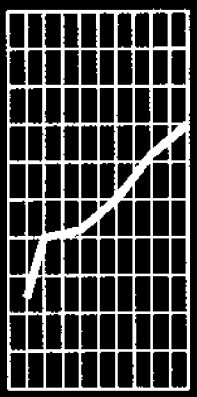
Australian Bureau of Statistics

1994–95

EMBARGO: 11:30 AM (CANBERRA TIME) FRI 25 JULY 1997

Australian Mining Industry



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AUSTRALIAN MINING INDUSTRY 1994–95

W. McLennan
Australian Statistician

AUSTRALIAN BUREAU OF STATISTICS

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INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics*, contact Helen Shannon on Adelaide (08) 8237 7382 or any ABS State Office.
- *for information about other ABS statistics and services*, please refer to the last page of this publication.

PREFACE

The mining industry is an important part of the economy of Australia, contributing 4% of gross domestic product and accounting for almost a quarter of its exports. Australia is a leading mineral resource nation and the world's largest producer of bauxite, diamonds, lead and mineral sands. Identified mineral reserves indicate that the significance of the mining industry is likely to continue. Additionally, processing of the products of mining, downstream manufacturing and the provision of services to support mining and related activity are important to Australia's economy, and to States and regions where they occur.

This compendium brings together a range of ABS information relating to mining, including the annual mining census, 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 as well as industry forecasts are included along with international comparisons.

This publication does not include any substantial information on services to mining. The growth in importance of these services, both in their own right, and as mining businesses move to use contractors and outsource some functions previously performed by their employees, has been recognised. The ABS has collected additional information on services to mining industries which will be available in the next issue of this publication.

Further information, including some additional detail can be obtained from the Mining National Project Centre, Australian Bureau of Statistics, GPO Box 2272, Adelaide, SA 5001 or telephone (08) 8237 7382.

Comments on the content of this publication can be provided to the Mining National Project Centre.

ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it the wide range of statistics published by the ABS would not be available for general use by governments and the community.

W. McLennan
Australian Statistician

Australian Bureau of Statistics
July 1997

SECTION 1 OVERVIEW

SIZE OF INDUSTRY

Internationally Australia continues to be a leading mineral resource nation. It is one of the world's top six countries for resources of commodities such as bauxite, gold, iron ore, lead, zinc, mineral sands and uranium. Australia has approximately 11% of the world's bauxite reserves and is the largest producer of natural rough diamonds and the mineral sands containing ilmenite, rutile and zircon. Australia ranks fourth in the world for gold resources and the vast Pilbara reserves position the country second in terms of iron ore resources.

EXPLORATION

A total of $1,576 million was spent during 1994–95 exploring for minerals and petroleum, an increase of 21% from 1993–94. The search for offshore crude oil accounted for $512 million of this expenditure. The Bureau of Resource Sciences anticipates that successes in the Timor Gap will lift Australia's petroleum self-sufficiency level to about 73% by the year 2000. However, without further discoveries, this will drop back to 47% by 2005. This will have a significant effect on Australia's imports, as petroleum is imported in large quantities.

PRODUCTION

The ex-mine value of mineral commodities produced during 1994–95 was $26,738 million, an increase of 4% from 1993–94. Value increases in most metallic minerals, due to combined production and price increases, were offset by the continued decline in coal value, due to lower prices.

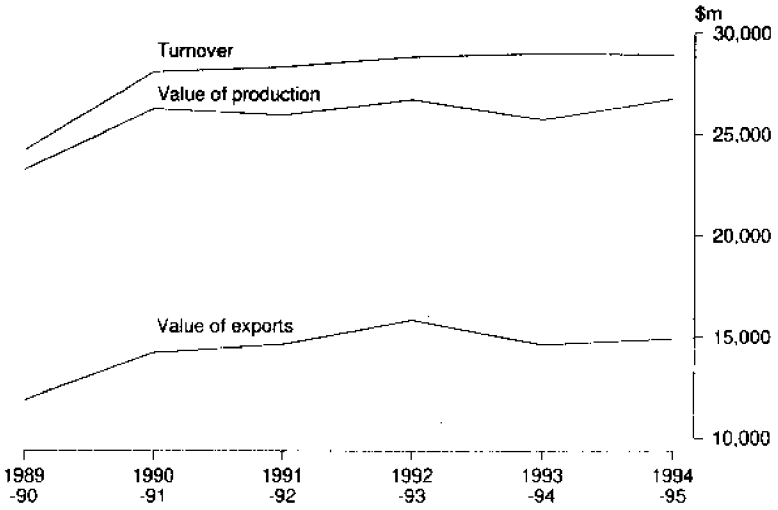
TRADE

The mining industry had sales of $28,132 million during 1994–95. Export data reveal that much of this output is sold overseas and underline the growing importance of the Asian region as a market for Australian commodities. The Asian region bought $5,300 million of black coal during 1994–95 with Japan and the Republic of Korea being the major purchasers. Exports of refined gold and iron ore to Asia were significant in this period.

TURNOVER

A total establishment turnover of $28,936 million was reported for 1994–95 which was virtually unchanged from 1993–94. Although turnover remained steady in 1994–95, the contributions of the major industry sectors varied quite markedly. The largest increase was in the other metal ore mining industries where turnover increased by $389 million (57%) to $1,070 million in 1994–95. This rise was primarily driven by increased demand and prices for nickel. The coal mining industry reported the largest decrease in turnover, falling $531 million (5%) to $9,342 million in the same period as production increases were offset by price decreases. The oil and gas industry also experienced a decrease, dropping $124 million (2%) to $7,681 million in 1994–95, mainly due to the lower production.

1.1 FINANCIAL SUMMARY, 1989–90 TO 1994–95



ENVIRONMENT

Protection of the environment is an important aspect of the mining industry. Expenditure for the primary purpose of pollution abatement and control was $196 million in 1994–95. This was 10% more than the $178 million reported in 1993–94 for the same industries. The majority of this expenditure, and increase, occurred in metal ore mining.

1.2 FINANCIAL SUMMARY

	1993–94	*1994–95*	*Change*
	$m	$m	%
Exploration expenditure	1 299	1 576	21.3
Value of production	25 702	26 738	4.0
Value added	18 933	18 914	–0.1
Establishment turnover	29 018	28 936	–0.2
Value of exports	14 603	14 914	2.1
Net capital expenditure	4 186	4 698	12.2
Environmental expenditure	178	196	10.1

EMPLOYMENT

Total employment at 30 June reported in the mining census decreased by 2% to 55,348 persons in 1994–95. This continued the decline in employment evident over the last decade. Wages and salaries paid in 1994–95 were $3,590 million, 1% down on 1993–94. After wages and salaries, payments for contract, subcontract and commission work were the next largest single expense incurred by mining operators. These expenses increased by 4% from $2,680 million to $2,799 million.

This reflects a trend across the major parts of the mining industry towards greater use of contract employment and contractors to undertake mining and related activities, previously done by employees of mining companies.

Since 1989–90, wages and salaries have increased marginally (at current prices) while payments for contract, subcontract and commission work have increased significantly ($1,615 million in 1989–90 to $2,799 million in 1994–95).

1.3 EMPLOYMENT SUMMARY

	Units	*1993–94*	*1994–95*	*Percentage change*
Employment	no.	56 465	55 348	–2.0
Wages and salaries	$m	3 627	3 590	–1.0
Union participation	%	45	46	1.1
Industrial disputes—working days lost per thousand employees	no.	1 962	2 231	13.7

Mining employment continued to be predominantly male, with over 90% of all employees being male (compared with around 57% in all industries). Over 97% of coal mining employees were male.

Some 46% of all employees in mining were members of trade unions. This compares with 33% trade union membership across all industries. Time lost per employee through industrial disputes was more than 20 times the average time lost for all industries. The 2,231 working days lost per thousand employees was principally attributable to workers in the coal mining industry where 4,660 working days per thousand employees were lost in 1994–95.

SECTION 2 HISTORY OF THE MINING INDUSTRY

The history of the Australian mining industry began with the first European settlement when settlers quarried stone and dug clay for bricks for their buildings. The industry has had its booms and depressions, but since the discovery of gold, it has been an important contributor to the Australian economy. It provides the nation's basic industrial requirements—construction materials, fuel and industrial raw materials; it has facilitated decentralisation of both population and industry, as towns, railways and ports were established to serve the mines and smelters; it has encouraged technological advancement, both in its own and other related fields; and it has been a major earner of export income. The industry has created wealth for the nation and its people through the discovery and mining of mineral deposits and processing the ore. It now produces some 65 different mineral commodities with annual values of production ranging to more than $7,000 million in the case of coal. Australia mines, or has unworked deposits of, almost all mineral commodities—of the major mineral raw materials it now lacks only sulphur. Some commodities, such as petroleum and aluminium, have had a relatively short production history in Australia; others, such as the base metals, iron ore and especially coal, go back to the early days of the industry.

COAL

It is not surprising that coal was the first mineral, other than those used for construction, to be found, because seams outcrop along the coast to the north and south of Sydney. Coal was first discovered in the Newcastle area by escaped convicts in 1791. Mining began near Newcastle in 1799 and in 1800 coal became the first mineral exported from Australia.

Production increased steadily from the 1830s onwards, and in the mid-1920s Australian production was almost 14 megatonnes, but the depression of the 1930s saw it fall by over a third. Renewed growth faltered in the late 1940s. Exports, which normally exceeded one megatonnes/year until the mid-1920s, had fallen to about 50,000 tonnes by the late 1940s because of increasing competition. At that time petroleum products began to replace coal in industry and railways, and these trends were exacerbated by prolonged industrial unrest.

It was widely agreed that coal would be of diminishing importance as a major mineral commodity. However, measures taken to improve the efficiency of mining, realisation of the economic importance of near-surface seams in the Bowen Basin in Queensland, and the emergence of large markets for coking coal, particularly in Japan, brought about a resurgence in the industry. Exports began to increase rapidly in the mid-1950s, and, with impetus added by the oil shocks of the 1970s, Australia became the world's largest coal exporter, with exports reaching 88 megatonnes in 1985. By 1993–94 exports of coal had risen to 129 megatonnes.

The pattern of black coal production changed during the latter half of this century. In 1953, New South Wales provided 77% of the total production and Queensland 14%, while in 1994–95, the two States provided 44% and 45%, respectively. Queensland became the predominant exporting State contributing 57% of coal exports compared with 43% from New South Wales. In total, 77% of Australian production was exported. Despite its changing fortunes the coal industry has been a major part of the mineral industry for 150 years and the rapid increase in exports in the 1960s consolidated its pre-eminence. In 1994–95 coal contributed 27% of the total value of ex-mine production in Australia.

MINERALS

In the circumstances at the time, the early settlers were little interested in minerals. Traces of gold were reported from 1823 onwards, and occurrences of other metals were reported from time to time. The first metalliferous mining was of silver-lead, at Glen Osmond near Adelaide in 1841. Copper mining began at Kapunda, in South Australia, in 1842, and at Burra, to the north, in 1844. At the end of the same decade, the first pig iron was produced from a small deposit of iron ore near Mittagong, New South Wales.

It was the discovery of payable alluvial gold in 1851 near Bathurst in New South Wales and, soon after, at the rich Victorian fields, that gave impetus to the metalliferous sector of the mineral industry. As search and discovery quickly spread to other parts of eastern Australia, the migrants which the gold attracted, the infrastructure which resulted, and realisation of the mineral potential, all profoundly influenced the development of Australia from the 1850s onwards.

The wealth created by the newly-mined gold and the influx of migrants began the transition away from an agricultural and pastoral economy. As industries were established to supply the machinery and transport facilities needed by the mines, service industries expanded to cater for increasing population and growing commercial activities.

Gold was the prospectors prime target for many years after 1851, and the Victorian discoveries were followed by many others around the continent, though few were so rich. Many of the new goldfields were abandoned as the shallow surface alluvials were exhausted, but on some, especially in Victoria, mining progressed to the deep leads-alluvial deposits covered by tens of metres of later sediments or by lava flows.

Prospecting on some fields discovered primary gold lodes rich enough to be worked. Working such lodes necessitated deep shafts, machinery and treatment plants, and these required capital. The individual miner or syndicate was replaced by companies, employing dozens or even hundreds of men. Towns were established and, as confidence in the long life of the mines increased, tents and shanties gave way to more permanent private and commercial buildings. When, decades later, the mines began to peter out, many such towns survived because they had become centres for the surrounding agricultural and pastoral industries, or were at convenient points on well established transport routes.

The interest and expertise in prospecting aroused by gold soon led to discoveries of other metals. Tin mining began almost simultaneously in 1872 at Inverell, New South Wales; Mount Bischoff, Tasmania; and Stanthorpe, Queensland. With the discovery soon after of other fields, especially Herberton in North Queensland, Australia became the major world source of tin in the late 1870s and early 1880s. Base metals were discovered at many places, including Moonta–Wallaroo, South Australia; Zeehan–Dundas and Mount Lyell, Tasmania; Cobar, New South Wales; and Mount Morgan, Queensland. The fabulous Broken Hill lode, whose profits spawned a variety of industries, including steel at Newcastle in 1915, was discovered in 1883.

By the beginning of the twentieth century, the metalliferous mining industry, with associated smelters and refineries, was well established. Gold was still pre-eminent, accounting for three-quarters of the total value of metalliferous mine production, with copper, lead and silver accounting for most of the remaining quarter.

Like the goldfields, each mine needed a town for its workers, engineering and machinery suppliers and transport facilities—including ports to ship its products to other parts of the world. Many towns in existence today owe their foundation to a mineral deposit found in the last four decades of the nineteenth century.

The industry continued to prosper in the early years of the twentieth century, however, it was severely affected by the collapse of metal prices after the ending of World War I. Many mines closed, and the value of mineral exports fell from $15.3 million in 1919–20 to $7.6 million in 1921–22.

In the late 1930s the mineral industry, although well established, played a minor role in the Australian economy. The need for new ore reserves of many minerals was the major concern of the industry in the late 1930s and early 1940s. Indeed, the 40-year drought of new discoveries, after the flood of the previous century, led some to the belief that there were few new resources to be found, and that the industry would gradually run down. An embargo was placed on the export of iron ore in 1938 by the Commonwealth Government, when reserves of high-grade ore were believed to be no more than 260 megatonnes. Few new mineral deposits were found from the beginning of the century until after World War II.

In the late 1940s there began a series of discoveries that was to completely change the structure of the industry and elevate Australia to a major mineral exporting country. In the 1950s the mainstays of the industry were lead, zinc, copper, gold and coal, and only the first four were exported in any quantity. By the late 1960s Australia was a world force in aluminium, coal, iron ore, nickel, manganese, titanium, uranium and zirconium as well as the traditional lead and zinc.

Some of the 'new' deposits had been known previously, but had not been economically workable. The economics of working such deposits changed remarkably because of technological advances which lowered the cost of mining and transporting huge quantities of material, but these advances would not have been decisive without the emergence of Japan as a major buyer of coal, iron ore and bauxite.

The discovery of new ore bodies close to former mines and the striking of the many new deposits was aided by the development of geochemical and geophysical exploration methods suited to Australian conditions. Many techniques developed in the northern hemisphere were not successful in the arid, deeply weathered terrain characteristic of most of Australia. However, these techniques were modified and new ones developed, and Australia is now a world leader in expertise for mineral exploration in arid regions.

Apart from Japan's economic growth, the expansion of the world economy in the 1950s and 1960s meant an ever increasing demand for minerals. Australia, with its well established industry, had the experience needed to find and develop the new deposits needed to meet this demand.

The greatly increased knowledge of the geology of Australia resulting from systematic geological and geophysical studies led to a better understanding of the geological composition of the continent. Mineral explorers were able to search more efficiently by using geological theories on the origin of mineral deposits to target specific areas for concentrated exploration. The better understanding showed that Australia had a high potential for the discovery of mineral deposits. This realisation, together with Australia's political stability, led to an influx in the early 1960s of major overseas mining companies which brought in new expertise and ideas, as well as funds for exploration.

The search for a variety of minerals in diverse geological conditions has developed a highly experienced mineral exploration industry which has begun exporting its skills to other parts of the world.

PETROLEUM

The 1960s saw also the discovery of economic accumulations of what had been Australia's most serious mineral deficiency—petroleum.

Although it had been sought for many years, petroleum (which includes crude oil and natural gas) was a latecomer to the mineral production scene in Australia. However, it now has become one of Australia's major mineral products in terms of value of production and in 1985, following a change in government policy on petroleum exports, it was Australia's second most valuable mineral export.

Hydrocarbons, in the form of crude bitumen, were first recorded in 1839, at the mouth of the Victoria River, near the Western Australia–Northern Territory border. The first well drilled specifically for petroleum was in 1882 at Alfred Flat, in the Coorong area of South

Australia. However this well, and several others in the same general area, did not encounter any oil.

In 1900, at Roma in Queensland, natural gas was encountered in an artesian water bore which was being deepened. Gas continued to flow freely from the well and in 1906 it was reticulated for town lighting; however, the flow failed after 10 days. This discovery marks the real beginning of petroleum exploration in Australia. Many wells were drilled subsequently in the Roma region; some encountered small quantities of oil or gas.

The first substantial flow of oil was in 1953 from the Rough Range No. 1 well in the north-west of Western Australia. However, a commercial field did not eventuate, and the interest in petroleum exploration aroused by the discovery began to wane. Because of the economic and strategic advantages of an indigenous supply of petroleum, the Commonwealth Government had encouraged the search for it since soon after World War I. With the increasing importance of petroleum and petroleum products to the Australian economy, in 1957 the Government adopted several measures, including a subsidy for specific approved operations, to encourage petroleum exploration. These measures did much to encourage exploration.

Australia's first commercial oil field was discovered at Moonie, 200 kilometres south-east of Roma in 1961. A pipeline was built to Brisbane, and commercial production began in 1964. Other important events in 1964 were the discovery of oil and gas at Barrow Island, Western Australia; of gas in what has become a cluster of oil and gas fields in north-east South Australia and the adjoining part of Queensland; and most important of all, the discovery of gas some 25 kilometres off the Gippsland coast in Australia's first offshore well. By 1993–94 the Gippsland Shelf fields supplied almost 60% of the crude oil and about 20% of the natural gas produced in Australia.

The Gippsland Shelf discovery, as well as becoming Australia's main source of oil and gas, also turned attention to Australia's extensive continental shelf, and 1971 saw the discovery of the huge gas fields of the North West Shelf. In addition to supplying Western Australia, they began to feed one of the world's few liquefied natural gas export projects at the end of the 1980s.

In the early 1970s, petroleum exploration again began to languish—indications from exploration were that onshore oilfields probably would be small and hence unlikely to be economic. However, the oil shocks of 1973 and 1979, when oil prices increased several-fold, completely changed the economics of the industry. Expenditure on exploration increased rapidly, from $49 million in 1976 to $948 million in 1982. Some known fields, such as Palm Valley and some Bass Strait fields, were developed, and many new fields were discovered, especially in south-west Queensland and the adjoining part of South Australia.

While exploration has been primarily for oil, it has discovered large resources of natural gas. Indeed, indications are that geological conditions in Australia in the past have favoured the formation of gas rather than oil. Natural gas contributed 18% of total Australian energy consumption in 1993–94.

Most Australian crude oils are 'light', and oil still has to be imported to supply heavy fractions needed for lubricating oils, bitumen, etc. In 1985, 96% of the Australian crude oil requirement was met by domestic production. However, unless major new discoveries are made, Australia's crude oil self-sufficiency will begin to decrease as production from some existing fields declines. Natural gas supplies, however, are adequate for many years, although resources are unevenly distributed around the continent.

The construction of a $400 million pipeline between the Pilbara and the Western Australian goldfields will supply industries with North West Shelf natural gas. The privately built, owned and operated gas pipeline will be 1,400 kilometres long. The project should increase the profitability of existing mining operations as well as increase the viability of a number of projects that are currently considered as sub-economic.

The conclusion of negotiations for the General Agreement on Tariffs and Trade (GATT) in Uruguay in December 1993 saw an important development in international trade occur. The Agreement should result in lower tariffs on manufactured goods and an increased openness of major markets. The benefits to mineral exporting nations such as Australia are likely to be substantial. The GATT arrangements will mean that Asian economies will require additional raw materials to assist in their expansion into newly opened international markets.

ENVIRONMENTAL ISSUES

In the 1950s the industry began to be affected by increasing public concern for the quality of the environment. Governments increased the controls on discharge of potentially polluting emissions such as water containing sediments or chemicals, and noxious gases. Whereas the industry once had general priority in land use, it now had competition with other potential uses of the land. Governments also took account of the likely effect of a proposed mining or treatment process on the surroundings before deciding whether it should go ahead, and required that, where feasible, mined-out areas be rehabilitated by reshaping and revegetating the surface so that the site could be used for other purposes.

The mineral sand mining industry illustrated the increased concern over environmental protection during the 1970s. Environmental lobbying resulted in the Federal Government ending mining on Fraser Island, Queensland. Mining ceased on the island in 1976.

NATIVE TITLE

The mineral industry's former priority for land use was affected in the 1970s when title to extensive tracts of land in the Northern Territory and some States was granted to the land's traditional Aboriginal owners. One result of this was that companies had to obtain the consent of the Aboriginal owners before they could explore or mine on such land.

On 3 June 1992 the High Court of Australia brought down its decision in *Mabo and Others v the State of Queensland*. This decision and the subsequent *Native Title Act 1993* which came into force on 1 January 1994 are having an effect on industries and businesses with interests in land such as agricultural and mining industries.

SECTION 3 STRUCTURE OF THE MINING INDUSTRY

The annual mining census collects data from management units and establishments classified to the coal mining, oil and gas extraction and metal ore mining industries. Units classified to construction material mining and mining n.e.c. are surveyed every three years. Non-employing units are excluded except where they are participants in operational unincorporated joint ventures.

The following analysis relates to establishment rather than management unit data (see Explanatory Notes, Statistical unit). Management unit level data includes information from establishments that are not predominantly engaged in mining activities and contrasts with establishment data which provides more homogeneous data for each industry. Concentration ratios relate mining establishments to contributing management units. The following analysis and table summarises the ratios. Detailed information, including data for individual industries, are available in the table at the end of this section. An explanation of the derivation of concentration ratios is provided in the Explanatory Notes, Concentration statistics.

The census shows that there were 504 mining establishments belonging to 384 management units operating at the end of June 1995.

3.1 ESTABLISHMENT LEVEL, SELECTED STATISTICS AND CONCENTRATION RATIOS(a)(b)

	Establishments at 30 June		*Employment at end of June*		*Wages and salaries*		*Turnover*		*Value added*		*Fixed capital expenditure less disposals*	
Management *units*	no.	ratio	persons	ratio	$m	ratio	$m	ratio	$m	ratio	$m	ratio
Largest												
12	50	0.10	16 445	0.30	1 034	0.29	11 349	0.39	8 047	0.43	2 044	0.44
25	86	0.17	24 236	0.44	1 571	0.44	16 105	0.56	11 400	0.60	2 740	0.58
50	132	0.26	33 431	0.60	2 210	0.62	20 907	0.72	14 831	0.78	3 320	0.71
100	200	0.40	41 568	0.75	2 709	0.77	25 149	0.87	17 560	0.93	3 730	0.79
200	316	0.63	46 533	0.84	2 932	0.83	28 205	0.97	19 753	1.04	4 504	0.96
All	**504**	**1.00**	**55 348**	**1.00**	**3 537**	**1.00**	**28 936**	**1.00**	**18 913**	**1.00**	**4 698**	**1.00**

(a) Note that the number of management units is greater in this table than the total number of in-scope management units. This is due to the inclusion of establishments in this table which belong to management units which are classified to industries other than mining.
(b) Excludes Australian and New Zealand Standard Industrial Classification (ANZSIC) subdivision 14, Construction material mining.

CONCENTRATION RATIOS

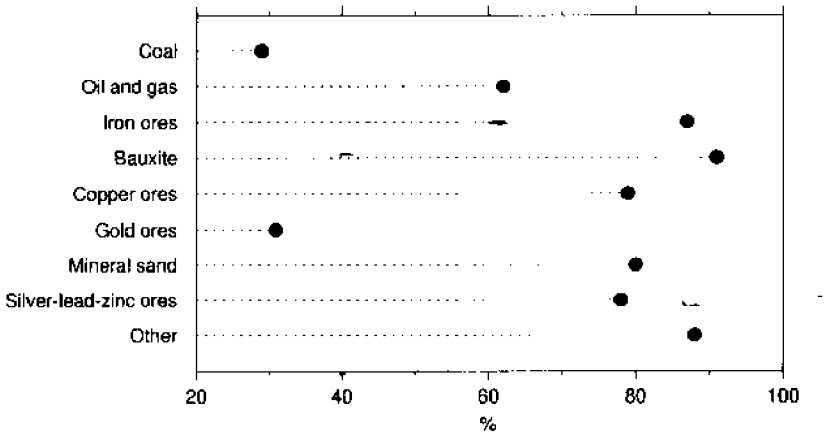
Ranking all management units by turnover confirms the highly concentrated structure of the industry. In 1994–95 the 12 largest management units accounted for 39% of turnover and 43% of value added. In addition, these units employed 30% of all persons employed in mining.

The top 100 management units accounted for 200 (40%) of all establishments. This group accounted for 87% of turnover, 93% of value added, 79% of fixed capital expenditure less disposals and 75% of employment.

A concentration table at industry level can be found on pages 15–16. A number of industries display activity that is highly concentrated. For example, in 1994–95 the largest four management units in the iron ore mining industry accounted for 87% of turnover and 93% 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 87% of employment.

The coal mining and gold mining industries display low levels of concentration. The largest four management units in the coal mining industry accounted for 29% of turnover in 1994–95 while in the gold ore mining industry the largest four accounted for 31% of turnover.

3.2 CONTRIBUTION TO TURNOVER OF LARGEST FOUR MANAGEMENT UNITS



UNINCORPORATED JOINT VENTURES

Industries that have a large number of unincorporated joint ventures display concentration ratios for employment and wages and salaries that are more evenly spread. This is because participants report details of turnover but often have few or no employees. Labour for such operations is usually employed by the joint venture operator. This is illustrated in the oil and gas extraction industry where the largest four management units account for 62% of turnover and 51% of employment.

Ranking establishments by employment size provides a different picture. Table 3.3 shows that many mining operations have employment in excess of 100 persons. There is 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 and tin mining have a substantial number of small establishments.

Establishments that were only participants in unincorporated joint ventures (UJV) accounted for $9,894 million in turnover during 1994–95. There were 202 establishments that only had participant status. This highlights a common operational style in mining that allows development of mineral deposits and the spread of risk through the involvement of, and investment by, both local and overseas organisations not otherwise involved in the mining industry.

