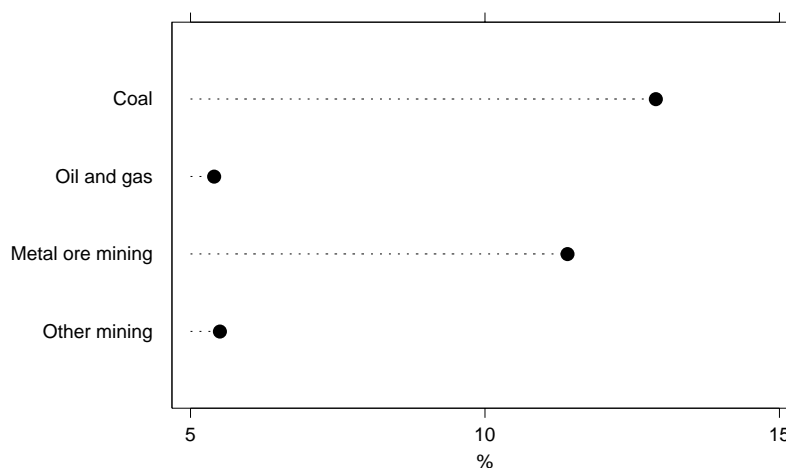
Source: ABS 1996a; FASTTRACCS (database), ABS.

Black coal was the largest mineral commodity exported in 1995–96 with a total value of \$7,784m (47% of mining exports and 10% of total exports). Japan bought \$3,331m (43%) of coal, followed by the Republic of Korea with \$980m (13%).

Other major exports were iron ore \$2,863m (17% of mining exports), of which \$1,276m was exported to Japan; crude oil \$1,593m (10%) of which \$370m was exported to Japan and \$344m to Taiwan. Exports of zinc ores accounted for \$432m (3%) and uranium \$242m (1%).

Refined gold exports rose 20% from \$4,699m in 1994–95 to \$5,625m in 1995–96. The three main countries to which refined gold was exported in 1995–96 were Republic of Korea (\$2,187m), Singapore (\$1,174m) and Japan (\$876m).

12.2 CHANGE IN VALUE OF EXPORTS—1994–95 to 1995–96



Source: ABS 1996a.

The Northeast Asia region (including Japan, Republic of Korea, China and Taiwan) was the main market for Australian mining commodities, taking 57% of the total value of mining exports in 1995–96. Shares for other regions were: Europe 10%, Southeast Asia (including Indonesia, Singapore, Thailand) 4% and Southern Asia (includes India) 4%.

The Northeast Asia sales were predominantly to Japan, and to a lesser extent, Republic of Korea, Taiwan and China. In 1995–96, 43% of coal, 21% of oil and gas, and 33% of metal ore was exported to Japan; 13% of coal and 11% 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.

For the European region, the United Kingdom received 3% of Australia's coal and metal ore exports, France received 2% of coal exports and Germany received 3% of metal ore exports.

There were significant increases in exports classified as having 'No Country of Destination' for 1995–96, for both coal mining and oil and gas extraction. This affects the above regional trade comparisons.