3.3 MINING ESTABLISHMENTS BY EMPLOYMENT SIZE

Employment size	*Establishments at 30 June 1995* no.	*Employment at end of June* persons	*Wages and salaries* $m	*Turnover* $m	*Value added* $m	*Fixed capital expenditure less disposals* $m
Less than 10	67	226	94	1 091	536	277
10–19	26	362	15	130	2	43
20–49	44	1 497	75	608	249	92
50–99	37	2 572	139	927	315	92
100–499	103	24 827	1 488	7 787	3 835	1 699
500–999	18	12 407	823	4 590	2 411	754
1 000 or more	7	13 176	885	3 910	1 838	393
UJV participants	202	281	17	9 894	9 727	1 347
Total	**504**	**55 348**	**3 537**	**28 936**	**18 913**	**4 698**

ESTABLISHMENTS BY STATE/TERRITORY

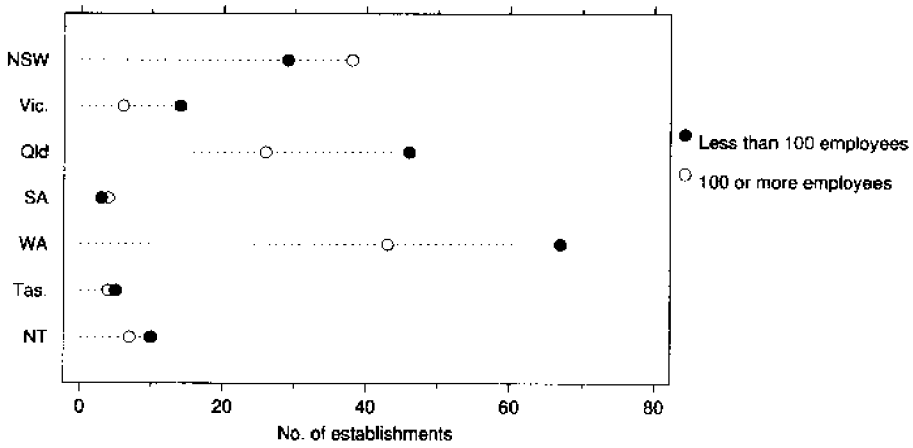
An analysis of establishments by State/Territory illustrates the relative levels of mining activity in each State and the composition of that activity. In terms of number of establishments, the major mining States are Western Australia, Queensland and New South Wales.

3.4 MINING ESTABLISHMENTS BY EMPLOYMENT SIZE BY STATE/TERRITORY

Employment size at end of June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Aust.*
Less than 10	7	7	20	2	28	1	2	67
10–19	5	2	8	1	9	1	—	26
20–49	9	4	12	—	14	2	3	44
50–99	8	1	6	—	16	1	5	37
100–499	32	5	17	3	35	4	7	103
500 or more	6	1	9	1	8	—	—	25
UJV participants	43	5	53	8	79	—	14	202
Total	**110**	**25**	**125**	**15**	**189**	**9**	**31**	**504**

UJV participants aside, the majority of establishments in New South Wales have an employment size greater than 100 employees. This reflects the coal mining activity that dominates the State. In contrast the profile for Western Australia shows the majority of establishments employ fewer than 100 persons. This is a reflection of the gold mining industry in that State. Western Australia also has 43 establishments with more than 100 employees. This covers the activities of iron ore mining and the larger gold mines.

3.5 NUMBER OF ESTABLISHMENTS(a) BY EMPLOYMENT SIZE



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

3.6 ESTABLISHMENT LEVEL(a), SELECTED STATISTICS AND CONCENTRATION RATIOS BY INDUSTRY CLASS(b)(c)

ANZSIC code	Industry description	Management units at 30 June		Establishments at 30 June		Employment at end of June		Wages and salaries		Turnover		Value added		Fixed capital expenditure less disposals	
		no.	ratio	no.	ratio	persons	ratio	$m	ratio	$m	ratio	$m	ratio	$m	ratio
11	**Coal mining**														
1100	Coal mining														
	First	4	0.03	15	0.09	6 883	0.27	497.5	0.28	2 733.7	0.29	1 089.4	0.21	330.5	0.32
	Second	4	0.03	12	0.07	2 749	0.11	187.5	0.10	1 461.1	0.16	1 191.0	0.23	161.5	0.16
	Third	4	0.03	11	0.07	1 792	0.07	172.6	0.10	928.1	0.10	779.4	0.15	68.8	0.07
	Fourth	4	0.03	6	0.04	2 483	0.10	179.4	0.10	805.9	0.09	420.5	0.08	99.5	0.10
	Fifth	4	0.03	6	0.04	1 897	0.07	122.7	0.07	608.5	0.07	283.0	0.06	48.0	0.05
	Sixth	4	0.03	6	0.04	1 173	0.05	83.1	0.05	453.3	0.05	274.5	0.05	36.0	0.04
	Remainder	95	0.80	106	0.65	8 318	0.33	564.9	0.31	2 351.4	0.25	1 099.5	0.21	281.4	0.27
	Industry total	*119*	*1.00*	*162*	*1.00*	*25 295*	*1.00*	*1 807.2*	*1.00*	*9 341.9*	*1.00*	*5 137.3*	*1.00*	*1 025.7*	*1.00*
12	**Oil and gas extraction**														
1200	Oil and gas extraction														
	First	4	0.07	21	0.22	2 189	0.51	127.2	0.39	4 743.7	0.62	4 376.2	0.63	658.1	0.54
	Second	4	0.07	8	0.08	25	0.01	2.8	0.01	1 375.0	0.18	1 381.5	0.20	326.2	0.27
	Third	4	0.07	6	0.06	—	—	—	—	709.0	0.09	712.2	0.10	164.6	0.13
	Fourth	4	0.07	10	0.10	94	0.02	4.6	0.01	382.2	0.05	358.6	0.05	24.1	0.02
	Fifth	4	0.07	8	0.08	63	0.01	2.5	0.01	171.7	0.02	162.6	0.02	7.7	0.01
	Sixth	4	0.07	6	0.06	—	—	—	—	105.2	0.01	105.5	0.02	15.3	0.01
	Remainder	31	0.56	37	0.39	1 939	0.45	189.1	0.58	194.7	0.03	–104.7	–0.01	30.7	0.03
	Industry total	*55*	*1.00*	*96*	*1.00*	*4 310*	*1.00*	*326.2*	*1.00*	*7 681.1*	*1.00*	*6 991.9*	*1.00*	*1 226.8*	*1.00*
13	**Metal ore mining**														
1311	Iron ore mining														
	First	4	0.24	7	0.33	5 694	0.93	378.5	0.95	2 699.1	0.87	1 636.2	0.84	390.7	0.89
	Second	4	0.24	4	0.19	352	0.06	19.8	0.05	255.4	0.08	202.4	0.10	28.2	0.06
	Remainder	9	0.53	10	0.48	44	0.01	1.3	—	148.6	0.05	115.1	0.06	19.2	0.04
	Industry total	*17*	*1.00*	*21*	*1.00*	*6 090*	*1.00*	*399.6*	*1.00*	*3 103.0*	*1.00*	*1 953.7*	*1.00*	*438.1*	*1.00*
1312	Bauxite mining														
	First	4	0.40	4	0.40	1 497	0.87	80.4	0.88	784.9	0.92	503.9	0.91	53.8	0.96
	Remainder	6	0.60	6	0.60	216	0.13	10.5	0.12	71.3	0.08	50.2	0.09	2.3	0.04
	Industry total	*10*	*1.00*	*10*	*1.00*	*1 713*	*1.00*	*90.9*	*1.00*	*856.3*	*1.00*	*554.1*	*1.00*	*56.1*	*1.00*
1313	Copper ore mining														
	First	4	0.29	4	0.29	1 970	0.88	105.4	0.82	808.8	0.79	578.4	0.85	59.2	0.91
	Remainder	10	0.71	10	0.71	266	0.12	22.9	0.18	210.2	0.21	99.3	0.15	6.0	0.09
	Industry total	*14*	*1.00*	*14*	*1.00*	*2 236*	*1.00*	*128.4*	*1.00*	*1 019.0*	*1.00*	*677.7*	*1.00*	*65.3*	*1.00*

For footnotes see end of table.

3.6 ESTABLISHMENT LEVEL(a), SELECTED STATISTICS AND CONCENTRATION RATIOS BY INDUSTRY CLASS(b)(c) — *continued*

ANZSIC code	Industry description	*Management units at 30 June*		*Establishments at 30 June*		*Employment at end of June*		*Wages and salaries*		*Turnover*		*Value added*		*Fixed capital expenditure less disposals*	
		no.	ratio	no.	ratio	persons	ratio	$m	ratio	$m	ratio	$m	ratio	$m	ratio
1314	Gold ore mining														
	First	4	0.03	10	0.07	1 474	0.18	92.5	0.23	1 274.4	0.31	842.9	0.41	196.6	0.20
	Second	4	0.03	9	0.06	1 091	0.13	62.4	0.16	609.7	0.15	311.9	0.15	119.8	0.12
	Third	4	0.03	4	0.03	656	0.08	30.8	0.08	448.7	0.11	302.1	0.15	39.7	0.04
	Fourth	4	0.03	5	0.03	368	0.04	25.1	0.06	311.8	0.07	187.7	0.09	53.6	0.05
	Fifth	4	0.03	5	0.03	371	0.05	15.4	0.04	248.5	0.06	137.9	0.07	21.2	0.02
	Sixth	4	0.03	4	0.03	678	0.08	26.3	0.07	193.9	0.05	73.7	0.04	36.0	0.04
	Remainder	115	0.83	116	0.76	3 600	0.44	149.2	0.37	1 082.4	0.26	223.7	0.11	538.1	0.54
	Industry total	*139*	*1.00*	*153*	*1.00*	*8 238*	*1.00*	*401.6*	*1.00*	*4 169.4*	*1.00*	*2 079.9*	*1.00*	*1 005.2*	*1.00*
1315	Mineral sand mining														
	First	4	0.40	6	0.50	1 212	0.64	52.7	0.66	505.8	0.80	256.0	0.82	21.5	0.31
	Remainder	6	0.60	6	0.50	676	0.36	27.4	0.34	125.4	0.20	54.3	0.18	48.7	0.69
	Industry total	*10*	*1.00*	*12*	*1.00*	*1 888*	*1.00*	*80.1*	*1.00*	*631.3*	*1.00*	*310.4*	*1.00*	*70.2*	*1.00*
1317	Silver-lead-zinc ore mining														
	First	4	0.33	8	0.50	2 473	0.73	143.2	0.80	832.6	0.78	451.8	0.81	97.8	0.75
	Second	4	0.33	4	0.25	730	0.22	33.6	0.19	190.0	0.18	74.4	0.13	26.7	0.20
	Remainder	4	0.33	4	0.25	163	0.05	2.9	0.02	41.6	0.04	34.5	0.06	5.9	0.05
	Industry total	*12*	*1.00*	*16*	*1.00*	*3 366*	*1.00*	*179.7*	*1.00*	*1 064.2*	*1.00*	*560.7*	*1.00*	*130.4*	*1.00*
1316, 1319	Metal ore mining n.e.c.														
	First	4	0.22	6	0.30	1 906	0.86	108.4	0.88	937.5	0.88	578.0	0.89	647.9	0.95
	Second	4	0.22	4	0.20	102	0.05	5.3	0.04	101.8	0.10	81.9	0.13	30.2	0.04
	Remainder	10	0.56	10	0.50	204	0.09	9.3	0.08	30.4	0.03	–12.0	–0.02	1.9	—
	Industry total	*18*	*1.00*	*20*	*1.00*	*2 212*	*1.00*	*123.0*	*1.00*	*1 069.7*	*1.00*	*647.9*	*1.00*	*680.0*	*1.00*

(a) See Explanatory Notes, 'Statistical unit'.

(b) Management units ranked by contribution to industry turnover largest twenty in categories of four, see Explanatory Notes 'Concentration Statistics'.

(c) Note that the number of management units in this table is greater than the total number of management units in Tables 10.3 and 10.9. This is due to the allocation of all establishments to their predominant industry classification prior to aggregating to management unit level.

SECTION 4 MINERAL AND PETROLEUM EXPLORATION

Exploration is the search for new deposits of ore, oil or gas. It also includes searches intended to extend the limits of known deposits by geological, geophysical, geochemical, drilling or other methods. It excludes activity of a developmental or production nature.

During 1994–95 a total of $1,576 million was spent exploring for minerals and petroleum in Australia and in offshore waters, $276 million (21%) more than in 1993–94. Exploration expenditure for minerals was $893 million, $171 million for oil onshore, and $512 million for oil in offshore waters.

During 1994–95 Australian resident companies spent $431 million on overseas exploration for minerals and petroleum.

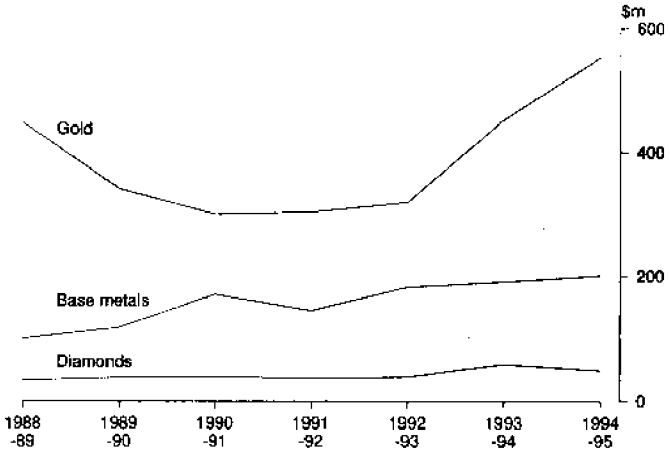
Detailed data is available on a quarterly basis in the ABS publication, *Actual and Expected Private Mineral Exploration, Australia* (Cat. no. 8412.0).

MINERAL EXPLORATION

The $893 million expended in Australia in 1994–95 was an increase of 13% on the previous year. Gold continued to be the main mineral sought, with $555 million spent. This represented 62% of total mineral exploration in Australia for 1994–95.

Base metals were the next most sought minerals with $201 million spent (23%), followed by diamonds, $48 million (5%) and coal, $38 million (4%). The search for gold, base metals and diamonds accounted for nearly 90% of Australian mineral exploration in 1994–95.

4.1 EXPLORATION EXPENDITURE BY MAIN MINERAL SOUGHT



Source: Actual and Expected Private Mineral Exploration, Australia (Cat. no. 8412.0).

Exploration expenditure for base metals doubled between the period from 1988–89 to 1994–95. In 1988–89 expenditure was $100 million, and by 1994–95 this increased to $201 million. Expenditure on

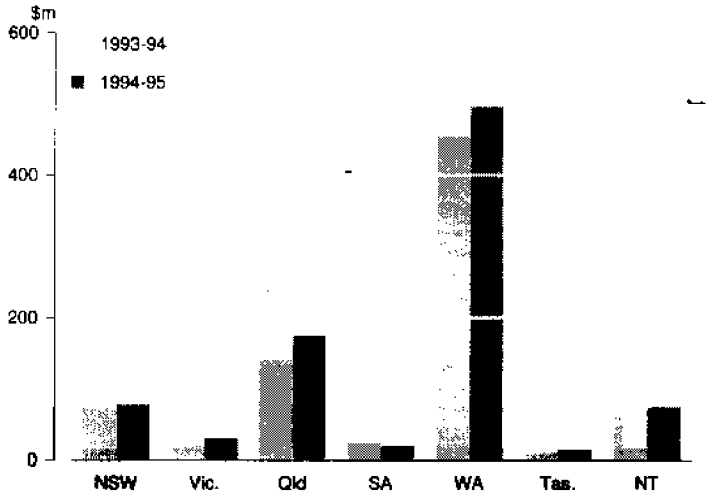
exploration for diamonds also rose from $33 million in 1988–89 to $48 million in 1994–95, an increase of 45%.

In contrast with this trend, exploration expenditure for uranium continued to decrease, dropping 73% from $28 million in 1988–89 to $8 million in 1994–95.

States and Territories

Expenditure on exploration for minerals rose in all States and Territories except South Australia in 1994–95 compared with 1993–94. Increases ranged from 51% in Victoria to 8% in New South Wales. Expenditure decreased in South Australia by $4 million (15%) in 1994–95. Expenditure in Western Australia increased to $496 million (up 9%) for 1994–95. Gold explorers made up the majority of this increase, spending over $379 million, up from $310 million in 1993–94. Other expenditures and increases were: Queensland $176 million (26%), Northern Territory $76 million (9%), Victoria $31 million (51%) and Tasmania $15 million (46%).

4.2 EXPLORATION EXPENDITURE(a)



(a) Excludes petroleum exploration.

Source: Actual and Expected Private Mineral Exploration, Australia (Cat. no. 8412.0).

Expenditure

In 1994–95, expenditure on production leases nearly doubled to $203 million compared to $112 million in 1988–89. A total of $691 million was spent on all other areas in 1994–95.

The number of metres drilled on production leases has increased steadily over the last three years. The number of metres drilled on production leases in 1994–95 was 3.3 million, an increase of 20% when compared with 1993–94. Drilling on production leases represented 32% of the total metres drilled. In comparison, drilling on all other areas increased by 3% to 7.0 million metres in 1994–95.

Drilling expenditure in 1994–95 totalled $322 million and represented 36% of total mineral exploration expenditure ($893 million).

Western Australia maintained the highest expenditure on drilling during 1993–94 and 1994–95. Approximately two-thirds of all drilling expenditure was in Western Australia in 1994–95 ($204 million) and also in 1993–94 ($192 million). This was followed by Queensland with $61 million. Of all drilling methods used, diamond drilling ($152 million) accounted for nearly half the total drilling expenditure in Australia. This was followed by reverse circulation drilling with $115 million.

4.3 MINERAL EXPLORATION EXPENDITURE AND METRES DRILLED(a)

	Expenditure			*Metres drilled*		
	On production leases	*On all other areas*	*Total*	*On production leases*	*On all other areas*	*Total*
	$m	*$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

(a) Other than for petroleum.

Source: Actual and Expected Private Mineral Exploration, Australia (Cat. no. 8412.0).

Drilling methods used

The average drilling cost per metre for all States and Territories was $108 using diamond drilling, $30 using reverse circulation, $32 using percussion drilling and $10 using rotary air blast drilling.

4.4 DRILLING METHODS: TOTAL EXPENDITURE

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Total*
Drilling method	$m	$m	$m	$m	$m	$m	$m	$m
Diamond	18	4	34	n.p.	80	n.p.	9	152
Reverse circulation	5	2	14	n.p.	87	n.p.	6	115
Percussion	2	—	6	n.p.	1	—	n.p.	10
Rotary air blast	1	—	5	—	28	—	3	37
Other	—	—	1	n.p.	7	—	n.p.	9
Total	**25**	**6**	**61**	**3**	**204**	**5**	**19**	**322**

Source: Actual and Expected Private Mineral Exploration, Australia, September Quarter 1995 (Cat. no. 8412.0).

4.5 DRILLING METHODS: TOTAL METRES DRILLED(a)

Drilling method	NSW '000 m	Vic. '000 m	Qld '000 m	SA '000 m	WA '000 m	Tas. '000 m	NT '000 m	Total '000 m
Diamond	213	44	221	13	792	38	83	1 404
Reverse circulation	166	50	403	n.p.	2 993	n.p.	193	3 846
Percussion	42	14	188	n.p.	55	n.p.	n.p.	313
Rotary air blast	54	n.p.	313	9	2 956	n.p.	192	3 537
Other	29	n.p.	27	13	461	—	n.p.	609
Total	**504**	**119**	**1 151**	**65**	**7 256**	**58**	**557**	**9 710**

(a) Information on metres drilled by drilling methods has been obtained from a special annual supplementary collection. Results differ from the data shown in table 4.3 which are collected quarterly.

Source: Actual and Expected Private Mineral Exploration, Australia, September Quarter 1995 (Cat. no. 8412.0).

PETROLEUM EXPLORATION

Total petroleum exploration expenditure in 1994–95 was $682 million, an increase of 35% compared with 1993–94. Expenditure on production leases rose by 50% to $105 million, while expenditure on all other areas increased by 32% to $577 million in 1994–95.

Onshore exploration expenditure increased by $26 million (18%) to $171 million in 1994–95. Expenditure on offshore exploration increased by $150 million (41%) to $512 million in 1994–95. An increase of $169 million in drilling expenditure offset the decrease of $20 million in other offshore expenditure during 1994–95.

4.6 PETROLEUM EXPLORATION EXPENDITURE

	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

Source: Actual and Expected Private Mineral Exploration, Australia (Cat. no. 8412.0).

OVERSEAS EXPLORATION

During 1994–95, Australian resident companies engaged in mineral and petroleum exploration in Australia also spent $431 million on mineral and petroleum exploration outside Australia. This represents an increase of 69% from $256 million in 1993–94. Petroleum exploration was the largest component (75%) of total overseas exploration expenditure in 1994–95.

Additionally some Australian companies undertake overseas exploration but do not explore in Australia. Details are not available for their expenditure on such exploration.

4.7 OVERSEAS EXPLORATION EXPENDITURE OF AUSTRALIAN RESIDENT COMPANIES(a)

	North America(b)	*Latin America(c)*	*PNG*	*Indo-nesia*	*China*	*Other Asia*	*Africa*	*Other*	*Total*
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Petroleum	72	57	27	n.p.	21	32	n.p.	67	325
Copper, lead, zinc, silver, nickel, and cobalt	n.p.	n.p.	n.p.	n.p.	n.p.	4	n.p.	n.p.	21
Gold	9	7	n.p.	10	n.p.	12	8	7	65
Iron ore	—	—	—	—	—	—	—	—	—
Mineral sands	n.p.	—	—	—	—	n.p.	—	n.p.	2
Tin, tungsten, scheelite and wolfram	—	—	—	—	—	—	—	—	—
Uranium	—	—	—	—	—	—	—	—	—
Coal	—	—	—	—	—	n.p.	—	—	n.p.
Construction materials	—	—	—	—	—	n.p.	—	—	n.p.
Diamonds	n.p.	n.p.	—	n.p.	—	n.p.	3	4	18
Bauxite	—	—	—	—	—	n.p.	—	—	n.p.
Other	—	—	—	—	n.p.	—	—	—	n.p.
Total	**89**	**71**	**41**	**20**	**24**	**48**	**57**	**82**	**431**

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

Source: Actual and Expected Private Mineral Exploration, Australia, September Quarter 1995 (Cat. no. 8412.0).

SECTION 5 IDENTIFIED MINERAL RESOURCES

The statistics in this section have been extracted from the Bureau of Resource Sciences publication *Australia's Identified Mineral Resources, 1994*.

Internationally Australia continues to be a leading mineral resource nation. It is one of the top six countries of the world for resources of such commodities as bauxite, bismuth, lithium, silver, manganese, tantalum, gold, iron ore, lead, zinc, mineral sands and uranium.

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 demonstrated resources and those that are poorly known, as inferred 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. Para-marginal 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 sub-marginal 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 economic demonstrated resource (EDR) reflects a high degree of certainty as to the size and quality of the resource and its economic viability. A more complete discussion on subsoil assets can be found in Section 3, Subsoil Assets, of *Occasional Paper: National Balance Sheets for Australia—Issues and Experimental Estimates, 1989 to 1992* (Cat. no. 5241.0).

EDR of several commodities, including gold, ilmenite, manganese, magnesite, zinc, tin and silver, rose substantially in 1994. EDR for cadmium, diamond and vanadium fell significantly, and for other commodities remained steady or showed minor variation over the year.

SELECTED COMMODITIES

Bauxite

Australia has approximately 11% of the world's bauxite EDR. Bauxite continues to be mined from open-cut operations at Weipa (Queensland), Gove (Northern Territory) and in the Darling Ranges (Western Australia). Major bauxite resources in the Admiralty Gulf region of northern Western Australia are potentially mineable but are remote from energy supplies and infrastructure. A part of this region, the Mitchell Plateau, is to be reappraised and with current mining and beneficiation techniques, has the potential for successful future development. Australia's bauxite

EDR and the ratio of EDR to identified resources (demonstrated plus inferred resources) remained virtually unchanged in 1994.

Black coal

Approximately 8% of the world's EDR of black coal occurs in Australia, principally in the Sydney and Bowen Basins in New South Wales and Queensland, respectively. Lesser proportions occur in the Gunnedah Basin (New South Wales) and the Galilee, Surat, and Moreton Basins (Queensland). Locally important but small EDR also occur in Tasmania, South Australia and Western Australia.

Copper

Australia has about 7% of world EDR and ranks fourth with Poland after Chile (27%), the United States (14%) and the former USSR (11%). In Australia, copper occurs mainly in the Olympic Dam (South Australia) and Mount Isa (Queensland) deposits. Other important deposits are North Parkes (New South Wales), Osborne and Ernest Henry (Queensland) and Nifty (Western Australia).

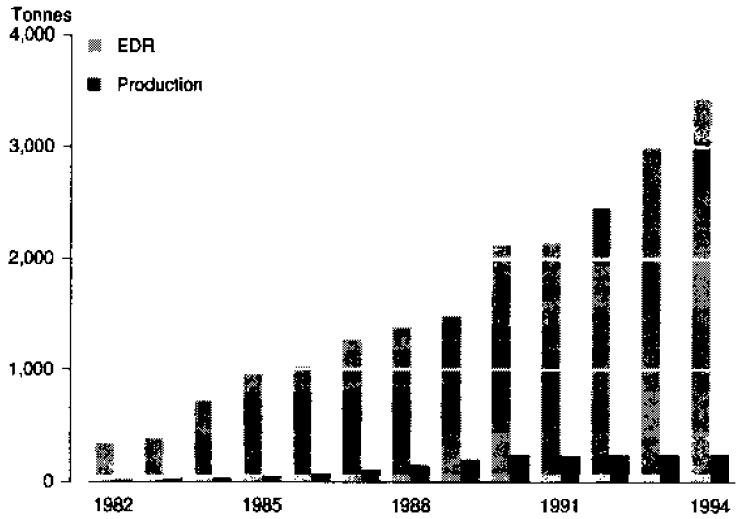
Diamonds

Australia is the largest producer in the world of natural rough diamonds but only a relatively small proportion (5%) of its output is of gem quality. Most of Australia's diamond resources (over 90%) are in the Argyle deposit in the Kimberley Region of Western Australia. Small resources occur in alluvial deposits in the Kimberleys and in the deep lead deposits at Copeton (New South Wales). Other prospects, including some in New South Wales and the Northern Territory, are being examined.