12.3 EXPORTS, By Country of Destination

	1993-94	1994-95	1995-96
<i>Principal country/region</i>	\$m	\$m	\$m
Coal mining			
Oceania	5	10	11
Europe	1 106	1 081	967
United Kingdom	231	197	219
Netherlands	204	172	84
France	173	162	154
Middle East and North Africa	220	211	211
Southeast Asia	43	39	68
Northeast Asia	4 943	4 679	4 964
Japan	3 391	3 226	3 331
Republic of Korea	934	881	980
Taiwan	433	399	519
Southern Asia	556	582	690
India	487	538	657
Northern America	4	6	8
South America and Central America	311	283	272
Africa (excluding North Africa)	2	—	—
No country details(a)	—	—	594
<i>Total</i>	<i>7 189</i>	<i>6 893</i>	<i>7 784</i>
Oil and gas extraction			
Oceania	60	86	94
Europe	40	86	23
Middle East	—	19	—
Southeast Asia	564	413	478
Indonesia	248	219	234
Singapore	241	159	144
Thailand	18	29	75
Northeast Asia	1 690	2 121	1 196
Japan	1 559	1 808	664
Southern Asia	—	22	—
Northern America	158	252	146
No country details(a)	69	—	1 225
<i>Total</i>	<i>2 581</i>	<i>2 999</i>	<i>3 162</i>
Metal ore mining			
Europe and the former USSR	495	615	687
Germany	121	142	164
United Kingdom	126	124	134
Italy	45	57	46
France	71	83	96
Middle East	11	12	27
Southeast Asia	55	61	94
Northeast Asia	2 885	3 001	3 199
Japan	1 708	1 718	1 759
Republic of Korea	570	570	569
China	445	586	718
Southern Asia	43	52	51
Northern America	39	44	27
South and Central America	16	3	—
Africa (excluding North Africa)	—	—	—
No country details(a)	1 008	1 000	1 258
<i>Total</i>	<i>4 552</i>	<i>4 787</i>	<i>5 342</i>
Other mining	281	237	250
Total mining exports(b)	14 603	14 914	16 537

(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 1996a.

Source: ABS 1996a.

EXPORT PRICES

The mining export price index rose in 1995–96 by 6%. Coal mining and metal ore mining contributed most to the increase with rises of 7% and 5%, respectively. The index measures changes in the prices of all merchandise exports from Australia.

12.4 EXPORT PRICE INDEX(a)(b)

ANZSIC subdivision	1993–94	1994–95	1995–96
11 Coal mining	106.3	96.1	103.5
12 Oil and gas extraction	115.1	113.8	117.7
13 Metal ore mining	92.9	88.6	93.5
Mining	101.0	94.2	100.0

(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 1996d.

IMPORTS

Mining imports into Australia were principally crude oil. The value of imports of mining products rose by \$397m (14%) from \$2,804m in 1994–95 to \$3,201m in 1995–96.

12.5 IMPORTS, By Industry of Origin

ANZSIC division/subdivision	1993–94.....		1994–95.....		1995–96.....	
	\$m	%	\$m	%	\$m	%
Mining						
11 Coal mining	14	—	12	—	12	—
12 Oil and gas extraction	2 298	4	2 506	3	2 911	4
13 Metal ore mining	117	—	130	—	129	—
14 Other mining	143	—	157	—	150	—
Total	2 573	4	2 804	4	3 201	4
Manufacturing	61 113	95	70 763	95	73 585	95
Agriculture, forestry, fishing and hunting	545	1	824	1	795	1
Other industries(a)	241	—	246	—	253	—
Total exports	64 469	100	74 638	100	77 834	100

(a) Includes commodities subject to a No Commodity Details restriction. See Explanatory Notes in ABS 1996a.

Source: ABS 1996a.

IMPORT PRICES

The mining import price index rose by 2% to 104.5. Oil and gas extraction showed a lesser increase, rising 1% to 103.5.

12.6 IMPORT PRICE INDEX(a)(b)

<i>ANZSIC division/subdivision</i>	<i>1993-94</i>	<i>1994-95</i>	<i>1995-96</i>
Mining	97.8	102.5	104.5
12 Oil and gas extraction	98.6	102.8	103.5
Manufacturing	115.5	113.8	113.5
Agriculture, forestry and fishing	107.3	141.7	136.3

(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 1996e.

The data in this section is extracted from United States Department of the Interior (1997) which provides estimates for the 1996 non-fuel mineral industry.

WORLD PRODUCTION

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.

In 1996 Australia accounted for 77% of the world production of tantalum, 63% of titanium dioxide in rutile, 56% of zirconium, 39% of bauxite, 38% of diamond production, 33% of titanium dioxide contained in ilmenite, and 18% of world lead production.