Gold

Australia has about 7% of world EDR and ranks fourth after South Africa, the former USSR and the United States. Australia's own gold EDR increased during 1994 by 14% to a record 3,434 tonnes. This increase occurred as a result of the continued high price of gold and the combined effects of successful exploration and reassessment of known deposits. Deposits in Western Australia account for 62% of EDR. Resources occur and are mined in all States and the Northern Territory.

5.1 GOLD EDR AND PRODUCTION



Source: Bureau of Resource Sciences, *Australia's Identified Mineral Resources, 1994*.

Iron ore Australia has the world's second largest EDR of iron ore after the former USSR. About 90% of Australia's very large identified resources of iron ore occur in the Pilbara Region of Western Australia, mainly in the Hamersley Basin, one of the world's major iron ore provinces.

Manganese Australia has about 6% of world EDR and ranks third after South Africa (44%) and the former USSR (36%). The principal mines and resources are located at the Groote Eylandt deposit (Northern Territory) and Woodie Woodie in the Pilbara Region (Western Australia).

Mineral sands Australia has 35% of world EDR of ilmenite, 16% of rutile and 35% of zircon and ranks first in EDR for all three minerals. With the exception of large inland undeveloped deposits in western Victoria and south west New South Wales, most of the resources in Australia occur along the eastern and western coastal regions. Western Australia has about 50% of rutile and zircon and over 70% of ilmenite EDR. Some resources, particularly in Queensland and New South Wales, are not available for mining because they occur in national parks and other reserved areas.

Nickel Almost all of Australia's EDR (97%) occurs in sulphide deposits in Western Australia. Australia's EDR ranks sixth in the world after Cuba, Russia, Canada, New Caledonia and Indonesia.

Platinum group metals There is minor production of platinum group metals (platinum, palladium, osmium, iridium, rhodium and ruthenium) as a by-product of nickel mining at Kambalda and nearby Carnilya Hill near Kalgoorlie in Western Australia. Exploration resulted in the discovery of substantial inferred resources, mostly in Western Australia, in recent years, but these are not commercially viable.

Tantalum Australia has the world's largest EDR of tantalum, with about 20% of the world total. The world's largest tantalum resource occurs in the Greenbushes deposit in the south-west of Western Australia. Important resources also occur in deposits that form the basis of the Wodgina project in the Pilbara Region of Western Australia.

Uranium For 1994 Australia's reasonably assured resources (RAR) of uranium, recoverable at less than US$80/kg uranium, amounted to 633,000 tonnes and represented about 27% of world resources in this category.

Australia's estimated additional resources category I (EAR-I) recoverable at less than US$80/kg uranium were estimated to be 154,000 tonnes uranium. In addition, Australia has the following resources in the high cost category: RAR in the US$80–130/kg uranium cost category 77,000 tonnes uranium; EAR-I in the US$80–130/kg uranium cost category 40,000 tonnes uranium. Also it is estimated that there is a 75% probability that Australia has undiscovered resources amounting to more than 2,600,000 tonnes and a 50% probability that the undiscovered resources may exceed 3,900,000 tonnes.

Zinc, lead and silver

Australia has the largest EDR in the world of both zinc (30%) and lead (31%) and lies third behind Canada and Mexico for silver (16%). EDR rose significantly in 1994 for zinc (up 13%) and silver (up 33%), and lead increased slightly. Reassessment of resources at major deposits resulted in large increases in zinc, lead and silver EDR at some, which were partly offset by production and reclassification of resources at others.

MAJOR COMMODITIES

The following table summarises details of Australia's major commodity resources for 1994 and provides a world comparison figure for 1993.

5.2 IDENTIFIED RESOURCES OF MAJOR MINERALS AND FUELS

		Australia 1994					
		Demonstrated			*Inferred*		*World 1993*
Mineral	*Unit*	*Economic*	*Sub-economic para-marginal*	*Sub-economic sub-marginal*	*Economic and sub-economic*	*Undifferentiated*	*Demonstrated Economic*
Antimony	kilotonnes	88.1	33.8	33.1	17.2	11.5	4 200
Asbestos	megatonnes	—	46.6	—	—	80.3	Large
Bauxite	megatonnes	2 538	—	5 303	—	2 134	23 000
Coal(a)							
In situ	gigatonnes	115	2	8	—	Very large	—
Recoverable	gigatonnes	90	2	6	—	166	916
Cadmium	kilotonnes	73.4	10.8	17.2	10.2	8.2	535
Chromite	megatonnes	—	2.37	0.52	21.35	—	1 400
Cobalt	kilotonnes	52	129	241	136	—	4 000
Copper(b)	megatonnes	20.2	17.2	0.8	8.1	—	310
Diamonds(c)	megacarats	298	331	0.3	—	36	1 280
Fluorine	megatonnes	—	24.1	5.8	—	0.7	102
Gold	tonnes	3 434	1 234	54	—	1 317	42 000
Iron ore	gigatonnes	18	13.8	0.4	17.2	—	150
Lead	megatonnes	19.7	4.6	9	12.7	2.2	63
Lithium	kilotonnes	159	—	3	—	7	2 200
Magnesite	megatonnes	246.9	—	288.5	—	230	2 500
Manganese ore	megatonnes	124	28	167	165	—	800
Mineral sands(d)	megatonnes	167.9	124.8	0.5	—	146.6	544
Molybdenum	kilotonnes	—	5	3	238	—	5 500
Nickel	megatonnes	2.9	2.1	3.8	2.9	—	47
Niobium	kilotonnes	3.4	67.6	—	—	1 994	3 500
Petroleum							
Crude oil	gigalitres	244	—	38	—	—	158 517
Natural gas	teralitres	1 006	—	1 130	—	—	
Condensate	gigalitres	133	—	54	—	—	138 353
LPG (natural)	gigalitres	135	—	89	—	—	
Phosphate rock	megatonnes	—	2 095	—	—	1 947	12 000
Platinum group	tonnes	17.7	36.8	16.7	119	—	56 000
Rare earths(e)	megatonnes	1	3.5	10.6	—	4	100
Shale oil	gigalitres	—	—	4 564	—	40 468	n.a.
Silver	kilotonnes	44.7	4.4	11	9.4	9.1	280
Tantalum	kilotonnes	6.2	6	0.1	—	65.1	22
Tin	kilotonnes	159.0	64.5	150.3	3 404	5.3	7 000
Tungsten	kilotonnes	1	96	107.1	81.8	—	2 300
Uranium	tonnes	See selected commodities above					
Vanadium	kilotonnes	15	1 739	8 425	2 282	—	10 000
Zinc	megatonnes	42.6	13.1	12.3	11.1	1.6	140

(a) Includes black and brown coal.
(b) Western world only.
(c) Gem, cheap gem and industrial.
(d) Includes rutile, ilmenite and zircon.
(e) Includes rare earth oxides and Yttrium Oxide (Y_2O_3).

Source: Bureau of Resource Sciences, *Australia's Identified Mineral Resources, 1994.*

SECTION 6 RESEARCH AND DEVELOPMENT EXPENDITURE

The value of research and development (R&D) expenditure in the mining industry in 1994–95 was $242 million, a decrease of 26% in current prices over 1993–94. Mining R&D expenditure accounted for 7% of total expenditure while manufacturing accounted for the majority (57%) of total R&D expenditure by all industries.

Human resources, measured in person years of effort, devoted to R&D in the mining industry decreased by 2% (13 person years) in 1994–95 from 838 to 825.

TYPE AND SOURCE OF EXPENDITURE

R&D capital expenditure decreased 64% from $129 million in 1993–94 to $46 million in 1994–95. Other current expenditure which includes expenditure on materials, fuels, rent and leasing, repairs and maintenance, data processing etc. and the proportion of expenditure on general services and overheads, attributable to R&D activity, decreased 3% from $149 million in 1993–94 to $145 million in 1994–95.

6.1 TYPE OF RESEARCH AND DEVELOPMENT EXPENDITURE, SOURCE OF FUNDS

	1993–94	*1994–95*
	$'000	$'000
Type of expenditure		
Capital expenditure	128 737	46 392
Labour costs	49 255	50 461
Other current expenditure	148 518	144 797
Total	*326 509*	*241 650*
Source of funds		
Own funds	321 511	238 756
Other	4 998	2 894
Total	*326 509*	*241 650*
Type of activity		
Basic research	n.a.	11 590
Applied research	n.a.	75 116
Experimental development	n.a.	154 944
Total	326 509	*241 650*

Source: Research and Experimental Development, Business Enterprises, Australia, 1994–95 (Cat. no. 8104.0) and ABS unpublished revised figures for 1993–94.

The majority of funding for R&D expenditure in the mining industry is from the mining companies themselves, accounting for 99% of total funds. The mining industry devoted 64% of R&D funds to experimental development and 31% to applied research.

EXPENDITURE BY LOCATION

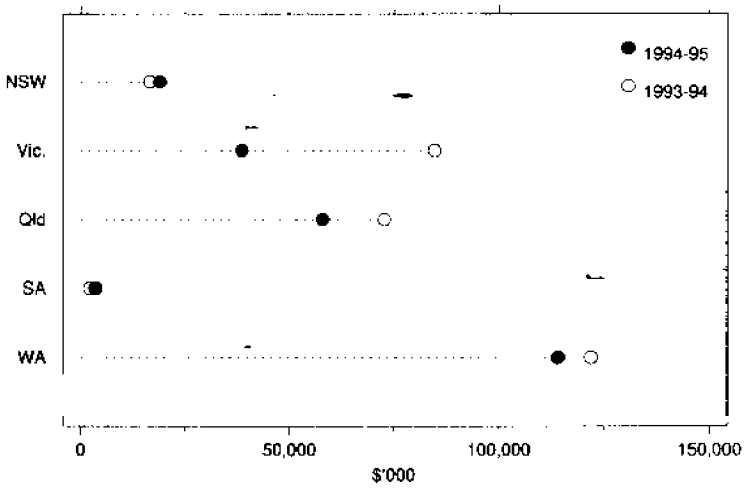
The leading States in terms of R&D expenditure in the mining industry in 1994–95 were Western Australia ($114 million) and Queensland ($58 million), accounting for 47% and 24% of R&D total expenditure, respectively. South Australia and New South Wales were the only States to record significant increases, with 54% and 27% respectively, in 1994–95. Victoria recorded the largest decrease in R&D with a fall of 54%.

6.2 RESEARCH AND DEVELOPMENT EXPENDITURE BY LOCATION

Location	*1993–94* $'000	*1994–95* $'000
New South Wales	16 642	18 952
Victoria	84 666	38 728
Queensland	72 718	57 976
South Australia	2 284	3 512
Western Australia	121 874	114 034
Tasmania, Australian Capital Territory, Northern Territory	n.p.	6 980
Overseas	n.p.	1 468
Total	**326 509**	**241 650**

Source: Research and Experimental Development, Business Enterprises, Australia, 1994–95 (Cat. no. 8104.0) and ABS unpublished revised figures for 1993–94.

6.3 RESEARCH AND DEVELOPMENT EXPENDITURE BY STATE



Source: Research and Experimental Development, Business Enterprises, Australia, 1994–95 (Cat. no. 8104.0) and ABS unpublished revised figures for 1993–94.

SECTION 7 MINERAL PRODUCTION

The statistics in this section have been derived from information supplied to the various State mines departments or directly to the Australian Bureau of Statistics (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 section, Financial Operations. The scope of both series are explained in 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 section.

MINING INDUSTRY

The total value of minerals produced in the metallic minerals, coal, oil and gas industries rose by 4% in 1994–95, from $25,702 million in 1993–94 to $26,738 million in 1994–95. This movement reversed the decrease of the previous year.

The metallic minerals industry contributed most to the increase with a rise of 8%, to $11,715 million in 1994–95 from $10,861 million in 1993–94. This resulted from value increases in most minerals due to a combination of production increases and price rises. The oil and gas industry value also rose by 4%, from $7,423 million in 1993–94 to $7,683 million in 1994–95. The coal industry continued to fall in value, due to lower prices and despite production increases. The 1994–95 value of $7,340 million represents a decline of 1% from the 1993–94 figure of $7,418 million.

7.1 VALUE OF MINERALS PRODUCED

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Aust.*
Type	$m	$m	$m	$m	$m	$m	$m	$m
Coal	3 248	415	3 339	(a)73	265	(b)—	—	(c)7 340
Oil and gas	—	n.p.	301	n.p.	3 661	—	282	7 683
Metallic minerals	620	117	1643	323	7 908	(b)405	702	(b)11 715
Total								
1994–95	3 864	n.p.	5 283	n.p.	11 835	405	984	26 738
1993–94	3 863	n.p.	5 134	n.p.	10 231	327	1 028	25 702
1992–93	3 817	n.p.	5 519	n.p.	10 286	310	1 350	26 721
1991–92	3 721	n.p.	4 981	n.p.	9 994	361	1 493	25 985
1990–91	3 751	n.p.	4 961	n.p.	9 761	355	1 866	26 293

(a) Includes freight.
(b) Coal is included with metallic minerals for Tasmania.
(c) Excludes coal for Tasmania.

METALLIC MINERALS

The total value of metallic minerals rose during 1994–95 by 8% to $11,715 million, in contrast to the previous five years during which it remained virtually constant. Rises were reported in all States and in most minerals.

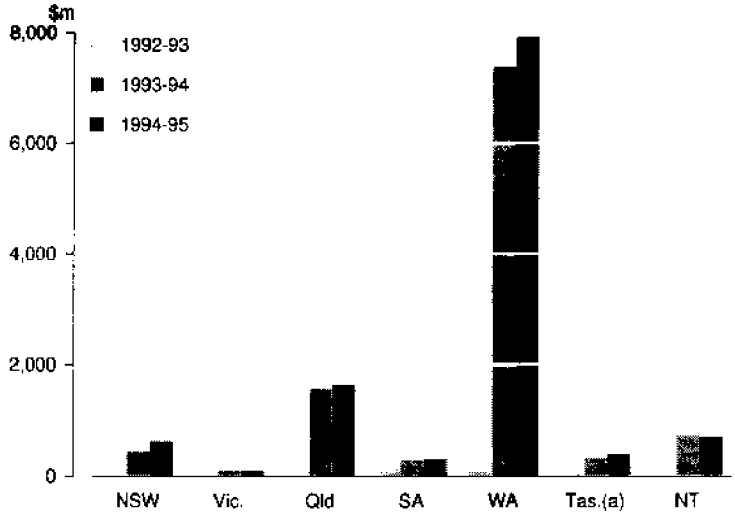
7.2 VALUE OF METALLIC MINERALS PRODUCED

	1990–91	*1991–92*	*1992–93*	*1993–94*	*1994–95*
State/Territory	$m	$m	$m	$m	$m
New South Wales	618	447	465	455	616
Victoria	71	46	90	106	117
Queensland	1 724	1 482	1 702	1 583	1 643
South Australia	278	283	287	301	323
Western Australia	6 887	7 518	7 391	7 402	7 908
Tasmania(a)	355	361	410	327	405
Northern Territory	976	819	675	686	702
Australia(b)	**10 910**	**10 957**	**10 920**	**10 861**	**11 715**

(a) Includes coal.
(b) Includes coal for Tasmania.

All States reported increases in the value of metallic minerals produced. Western Australia, as the largest producer in the metallic minerals sector, showed the largest increase with a rise of $506 million (7%) to $7,908 million in 1994–95. The second largest producing State, Queensland, reported a 4% increase over the same period, rising from $1,583 million to $1,643 million. The largest percentage rise was reported by New South Wales with a rise of 35% to $616 million.

7.3 VALUE OF METALLIC MINERALS



(a) Includes coal for Tasmania.

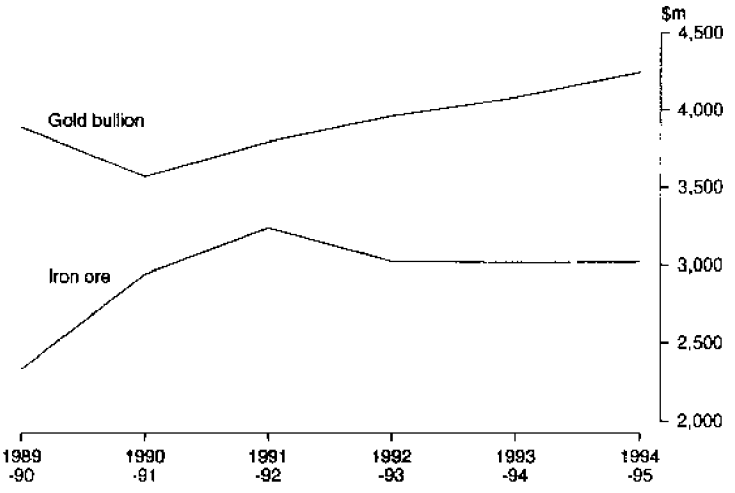
7.4 METALLIC MINERAL PRODUCTION, SELECTED MINERALS

Mineral	*Unit*	*1990–91*	*1991–92*	*1992–93*	*1993–94*	*1994–95*
		QUANTITY				
Bauxite	kilotonnes	41 831	34 788	40 946	43 306	45 384
Copper concentrate(a)	kilotonnes	1 004	915	1 254	1 322	1 114
Copper precipitate(b)	tonnes	4 384	6 203	8 174	16 192	18 888
Gold bullion (dore)(c)	kilograms	264 993	259 656	275 331	274 687	298 697
Iron ore(d)	kilotonnes	111 475	114 781	115 703	123 631	137 525
Mineral sands(e)	kilotonnes	1 878	1 954	2 118	2 252	2 375
Uranium concentrate (U_3O_8)	tonnes	2 913	2 901	1 342	1 457	n.a.
Zinc concentrate(f)	kilotonnes	1 810	1 927	2 011	1 890	1 699
		VALUE ($m)				
Bauxite		n.p.	n.p.	n.p.	(g)773	(g)840
Copper concentrate(a)		n.p.	n.p.	867	792	913
Copper precipitate(b)		14	19	26	50	71
Gold bullion (dore)(c)		(h)3 568	(h)3 797	(h)3 962	(h)4 080	4 246
Iron ore(d)		(h)2 945	(h)3 239	(h)3 026	(h)3 018	3 020
Mineral sands(e)		n.p.	504	451	471	575
Uranium concentrate (U_3O_8)		291	242	114	156	33
Zinc concentrate(f)		n.p.	344	516	429	482
Other metallic minerals(i)		n.p.	1 321	902	760	1 535
Total metallic minerals(i)		*10 910*	*10 957*	*10 920*	*10 861*	*11 715*

(a) Excludes South Australia.
(b) Includes copper concentrate in other forms.
(c) Includes alluvial gold.
(d) Includes iron ore pellets.
(e) Includes synthetic rutile, ilmenite, beneficiated ilmenite, leucoxene, monazite, rutile and zircon.
(f) Includes zinc-lead concentrate.
(g) Imputed by the ABS based on metallic content.
(h) Excludes Tasmania.
(i) Includes Tasmanian coal production.

The value of gold bullion production increased by 4% from $4,080 million in 1993–94 to $4,246 million in 1994–95 as a result of production increases, and despite price falls. Iron ore, as Australia's second most valuable metallic mineral, showed a rise of less than 1% despite a production increase of 11%. Of the other major minerals, uranium alone showed a decrease in the value of production due to the absence of production from the Ranger mine in the Northern Territory.

7.5 VALUE OF IRON ORE AND GOLD BULLION



COAL

The total value of production by the coal industry was $7,340 million in 1994–95, a drop of 1% from 1993–94. The decline in value came despite an increase in production for most commodities including a rise of 8% for total black coal. The quantity of coal produced in 1994–95 was 243 million tonnes compared with 228 million tonnes in 1993–94.

The average unit value for black coal continued to drop. At $36.08 per tonne, the 1994–95 figure represents the lowest unit value obtained since 1988–89.

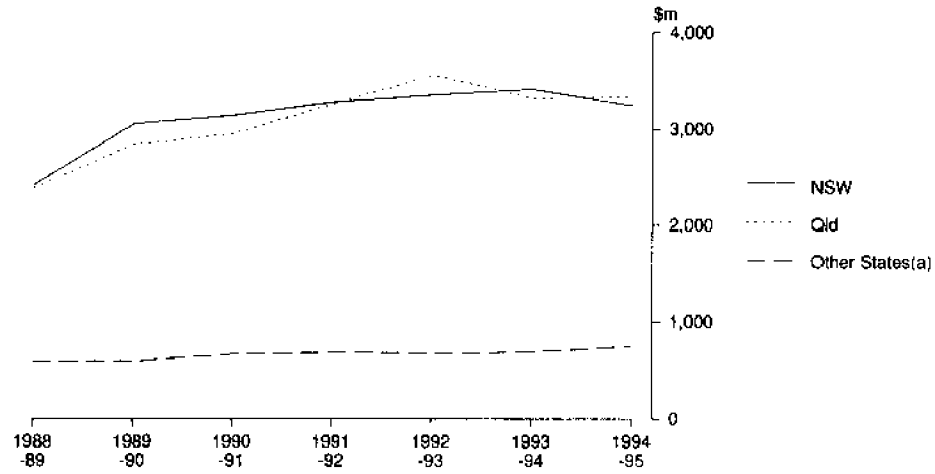
7.6 COAL PRODUCTION, SALEABLE

	1990–91	*1991–92*	*1992–93*	*1993–94*	*1994–95*
	QUANTITY (kilotonnes)				
Coal (other than lignite)					
Semi-anthracite	220	43	231	305	389
Bituminous	149 886	163 672	165 242	164 808	177 205
Sub-bituminous	16 399	12 466	12 497	12 761	14 309
Total	*166 505*	*176 570*	*177 970*	*177 874*	*191 903*
Lignite					
For briquettes	1 802	2 010	1 264	1 470	750
Other	46 367	48 721	46 648	48 214	49 929
Briquettes	715	721	516	n.a.	n.a.
	VALUE ($m)				
Coal (other than lignite)					
Semi-anthracite	5	12	8	5	12
Bituminous(a)	5 837	6 409	6 786	6 595	6 431
Sub-bituminous	544	415	411	417	482
Total(a)	*6 387*	*6 836*	*7 205*	*7 017*	*6 925*
Lignite					
For briquettes	13	15	6	5	3
Other	331	348	373	396	412
Briquettes	23	18	n.a.	n.a.	n.a.
Total coal(a)	**6 754**	**7 216**	**(b)7 585**	**(b)7 418**	**(b)7 340**

(a) Excludes Tasmania.
(b) Excludes briquettes.

Queensland produced 45% and New South Wales 44% of the total value of coal in 1994–95.

7.7 VALUE OF COAL PRODUCED



(a) Excludes Tasmanian coal.

OIL AND GAS

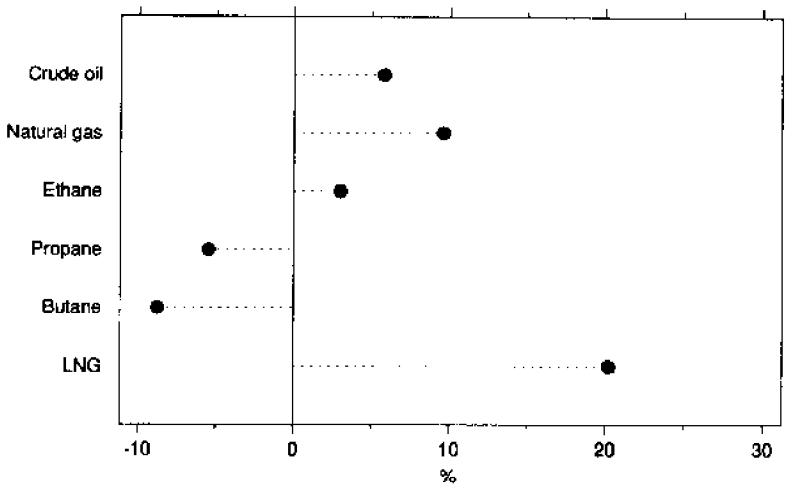
The contribution of oil and gas to total value of minerals produced was $7,683 million in 1994–95, a rise of 4% from the 1993–94 figure of $7,423 million.

7.8 OIL AND GAS PRODUCTION

	Unit	*1990–91*	*1991–92*	*1992–93*	*1993–94*	*1994–95*
			QUANTITY			
Crude oil(a)	megalitres	29 189	31 984	30 592	29 583	31 301
Natural gas(b)	gigalitres	15 589	16 289	16 631	15 959	17 486
Ethane	gigalitres	175	182	187	202	208
Propane(c)	megalitres	2 013	2 064	2 078	2 115	1 999
Butane(c)	megalitres	1 504	1 574	1 651	1 622	1 480
Liquefied natural gas	kilotonnes	3 577	4 250	4 922	5 732	6 888
			VALUE ($m)			
Crude oil(a)		6 328	5 445	5 508	4 747	4 670
Natural gas(b)		1 013	1 080	1 171	1 182	1 247
Ethane		28	34	35	33	34
Propane(c)		244	230	265	251	266
Butane(c)		180	177	213	194	204
Liquefied natural gas		838	846	1 025	1 016	1 263
Total		**8 629**	**7 812**	**8 216**	**7 423**	**7 683**

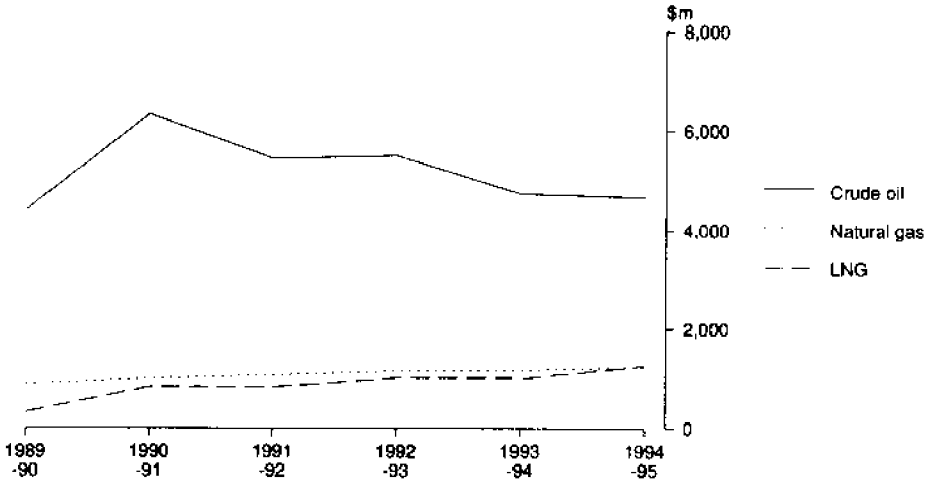
(a) Stabilised. Includes condensate.
(b) Includes field and plant usage.
(c) Excludes refinery production.

7.9 PERCENTAGE CHANGE IN QUANTITY OF OIL AND GAS PRODUCTION, 1993–94 TO 1994–95



All commodities with the exception of crude oil increased in value in 1994–95. Liquefied Natural Gas (LNG) showed the largest increase in value, 24%, resulting from production increases of 20%. Natural gas increased by only 5% despite a production increase of 10%. Crude oil declined in value by 2% despite production increases of 6%, as unit values fell.

7.10 OIL AND GAS, VALUE OF SELECTED COMMODITIES



7.11 METALLIC MINERALS PRODUCED

Commodity code	Mineral	Unit	1992–93	1993–94	1994–95							
			Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
					QUANTITY							
556	Antimony concentrate	tonnes	2 114	812	1 129	—	—	—	—	—	—	1 129
500	Bauxite	'000 tonnes	40 946	43 306	—	2	9 335	—	(a)29 927	—	6 120	45 384
559	Bismuth concentrate	tonnes	—	—	—	—	—	—	—	—	—	—
502	Copper concentrate	'000 tonnes	(b)1 254	(b)1 322	156	58	749	n.a.	84	59	8	(b)1 114
503	Copper ore	tonnes	5 027	468	—	—	—	—	—	—	—	—
506	Copper precipitate(c)	tonnes	8 174	16 192	12 046	—	6 842	—	—	—	—	18 888
509	Gold bullion (dore)(d)	kg	275 331	274 687	30 128	4 370	41 770	—	204 553	141	17 735	298 697
511	Gold concentrate	tonnes	3 499	n.p.	475	—	—	—	n.p.	—	—	n.p.
510	Gold ore	tonnes	(b)9	(b)7	—	—	—	n.a.	—	—	—	(b)—
512	Other gold	tonnes	—	—	—	—	—	—	—	—	—	—
(e)	Iron ore	'000 tonnes	115 703	123 631	—	—	—	2 844	133 128	1 553	—	137 525
	Iron oxide for											
516	Cement manufacture	tonnes	108 902	14 226	16 468	—	—	—	—	—	—	16 468
517	Coal washing	tonnes	221 810	175 216	39 920	—	24 551	—	—	113 698	—	178 169
535	Lead concentrate	'000 tonnes	856	873	320	—	299	—	27	97	23	766
536	Lead-copper concentrate	tonnes	1 153	—	—	—	—	—	—	—	—	—
537	Lead ore	tonnes	7 379	—	—	—	4 627	—	—	—	—	4 627
546	Lead-zinc concentrate	tonnes	72 153	57 517	—	—	—	—	—	45 317	—	45 317
	Manganese ore											
563	Metallurgical grade	'000 tonnes	597	815	—	—	—	—	n.p.	—	943	n.p.
565	Other grades	'000 tonnes	828	963	—	—	—	—	72	—	939	1 011
	Mineral sands											
521	Synthetic rutile	'000 tonnes	—	—	—	—	—	—	396	—	—	396
522	Ilmenite concentrate(f)	'000 tonnes	1 516	1 627	7	—	171	—	987	—	—	1 165
523	Leucoxene concentrate	'000 tonnes	11	17	—	—	—	—	19	—	—	19
524	Monazite concentrate	'000 tonnes	6	6	—	—	—	—	—	—	—	—
525	Rutile concentrate	'000 tonnes	185	167	36	—	76	—	108	—	—	220
529	Zircon concentrate	'000 tonnes	400	435	31	—	67	—	477	—	—	575
532	Nickel concentrate	'000 tonnes	522	563	—	—	—	—	733	—	—	733
533	Nickel ore	'000 tonnes	259	200	—	—	222	—	—	—	—	222
569	Pyrite concentrate	'000 tonnes	94	88	—	—	—	—	—	23	—	23
571	Scheelite concentrate	tonnes	1 099	27	—	—	—	—	—	40	—	40
570	Tantalite-columbite concentrate	tonnes	537	246	—	—	—	—	379	—	—	379
549	Tin concentrate	tonnes	12 387	(g)13 521	—	—	52	—	n.p.	14 316	—	(g)14 368
575	Uranium concentrate (U_3O_8)	tonnes	(b)1 342	(b)1 457	—	—	—	n.a.	—	—	—	(b)n.a.
543	Zinc concentrate	'000 tonnes	1 897	1 795	614	13	382	—	226	351	56	1 642
544	Zinc ore	tonnes	1 179	—	—	—	—	3 078	—	—	—	3 078
547	Zinc-lead concentrate	'000 tonnes	114	95	—	—	57	—	—	—	—	57
579	Other metallic minerals	tonnes	428	161	—	—	—	—	n.p.	—	—	n.p.

For footnotes see end of table.

7.11 METALLIC MINERALS PRODUCED — *continued*

Commodity code	Mineral	1992–93	1993–94	1994–95							
		Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
		VALUE ($'000)									
556	Antimony concentrate	2 666	1 130	2 203	—	—	—	—	—	—	2 203
500	Bauxite	n.p.	773 289	—	2	231 472	—	(h)463 094	—	145 433	840 001
559	Bismuth concentrate	—	—	—	—	—	—	—	—	—	—
502	Copper concentrate	866 650	(b)791 766	120 012	36 475	638 315	n.c.	n.p.	n.p.	7 411	(b)912 680
503	Copper ore	1 077	17	—	—	—	—	—	—	—	—
506	Copper precipitate(c)	25 648	49 556	45 586	—	25 894	—	—	—	—	71 480
509	Gold bullion (dore)(d)	(i)3 961 843	(i)4 079 963	136 240	77 130	438 296	—	3 271 471	n.p.	322 870	(i)4 246 007
511	Gold concentrate	12 534	n.p.	44	—	—	—	n.p.	—	—	n.p.
510	Gold ore	(b)685	(b)1 924	—	—	—	n.c	—	—	—	—
512	Other gold	—	—	—	—	—	—	—	—	—	—
(e)	Iron ore	(i)3 025 624	3 018 284	—	—	—	25 596	2 860 376	134 499	—	3 020 471
	Iron oxide for										
516	Cement manufacture	n.p.	85	12	—	—	—	—	—	—	125
517	Coal washing	n.p.	n.p.	4 802	—	2 937	—	n.p.	n.p.	—	19 648
535	Lead concentrate	226 944	252 416	110 338	—	135 060	—	—	n.p.	5 256	n.p.
536	Lead-copper concentrate	n.p.	—	—	—	—	—	—	—	—	—
537	Lead ore	227	—	—	—	274	—	—	—	—	274
546	Lead-zinc concentrate	n.p.	9 014	—	—	—	—	—	6 433	—	6 433
	Manganese ore										
563	Metallurgical grade	82 314	80 083	—	—	—	—	n.p.	—	109 523	n.p.
565	Other grades	n.p.	n.p.	—	—	—	—	n.p.	—	83 547	n.p.
	Mineral sands										
521	Synthetic rutile	—	—	—	—	—	—	197 603	—	—	197 603
522	Ilmenite concentrate(f)	412 799	470 930	162	—	69 408	—	100 756	—	—	377 052
523	Leucoxene concentrate			—	—		—	10 575	—	—	
524	Monazite concentrate			—	—		—	n.p.	—	—	
525	Rutile concentrate			20 162	—		—	48 568	—	—	
529	Zircon concentrate			12 291	—		—	114 980	—	—	
532	Nickel concentrate	n.p.	n.p.	—	—	—	—	n.p.	—	—	n.p.
533	Nickel ore	4 979	6 386	—	—	5 501	—	—	—	—	5 501
569	Pyrite concentrate	n.p.	n.p.	—	—	—	—	—	n.p.	—	n.p.
571	Scheelite concentrate	n.p.	n.p.	—	—	—	—	—	n.p.	—	n.p.
570	Tantalite-columbite concentrate	n.p.	n.p.	—	—	—	—	n.p.	—	—	n.p.
549	Tin concentrate	n.p.	n.p.	—	—	240	—	n.p.	n.p.	—	n.p.
575	Uranium concentrate (U308)	113 550	156 188	—	—	—	33 424	—	—	—	33 424
543	Zinc concentrate	501 694	422 423	163 675	3 692	90 482	—	n.p.	n.p.	28 050	477 100
544	Zinc ore	114	—	—	—	—	464	—	—	—	464
547	Zinc-lead concentrate	14 408	6 543	—	—	4 876	—	—	—	—	4 876
579	Other metallic minerals	30	23	—	—	—	—	n.p.	—	—	n.p.
	Total metallic minerals	**(j)10 920 259**	**(j)10 860 682**	**616 045**	**117 299**	**1 642 755**	**323 428**	**7 908 483**	**(j)404 901**	**702 090**	**(j)11 715 001**

(a) Estimated by the ABS.
(b) Excludes South Australia.
(c) Includes copper in other forms.
(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) Excludes Western Australia.
(h) Imputed by the ABS based on metallic content and unit values obtained from other States
(i) Excludes Tasmania.
(j) Includes Tasmanian coal production.

7.12 COAL PRODUCED

Commodity code	Mineral	Unit	1992–93 Aust.	1993–94 Aust.	1994–95 NSW(a)	Vic.	Qld	SA	WA	Tas.	NT	Aust.
					QUANTITY							
	Coal (other than lignite)											
	Saleable coal(b)											
581	Semi-anthracite	'000 tonnes	231	305	—	—	389	—	—	—	—	389
580	Bituminous	'000 tonnes	165 242	164 808	88 588	—	88 342	—	—	275	—	177 205
582	Sub-bituminous	'000 tonnes	12 497	12 761	—	—	5 765	2 555	5 864	125	—	14 309
	Total	'000 tonnes	*177 970*	*177 874*	*88 588*	—	*94 496*	*2 555*	*5 864*	*400*	—	*191 903*
	Washery rejects(b)	'000 tonnes	(c)(d)44 831	(c)(d)42 463	19 179	—	26 879	n.a.	n.a.	401	—	(c)(d)46 459
	Underground	'000 tonnes	(d)(e)61 116	(d)(e)56 671	48 702	—	16 104	—	n.a.	n.a.	—	(d)(e)64 806
	Open cut	'000 tonnes	(d)(e)155 762	(d)(e)133 675	59 065	—	105 271	2 555	n.a.	n.a.	—	(d)(e)166 891
	Lignite											
	Saleable coal											
588	For briquettes	'000 tonnes	1 264	1 470	—	750	—	—	—	—	—	750
589	Other	'000 tonnes	46 648	48 214	—	49 929	—	—	—	—	—	49 929
586	Briquettes	'000 tonnes	516	—	—	n.a.	—	—	—	—	—	n.a.
					VALUE ($'000)							
	Coal (other than lignite)											
	Saleable coal											
581	Semi-anthracite		7 977	4 999	—	—	11 780	—	—	—	—	11 780
580	Bituminous		(e)6 786 230	(e)6 594 925	3 247 656	—	3 183 842	—	—	n.p.	—	(e)6 431 498
582	Sub-bituminous		411 137	417 145	—	—	143 780	(f)72 707	265 329	n.p.	—	(e)481 816
	Total		*(e)7 205 344*	*(e)7 017 069*	*3 247 656*	—	*3 339 402*	*(f)72 707*	*265 329*	*n.p.*	—	*(e)6 925 094*
	Lignite											
588	For briquettes		6 320	5 310	—	2 775	—	—	—	—	—	2 775
589	Other		373 099	395 678	—	411 914	—	—	—	—	—	411 914
586	Briquettes		n.a.	—	—	n.a.	—	—	—	—	—	n.a.
	Total coal		**(e)(g)7 584 763**	**(e)(g)7 418 057**	**3 247 656**	**(g)414 689**	**3 339 402**	**(f)72 707**	**265 329**	**n.p.**	—	**(e)(g)7 339 783**

(a) *Source:* Joint Coal Board for details of quantity produced.
(b) Raw coal is saleable coal plus washery rejects.
(c) Excludes South Australia.
(d) Excludes Western Australia.
(e) Excludes Tasmania.
(f) Includes freight.
(g) Excludes briquettes.

7.13 OIL AND GAS PRODUCED

Commodity code	Mineral	Unit	1992–93	1993–94	1994–95							
			Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
					QUANTITY							
590 & 592	Crude oil-stabilised (incl. condensate)	mega litres	30 592	29 583	—	14 598	1 164	1 266	12 536	—	1 737	31 301
591	Natural gas(a)	giga litres	16 631	15 959	—	5 480	2 247	4 038	5 333	—	388	17 486
593	Ethane	giga litres	187	202	—	189	—	19	—	—	—	208
	Liquefied petroleum gases(b)											
594	Propane	mega litres	2 078	2 115	—	1 395	182	422	—	—	—	1 999
595	Butane	mega litres	1 651	1 622	—	1 139	114	227	—	—	—	1 480
596	Liquefied natural gases	'000 tonnes	4 922	5 732	—	—	—	—	6 888	—	—	6 888
					VALUE ($'000)							
590 & 592	Crude oil-stabilised (incl. condensate)		5 507 785	4 747 186	—	n.p.	119 376	n.p.	1 957 987	—	257 379	4 669 745
591	Natural gas(a)		1 171 055	1 181 529	—	n.p.	144 666	n.p.	440 992	—	24 760	1 246 943
593	Ethane		34 543	33 300	—	n.p.	—	n.p.	—	—	—	34 218
	Liquefied petroleum gases(b)											
594	Propane		264 852	250 853	—	n.p.	23 123	n.p.	—	—	—	265 850
595	Butane		212 946	194 345	—	n.p.	14 171	n.p.	—	—	—	203 552
596	Liquefied natural gases		1 025 056	1 015 679	—	—	—	—	1 262 513	—	—	1 262 513
	Total oil and gas		**8 216 237**	**7 422 892**	**—**	**n.p.**	**301 336**	**n.p.**	**3 661 492**	**—**	**282 139**	**7 682 821**

(a) Includes field and plant usage.
(b) Excludes refinery production.

7.14 CONTENTS OF METALLIC MINERALS PRODUCED(a)

Commodity code	Mineral in which contained	1992–93	1993–94	1994–95							
		Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
				ALUMINA (Al_2O_3) ('000 tonnes)							
500	Bauxite	n.p.	10,708	—	n.a.	n.a.	—	7 907	—	3 072	(a)(b)10 979
				ANTIMONY (tonnes)							
556	Antimony concentrate	1 394	532	707	—	—	—	—	—	—	707
511	Gold concentrate	32	31	20	—	—	—	—	—	—	20
535	Lead concentrate	773	932	443	—	252	—	—	—	—	695
543	Zinc concentrate	5	19	7	—	—	—	—	—	—	7
547	Zinc-lead concentrate	—	—	—	—	—	—	—	—	—	—
	Total	2 204	1 514	1 177	—	252	—	—	—	—	1 429
				CADMIUM (tonnes)							
535	Lead concentrate	217	195	87	—	69	—	—	—	—	156
536	Lead-copper concentrate	3	—	—	—	—	—	—	—	—	—
546	Lead-zinc concentrate	2	—	—	—	—	—	—	—	—	—
543	Zinc concentrate	1 893	1 688	959	—	476	—	—	—	—	1 435
547	Zinc-lead concentrate	119	95	—	—	58	—	—	—	—	58
	Total	2 234	1 978	1 046	—	603	—	—	—	—	1 649
				COBALT (tonnes)							
532	Nickel concentrate	287	370	—	—	—	—	786	—	—	786
533	Nickel ore	229	275	—	—	333	—	—	—	—	333
543	Zinc concentrate	34	28	21	—	—	—	—	—	—	21
	Total	550	673	21	—	333	—	786	—	—	1 140
				COPPER (tonnes)							
502	Copper concentrate	n.p.	413 874	44 496	13 163	180 745	68 304	22 581	14 520	1 137	344 946
503	Copper ore	383	16	—	—	—	—	—	—	—	—
506	Copper precipitate	—	16 149	12 046	—	6 822	—	—	—	—	18 868
511	Gold concentrate	(c)507	n.a.	—	—	—	—	n.a.	—	—	n.a.
535	Lead concentrate	6 276	5 762	3 601	—	1 970	—	—	17	—	5 588
536	Lead-copper concentrate	n.a.	—	—	—	—	—	—	—	—	—
546	Lead-zinc concentrate	126	—	—	—	—	—	—	—	—	—
532	Nickel concentrate	5 321	4 035	—	—	—	—	4 489	—	—	4 489
579	Pyrite ore	21	8	—	—	—	—	—	—	—	—
543	Zinc concentrate	2 507	2 338	3 545	—	317	—	—	171	—	4 033
	Total	n.p.	442 182	63 688	13 163	189 854	68 304	27 071	14 708	1 137	377 925

For footnotes see end of table.

7.14 CONTENTS OF METALLIC MINERALS PRODUCED(a) — *continued*

Commodity code	Mineral in which contained	1992–93	1993–94	1994–95							
		Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
				GOLD (kg)							
556	Antimony concentrate	51	27	36	—	—	—	—	—	—	36
502	Copper concentrate	n.p.	(c)7 053	660	—	4 073	947	n.c.	470	63	(c)6 213
503	Copper ore	(c)1	—	—	—	—	—	n.c.	—	—	(c)—
509	Gold bullion (dore)(c)	(c)(f)53 857	(c)54 217	7 807	n.a.	23 805	—	n.c.	123	17 230	(a)(c)48 965
511	Gold concentrate	(c)605	73	62	—	—	—	n.c.	—	—	(c)62
510	Gold ore	1	106	—	—	—	—	—	—	—	—
512	Other gold	n.p.	—	—	—	—	—	—	—	—	—
535	Lead concentrate	578	467	386	—	10	—	—	38	—	434
546	Lead-zinc concentrate	48	—	—	—	—	—	—	—	—	—
543	Zinc concentrate	154	136	131	—	—	—	—	133	—	264
	Total	*n.p.*	*255 757*	*9 082*	*n.a.*	*27 888*	*947*	*187 239*	*764*	*17 293*	*(a)243 213*
				IRON ('000 tonnes)							
(g)	Iron ore	72 075	76 960	—	—	—	n.a.	82 346	1 024	—	(d)83 370
				LEAD (tonnes)							
502	Copper concentrate	2 979	2 729	2 588	—	551	—	—	199	—	3 338
503	Copper ore	2	—	—	—	—	—	—	—	—	—
535	Lead concentrate	n.p.	483 459	195 673	—	148 358	—	21 256	41 847	8 618	415 752
536	Lead-copper concentrate	n.a.	—	—	—	—	—	—	—	—	—
537	Lead ore	581	—	—	—	565	—	—	—	—	565
546	Lead-zinc concentrate	10 342	6 246	—	—	—	—	—	6 136	—	6 136
543	Zinc concentrate	32 236	25 967	12 057	—	10 207	—	—	1 180	—	23 444
547	Zinc-lead concentrate	15 718	11 120	—	—	6 903	—	—	—	—	6 903
	Total	*n.p.*	*524 521*	*210 318*	—	*166 584*	—	*21 256*	*49 362*	*8 618*	*456 138*
				MANGANESE (tonnes)							
	Manganese ore										
563	Metallurgical grade	n.p.	396 984	—	—	—	—	—	—	458 808	458 808
565	Other grades	n.p.	480 659	—	—	—	—	36 423	—	465 621	502 044
	Total	*n.p.*	*877 643*	—	—	—	—	*36 423*	—	*924 429*	*960 852*
				MERCURY (tonnes)							
543	Zinc concentrate	5	10	14	—	—	—	—	—	—	14
				MONAZITE (tonnes)							
524	Monazite concentrate	5 813	5 470	—	—	—	—	280	—	—	280
				NICKEL (tonnes)							
502	Copper concentrate	34	—	—	—	—	—	—	—	—	—
532	Nickel concentrate	53 279	61 097	—	—	—	—	93 002	—	—	93 002
533	Nickel ore	3 516	3 141	—	—	3 707	—	—	—	—	3 707
543	Zinc concentrate	2	3	3	—	—	—	—	—	—	3
	Total	56 831	*64 241*	3	—	3 707	—	93 002	—	—	*96 712*

For footnotes see end of table.

7.14 CONTENTS OF METALLIC MINERALS PRODUCED(a) — *continued*

Commodity code	Mineral in which contained	1992–93 Aust.	1993–94 Aust.	1994–95 NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
				PALLADIUM (kg)							
532	Nickel concentrate	422	373	—	—	—	—	514	—	—	514
				PLATINUM (kg)							
532	Nickel concentrate	112	64	—	—	—	—	121	—	—	121
				SELENIUM (tonnes)							
502	Copper concentrate	31	45	47	—	—	—	—	—	—	47
535	Lead concentrate	29	30	22	—	—	—	—	—	—	22
543	Zinc concentrate	18	1	6	—	—	—	—	—	—	6
	Total	78	76	75	—	—	—	—	—	—	75
				SILICON DIOXIDE (SiO_2) (tonnes)							
500	Bauxite	n.p.	212	—	—	—	—	—	—	226	226
				SILVER (kg)							
502	Copper concentrate	172 526	172 765	20 139	n.a.	37 097	8 956	30 189	60 143	—	(a)156 524
509	Gold bullion(dore)(c)	(f)54 753	(f)57 285	17 340	n.a.	16 473	—	27 525	48	1 596	(a)62 982
511	Gold concentrate	747	—	—	—	—	—	—	—	—	—
535	Lead concentrate	n.p.	703 932	177 201	—	311 675	—	—	41 254	8 618	538 748
546	Lead-zinc concentrate	14 676	10 856	—	—	—	—	—	13 865	—	13 865
532	Nickel concentrate	1 425	241	—	—	—	—	199	—	—	199
579	Pyrite ore	12	4	—	—	—	—	—	—	—	—
541	Silver-lead-zinc ore	53	—	—	—	—	—	—	—	—	—
543	Zinc concentrate	n.p.	99 414	31 570	—	41 528	—	—	8 346	6 660	88 104
547	Zinc-lead concentrate	47 367	35 677	—	—	21 473	—	—	—	—	21 473
	Total	*n.p.*	*1 080 174*	*246 250*	*n.a.*	*428 246*	*8 956*	*57 913*	*123 656*	*16 874*	*(a)881 895*
				SULPHUR (tonnes)							
502	Copper concentrate	57 841	51 675	47 947	—	—	—	—	—	—	47 947
535	Lead concentrate	(f)60 789	59 949	57 530	—	—	—	—	—	—	57 530
546	Lead-zinc concentrate	(f)653	—	—	—	—	—	—	—	—	—
543	Zinc concentrate	(f)319 637	328 886	194 403	—	89 795	—	—	—	—	284 198
547	Zinc-lead concentrate	33 351	27 793	—	—	16 177	—	—	—	—	16 177
	Total	*(f)472 271*	*468 303*	*299 880*	—	*105 972*	—	—	—	—	*405 852*
				TANTALITE-COLUMBITE ($Ta_2O_5+Nb_2O_5$) (kg)							
570	Tantalite-columbite concentrate	154 928	90 999	—	—	—	—	198 975	—	—	198 975

For footnotes see end of table.

7.14 CONTENTS OF METALLIC MINERALS PRODUCED(a) — *continued*

Commodity code	Mineral in which contained	1992–93	1993–94	1994–95							
		Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
				TIN (tonnes)							
535	Lead concentrate	20	21	11	—	—	—	—	—	—	11
549	Tin concentrate (incl. tin-wolfram concentrate)	5 911	7 575	—	—	43	—	457	7 460	—	7 960
543	Zinc concentrate	51	53	31	—	—	—	—	—	—	31
	Total	*5 982*	*7 649*	*42*	—	*43*	—	*457*	*7 460*	—	*8 002*
				TITANIUM DIOXIDE (TiO_2) (tonnes)							
500	Bauxite	n.p.	178	—	—	—	—	—	—	190	190
521	Synthetic rutile	—	—	—	—	—	—	364 572	—	—	364 572
522	Ilmenite concentrate (incl. beneficiated ilmenite)	977 966	987 649	2 995	—	83 944	—	561 337	—	—	648 276
523	Leucoxene concentrate	10 247	15 965	—	—	—	—	17 641	—	—	17 641
525	Rutile concentrate	176 149	159 257	34 954	—	72 321	—	101 374	—	—	208 649
	Total	*n.p.*	*1 163 049*	*37 949*	—	*156 265*	—	*1 044 924*	—	*190*	*1 239 328*
				TUNGSTIC OXIDE (WO_3) (units of 10 kg)							
571	Scheelite concentrate	153	—	—	—	—	—	—	n.a.	—	(f)—
				URANIUM (tonnes)							
575	Uranium concentrate	n.p.	3 348	—	—	—	790	—	—	—	790
				ZINC (tonnes)							
502	Copper concentrate	2 079	1 827	1 993	—	670	—	—	101	—	2 764
503	Copper ore	8	—	—	—	—	—	—	—	—	—
535	Lead concentrate	56 351	54 441	21 577	—	21 411	—	—	778	—	43 766
536	Lead-copper concentrate	8	—	—	—	—	—	—	—	—	—
546	Lead-zinc concentrate	24 632	20 134	—	—	—	—	—	14 999	—	14 999
579	Pyrite ore	—	1	—	—	—	—	—	—	—	—
543	Zinc concentrate	n.p.	887 952	306 677	5 947	195 290	—	114 883	178 260	27 350	828 407
547	Zinc-lead concentrate	36 513	32 936	—	—	18 688	—	—	—	—	18 688
544	Zinc ore	472	—	—	—	—	—	—	—	—	—
	Total	*n.p.*	*997 291*	*330 247*	*5 947*	*236 059*	—	*114 883*	*194 138*	*27 350*	*908 624*
				ZIRCONIUM DIOXIDE (ZrO_2) (tonnes)							
529	Zircon concentrate	277 219	297 116	30 976	—	44 318	—	311 086	—	—	386 380

(a) In this table the contents of the various minerals (estimated by assay—see the Explanatory Notes) 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.

(b) Excludes Victoria.

(c) Excludes Queensland.
(d) Excludes Western Australia.
(e) Excludes South Australia.
(f) Includes alluvial gold.
(g) Excludes Tasmania.
(h) Commodity codes 507,513,515. Includes iron ore pellets.