13.1 SELECTED MINERALS, Production—1996
.....

<i>Mineral</i>	<i>Australian proportion of estimated world production</i>
	%
.....	
Bauxite(a)	38.7
Copper in ores and concentrates	4.1
Diamond(b)	38.4
Gold in ores and concentrates	12.4
Iron ore	14.3
Lead in ores and concentrates	17.5
Lithium in ores and concentrates(a)(c)	27.3
Manganese in ores and concentrates	12.8
Mineral sands	
Ilmenite(a)(d)(e)	33.0
Rutile(a)(d)	62.9
Zircon(a)(f)	55.6
Nickel in ores and concentrates	10.5
Salt	4.7
Silver in ores and concentrates	6.1
Tantalum(g)	76.5
Tin in ores and concentrates(a)	4.2
Zinc in ores and concentrates	12.5

- (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 1997.

WORLD PRODUCTION *continued*

The most marked changes in world production between 1995 and 1996 were an increase in production of nickel (17%) and copper (9%).

There was little change in Australia's share of world production of most minerals between 1995 and 1996. Major changes were an increase in Australia's share in gold (14%), ilmenite (12%) and a decrease in Australia's share in lead (9%).

PRINCIPAL COUNTRIES

The world's leading producers of selected minerals in 1996 are shown in table 13.2. For the leading countries listed, the most significant changes in production between 1995 and 1996 were for Chile, which recorded a 28% increase in copper production, and Australia, which recorded a 12% increase in ilmenite production.

13.2 PRINCIPAL PRODUCING COUNTRIES OF SELECTED MINERALS—1996

<i>Mineral</i>	<i>Production</i>	<i>Country</i>
Bauxite (Mt)	43	Australia
Copper in ores and concentrates (kt)	3 000	Chile
Diamond(a) (Mct)	43	Australia
Gold in ores and concentrates (t)	490	South Africa
Iron ore (Mt)	250	China
Lead in ores and concentrates (kt)	490	Australia
Lithium in ores and concentrates(b) (t)	2 100	Chile
Manganese in ores and concentrates (kt)	1 400	South Africa
Mineral sands		
Ilmenite(c)(d) (kt)	1 150	Australia
Rutile(c) (kt)	190	Australia
Zircon(e) (kt)	500	Australia
Nickel in ores and concentrates (kt)	250	Russia
Salt (Mt)	40	United States
Silver in ores and concentrates (t)	2 400	Mexico
Tantalum(f) ('000 kg)	280	Australia
Tin in ores and concentrates (kt)	50	China
Zinc in ores and concentrates (kt)	1 200	Canada

(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 1997.

EXPLANATORY NOTES

INTRODUCTION

1 A range of financial statistics appearing in this publication have been derived from the 1995–96 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 conforms to the same basic conceptual standards, allowing comparative analysis between different industries and industry sectors.

3 The data for 1994–95 are now final and replace those previously issued in the 1994–95 issue of this publication, released in July 1997.

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 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.

8 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.

9 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 1995–96. ANZSIC Group 141 (Construction material mining) was collected using a sample survey. The next collection is being undertaken with respect to the 1996–97 financial year.

10 Information on mineral production is collected from State mines departments or equivalents. All producers engaged in mineral production activity provide data to these departments. This information therefore covers not only the production of establishments classified according to ANZSIC for coal mining, oil and gas extraction, metal ore mining, construction material mining and mining n.e.c., but also establishments which carry out mining or quarrying as a secondary activity) that are out of scope of the annual collection.

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 1996 for each State and Territory with some comparative statistics relating to preceding years, but generally details for the Australian Capital Territory are not available for publication.

22 Statistics on mineral production were derived from information supplied to the various mines departments and the ABS, supplemented in some cases by information made available by the Joint Coal Board and the Queensland Coal Board. The statistics for Queensland and the Northern Territory were compiled using data supplied by the mines department or equivalent in those States. Data for Victoria and South Australia were compiled using the data supplied by the mines department or equivalent with the exception of the oil and gas table. Value of oil and gas production figures were extracted from ABS data in order to publish an Australian total.