7.15 OTHER NON-METALLIC MINERALS PRODUCED

Commodity code	Mineral	Unit	1989–90	1992–93	1994–95							
			Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
					QUANTITY							
684	Barite	tonnes	20 753	9 264	1 105	—	—	7 693	—	—	—	8 798
685	Carbon dioxide	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
686	Diatomite	tonnes	11 981	12 559	—	2 978	888	—	9 636	—	—	13 502
689	Feldspar	tonnes	10 515	23 156	1 474	—	—	436	52 515	—	—	54 425
691	Garnet concentrate	tonnes	27 768	42 517	—	—	—	—	71 070	—	—	71 070
. .	Gems											
704	Gypsum	'000 tonnes	1 885	1 486	69	40 949	24	1 479	230	—	—	42 751
705	Lithium ores	tonnes	47 428	42 550	—	—	—	—	—	—	—	—
708	Magnesite, crude	tonnes	50 808	246 778	—	—	218 103	1 142	—	—	—	219 245
709	Mica	tonnes	649	1 085	—	—	—	1 327	—	—	—	1 327
711	Peat	tonnes	11 595	40 278	29 133	—	1 878	—	960	—	—	31 971
713	Pebbles – for grinding	tonnes	—	n.p.	—	—	—	—	—	n.p.	—	n.p.
714	Perlite	tonnes	2 831	3 425	—	—	4 098	—	—	—	—	4 098
715	Phosphate rock	tonnes	7 107	2 494	—	—	—	5 517	—	—	—	5 517
717	Phrophylite	tonnes	2 965	1 175	777	—	—	—	—	—	—	777
724	Salt	'000 tonnes	7 188	7 999	—	25	318	715	7 176	—	—	8 234
(a)	Silica	'000 tonnes	3 116	3 570	565	220	2 829	174	614	174	—	4 576
736	Silimanite	tonnes	257	—	—	—	—	—	—	—	—	—
737	Talc (incl. steatite)	'000 tonnes	234	172	27	—	—	13	113	—	—	153
738	Vermiculite	tonnes	105	199	—	—	—	—	—	—	—	—
745	Other	tonnes	57 310	87 622	83 691	—	—	—	—	—	—	83 691

For footnotes see end of table.

7.15 OTHER NON-METALLIC MINERALS PRODUCED — *continued*

Commodity code	Mineral	1989–90	1992–93	1994–95							
		Aust.	Aust.	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
				VALUE ($'000)							
684	Barite	n.p.	510	18	—	—	246	—	—	—	264
685	Carbon dioxide	733	3 700	—	—	—	—	—	—	—	—
686	Diatomite	2 475	7 676	1 837	n.a.	176	—	77	—	—	2 090
689	Feldspar	562	n.p.	133	—	—	11	1 933	—	—	2 077
691	Garnet concentrate	1 152	4 041	—	—	—	—	6 753	—	—	6 753
	Gems										
694	Chrysoprase	547	n.p.	—	—	1 168	—	1 396	—	—	2 564
697	Diamonds	413 584	519 981	—	—	—	—	480 031	—	—	480 031
695	Opal	116 730	84 910	71 040	—	1 503	38 579	—	—	—	111 122
696	Sapphire	13 499	14 148	11 423	—	2 954	—	—	—	—	14 377
702	Other gems	239	435	28	—	69	—	38	—	—	135
704	Gypsum	7 372	4 989	718	296	356	2 781	2 659	—	—	6 810
705	Lithium ores	n.p.	n.p.	—	—	—	—	—	—	—	—
708	Magnesite, crude	2 416	9 627	—	—	11 572	28	—	—	—	11 600
709	Mica	71	119	—	—	—	165	—	—	—	165
711	Peat	n.p.	n.p.	1 530	—	54	—	67	—	—	1 651
713	Pebbles-for grinding	—	n.p.	—	—	—	—	—	n.p.	—	n.p.
714	Perlite	212	249	—	—	83	—	—	—	—	83
715	Phosphate rock	126	44	—	—	—	22	—	—	—	22
717	Phrophylite	146	98	71	—	—	—	—	—	—	71
724	Salt	129 402	174 821	—	818	14 647	4 533	155 144	—	—	175 142
(a)	Silica	n.p.	n.p.	8 947	5 381	28 769	1 814	5 479	n.p.	—	n.p.
736	Silimanite	30	—	—	—	—	—	—	—	—	—
737	Talc (incl. steatite)	6 257	12 688	1	—	—	1 173	8 517	—	—	9 691
738	Vermiculite	19	35	—	—	—	—	—	—	—	—
745	Other	983	1 355	2 082	—	—	—	—	—	—	2 082
	Total other non-metallic minerals	**696 555**	**839 426**	**97 828**	**6 495**	**61 351**	**49 352**	**662 094**	**n.p.**	**—**	**(b)877 120**

(a) Commodity codes 725, 726, 727, 728.
(b) Excludes Tasmania.

SECTION 8 FINANCIAL OPERATIONS

The data presented in this section are derived from the 1994–95 Census of Mining Operations and from some comparative statistics relating to earlier years. The scope of the annual census for 1994–95 included ANZSIC subdivisions 11 Coal mining, 12 Oil and gas extraction and 13 Metal ore mining industries and ANZSIC class 1420 Mining n.e.c., which will be included annually from 1994–95. Every three years subdivision 14 Other mining is included in its entirety. Information on subdivision 14, which includes construction material mining, may be found in the publication *The Australian Mining Industry, 1993–94* (Cat. no. 8414.0). This subdivision will next be collected for the 1995–96 reference period.

Some of the data published in the 1993–94 edition of *The Australian Mining Industry, 1993–94* (Cat. no. 8414.0) have been revised to take account of changes to previously reported data.

Statistics are presented at both the management unit and establishment levels (see Explanatory Notes, Statistical unit). 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 section are summary tables only. The commentary refers to these tables and the more detailed tables appearing at the end of this section. The tables on pages 55–57 relate to management unit data while the tables on pages 58–75 relate to establishment data. Refer to the Glossary for definitions of terms used.

MANAGEMENT UNIT SUMMARY

8.1 MINING OPERATIONS, SUMMARY DETAILS BY INDUSTRY SUBDIVISION

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Income and expenditure									
Sales of goods and services	9 135	9 109	7 319	7 008	12 003	12 325	28 457	28 442	823
Purchases and selected expenses	5 260	5 402	1 328	1 329	6 635	6 451	13 223	13 182	317
Trading profit	3 788	3 726	5 992	5 697	5 376	5 858	15 156	15 281	499
Selected labour costs	2 025	2 042	421	436	1 607	1 660	4 053	4 138	119
Earnings before interest and tax	1 017	798	2 989	3 274	2 654	2 764	6 660	6 836	242
Operating profit before tax	708	474	2 589	2 937	2 208	2 152	5 504	5 564	225
Turnover	9 349	9 223	7 416	7 080	12 167	12 486	28 932	28 789	826
Industry gross product	4 001	3 840	6 089	5 770	5 540	6 018	15 630	15 628	502
Assets and liabilities									
Total assets	14 145	15 098	22 399	22 337	22 041	25 853	58 584	63 288	1 583
Total liabilities	7 399	8 795	11 329	10 704	9 619	11 216	28 348	30 715	618
Net worth	6 746	6 303	11 069	11 632	12 421	14 638	30 237	32 574	965
Capital expenditure									
Total acquisitions	1 023	1 089	1 486	1 477	1 973	2 879	4 482	5 445	98
Net capital expenditure	795	1 001	1 465	1 446	1 826	2 756	4 085	5 202	93

Trading profit

Total trading profit increased by $125 million (1%) from $15,156 million in 1993–94 to $15,281 million in 1994–95. A decrease in the cost of purchases of goods and materials (down $514 million) was offset by a rise of $510 million in other selected expenses. The value of sales of goods and services decreased by $15 million to $28,442 million in 1994–95.

Metal ore mining reported an increase in trading profit of $482 million (9%) to $5,858 million in 1994–95. The cost of purchases decreased by $552 million and the value of sales of goods and services increased by $322 million for the metal ore mining industry. Trading profit for the oil and gas extraction industry fell by $295 million (5%) to $5,697 million. This was mainly due to a decrease in the value of sales of goods and services, which fell by $311 million to $7,008 million in 1994–95.

Trading profit for ANZSIC class 1420, mining n.e.c., was $499 million in 1994–95.

Earnings before interest and tax

Earnings before interest and tax (EBIT) was $6,836 million in 1994–95, up $176 million (3%) on the $6,660 million recorded in 1993–94. EBIT for the oil and gas extraction industry increased by $286 million (10%) to $3,274 million in 1994–95 mainly as a result of increased revenue from other income (up $526 million) and a decrease in royalty expenses (down $231 million). Increased depreciation expenses contributed to the fall in EBIT for the coal mining industry, where EBIT decreased by $220 million (22%) to $798 million in 1994–95. The metal ore mining industry recorded a $110 million increase (4%) in EBIT even though depreciation expenses rose by $307 million during the reference period.

Operating profit before tax

Operating profit before tax (OPBT) is calculated by deducting the cost of interest expenses from EBIT. OPBT increased by $59 million (1%) from $5,504 million in 1993–94 to $5,564 million in 1994–95. OPBT for the oil and gas extraction industry increased by $349 million (13%) to $2,937 million in 1994–95 as interest expenses were lower than the previous year. The coal mining industry recorded a decrease of $234 million (33%) to $474 million in 1994–95. Increases in interest expenses offset increase in sales revenue to the extent that OPBT for the metal ore mining industry decreased by $56 million (3%) to $2,152 million in the same period.

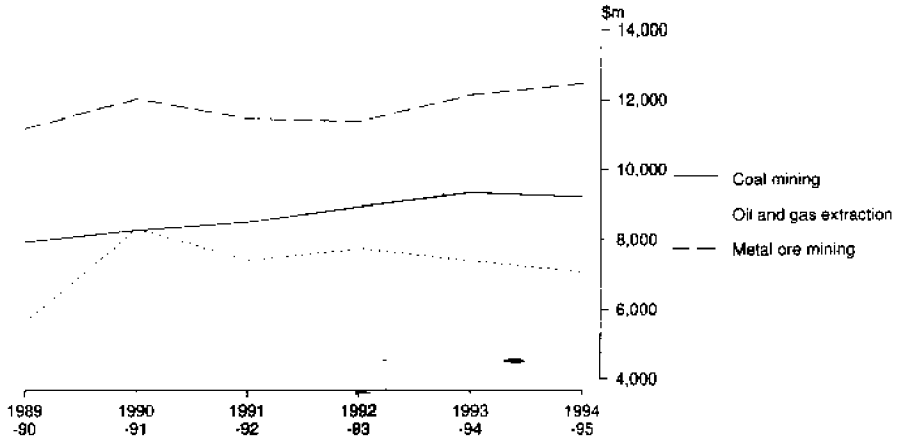
Operating profit before tax for the mining n.e.c. class was $225 million in 1994–95.

Turnover

Turnover decreased by $142 million (less than 1%) from $28,932 million in 1993–94 to $28,789 million in 1994–95, largely due to decreases in the value of capital work done for own use which fell by $120 million (38%) to $199 million during the reporting period.

The metal ore mining industry recorded an increase in turnover rising $319 million (3%) to $12,486 million. Turnover in the oil and gas extraction industry decreased by $336 million (5%) to $7,080 million in 1994–95, while turnover in the coal mining industry fell by $126 million (1%) to $9,223 million in the same period.

8.2 MANAGEMENT UNIT TURNOVER



Analysis of turnover for the period 1989–90 to 1994–95 for each of the major mining industry subdivisions shows a different pattern of performance (based on current prices). Growth in the coal mining industry has been steady, although it has flattened out in 1994–95. This has primarily been the result of increased production combined with lower prices. The oil and gas extraction industry shows a peak in 1990–91 which was attributable to the effects of the Gulf War and a fall in 1993–94 associated with a decrease in production caused by the maintenance program of the Challis and Jabiru fields. The continued decline in turnover is attributable to lower prices experienced in 1994 and to industrial action in the Victorian oil and gas fields during 1994–95. Variations in turnover for the metal ore mining industry are the result of variations in production levels and prices for the various commodities. Turnover rose in the metal ore industry in 1994–95 as a result of improved prices for several commodities and the commissioning of a number of new mines in the gold ore mining industry.

During 1994–95 metal ore mining was the largest contributor to turnover, accounting for 43% of the total. Coal, with a turnover of $9,223 million, accounted for 32%.

Industry gross product

Industry gross product (IGP) decreased by $2 million from $15,630 million in 1993–94 to $15,628 million in 1994–95.

IGP for the metal ore mining industry increased by $479 million (9%) to $6,019 million in 1994–95. Both the coal mining and oil and gas extraction industries recorded decreases in IGP. IGP for the coal mining industry decreased by $161 million (4%) to $3,840 million and for the oil and gas extraction industry IGP fell by $320 million (5%) to $5,770 million in 1994–95.

The metal ore mining industry was the largest contributor to IGP in 1994–95, accounting for 39%. The oil and gas extraction industry accounted for 37%, down 2 percentage points on its contribution in 1993–94.

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 1994–95 was $32,574 million, an increase of $2,337 million (8%) over the $30,237 million reported in 1993–94. Metal ore mining accounted for $14,638 million (45%) of total net worth while the oil and gas extraction industry contributed $11,632 million (36%). Net worth for the metal ore mining industry increased by $2,217 million (18%) primarily due to the increase in value of non-current assets. Net worth for the coal mining industry decreased by $443 million (7%) in 1994–95.

Net worth for mining n.e.c. in 1994–95 was $965 million.

Net capital expenditure

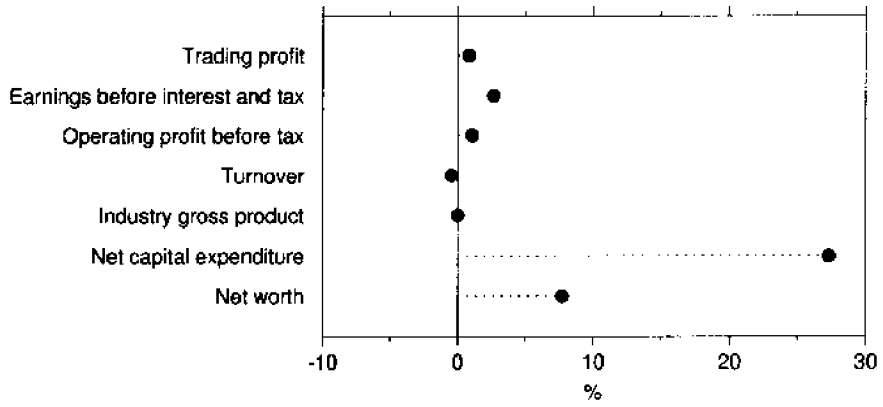
Total net capital expenditure in 1994–95 increased by $1,117 million (27%) to $5,202 million compared with the $4,085 million reported in 1993–94. Net capital expenditure increased in the metal ore mining industry by $930 million (51%) to $2,756 million in 1994–95 as a result of increased expenditure on both plant, machinery and equipment and other buildings and structures. The coal mining industry recorded an increase of $206 million (26%) rising to $1,001 million during 1994–95.

The metal ore mining industry was the largest contributor to net capital expenditure accounting for $2,756 million (53%) in 1994–95. The oil and gas extraction industry was the next largest contributor with $1,446 million (28%).

Expenditure on plant, machinery and equipment remained the largest component of capital expenditure, accounting for $3,290 million (60%) of the overall total, up $424 million (15%) on the $2,865 million reported in 1993–94. Expenditure on other buildings and structures rose by $501 million (32%) to $2,045 million.

Net capital expenditure for mining n.e.c. was $93 million in 1994–95 with the majority of expenditure being on plant, machinery and equipment.

8.3 PERCENTAGE CHANGE IN SELECTED INDICATORS, 1993–94 AND 1994–95



ESTABLISHMENT SUMMARY

Statistics for detailed industry groupings and for each State are available at the establishment level. The following analysis relates to both the summary table below and the tables at the end of this section (see pages 58–75). The data for establishments vary from those for management units (see Explanatory Notes, Statistical unit) in that they reflect a more homogenous picture of the industry.

8.4 ESTABLISHMENT LEVEL(a), SUMMARY OF OPERATIONS BY INDUSTRY CLASS

		Stocks		Purchases and selected		Net capital
	Turnover	Opening	Closing	expenses	Value added	expenditure
Industry class	$m	$m	$m	$m	$m	$m
Coal mining						
110 Coal mining	9 342	720	741	4 226	5 137	1 026
Oil and gas extraction						
1200 Oil and gas extraction	7 681	213	239	716	6 992	1 227
Metal ore mining						
1311 Iron ore mining	3 103	327	280	1 102	1 954	438
1312 Bauxite mining	856	55	40	288	554	56
1313 Copper ore mining	1 019	140	150	351	678	65
1314 Gold ore mining	4 169	513	571	2 147	2 080	1 005
1315 Mineral sand mining	631	152	142	311	310	70
1317 Silver-lead-zinc ore mining	1 064	146	114	472	561	130
Other(b)	1 070	255	284	451	648	686
131 Total metal ore mining	11 913	1 589	1 582	5 121	6 784	2 445
Total 1994–95	**28 936**	**2 522**	**2 562**	**10 063**	**18 914**	**4 698**
Total 1993–94	29 018	2 614	2 517	9 989	18 933	4 186

(a) See Explanatory Notes, Statistical unit.
(b) Includes ANZSIC classes 1316 and 1319.

The following analysis makes comparisons relating only to ANZSIC subdivisions 11, 12 and 13. In addition data was collected for ANZSIC class 1420 with respect to 1994–95. Descriptions relating to this industry class relate only to 1994–95 as the data was not collected in 1993–94.

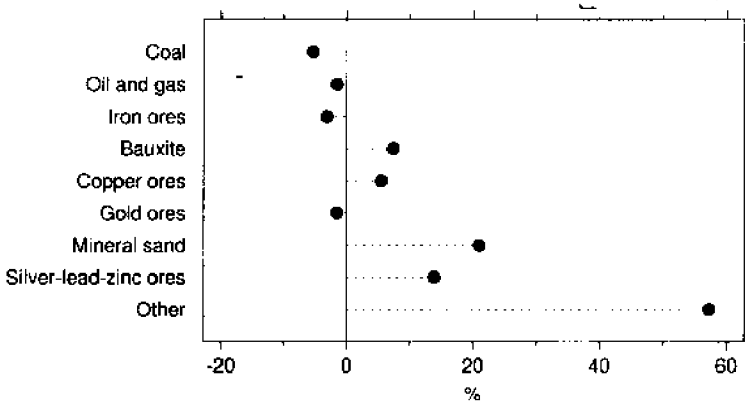
Turnover by industry

Turnover in 1994–95 was $28,936 million compared with $29,018 million for 1993–94, a decrease of less than 1%. The largest absolute increase was in the other metal ore mining industries which increased by $389 million (57%) to $1,070 million in 1994–95. This rise has primarily been driven by increased demand and prices for nickel. The coal mining industry reported the largest decrease, falling $531 million (5%) to $9,342 million in the same period. Increased production tonnages were more than offset by price decreases. The oil and gas industry also experienced a decrease, dropping $124 million (2%) to $7,681 million in 1994–95, with decreased production volumes from Bass Strait offsetting production increases elsewhere.

Several other industries recorded increases in turnover. Among these were the mineral sand mining industry which increased by $110 million (21%) to $631 million as a result of an increase in world demand and improved prices. Turnover in the silver-lead-zinc ore mining industry rose by $129 million (14%) to $1,064 million in 1994–95.

Turnover for the mining n.e.c. class at establishment level was $843 million of which the value of sales accounted for 99%.

8.5 PERCENTAGE CHANGE IN TURNOVER BETWEEN 1993–94 AND 1994–95



The coal mining industry was the largest contributor to turnover in 1994–95. Coal mining accounted for 32%, down from 34% in 1993–94. Oil and gas extraction accounted for 27% in 1994–95, the same level as in 1993–94. The other main contributors were the gold ore mining and the iron ore mining industries which accounted for 14% and 11% respectively of total turnover in 1994–95.

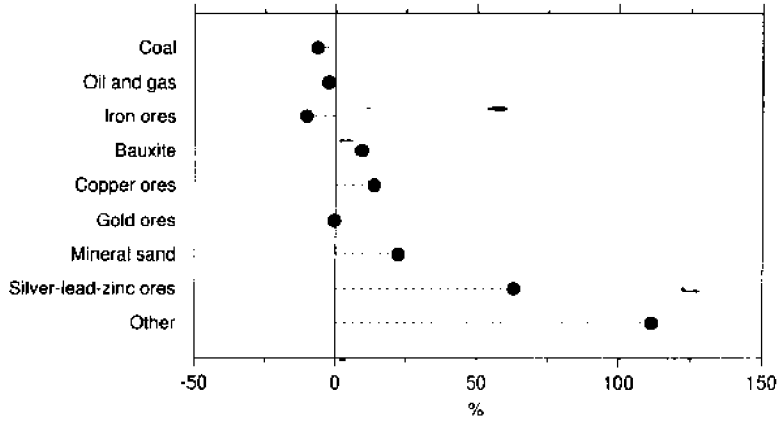
Value added by industry

Value added was virtually unchanged from 1993–94 falling only $19 million to $18,913 million in 1994–95. However, greater movements were experienced by individual industries. Reflecting turnover, the other metal ore mining industries increased by $341 million (111%) to $648 million in 1994–95. This was achieved primarily through the increased value of sales and only a relatively small increase in expenses. Value added in the silver-lead-zinc ore mining industry increased by $217 million (63%) to $561 million during 1994–95 with the increase being partially attributable to a decrease in the value of purchases of materials.

A number of industries recorded decreases in value added. These included the coal mining industry where value added fell by $348 million (6%) to $5,137 million in 1994–95 and the iron ore mining industry which experienced a $224 million (10%) decrease, falling to $1,954 million in 1994–95. A decrease was also recorded in the oil and gas extraction industry, down $165 million (2%) to $6,992 million in the same period.

The oil and gas extraction industry, with a low level of current expenses relative to income from sales, remains the largest contributor to national value added accounting for 37% of the total in 1994–95. Coal was the second largest contributor accounting for 27%.

8.6 PERCENTAGE CHANGE IN VALUE ADDED BETWEEN 1993–94 AND 1994–95



The mining n.e.c. class recorded a value added of $580 million in 1994–95. The largest single expenditure being for purchase of materials, components and containers which accounted for $83 million.

Capital expenditure by industry

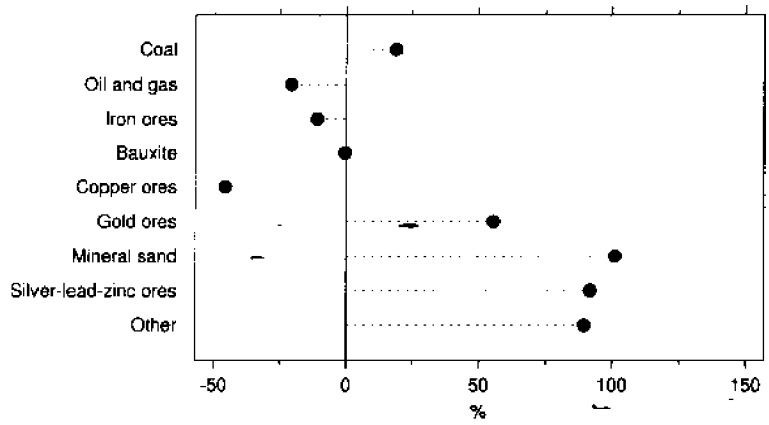
Net capital expenditure, that is total expenditure less disposals, increased by $512 million (12%) from $4,186 million in 1993–94 to $4,698 million in 1994–95. The largest absolute increase in net capital expenditure occurred in the gold ore mining industry with a rise of $359 million (56%) to $1,005 million. Several new mines were commissioned during the period including Bronzewing and Lynas Find in Western Australia and Union Reefs and Rustlers Roost in the Northern Territory. Increased development is expected in Western Australia as a result of the development of the Goldfields gas pipeline which should act to reduce operating costs. Other industries to record increases included the coal mining industry, up $163 million (19%), and the other metal ore mining industry, up $321 million (89%) for 1994–95.

These increases were partially offset by falls in net capital expenditure in the oil and gas extraction industry, down $320 million (21%) to $1,227 million, the copper ore mining industry, down $54 million (45%) to $65 million and the iron ore mining industry, down $54 million (11%) to $438 million in 1994–95.

The majority of fluctuations in total capital expenditure were due to variations in the level of expenditure on buildings and other structures. This was particularly so for the gold ore mining industry where capital expenditure on buildings and other structures rose by $253 million.

Expenditure on plant, machinery and equipment accounted for 61% ($3,113 million) of the total capital expenditure in 1994–95. Expenditure on buildings and other structures rose by $133 million (8%) to $1,862 million and accounted for 37% of all expenditure.

8.7 CHANGE IN NET CAPITAL EXPENDITURE BETWEEN 1993–94 AND 1994–95



Despite the decrease in total net capital expenditure reported by establishments in the oil and gas extraction industry, the industry still accounted for $1,227 million or 26% of the national total. Coal mining with $1,026 million (22%) was the next major contributor.

Net capital expenditure for mining n.e.c. was $94 million in 1994–95.

STATE DATA

Data may be available at the State level on an industry subdivision basis, subject to confidentiality restrictions. The following table summarises the data for each State/Territory for 1994–95. Detailed figures can be found in the tables at the end of this section (pages 58–75).

8.8 ESTABLISHMENT LEVEL(a), SUMMARY OF OPERATIONS

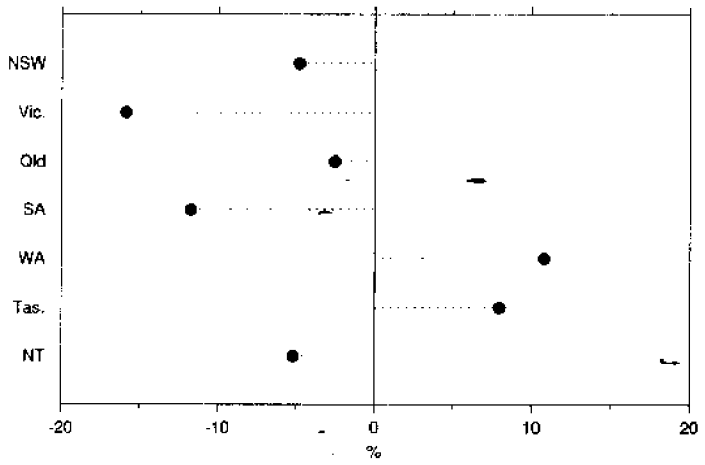
		Stocks		Purchases and selected		Net capital expend-
	Turnover	Opening	Closing	expenses	Value added	iture
State/Territory	$m	$m	$m	$m	$m	$m
New South Wales	4 589	380	350	1 979	2 580	620
Victoria	3 435	41	52	267	3 179	566
Queensland	6 669	707	716	3 124	3 554	677
South Australia	940	77	89	187	765	68
Western Australia	11 817	1 045	1 077	3 982	7 867	2 613
Tasmania	371	61	49	149	210	45
Northern Territory	1 115	210	229	376	758	110
Australia	**28 936**	**2 522**	**2 562**	**10 063**	**18 914**	**4 698**

(a) See Explanatory Notes, Statistical unit.

Turnover

Western Australia recorded the largest increase in turnover, rising $1,130 million (11%) to $11,817 million in 1994–95. This was a result of increased revenue from the oil and gas products. Tasmania was the only other State to record an increase in 1994–95, rising $27 million to $371 million. Victoria recorded the largest decrease in turnover, falling $648 million (16%) to $3,435 million in 1994–95. This resulted from a decrease in the production levels for crude oil due to industrial action. Decreases in turnover were also reported in New South Wales, down $232 million (5%) to $4,589 million and in Queensland, down $174 million (3%) to $6,669 million in 1994–95.

8.9 PERCENTAGE CHANGE IN TURNOVER BETWEEN 1993–94 AND 1994–95



Western Australia retained its position as the largest contributor to national turnover, accounting for $11,817 million (41%). Queensland, with $6,669 million (23%), was the second largest contributor.

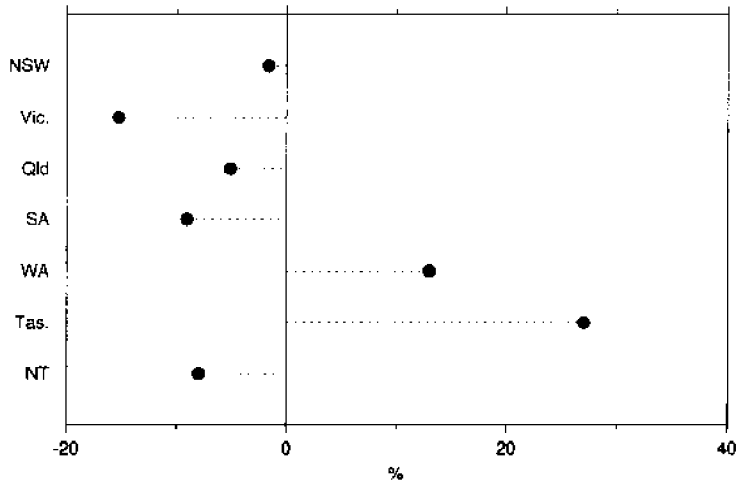
Western Australia accounted for the largest proportion of turnover for the class mining n.e.c., recording $726 million during 1994–95.

Value added

Movements in value added generally reflected those of turnover. Value added in Western Australia increased by $884 million (13%) rising from $6,983 million in 1993–94 to $7,867 million in 1994–95. This was a direct result of an increase in the level of sales revenue generated by the oil and gas extraction and gold mining industries. In Tasmania value added increased by $45 million (27%) to $210 million in 1994–95.

Value added in Victoria decreased by $572 million (15%) to $3,179 million due to decreased sales revenue for oil and gas in 1994–95. In Queensland value added decreased by $191 million (5%) falling to $3,554 million in 1994–95.

8.10 PERCENTAGE CHANGE IN VALUE ADDED BETWEEN 1993–94 AND 1994–95

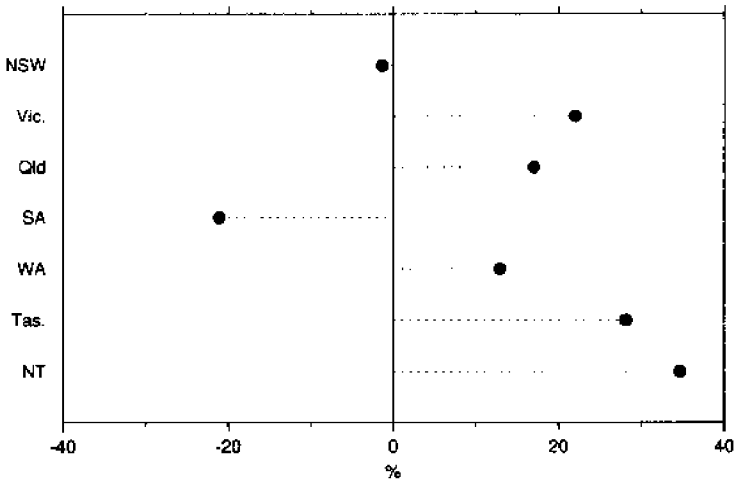


Western Australia was the largest contributor to national value added, accounting for $7,867 million (42%). Queensland with $3,554 million and Victoria with $3,179 million contributed 19% and 17% respectively during 1994–95.

Capital expenditure

Western Australia was the largest contributor to net capital expenditure during 1994–95, accounting for $2,613 million (56%), which represented a $300 million (13%) increase on the figure reported in 1993–94. This was primarily due to increased expenditure on plant, machinery and equipment and buildings and other structures within the metal ore mining sector, principally within the gold ore mining industry. Net capital expenditure in Victoria rose by $102 million (22%) to $566 million in 1994–95 where expenditure in oil and gas extraction rose markedly.

8.11 PERCENTAGE CHANGE IN NET CAPITAL EXPENDITURE BETWEEN 1993–94 AND 1994–95



Queensland also recorded an increase in net capital expenditure, rising $99 million (17%) to $677 million in 1994–95 as a result of increased expenditure in that State's coal mining industry. South Australia recorded the largest decrease, falling $18 million (21%) to $69 million in the same period.

Western Australia recorded the greatest net capital expenditure for the mining n.e.c. class, $84 million in 1994–95 with expenditure on plant, machinery and equipment being the most significant component.

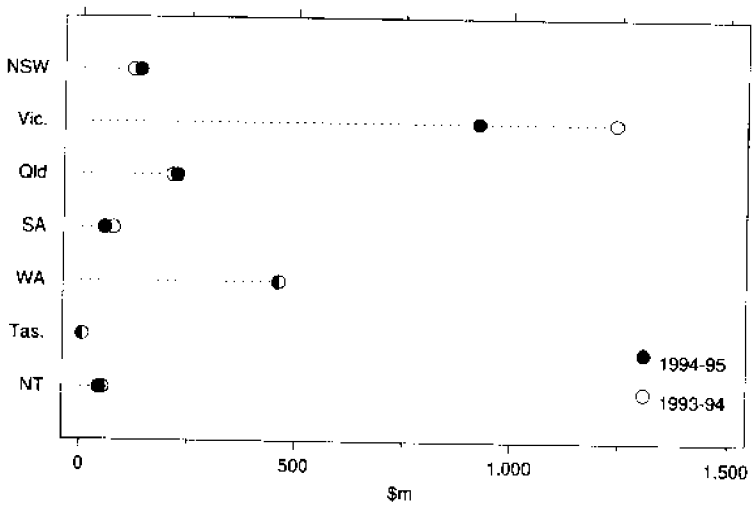
Royalties

Royalties data appear in the last two tables at the end of this section. The data are presented at establishment level (by industry and State). Royalty payments are a reflection of production and/or sales, the data for which are collected at the establishment level.

Royalties totalling $1,847 million were paid during 1994–95. This represented a decrease of $315 million (15%) on the $2,162 million reported in 1993–94. The oil and gas extraction industry recorded the largest decrease, with royalties paid falling $310 million (20%) to $1,224 million primarily the result of a decrease in the level of royalties paid in Victoria. The industry, however, remained the largest contributor to royalties paid, accounting for 66% in 1994–95. The value of royalties paid in the bauxite mining industry decreased by $42 million (68%) to $20 million. Royalties paid by the coal mining industry rose by $29 million (11%) to $297 million in 1994–95.

Victoria, with its oil and gas extraction industry, contributed $923 million to total royalties paid. This was a fall of $318 million (26%) from 1993–94, but still represented 50% of the total royalties paid in 1994–95. Western Australia was the second largest contributor to royalties paid, accounting for $462 million (25%) in total royalty payments. Queensland contributed $223 million (12%) in 1994–95.

8.12 ROYALTIES PAID BY STATE



Royalties for mining n.e.c. amounted to $47 million in 1994–95 with $44 million of this being paid by establishments in Western Australia.

8.13 MANAGEMENT UNIT LEVEL(a), INCOME AND EXPENDITURE BY INDUSTRY SUBDIVISION

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods and services	9 135.1	9 109.2	7 318.8	7 007.9	12 003.2	12 324.9	28 457.1	28 442.0	823.3
Less									
Purchases of goods and materials	1 523.5	1 592.0	184.4	154.2	2 843.8	2 291.4	4 551.7	4 037.7	102.4
Rent, leasing and hiring expenses									
Motor vehicles	8.7	9.2	2.5	2.3	10.0	9.9	21.2	21.4	0.7
Plant, machinery and other equipment	41.6	49.1	13.0	9.7	69.1	67.0	123.6	125.9	2.3
Land, buildings and other structures	72.3	42.9	34.6	44.6	70.6	26.3	177.4	113.8	2.4
Other rent, leasing and hiring	—	15.6	—	0.6	—	6.6	—	22.8	2.9
Outward freight and cartage	1 746.0	1 625.1	80.7	122.0	261.4	270.8	2 088.2	2 017.8	49.9
Motor vehicle expenses	11.8	12.9	10.1	11.3	41.1	50.3	62.9	74.5	2.3
Repair and maintenance expenses	767.8	773.0	184.6	110.0	799.0	809.8	1 751.4	1 692.8	19.1
Payment for contract, sub-contract and commission work	525.0	572.9	279.4	326.8	1 875.1	1 899.2	2 679.5	2 798.8	74.7
Other selected expenses	563.1	709.4	538.8	547.6	664.9	1 019.4	1 766.7	2 276.5	60.6
Purchases and selected expenses	*5 259.7*	*5 402.2*	*1 327.9*	*1 329.2*	*6 634.9*	*6 450.7*	*13 222.5*	*13 182.0*	*317.5*
Plus									
Opening stocks	816.0	756.6	215.4	231.3	1 846.0	1 901.5	2 877.4	2 889.4	228.6
Less									
Closing stocks	728.3	776.0	216.8	250.0	1 853.8	1 884.8	2 798.9	2 910.8	221.6
Cost of sales	*5 347.4*	*5 382.8*	*1 326.6*	*1 310.4*	*6 627.1*	*6 467.4*	*13 301.1*	*13 160.7*	*324.4*
Trading profit	**3 787.7**	**3 726.4**	**5 992.2**	**5 697.4**	**5 376.1**	**5 857.5**	**15 156.0**	**15 281.4**	**498.9**
Plus									
Rent, leasing and hiring income	17.7	31.0	82.2	63.6	21.1	25.4	121.0	120.0	1.1
Government subsidies	13.3	6.7	—	—	21.3	21.6	34.6	28.4	—
Interest income	91.3	71.7	48.7	46.2	266.0	430.4	406.0	548.2	7.8
Other income	165.2	198.8	31.4	557.7	141.9	71.0	338.5	827.5	8.5
Less									
Wages and salaries	1 869.0	1 870.8	395.7	410.9	1 501.0	1 555.2	3 765.8	3 837.0	112.9
Superannuation	114.9	124.4	22.1	21.9	68.9	67.3	205.8	213.6	4.1
Workers' compensation	41.0	47.1	3.4	2.8	37.1	37.9	81.5	87.7	1.7
Selected labour costs	*2 024.9*	*2 042.3*	*421.1*	*435.6*	*1 607.1*	*1 660.4*	*4 053.1*	*4 138.3*	*118.7*
Less									
Depreciation	743.4	874.1	1 183.5	1 321.8	1 205.8	1 512.3	3 132.7	3 708.2	104.2
Insurance premiums	52.9	55.9	49.4	56.2	51.8	56.8	154.0	169.0	4.5
Royalties expenses	236.1	263.3	1 508.0	1 277.1	302.8	410.8	2 046.9	1 951.2	46.4
Bad debts	0.7	1.3	3.7	0.1	4.9	1.7	9.2	3.1	0.2
Earnings before interest and tax	**1 017.2**	**797.7**	**2 988.7**	**3 274.2**	**2 654.2**	**2 763.9**	**6 660.1**	**6 835.7**	**242.1**
Less									
Interest expenses	309.0	323.4	400.1	336.8	446.6	611.7	1 155.7	1 271.9	17.4
Operating profit before tax	**708.2**	**474.3**	**2 588.6**	**2 937.3**	**2 207.6**	**2 152.1**	**5 504.4**	**5 563.8**	**224.7**

(a) See Explanatory Notes, Statistical unit.

8.14 MANAGEMENT UNIT LEVEL(a), INDUSTRY GROSS PRODUCT BY INDUSTRY SUBDIVISION

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods and services	9 135.1	9 109.2	7 318.8	7 007.9	12 003.2	12 324.9	28 457.1	28 442.0	823.3
Rent, leasing and hiring income	17.7	31.0	82.2	63.6	21.1	25.4	121.0	120.0	1.1
Government subsidies	13.3	6.7	—	—	21.3	21.6	34.6	28.4	—
Plus									
Capital work done for own use	182.5	76.0	15.0	8.7	121.3	113.9	318.8	198.7	1.9
Turnover	**9 348.5**	**9 222.9**	**7 416.0**	**7 080.3**	**12 167.0**	**12 485.9**	**28 931.5**	**28 789.1**	**826.3**
Plus									
Closing stocks	728.3	776.0	216.8	250.0	1 853.8	1 884.8	2 798.9	2 910.8	221.6
Less									
Opening stocks	816.0	756.6	215.4	231.3	1 846.0	1 901.5	2 877.4	2 889.4	228.6
Less									
Purchases and selected expenses	5 259.7	5 402.2	1 327.9	1 329.2	6 634.9	6 450.7	13 222.5	13 182.0	317.5
Industry gross product	**4 001.1**	**3 840.1**	**6 089.4**	**5 769.8**	**5 539.8**	**6 018.5**	**15 630.4**	**15 628.4**	**501.9**

(a) Includes items listed plus value of capital work done for own use.

8.15 MANAGEMENT UNIT LEVEL(a), ASSETS AND LIABILITIES BY INDUSTRY SUBDIVISION

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Assets									
Current assets									
Closing stocks	728.3	776.0	216.8	250.0	1 853.8	1 884.8	2 798.9	2 910.8	221.6
Other current assets	2 123.3	3 094.7	1 808.1	1 801.0	5 494.0	6 452.9	9 425.4	11 348.7	244.9
Non-current assets	11 293.5	11 227.4	20 373.6	20 285.6	14 692.8	17 515.7	46 359.9	49 028.8	1 116.1
Total value of assets	*14 145.1*	*15 098.2*	*22 398.5*	*22 336.7*	*22 040.6*	*25 853.4*	*58 584.3*	*63 288.3*	*1 582.7*
Liabilities									
Current liabilities	3 168.0	4 192.1	2 372.5	2 689.2	5 150.8	5 921.8	10 691.2	12 803.0	254.2
Non-current liabilities	4 230.8	4 602.7	8 957.0	8 015.1	4 468.5	5 293.9	17 656.3	17 911.7	363.9
Total value of liabilities	*7 398.8*	*8 794.8*	*11 329.4*	*10 704.3*	*9 619.3*	*11 215.6*	*28 347.6*	*30 714.7*	*618.0*
Net worth	**6 746.3**	**6 303.4**	**11 069.1**	**11 632.4**	**12 421.3**	**14 637.8**	**30 236.7**	**32 573.5**	**964.6**

(a) Includes items listed plus value of capital work done for own use.

8.16 MANAGEMENT UNIT LEVEL, ACQUISITIONS AND DISPOSALS OF FIXED TANGIBLE ASSETS(a) BY INDUSTRY SUBDIVISION

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on									
Land	9.6	18.5	0.3	—	21.4	25.1	31.3	43.5	0.3
Dwellings	14.2	18.5	0.5	—	27.2	48.5	41.9	67.0	0.9
Other buildings and structures	259.4	297.6	555.6	455.1	728.8	1 291.9	1 543.7	2 044.6	11.5
Plant, machinery and equipment	739.8	754.1	929.9	1 022.0	1 195.5	1 513.5	2 865.3	3 289.6	85.6
Total acquisitions	**1 023.1**	**1 088.7**	**1 486.3**	**1 477.1**	**1 972.9**	**2 879.0**	**4 482.2**	**5 444.8**	**98.3**
Disposal of assets	228.2	88.0	21.5	31.5	147.1	123.0	396.8	242.6	5.4
Net capital expenditure	**794.9**	**1 000.7**	**1 464.8**	**1 445.5**	**1 825.8**	**2 756.0**	**4 085.4**	**5 202.2**	**92.9**

(a) Includes items listed plus value of capital work done for own use.

8.17 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY INDUSTRY CLASS

	Coal mining		*Oil and gas extraction*		*Iron ore mining*		*Bauxite mining*	
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods								
Produced by this business(b)	9 408.6	9 019.6	7 740.3	7 600.8	3 053.7	2 907.7	796.0	823.9
Not produced by this business(b)	164.7	151.6	—	7.0	58.0	89.5	—	—
Service income	84.7	77.4	46.3	26.0	71.9	84.6	—	—
Rent, leasing and hiring income	11.6	11.7	1.8	28.4	7.9	9.0	—	0.1
Government subsidies	13.3	4.4	—	—	0.7	0.4	0.1	0.1
Plus								
Capital work done for own use	189.8	77.2	17.0	19.2	10.3	11.8	1.4	32.2
Turnover	**9 872.7**	**9 341.9**	**7 805.4**	**7 681.4**	**3 202.4**	**3 103.0**	**797.5**	**856.3**
Plus								
Closing stocks	698.1	741.5	201.1	238.9	337.9	279.5	41.0	40.3
Less								
Opening stocks	796.1	719.9	215.7	212.6	345.6	327.2	37.0	54.9
Less								
Purchases								
Materials, components, containers etc.(c)(d)	799.4	792.7	86.2	126.2	189.2	229.3	98.8	112.9
Electricity and fuels	364.1	376.3	24.5	24.3	144.5	142.8	80.6	77.4
Goods for resale(c)	136.3	145.4	—	—	29.5	40.2	—	—
Rent, leasing and hiring expenses								
Motor vehicles	9.2	11.1	1.6	1.9	1.3	1.0	0.2	0.2
Plant, machinery and other equipment	44.6	52.4	10.2	9.4	8.6	8.6	3.5	4.9
Land, buildings and other structures	46.3	27.7	19.6	28.0	33.5	6.4	16.4	0.5
Other rent leasing and hiring(e)	—	5.3	—	0.6	—	4.8	—	18.5
Outward freight and cartage	1 633.4	1 528.2	87.7	129.7	17.6	21.8	4.4	12.3
Motor vehicle expenses	11.2	14.0	8.1	8.5	8.3	8.7	1.2	1.6
Repair and maintenance expenses	784.2	754.7	172.0	109.9	223.3	242.3	31.3	33.2
Payment for contract, sub-contract and commission work	461.1	518.5	224.1	277.3	361.8	395.7	39.3	26.1
Purchases and selected expenses	*4 289.9*	*4 226.2*	*634.1*	*715.9*	*1 017.5*	*1 101.7*	*275.7*	*287.5*
Value added	**5 484.9**	**5 137.3**	**7 156.7**	**6 991.9**	**2 177.3**	**1 953.7**	**525.9**	**554.1**

For footnotes see end of table.

8.17 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY INDUSTRY CLASS—*continued*

	Copper ore mining		*Gold ore mining*		*Mineral sand mining*		*Silver-lead-zinc ore mining*	
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods								
Produced by this business(b)	947.8	988.6	4 191.0	4 108.5	516.0	614.8	913.8	1 020.8
Not produced by this business(b)	—	—	—	0.5	3.3	8.1	—	15.7
Service income	1.1	0.3	23.8	5.4	—	—	1.3	1.3
Rent, leasing and hiring income	2.1	0.5	2.2	2.5	0.4	0.6	1.8	1.7
Government subsidies	6.2	6.7	4.4	3.6	—	—	5.6	6.0
Plus								
Capital work done for own use	8.8	22.9	15.8	48.9	1.9	7.7	12.5	18.8
Turnover	**966.0**	**1 019.0**	**4 237.3**	**4 169.4**	**521.7**	**631.3**	**934.9**	**1 064.2**
Plus								
Closing stocks	153.4	150.5	520.9	570.8	161.2	142.3	154.7	114.3
Less								
Opening stocks	181.1	140.4	513.0	513.4	164.1	152.4	160.6	145.8
Less								
Purchases								
Materials, components, containers etc.(c)(d)	131.5	102.3	600.5	440.7	88.9	91.5	235.5	139.1
Electricity and fuels	49.1	52.1	293.8	300.5	62.4	72.5	70.6	67.9
Goods for resale(c)	—	—	—	0.5	3.1	8.0	—	18.2
Rent, leasing and hiring expenses								
Motor vehicles	1.7	1.3	2.8	4.1	0.3	0.2	1.6	1.7
Plant, machinery and other equipment	4.3	4.2	30.7	37.1	11.5	9.7	1.7	2.6
Land, buildings and other structures	1.5	0.1	9.0	7.6	1.3	1.5	0.1	0.2
Other rent leasing and hiring(e)	—	—	—	1.3	—	0.2	—	1.4
Outward freight and cartage	25.6	16.1	12.6	29.3	18.0	26.4	116.4	81.8
Motor vehicle expenses	2.2	6.5	14.9	14.7	2.2	2.5	3.8	3.5
Repair and maintenance expenses	49.0	78.4	246.5	250.5	34.3	42.6	88.7	101.2
Payment for contract, sub-contract and commission work	77.6	90.6	946.7	1 060.7	42.7	55.6	66.8	54.3
Purchases and selected expenses	*342.5*	*351.5*	*2 157.5*	*2 147.0*	*264.8*	*310.7*	*585.3*	*472.0*
Value added	**595.9**	**677.7**	**2 087.6**	**2 079.9**	**254.0**	**310.4**	**343.8**	**560.7**

For footnotes see end of table.

8.17 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY INDUSTRY CLASS—*continued*

	Other metal ore mining		*Total metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Sales of goods							
Produced by this business(b)	668.6	1 047.2	11 086.9	11 511.6	28 235.8	28 132.1	838.6
Not produced by this business(b)	—	—	61.3	113.8	226.0	272.3	0.2
Service income	4.6	13.9	102.5	105.4	233.5	208.8	1.9
Rent, leasing and hiring income	4.5	6.7	19.0	21.0	32.4	61.1	0.3
Government subsidies	0.5	—	17.4	16.9	30.7	21.4	—
Plus							
Capital work done for own use	2.2	1.8	52.9	144.2	259.7	240.6	1.9
Turnover	**680.3**	**1 069.7**	**11 340.1**	**11 912.8**	**29 018.1**	**28 936.2**	**843.0**
Plus							
Closing stocks	248.7	284.0	1 617.8	1 581.6	2 517.0	2 562.0	225.8
Less							
Opening stocks	200.6	255.1	1 601.8	1 589.2	2 613.6	2 521.6	233.1
Less							
Purchases							
Materials, components, containers etc.(c)(d)	92.6	100.7	1 437.0	1 216.6	2 322.6	2 135.4	83.3
Electricity and fuels	62.5	79.2	763.4	792.5	1 152.0	1 193.0	18.2
Goods for resale(c)	—	—	32.6	66.9	168.9	212.3	0.2
Rent, leasing and hiring expenses							
Motor vehicles	0.4	0.2	8.2	8.7	19.1	21.7	0.7
Plant, machinery and other equipment	6.7	6.3	67.0	73.4	121.8	135.2	2.8
Land, buildings and other structures	1.3	1.3	63.0	17.5	128.9	73.3	1.6
Other rent leasing and hiring(e)	—	—	—	26.1	—	—	1.8
Outward freight and cartage	24.6	38.7	219.2	226.4	1 940.3	1 884.3	49.8
Motor vehicle expenses	4.3	12.3	37.1	49.8	56.3	72.2	2.3
Repair and maintenance expenses	65.5	65.7	738.7	813.8	1 694.9	1 678.5	20.0
Payment for contract, sub-contract and commission work	163.9	146.5	1 698.9	1 829.4	2 384.2	2 625.2	75.2
Purchases and selected expenses	*421.8*	*450.7*	*5 065.1*	*5 121.0*	*9 989.0*	*10 063.1*	*256.0*
Value added	**306.6**	**647.9**	**6 291.0**	**6 784.2**	**18 932.6**	**18 913.5**	**579.7**

(a) See Explanatory Notes, Statistical unit.
(b) Includes transfers out to other establishments of the same management unit where appropriate.
(c) Includes transfers in from other establishments of the same management unit where appropriate.
(d) Includes minerals for further processing.
(e) 'Other rent leasing and hiring' expenses were included in 'Plant, machinery and equipment' expenses in 1993–94.

8.18 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET AND INDUSTRY CLASS

	Coal mining		*Oil and gas extraction*		*Iron ore mining*		*Bauxite mining*	
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on								
Fixed tangible assets								
Land	10.5	27.8	0.2	—	1.4	1.5	0.1	0.1
Dwellings	15.9	19.4	2.6	—	1.2	3.0	8.4	7.7
Buildings and other structures	279.8	298.0	699.2	445.3	116.8	124.5	2.6	2.0
Plant, machinery and equipment	687.9	756.1	904.0	968.9	415.2	326.6	48.7	49.5
Total	**994.0**	**1 101.3**	**1 605.9**	**1 414.2**	**534.6**	**455.6**	**59.8**	**59.2**
Intangible assets	17.7	3.1	81.0	86.5	—	—	—	0.6
Disposals of fixed tangible assets	131.4	75.7	58.8	187.3	42.5	17.5	3.4	3.1
Disposals of intangible assets	1.6	0.2	8.0	15.6	2.5	—	—	—
Fixed capital expenditure less disposals								
Land, buildings and other structures	281.5	334.8	700.8	443.8	99.4	124.6	9.6	8.6
Plant machinery and equipment	581.1	690.8	846.3	783.0	392.7	313.5	46.8	47.5
Total	**862.6**	**1 025.7**	**1 547.0**	**1 226.8**	**492.1**	**438.1**	**56.4**	**56.1**

	Copper ore mining		*Gold ore mining*		*Mineral sand mining*		*Silver-lead-zinc ore mining*	
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on								
Fixed tangible assets								
Land	1.1	1.2	15.7	18.0	0.5	1.0	—	0.5
Dwellings	1.6	0.8	8.9	12.3	0.5	0.4	0.5	1.7
Buildings and other structures	84.2	18.6	392.3	645.3	6.4	32.4	34.7	55.5
Plant, machinery and equipment	41.6	56.2	267.0	398.6	28.9	38.6	42.4	77.4
Total	**128.6**	**76.9**	**683.9**	**1 074.2**	**36.3**	**72.5**	**77.5**	**135.1**
Intangible assets	3.7	0.5	12.7	13.5	1.7	2.9	4.6	10.2
Disposals of fixed tangible assets	9.1	11.6	37.6	69.0	1.4	2.2	9.5	4.6
Disposals of intangible assets	—	—	0.3	—	—	—	—	—
Fixed capital expenditure less disposals								
Land, buildings and other structures	82.5	16.4	402.3	658.0	6.8	33.4	34.6	56.5
Plant machinery and equipment	37.0	48.9	244.0	347.1	28.1	36.8	33.4	73.9
Total	**119.5**	**65.3**	**646.3**	**1 005.2**	**34.9**	**70.2**	**68.0**	**130.4**

For footnotes see end of table.