23 Statistics for New South Wales, Western Australia and Tasmania use mines department data for quantities of production. Value of production has been extracted from ABS data. An exception to this was the use of ABS data for quantity as well as value of gold bullion and bauxite production in Western Australia.

PRINCIPLES FOR MEASURING QUANTITY AND VALUE OF MINERALS

24 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.

25 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.

26 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.

27 In addition to the basic quantity data, the contents of metallic minerals are recorded. The contents of the various minerals (estimated by assay) have been tabulated to show the aggregate quantity of each metal, metallic oxide or element contained in the various metallic minerals produced. The totals compiled in this way are on a mine production basis and, as no allowance has been made for losses in smelting and refining, they are, in general, greater than the quantities actually recovered.

INDUSTRY PERFORMANCE MEASURES

28 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.

29 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.

30 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.

INDUSTRY PERFORMANCE MEASURES *continued*

31 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.

32 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.

33 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.

34 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 can it 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.

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

CONCENTRATION STATISTICS

36 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.

CONCENTRATION STATISTICS *continued*

37 The following steps outline the method used to calculate concentration ratios for each industry.

- Establishments engaged in an industry and belonging to the same management unit were brought together and the data reported for them were aggregated. In this way it was possible to identify the contribution to industry totals by establishments operating under common ownership or control.
- Management units were ranked in descending order according to the size of the contribution of their establishments 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.

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

39 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.

40 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.

41 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

42 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.

43 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.

44 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

45 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

46 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 (Cat. no. 8412.0)

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

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

Employee Earnings and Hours, Australia (Cat. no. 6306.0)

Environment Protection Expenditure (Cat. no. 4603.0)

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

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

Industrial Disputes, Australia (Cat. no. 6322.0)

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

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

Labour Force, Australia (Cat. no. 6203.0)

Manufacturing Industry, Australia (Cat. no. 8221.0)

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 & Experimental Development Business Enterprises, Australia
(Cat. no. 8114.0)

Trade Union Members, Australia (Cat. no. 6325.0)

Year Book Australia (Cat. no. 1301.0)

47 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

48 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

49 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.

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

ABBREVIATIONS AND SYMBOLS

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

ABS	Australian Bureau of Statistics
ABARE	Australian Bureau of Agricultural and Resource Economics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BRS	Bureau of Resource Sciences
EBIT	Earnings before interest and tax
EDR	Economic demonstrated resource
IGP	Industry gross product
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
OPBT	Operating profit before tax
PNG	Papua New Guinea
R&D	Research and development
UJV	Unincorporated joint venture
USBM	United States Bureau of Mines
GL	Gigalitres
Gt	Gigatonnes
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

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

53 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

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).
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.
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 (EBIT)	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	Includes bounties, subsidies and export grants but excludes diesel fuel rebate.
Industry gross product (IGP)	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: $\text{IGP} = \text{Sales of goods and services}$ <p style="margin-left: 40px;"><i>plus</i></p> <ul style="list-style-type: none"> Rent, leasing and hiring income Government subsidies Capital work done for own use Closing stocks <p style="margin-left: 40px;"><i>less</i></p> <ul style="list-style-type: none"> Opening stocks Purchases and selected expenses.
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 (OPBT)	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 and rates.
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.
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.</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 for land, buildings and other structures	Includes rent paid for land, premises, shops, warehouses, etc.
Rent, leasing and hiring expenses for motor vehicles	Excludes expenses for off-road motor vehicles and finance lease payments.
Rent, leasing and hiring expenses for plant, machinery and equipment	Includes hiring of equipment without an operator.
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.
Research expenses	Includes expenses incurred in research and development carried out by the organisation on its own behalf or on behalf of others. It also includes the funding of other organisations or individuals to carry out research on behalf of the organisation using their own facilities.
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) and service income (e.g. repair and service income, contract, subcontract and commission income, installation charges).</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.
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

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