8.18 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET AND INDUSTRY CLASS—*continued*

	Other metal ore mining		*Total metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on							
Fixed tangible assets							
Land	1.4	1.3	20.1	23.6	30.8	51.5	0.3
Dwellings	12.0	3.2	33.1	29.2	51.6	48.6	0.9
Buildings and other structures	113.3	240.9	750.2	1 119.2	1 729.1	1 862.4	12.6
Plant, machinery and equipment	236.5	440.6	1 080.4	1 387.4	2 672.3	3 112.5	84.5
Total	**363.2**	**686.1**	**1 883.9**	**2 559.5**	**4 483.8**	**5 075.0**	**98.2**
Intangible assets	—	—	22.8	27.7	121.5	117.4	2.1
Disposals of fixed tangible assets	4.3	6.1	107.8	114.2	298.1	377.2	4.2
Disposals of intangible assets	—	—	2.8	—	12.4	15.7	—
Fixed capital expenditure less disposals							
Land, buildings and other structures	126.0	245.2	761.1	1 142.7	1 743.3	1 921.4	13.2
Plant machinery and equipment	232.9	434.8	1 015.0	1 302.6	2 442.4	2 776.4	80.8
Total	**358.9**	**680.0**	**1 776.1**	**2 445.3**	**4 185.7**	**4 697.8**	**94.0**

(a) See Explanatory Notes, Statistical unit.
(b) Excludes capital work done for own use—reported in table on pages 58–60.

8.19 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY STATE AND INDUSTRY SUBDIVISION

	NEW SOUTH WALES						
	Coal mining		*Metal ore mining*		*Total coal mining and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Sales of goods							
Produced by this business(b)	4 014.0	3 781.7	460.6	593.8	4 474.6	4 375.5	16.3
Not produced by this business(b)	143.1	122.4	—	—	143.1	122.4	—
Service income	22.8	22.0	0.8	0.5	23.6	22.5	—
Rent, leasing and hiring income	5.6	2.1	1.5	1.5	7.1	3.6	0.1
Government subsidies	0.2	0.1	1.1	0.1	1.3	0.2	—
Plus							
Capital work done for own use	170.0	57.1	1.6	8.1	171.6	65.2	0.1
Turnover	**4 355.8**	**3 985.4**	**465.5**	**603.9**	**4 821.3**	**4 589.4**	**16.6**
Plus							
Closing stocks	312.3	288.8	75.5	61.1	387.8	349.9	0.7
Less							
Opening stocks	381.5	307.7	60.0	72.4	441.5	380.1	0.7
Less							
Purchases							
Materials, components, containers etc.(c)(d)	336.4	304.0	101.8	87.4	438.2	391.4	1.1
Electricity and fuels	153.7	154.8	38.6	38.1	192.3	192.9	1.1
Goods for resale(c)	118.3	120.7	—	—	118.3	120.7	—
Rent, leasing and hiring expenses							
Motor vehicles	1.8	3.4	0.6	0.7	2.4	4.1	0.1
Plant, machinery and other equipment	28.5	25.0	0.5	0.1	29.0	25.1	0.3
Land, buildings and other structures	30.9	16.5	1.7	0.5	32.6	17.1	0.2
Other rent, leasing and hiring(e)	—	—	—	1.6	—	1.6	0.1
Outward freight and cartage	642.0	542.8	41.5	20.2	683.5	562.9	0.3
Motor vehicle expenses	5.3	4.9	2.2	2.4	7.5	7.4	0.3
Repair and maintenance expenses	379.5	386.2	63.6	55.6	443.2	441.8	1.3
Payment for contract, sub-contract and commission work	157.6	169.3	40.0	44.5	197.7	213.7	0.9
Purchases and selected expenses	*1 854.0*	*1 727.7*	*290.6*	*251.1*	*2 144.6*	*1 978.8*	*5.7*
Value added	**2 432.6**	**2 238.8**	**190.4**	**341.6**	**2 623.1**	**2 580.4**	**10.9**

For footnotes see end of table.

8.19 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY STATE AND INDUSTRY SUBDIVISION—*continued*

	VICTORIA						
	Coal mining and metal ore mining		*Oil and gas extraction*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Sales of goods							
Produced by this business(b)	542.4	539.0	3 501.8	2 875.9	4 044.2	3 414.9	n.p.
Not produced by this business(b)	—	—	—	—	—	—	n.p.
Service income	1.5	1.2	2.4	3.3	3.9	4.5	n.p.
Rent, leasing and hiring income	0.9	0.1	0.4	0.4	1.3	0.4	n.p.
Government subsidies	12.5	3.7	—	—	12.5	3.7	n.p.
Plus							
Capital work done for own use	7.0	4.6	13.7	6.5	20.7	11.1	n.p.
Turnover	**564.3**	**548.5**	**3 518.3**	**2 886.1**	**4 082.6**	**3 434.6**	**n.p.**
Plus							
Closing stocks	12.0	9.6	31.8	42.6	43.8	52.3	n.p.
Less							
Opening stocks	10.6	9.0	36.3	32.4	46.9	41.4	n.p.
Less							
Purchases							
Materials, components, containers etc.(c)(d)	28.4	29.7	25.0	56.3	53.4	86.1	n.p.
Electricity and fuels	18.2	11.6	6.0	1.0	24.3	12.6	n.p.
Goods for resale(c)	—	—	—	—	—	—	n.p.
Rent, leasing and hiring expenses							
Motor vehicles	1.0	1.1	0.1	0.1	1.1	1.3	n.p.
Plant, machinery and other equipment	1.6	2.4	0.7	0.3	2.3	2.7	n.p.
Land, buildings and other structures	8.0	0.1	0.3	0.5	8.3	0.5	n.p.
Other rent, leasing and hiring(e)	—	—	—	—	—	—	n.p.
Outward freight and cartage	9.9	11.2	3.5	3.5	13.4	14.7	n.p.
Motor vehicle expenses	1.3	1.8	1.0	1.8	2.3	3.6	n.p.
Repair and maintenance expenses	32.6	39.4	77.6	34.1	110.1	73.5	n.p.
Payment for contract, sub-contract and commission work	69.6	47.9	43.7	23.8	113.3	71.8	n.p.
Purchases and selected expenses	*170.6*	*145.3*	*158.0*	*121.4*	*328.5*	*266.7*	*n.p.*
Value added	**395.0**	**403.8**	**3 355.9**	**2 774.9**	**3 750.9**	**3 178.8**	**n.p.**

For footnotes see end of table.

8.19 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY STATE AND INDUSTRY SUBDIVISION— continued

QUEENSLAND

Items	*Coal mining*		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods									
Produced by this business(b)	4 585.3	4 440.9	336.1	351.0	1 765.0	1 668.2	6 686.3	6 460.0	30.5
Not produced by this business(b)	21.6	29.2	—	—	—	18.9	21.6	48.1	—
Service income	59.0	54.0	17.4	17.1	2.1	1.8	78.6	72.9	0.4
Rent, leasing and hiring income	4.1	8.3	0.1	0.1	1.2	0.8	5.4	9.2	0.1
Government subsidies	0.7	0.8	—	—	10.9	12.6	11.6	13.4	—
Plus									
Capital work done for own use	15.9	16.6	0.3	9.4	23.5	39.3	39.7	65.3	0.1
Turnover	**4 686.5**	**4 549.7**	**353.9**	**377.6**	**1 802.7**	**1 741.6**	**6 843.2**	**6 668.9**	**31.2**
Plus									
Closing stocks	371.0	430.7	21.6	19.9	304.4	265.0	697.0	715.6	1.8
Less									
Opening stocks	401.9	399.3	22.2	19.2	339.4	288.5	763.5	707.0	1.7
Less									
Purchases									
Materials, components, containers etc.(c)(d)	428.4	460.2	19.4	19.2	270.7	154.5	718.5	633.8	0.5
Electricity and fuels	178.4	197.3	0.4	1.4	115.0	105.6	293.8	304.3	2.2
Goods for resale(c)	18.0	24.6	—	—	—	21.3	18.0	45.9	—
Rent, leasing and hiring expenses									
Motor vehicles	5.7	4.8	0.4	0.4	2.3	2.4	8.3	7.5	0.1
Plant, machinery and other equipment	10.8	20.8	0.9	0.7	10.6	12.3	22.3	33.8	0.1
Land, buildings and other structures	7.0	10.7	0.2	—	17.9	2.8	25.2	13.5	0.3
Other rent, leasing and hiring(e)	—	3.7	—	—	—	13.8	—	17.5	0.2
Outward freight and cartage	962.2	979.5	66.4	107.4	76.0	60.0	1 104.6	1 146.9	0.9
Motor vehicle expenses	4.2	4.6	0.8	0.5	3.7	8.0	8.8	13.1	0.3
Repair and maintenance expenses	339.7	311.6	2.0	9.7	64.8	93.9	406.6	415.1	5.0
Payment for contract, sub-contract and commission work	241.5	311.3	14.8	2.6	169.3	178.5	425.5	492.4	0.2
Purchases and selected expenses	*2 196.0*	*2 329.0*	*105.3*	*141.8*	*730.3*	652.9	*3 031.5*	*3 123.8*	9.7
Value added	**2 459.6**	**2 252.1**	**248.0**	**236.5**	**1 037.5**	**1 065.2**	**3 745.1**	**3 553.8**	**21.5**

For footnotes see end of table.

8.19 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY STATE AND INDUSTRY SUBDIVISION—*continued*

	SOUTH AUSTRALIA			WESTERN AUSTRALIA						
	Total coal mining, oil and gas extraction and metal ore mining		*Mining n.e.c.*	*Coal mining and oil and gas extraction*		*Metal ore mining*		*Total coal mining,, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods										
Produced by this business(b)	1 058.9	934.9	60.2	2 998.5	3 657.2	7 471.7	7 828.3	10 470.2	11 485.4	724.1
Not produced by this business(b)	—	—	0.2	—	7.0	61.3	94.9	61.3	101.8	—
Service income	3.4	4.1	1.5	22.8	1.9	96.3	96.6	119.0	98.5	—
Rent, leasing and hiring income	2.5	1.1	—	1.2	28.1	13.5	17.2	14.7	45.3	—
Government subsidies	—	—	—	—	—	1.7	0.5	1.7	0.5	—
Plus										
Capital work done for own use	0.3	0.3	0.3	2.7	3.9	16.8	81.3	19.6	85.2	1.4
Turnover	**1 065.1**	**940.3**	**62.2**	**3 025.2**	**3 698.1**	**7 661.2**	**8 118.8**	**10 686.4**	**11 816.8**	**725.6**
Plus										
Closing stocks	70.5	89.3	5.8	85.3	101.3	954.1	975.5	1 039.4	1 076.8	217.0
Less										
Opening stocks	86.2	77.1	6.0	89.5	89.4	921.0	955.5	1 010.4	1 044.9	224.5
Less										
Purchases										
Materials, components, containers etc.(c)(d)	40.4	31.6	0.5	37.3	44.9	925.1	817.8	962.4	862.6	79.9
Electricity and fuels	19.6	25.0	1.1	21.6	21.7	512.9	547.8	534.6	569.5	13.0
Goods for resale(c)	—	—	0.2	—	—	32.6	45.6	32.6	45.6	—
Rent, leasing and hiring expenses										
Motor vehicles	1.2	2.5	0.4	1.4	1.2	4.6	4.9	5.9	6.1	0.1
Plant, machinery and other equipment	4.5	4.2	0.5	10.9	11.6	49.9	51.6	60.7	63.2	1.8
Land, buildings and other structures	4.3	4.5	0.1	15.1	23.4	41.6	12.6	56.7	36.0	1.0
Other rent, leasing and hiring(e)	—	3.1	—	—	2.2	—	5.9	—	8.1	1.5
Outward freight and cartage	26.8	5.8	33.2	3.0	2.9	71.7	111.5	74.7	114.4	15.0
Motor vehicle expenses	5.1	6.9	0.2	3.1	3.2	25.9	27.0	29.0	30.3	1.4
Repair and maintenance expenses	75.4	69.8	1.6	59.2	47.3	482.6	552.1	541.8	599.4	11.6
Payment for contract, sub-contract and commission work	30.9	33.8	2.0	135.0	218.9	1 298.9	1 427.4	1 433.9	1 646.3	71.9
Purchases and selected expenses	*208.2*	*187.2*	*39.8*	*286.6*	*377.3*	*3 445.8*	*3 604.3*	3 732.4	3 981.6	*197.3*
Value added	**841.2**	**765.3**	**22.2**	**2 734.5**	**3 332.6**	**4 248.6**	**4 534.4**	**6 983.0**	**7 867.0**	**520.8**

For footnotes see end of table.

8.19 ESTABLISHMENT LEVEL(a), INCOME AND EXPENDITURE BY STATE AND INDUSTRY SUBDIVISION—*continued*

	TASMANIA			NORTHERN TERRITORY					
	Total coal mining and metal ore mining		*Mining n.e.c.*	*Oil and gas extraction*		*Metal ore mining*		*Total oil and gas extraction and metal ore mining*	
	1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Sales of goods									
Produced by this business(b)	338.5	363.3	n.p.	390.0	307.8	773.0	790.2	1 163.0	1 098.0
Not produced by this business(b)	—	—	n.p.	—	—	—	—	—	—
Service income	—	—	n.p.	2.8	—	2.2	6.2	5.0	6.2
Rent, leasing and hiring income	0.3	0.5	n.p.	0.2	—	0.9	1.0	1.1	1.0
Government subsidies	0.1	—	n.p.	—	—	3.6	3.5	3.6	3.5
Plus									
Capital work done for own use	4.8	7.2	n.p.	0.6	0.9	2.5	5.4	3.0	6.4
Turnover	**343.7**	**371.0**	**n.p.**	**393.6**	**308.8**	**782.3**	**806.4**	**1 175.9**	**1 115.2**
Plus									
Closing stocks	60.5	49.4	n.p.	26.3	32.2	191.8	196.5	218.1	228.7
Less									
Opening stocks	50.5	60.9	n.p.	28.3	28.4	186.3	181.9	214.6	210.2
Less									
Purchases									
Materials, components, containers etc.(c)(d)	54.4	38.8	n.p.	4.4	6.1	50.8	85.1	55.2	91.1
Electricity and fuels	29.6	29.6	n.p.	0.2	2.2	57.8	56.9	57.9	59.1
Goods for resale(c)	—	—	n.p.	—	—	—	—	—	—
Rent, leasing and hiring expenses									
Motor vehicles	0.1	0.1	n.p.	—	—	0.1	—	0.1	—
Plant, machinery and other equipment	—	3.1	n.p.	0.1	0.4	2.8	2.6	2.9	3.0
Land, buildings and other structures	0.1	—	n.p.	0.3	—	1.5	1.6	1.7	1.6
Other rent, leasing and hiring(e)	—	1.7	n.p.	—	—	—	—	—	—
Outward freight and cartage	23.7	19.5	n.p.	11.2	12.5	2.5	7.6	13.6	20.1
Motor vehicle expenses	1.3	1.4	n.p.	0.2	0.2	2.2	9.4	2.4	9.7
Repair and maintenance expenses	43.3	38.7	n.p.	24.3	9.0	50.1	31.1	74.5	40.1
Payment for contract, sub-contract and commission work	35.7	16.5	n.p.	13.1	17.9	134.1	132.9	147.1	150.8
Purchases and selected expenses	*188.3*	*149.4*	*n.p.*	53.7	*48.3*	301.8	*327.2*	*355.4*	375.5
Value added	**165.4**	**210.1**	**n.p.**	**338.0**	**264.3**	**485.9**	**493.8**	**823.9**	**758.1**

(a) See Explanatory Notes, Statistical unit.
(b) Includes transfers out to other establishments of the same management unit where appropriate.
(c) Includes transfers in from other establishments of the same management unit where appropriate.
(d) Includes minerals for further processing.
(e) 'Other rent leasing and hiring' expenses were included in 'Plant, machinery and equipment' expenses in 1993–94.

8.20 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET, STATE AND INDUSTRY SUBDIVISION

	NEW SOUTH WALES						
	Coal mining		*Metal ore mining*		*Total coal mining and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on							
Fixed tangible assets							
Land	3.3	8.9	2.5	2.3	5.8	11.2	—
Dwellings	2.0	0.3	3.5	0.2	5.5	0.6	0.4
Buildings and other structures	171.8	106.5	48.2	102.2	220.0	208.7	—
Plant, machinery and equipment	388.6	387.6	62.9	66.1	451.5	453.7	3.
Total	**565.6**	**503.3**	**117.1**	**170.9**	**682.7**	**674.2**	**4.0**
Intangible assets	15.1	—	1.7	1.3	16.8	1.4	—
Disposals of fixed tangible assets	49.3	50.1	5.4	4.5	54.7	54.7	0.6
Disposals of intangible assets	1.6	—	—	—	1.6	—	—
Fixed capital expenditure less disposals							
Land, buildings and other structures	161.4	110.3	50.5	103.1	211.9	213.3	0.4
Plant machinery and equipment	354.9	342.9	61.1	63.3	416.0	406.2	3.0
Total	**516.3**	**453.2**	**111.7**	**166.4**	**628.0**	**619.6**	**3.4**

For footnotes see end of table.

8.20 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET, STATE AND INDUSTRY SUBDIVISION—*continued*

	VICTORIA						
	Coal mining and metal ore mining		*Oil and gas extraction*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on							
Fixed tangible assets							
Land	0.9	0.1	0.2	—	1.0	0.1	n.p.
Dwellings	0.1	0.1	—	—	0.1	0.1	n.p.
Buildings and other structures	10.9	8.0	282.3	265.4	293.2	273.4	n.p.
Plant, machinery and equipment	18.7	14.7	159.2	282.5	177.9	297.1	n.p.
Total	**30.5**	**22.9**	**441.7**	**547.9**	**472.2**	**570.8**	**n.p.**
Intangible assets	0.2	2.9	—	—	0.2	2.9	n.p.
Disposals of fixed tangible assets	6.4	0.7	2.6	4.5	9.0	5.2	n.p.
Disposals of intangible assets	—	—	—	—	—	—	n.p.
Fixed capital expenditure less disposals							
Land, buildings and other structures	11.7	8.1	282.5	265.4	294.2	273.5	n.p.
Plant machinery and equipment	12.4	14.1	156.6	278.0	169.0	292.1	n.p.
Total	**24.1**	**22.2**	**439.1**	**543.4**	**463.2**	**565.6**	**n.p.**

For footnotes see end of table.

8.20 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET, STATE AND INDUSTRY SUBDIVISION—*continued*

QUEENSLAND

	Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on									
Fixed tangible assets									
Land	7.1	18.7	—	—	1.2	0.1	8.3	18.8	—
Dwellings	13.7	18.8	2.1	—	2.8	0.2	18.6	19.0	—
Buildings and other structures	98.5	184.5	74.9	30.5	69.1	38.6	242.5	253.6	2.2
Plant, machinery and equipment	257.7	337.4	63.4	7.7	90.2	69.0	411.4	414.2	3.2
Total	**377.1**	**559.4**	**140.4**	**38.2**	**163.3**	**108.0**	**680.8**	**705.5**	**5.5**
Intangible assets	2.6	2.2	30.1	16.8	8.4	1.2	41.1	20.2	—
Disposals of fixed tangible assets	53.3	21.2	40.9	2.3	8.2	5.2	102.4	28.7	0.3
Disposals of intangible assets	—	0.2	8.0	4.4	—	—	8.0	4.6	—
Fixed capital expenditure less disposals									
Land, buildings and other structures	110.8	217.1	75.8	29.1	70.1	37.5	256.7	283.7	2.3
Plant machinery and equipment	213.0	321.1	23.7	6.8	85.0	65.3	321.7	393.2	2.9
Total	**323.8**	**538.2**	**99.5**	**35.9**	**155.1**	**102.8**	**578.4**	**676.9**	**5.2**

For footnotes see end of table.

8.20 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET, STATE AND INDUSTRY SUBDIVISION—*continued*

	SOUTH AUSTRALIA			WESTERN AUSTRALIA						
	Total coal mining, oil and gas extraction and metal ore mining		*Mining n.e.c.*	*Coal mining and oil and gas extraction*		*Metal ore mining*		*Total coal mining,, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
	1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on										
Fixed tangible assets										
Land	—	—	—	—	0.3	13.9	20.9	14.0	21.2	0.1
Dwellings	—	0.8	—	0.6	0.3	26.8	27.2	27.4	27.5	0.5
Buildings and other structures	44.0	29.5	0.1	317.1	108.5	536.4	898.4	853.5	1 006.8	10.3
Plant, machinery and equipment	46.9	46.4	1.0	666.0	675.3	874.4	1 145.3	1 540.4	1 820.6	76.7
Total	**90.9**	**76.7**	**1.1**	**983.7**	**784.3**	**1 451.6**	**2 091.9**	**2 435.3**	**2 876.1**	**87.6**
Intangible assets	19.0	29.9	—	29.3	40.0	11.7	23.0	41.0	64.0	2.1
Disposals of fixed tangible assets	4.2	8.2	0.1	40.3	181.6	81.8	81.5	122.0	263.1	3.2
Disposals of intangible assets	—	—	—	—	11.1	2.7	—	2.7	11.1	—
Fixed capital expenditure less disposals										
Land, buildings and other structures	43.5	27.4	0.1	317.3	109.0	543.3	926.2	860.5	1 035.2	10.4
Plant machinery and equipment	43.2	41.1	0.9	626.2	493.7	826.5	1 084.2	1 452.7	1 577.9	73.9
Total	**86.7**	**68.5**	**1.0**	**943.4**	**602.7**	**1 369.8**	**2 010.4**	**2 313.3**	**2 613.1**	**84.3**

For footnotes see end of table.

8.20 ESTABLISHMENT LEVEL(a), FIXED CAPITAL EXPENDITURE(b) BY TYPE OF ASSET, STATE AND INDUSTRY SUBDIVISION—*continued*

	TASMANIA			NORTHERN TERRITORY					
	Total coal mining and metal ore mining		*Mining n.e.c.*	*Oil and gas extraction*		*Metal ore mining*		*Total oil and gas extraction and metal ore mining*	
	1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items	$m	$m	$m	$m	$m	$m	$m	$m	$m
Capital expenditure on									
Fixed tangible assets									
Land	—	—	n.p.	—	—	1.7	0.2	1.7	0.2
Dwellings	—	—	n.p.	—	—	—	0.7	—	0.7
Buildings and other structures	25.4	26.7	n.p.	5.2	15.1	45.4	48.6	50.6	63.7
Plant, machinery and equipment	12.4	24.2	n.p.	2.4	7.8	29.4	48.5	31.8	56.3
Total	**37.8**	**50.8**	**n.p.**	**7.6**	**22.9**	**76.5**	**97.9**	**84.1**	**120.8**
Intangible assets	—	—	n.p.	2.6	—	0.8	—	3.4	—
Disposals of fixed tangible assets	2.9	6.2	n.p.	—	—	2.8	11.2	2.8	11.2
Disposals of intangible assets	—	—	n.p.	—	—	—	—	—	—
Fixed capital expenditure less disposals									
Land, buildings and other structures	24.5	24.9	n.p.	5.2	15.1	46.7	48.2	51.9	63.4
Plant machinery and equipment	10.4	19.8	n.p.	2.4	7.7	27.0	38.5	29.4	46.2
Total	**34.8**	**44.6**	**n.p.**	**7.6**	**22.9**	**73.7**	**86.7**	**81.3**	**109.6**

(a) See Explanatory Notes, Statistical unit.
(b) Excludes capital work done for own use—reported in table on pages 63–67.

8.21 ESTABLISHMENT LEVEL(a), MINERAL ROYALTIES PAID BY INDUSTRY CLASS

Items	Coal mining		Oil and gas extraction		Iron ore mining		Bauxite mining	
	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95
	$m	$m	$m	$m	$m	$m	$m	$m
To Governments	252.4	280.1	1 442.0	1 178.2	172.2	160.3	59.9	19.7
Others(b)	15.4	17.0	91.6	45.4	9.1	28.6	2.3	—
Total	**267.8**	**297.1**	**1 533.6**	**1 223.6**	**181.3**	**188.9**	**62.1**	**19.7**

Items	Copper ore mining		Gold ore mining		Mineral sand mining		Silver-lead-zinc ore mining	
	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95
	$m	$m	$m	$m	$m	$m	$m	$m
To Governments	32.8	33.2	20.2	15.0	13.5	17.2	23.9	23.2
Others(b)	—	0.2	7.0	7.5	2.0	1.0	—	—
Total	**32.8**	**33.4**	**27.1**	**22.5**	**15.4**	**18.2**	**23.9**	**23.2**

Items	Other metal ore mining		Total metal ore mining		Total coal mining, oil and gas extraction and metal ore mining		Mining n.e.c.
	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1994–95
	$m	$m	$m	$m	$m	$m	$m
To Governments	16.4	18.0	338.7	286.5	2 033.0	1 744.8	45.4
Others(b)	1.8	2.9	22.1	40.2	129.1	102.6	1.1
Total	**18.2**	**20.9**	**360.8**	**326.7**	**2 162.2**	**1 847.4**	**46.5**

(a) See Explanatory Notes, Statistical unit.
(b) Includes 'Mineral royalties paid to others' and 'Other royalties'.

8.22 ESTABLISHMENT LEVEL(a), MINERAL ROYALTIES PAID BY STATE AND INDUSTRY SUBDIVISION

NEW SOUTH WALES

Items		*Coal mining*		*Metal ore mining*		*Total coal mining and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
		$m	$m	$m	$m	$m	$m	$m
To	Governments	107.0	118.4	6.3	8.7	113.2	127.1	0.1
	Others(b)	4.2	6.1	0.1	0.1	4.3	6.1	0.1
	Total	**111.2**	**124.5**	**6.3**	**8.8**	**117.5**	**133.3**	**0.2**

VICTORIA

Items		*Coal mining and metal ore mining*		*Oil and gas extraction*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
		$m	$m	$m	$m	$m	$m	$m
To	Governments	7.5	7.7	1 161.1	883.9	1 168.7	891.6	n.p.
	Others(b)	0.7	1.1	71.0	30.0	71.7	31.0	n.p.
	Total	**8.2**	**8.8**	**1 232.1**	**913.9**	**1 240.4**	**922.6**	**n.p.**

QUEENSLAND

Items		*Coal mining*		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
		$m	$m	$m	$m	$m	$m	$m	$m	$m
To	Governments	123.9	139.0	18.9	18.8	51.7	45.8	194.5	203.6	1.5
	Others(b)	10.6	9.9	3.8	7.2	1.7	1.8	16.2	18.8	0.7
	Total	**134.6**	**148.9**	**22.7**	**26.0**	**53.4**	**47.6**	**210.7**	**222.5**	**2.2**

For footnotes see end of table.

8.22 ESTABLISHMENT LEVEL(a), MINERAL ROYALTIES PAID BY STATE AND INDUSTRY SUBDIVISION—*continued*

		SOUTH AUSTRALIA			WESTERN AUSTRALIA						
		Total coal mining, oil and gas extraction and metal ore mining		*Mining n.e.c.*	*Coal mining and oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Items		$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
To	Governments	65.4	45.9	0.3	198.9	233.0	242.9	195.0	441.8	428.0	43.3
	Others(b)	9.6	7.9	0.1	5.6	0.1	13.9	34.1	19.5	34.2	0.3
	Total	**75.0**	**53.8**	**0.4**	**204.5**	**233.2**	**256.8**	**229.1**	**461.3**	**462.2**	**43.6**

		TASMANIA			NORTHERN TERRITORY					
		Total coal mining and metal ore mining		*Mining n.e.c.*	*Oil and gas extraction*		*Metal ore mining*		*Total oil and gas extraction and metal ore mining*	
		1993–94	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Items		$m	$m	$m	$m	$m	$m	$m	$m	$m
To	Governments	4.2	8.5	n.p.	21.3	14.9	24.0	25.0	45.3	40.0
	Others(b)	0.6	0.7	n.p.	1.7	0.4	5.6	3.4	7.3	3.8
	Total	**4.8**	**9.3**	**n.p.**	**23.0**	**15.3**	**29.6**	**28.4**	**52.5**	**43.8**

(a) See Explanatory Notes, Statistical unit.
(b) Includes 'Mineral royalties paid to others' and 'Other royalties'.

SECTION 9 INDUSTRY PERFORMANCE MEASURES

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 section. Information on the uses and limitations of these measures can be found in the Explanatory Notes, Industry performance measures.

PERFORMANCE RATIOS

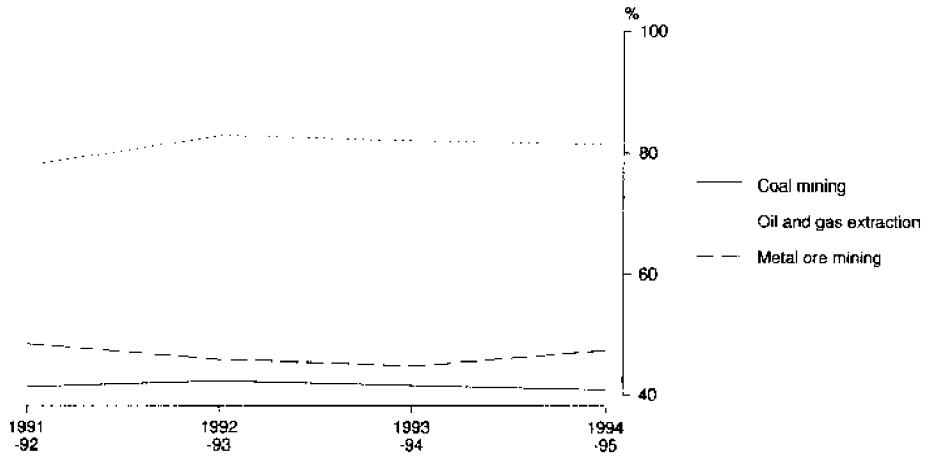
Performance ratios presented at the management unit level are based on data items relating to businesses (i.e. balance sheet items). Principal features for 1994–95 that appear in detail in the first table at the end of this section are:

- the profitability ratio of trading profit margin increased from 53% to 54%. The metal ore mining industry recorded the largest increase, rising almost 3 percentage points to 48% in 1994–95;
- the profitability ratio of return on assets decreased from 10% to 9%. Return on assets in the oil and gas extraction industry increased by one percentage point to 13%. The ratio decreased from 5% to 3% for the coal mining industry;
- the liquidity ratio remained steady at 0.9%;
- the debt ratio of interest coverage decreased slightly, from 5.8 to 5.4. Within the oil and gas extraction industry, the debt ratio of interest coverage increased from 7.5 to 9.7, while in the coal mining industry the ratio decreased from 3.3 to 2.5;
- the debt ratio of debts to assets remained steady at 51%. In the coal mining industry this ratio increased from 55% to 61% in 1994–95, while in the oil and gas extraction industry the ratio fell from 51% to 49%; and
- the capital expenditure ratio of acquisitions to disposals increased from 11.3 to 22.4. Increases were recorded in the coal mining industry where the ratio increased from 4.5 to 12.4 and in the metal ore mining industry where the ratio rose from 13.4 to 23.4. This increase offset the fall recorded in the oil and gas extraction industry where the ratio fell from 69.2 to 46.8.

Mining n.e.c. recorded a trading profit margin of 61% and a debts to assets ratio of 45% in 1994–95.

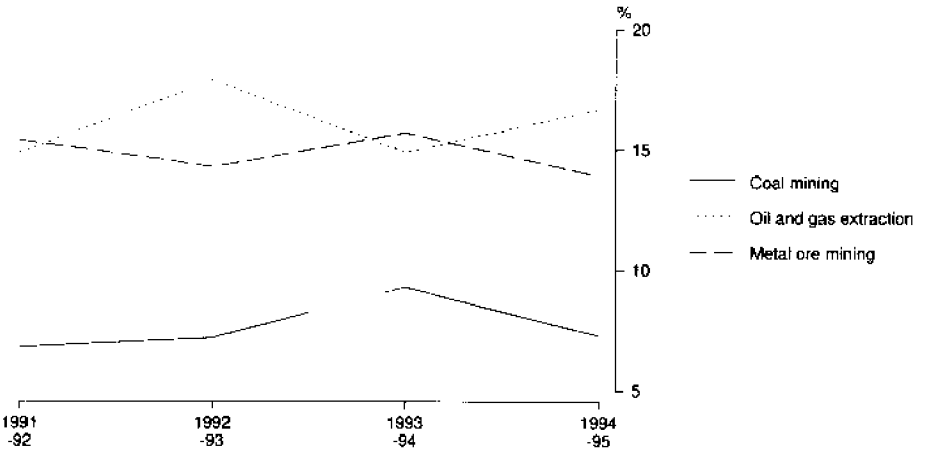
Analysis of a number of these ratios between 1991–92 and 1994–95 for each of the major mining industry subdivisions show different patterns of performance. The trading profit margin for the oil and gas extraction industry is higher than for either coal mining or metal ore mining during this period. This reflects the lower level of purchases and capital intensive nature of the industry.

9.1 TRADING PROFIT MARGIN



The return on funds displays a different pattern. The return on funds is much lower for the coal mining than for the 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. This was largely due to the fall in generated revenue for oil and gas extraction during 1993–94 resulting from the maintenance program conducted in the Challis and Jabiru fields. In 1994–95 the returns on funds for oil and gas increased while those for metal ore mining declined. The return on funds in coal mining decreased primarily as a result of increased expenses during 1994–95.

9.2 RETURN ON FUNDS



OPERATING RATIOS

There are a number of operating ratios that can be calculated from data collected at the establishment level. Principal features of the 1994–95 operating ratios for establishment data, presented in tables 9.6 and 9.7, were:

- turnover per person employed increased from $513,900 to $522,800 (up 2%);
- value added per person employed increased from $335,300 to $341,700 (up 2%); and
- wages and salaries per person employed increased from $64,200 to $64,900.

At an industry class level the main features of the operating ratios in 1994–95 were:

- oil and gas extraction had the highest turnover per person employed ($1,782,200) while the silver-lead-zinc ore mining industry had the lowest ($316,200);
- the oil and gas extraction industry had the highest level of value added per person employed ($1,622,300) while the mineral sand mining industry recorded the lowest level ($164,400); and
- wages and salaries paid per person employed was $76,500 in the oil and gas extraction industry compared with $43,000 in the mineral sand mining industry.

At the State level the main features of the operating ratios were:

- Victoria recorded the highest level of turnover per person employed ($1,687,000) while New South Wales recorded the lowest level ($308,700 per person employed);
- value added per person employed was greatest in Victoria ($1,561,300) and lowest in New South Wales ($173,500 per person employed); and
- wages and salaries paid per person employed ranged from $71,200 in New South Wales down to $50,600 per person employed in South Australia.

ECONOMY-WIDE COMPARISONS

Comparisons across industries in business performance measures are presented at the management unit level. The following analysis presents the mining sector in relation to other industries in the Australian economy.

Operating profit before tax (OPBT) for the entire mining sector (including services to mining) was $5,871 million in 1994–95 (which represented 7% of the total OPBT for all employing trading businesses). This was up on the $5,531 million contribution in 1993–94.

9.3 SUMMARY OF INDUSTRY PERFORMANCE

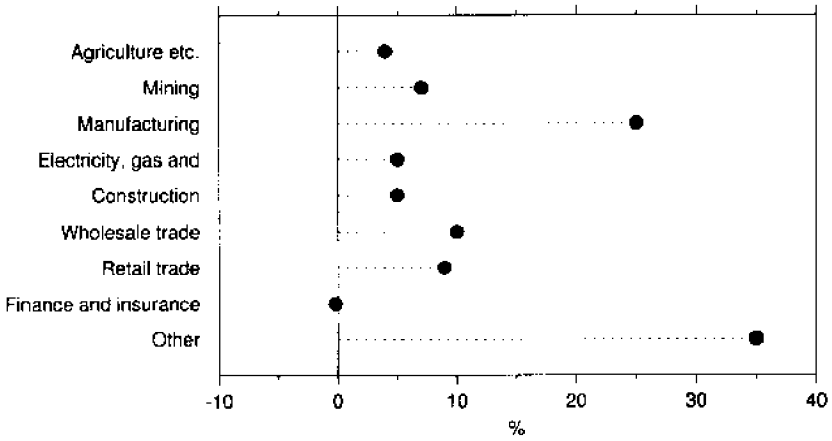
	Operating profit before tax		*Industry gross product*	
	1993–94	*1994–95*	*1993–94*	*1994–95*
Industry sector	$m	$m	$m	$m
Agriculture, forestry and fishing	4 679	3 460	10 117	9 411
Mining	5 531	5 871	16 914	17 060
Manufacturing	15 240	16 175	55 078	59 637
Electricity, gas and water supply	3 607	3 757	14 472	12 967
Construction	2 434	2 763	11 325	11 907
Wholesale trade	4 466	6 979	20 599	23 100
Retail trade	3 748	4 822	19 602	21 908
Finance and insurance	22 194	20 003	-926	-466
Other	18 626	20 512	73 639	83 562
Total	**80 525**	**84 342**	**220 820**	**239 086**

Source: Business Operations and Industry Performance, Australia, 1994–95 (Cat. no. 8140.0).

In terms of operating profit before tax, manufacturing accounted for $16,175 million (19%) in 1994–95 while the finance and insurance sector accounted for $20,003 million (24%).

Mining industry gross product in 1994–95 was $17,060 million (7%) of the total industry gross product of $239,086 million. The industries with the greatest contribution to industry gross product were manufacturing with $59,637 million (25%) and wholesale trade with $23,100 million (10%).

9.4 INDUSTRY SHARE OF GROSS PRODUCT



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

9.5 MANAGEMENT UNIT LEVEL(a), SELECTED PERFORMANCE RATIOS BY INDUSTRY SUBDIVISION

		Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Turnover ratios										
Asset turnover	%	0.7	0.6	0.3	0.3	0.5	0.5	0.5	0.5	0.5
Profitability ratios										
Trading profit margin	%	41.5	40.9	81.9	81.3	44.8	47.5	53.3	53.7	60.6
Return on funds	%	9.3	7.3	14.9	16.7	15.7	13.9	13.9	13.5	18.2
Return on assets	%	5.3	3.3	11.7	13.3	10.9	9.0	9.9	9.2	16.5
Liquidity ratios										
Liquidity ratio	times	0.7	0.7	0.8	0.7	1.1	1.1	0.9	0.9	1.
Current ratio	times	0.9	0.9	0.9	0.8	1.4	1.4	1.1	1.1	1.8
Debt ratios										
Interest coverage	times	3.3	2.5	7.5	9.7	5.9	4.5	5.8	5.4	13.9
Debts to assets	%	55.2	61.4	51.1	48.5	47.7	46.8	50.8	50.9	45.4
Capital expenditure ratios										
Acquisitions to disposals	times	4.5	12.4	69.2	46.8	13.4	23.4	11.3	22.4	18.
Net capital expenditure to assets	%	5.9	7.0	6.6	6.5	9.0	11.5	7.3	8.6	6.8

(a) See Explanatory Notes, Statistical unit.

9.6 ESTABLISHMENT LEVEL(a),SELECTED OPERATING RATIOS BY INDUSTRY CLASS

Items	Unit	Coal mining		Oil and gas extraction		Iron ore mining		Bauxite mining	
		1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95
Value per person employed(b)									
Wages and salaries(c)	$'000	74.0	72.3	72.4	76.5	63.1	66.0	49.0	53.6
Turnover	$'000	374.2	369.3	1 756.4	1 782.2	505.4	509.5	456.0	499.9
Value added	$'000	207.9	203.1	1 610.4	1 622.3	343.6	320.8	300.7	323.5
Net capital expenditure(d)	$'000	32.7	40.6	348.1	284.7	77.7	71.9	32.2	32.8
Ratio of									
Value added to turnover	times	0.6	0.6	0.9	0.9	0.7	0.6	0.7	0.7
Wages and salaries to value added(c)	times	0.4	0.4	—	0.1	0.2	0.2	0.2	0.2

Items	Unit	Copper ore mining		Gold ore mining		Mineral sand mining		Silver-lead-zinc ore mining	
		1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1993–94	1994–95
Value per person employed(b)									
Wages and salaries(c)	$'000	57.7	59.4	45.3	50.2	42.9	43.0	58.0	55.1
Turnover	$'000	361.3	455.7	529.5	506.1	294.7	334.4	314.3	316.2
Value added	$'000	222.8	303.1	260.9	252.5	143.5	164.4	115.6	166.6
Net capital expenditure(d)	$'000	44.7	29.2	80.8	122.0	19.7	37.2	22.9	38.8
Ratio of									
Value added to turnover	times	0.6	0.7	0.5	0.5	0.5	0.5	0.4	0.5
Wages and salaries to value added(c)	times	0.3	0.2	0.2	0.2	0.3	0.3	0.5	0.3

Items	Unit	Other metal ore mining		Total metal ore mining		Total coal mining, oil and gas extraction and metal ore mining		Mining n.e.c.
		1993–94	1994–95	1993–94	1994–95	1993–94	1994–95	1994–95
Value per person employed(b)								
Wages and salaries(c)	$'000	47.7	56.3	52.8	55.6	64.2	64.9	53.0
Turnover	$'000	318.9	483.6	442.3	462.8	513.9	522.8	455.7
Value added	$'000	143.7	292.9	245.4	263.5	335.3	341.7	313.3
Net capital expenditure(d)	$'000	168.3	307.4	69.3	95.0	74.1	84.9	50.8
Ratio of								
Value added to turnover	times	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Wages and salaries to value added(c)	times	0.3	0.2	0.2	0.2	0.2	0.2	0.2

(a) See Explanatory Notes, Statistical unit.
(b) Includes working proprietors.
(c) Excludes amounts drawn by working proprietors.
(d) Fixed capital expenditure less disposals.

9.7 ESTABLISHMENT LEVEL(a), SELECTED OPERATING RATIOS BY STATE AND INDUSTRY SUBDIVISION

NEW SOUTH WALES

Items	Unit	Coal mining 1993–94	Coal mining 1994–95	Metal ore mining 1993–94	Metal ore mining 1994–95	Total coal mining and metal ore mining 1993–94	Total coal mining and metal ore mining 1994–95	Mining n.e.c. 1994–95
Value per person employed(b)								
Wages and salaries(c)	$'000	74.4	74.2	55.5	53.8	72.0	71.2	27.9
Turnover	$'000	322.0	313.5	234.5	280.3	310.8	308.7	129.4
Value added	$'000	179.8	176.1	95.9	158.5	169.1	173.5	84.9
Net capital expenditure(d)	$'000	38.2	35.6	56.3	77.2	40.5	41.7	26.3
Ratio of								
Value added to turnover	times	0.6	0.6	0.4	0.6	0.5	0.6	0.7
Wages and salaries to value added(c)	times	0.4	0.4	0.6	0.3	0.4	0.4	0.3

VICTORIA

Items	Unit	Coal mining and metal ore mining 1993–94	Coal mining and metal ore mining 1994–95	Oil and gas extraction 1993–94	Oil and gas extraction 1994–95	Total coal mining, oil and gas extraction and metal ore mining 1993–94	Total coal mining, oil and gas extraction and metal ore mining 1994–95	Mining n.e.c. 1994–95
Value per person employed(b)								
Wages and salaries(c)	$'000	61.6	68.5	66.1	68.6	62.7	68.5	n.p.
Turnover	$'000	337.1	373.2	6 385.4	5 099.1	1 834.9	1 687.0	n.p.
Value added	$'000	236.0	274.7	6 090.5	4 902.7	1 685.8	1 561.3	n.p.
Net capital expenditure(d)	$'000	14.4	15.1	797.0	960.0	208.2	277.8	n.p.
Ratio of								
Value added to turnover	times	0.7	0.7	1.0	1.0	0.9	0.9	n.p.
Wages and salaries to value added(c)	times	0.3	0.2	—	—	—	—	n.p.

QUEENSLAND

Items	Unit	Coal mining 1993–94	Coal mining 1994–95	Oil and gas extraction 1993–94	Oil and gas extraction 1994–95	Metal ore mining 1993–94	Metal ore mining 1994–95	Total coal mining, oil and gas extraction and metal ore mining 1993–94	Total coal mining, oil and gas extraction and metal ore mining 1994–95	Mining n.e.c. 1994–95
Value per person employed(b)										
Wages and salaries(c)	$'000	73.7	70.7	53.9	54.0	51.5	53.3	66.7	65.3	36.8
Turnover	$'000	462.6	448.1	1 168.1	1 187.4	413.5	406.5	462.6	452.0	172.3
Value added	$'000	242.8	221.8	818.5	743.6	238.0	248.6	253.2	240.8	118.9
Net capital expenditure(d)	$'000	32.0	53.0	328.3	112.9	35.6	24.0	39.1	45.9	28.8
Ratio of										
Value added to turnover	times	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.5	0.7
Wages and salaries to value added(c)	times	0.3	0.3	0.1	0.1	0.2	0.2	0.3	0.3	0.3

For footnotes see end of table.

9.7 ESTABLISHMENT LEVEL(a), SELECTED OPERATING RATIOS BY STATE AND INDUSTRY SUBDIVISION—*continued*

		SOUTH AUSTRALIA			WESTERN AUSTRALIA						
		Total coal mining, oil and gas extraction and metal ore mining		*Mining n.e.c.*	*Coal mining and oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Value per person employed(b)											
Wages and salaries(c)	$'000	50.6	50.6	36.0	87.1	88.0	52.4	56.0	58.1	60.9	60.8
Turnover	$'000	493.1	493.1	486.0	973.4	1 290.3	484.8	511.6	565.1	630.7	536.7
Value added	$'000	389.4	389.4	173.8	879.8	1 162.8	268.9	285.7	369.3	419.9	385.2
Net capital expenditure(d)	$'000	40.2	32.3	7.6	303.6	210.3	86.7	126.7	122.3	139.5	62.4
Ratio of											
Value added to turnover	times	0.8	0.8	0.4	0.9	0.9	0.6	0.6	0.7	0.7	0.7
Wages and salaries to value added(c)	times	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2

		TASMANIA			NORTHERN TERRITORY					
		Total coal mining and metal ore mining		*Mining n.e.c.*	*Oil and gas extraction*		*Metal ore mining*		*Total oil and gas extraction and metal ore mining*	
Items	*Unit*	*1993–94*	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Value per person employed(b)										
Wages and salaries(c)	$'000	60.6	70.9	n.p.	123.0	86.7	53.8	55.9	61.4	59.5
Turnover	$'000	245.8	341.6	n.p.	2 460.2	1 506.4	600.4	524.7	803.8	640.2
Value added	$'000	118.3	193.5	n.p.	2 112.3	1 289.3	372.9	321.3	563.1	435.2
Net capital expenditure(d)	$'000	24.9	41.1	n.p.	47.6	111.5	56.6	56.4	55.6	62.9
Ratio of										
Value added to turnover	times	0.5	0.6	n.p.	0.9	0.9	0.6	0.6	0.7	0.7
Wages and salaries to value added(c)	times	0.5	0.4	n.p.	0.1	0.1	0.1	0.2	0.1	0.1

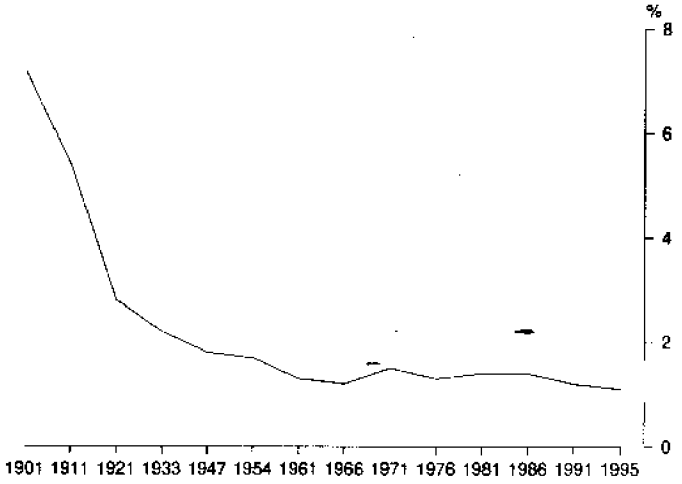
(a) See Explanatory Notes, Statistical unit.
(b) Includes working proprietors.
(c) Excludes amounts drawn by working proprietors.
(d) Fixed capital expenditure less disposals.

SECTION 10 EMPLOYMENT

HISTORICAL EMPLOYMENT

The proportion of employed persons in mining in Australia is estimated to have declined during this century from a high of around 7% in 1901 to just over 1% in 1995. The following graph illustrates the changes in the proportion of employed persons involved in mining in Australia.

10.1 PROPORTION OF LABOUR FORCE EMPLOYED IN MINING



Source: Year Book, Australia (Cat. no. 1301.0).

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. In recent years the Mining Census has recorded a tapering in the number employed.

10.2 EMPLOYMENT IN MINING(a)

	Employment at mining establishments from the Mining Census(a)
1901	113 462
1911	94 762
1921	53 164
1933	58 092
1947	48 992
1954	56 613
1961	46 125
1966	47 777
1971	62 642
1976	67 609
1981	77 788
1986	78 969
1991	(b)65 778
1992	(b)61 348
1993	66 462
1994	(b)56 465
1995	(b)55 348

(a) Employment at mining establishments from the Mining Census. Excludes ANZSIC Subdivision 15 Services to mining.

(b) Excludes ANZSIC Subdivision 14 Other mining which employed 8,799 persons in 1990 and 8,415 persons in 1993.

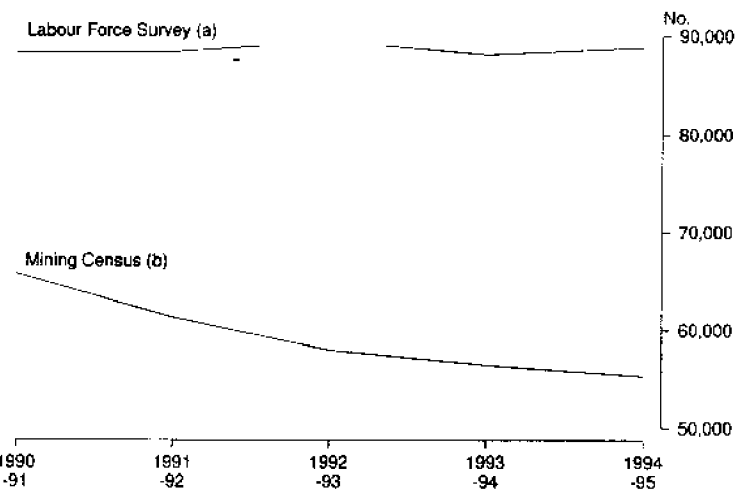
This tapering in recorded employment may be explained by changes occurring within the mining industry. These include increased productivity including changes to working practices at a number of mines and, in recent years, greater use of contractors whose industry of employment is specific to the activities they undertake.

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 and may be primarily classified to industry categories that are out of scope of the Mining Census. The use of such contract arrangements occurs to a significant extent in gold, coal and iron ore mining (see Explanatory Notes, Scope).

Employment numbers from the Mining Census 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.

10.3 MINING EMPLOYMENT



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

MANAGEMENT UNIT EMPLOYMENT

Employment information is also collected at the management unit level (which may cover activities other than the operation of mine sites). The total employment recorded at this level will often be greater than that recorded at the establishment unit level. Details reported in the 1994–95 annual census appear in Table 10.10 on page 90.

Total employment at the management unit level at the end of June 1995 decreased by 660 persons (1%) to 60,447 persons. All industry subdivisions recorded decreases in employment with the coal mining industry reporting the largest decrease, a fall of 277 persons (1%) to

26,429 persons. Employment fell in the metal ore mining industry by 202 persons (1%) and in the oil and gas extraction industry by 181 persons (3%).

10.4 MANAGEMENT UNIT LEVEL(a), EMPLOYMENT BY INDUSTRY SUBDIVISION, JUNE 1995

ANZSIC subdivision		*Management units* no.	*Employment* no.	*Wages and salaries* $m
11	Coal mining	100	26 429	1 871
12	Oil and gas extraction	45	5 473	411
13	Metal ore mining	182	28 545	1 555
Total 1994–95		**327**	**60 447**	**3 837**
Total 1993–94		306	61 107	3 766

(a) See Explanatory Notes, Statistical unit.

The metal ore mining industry was the major contributor to national employment in mining with 28,545 persons (47%). The coal mining industry was next with 26,429 persons (44%) in 1994–95.

ESTABLISHMENT EMPLOYMENT

Data collected in the 1994–95 annual census of mining operations is presented in the tables on pages 91–95 and is summarised below. At the establishment level, employment decreased 2% to 55,348 persons at the end of June 1995.

10.5 ESTABLISHMENT LEVEL(a), EMPLOYMENT BY INDUSTRY CLASS, JUNE 1995

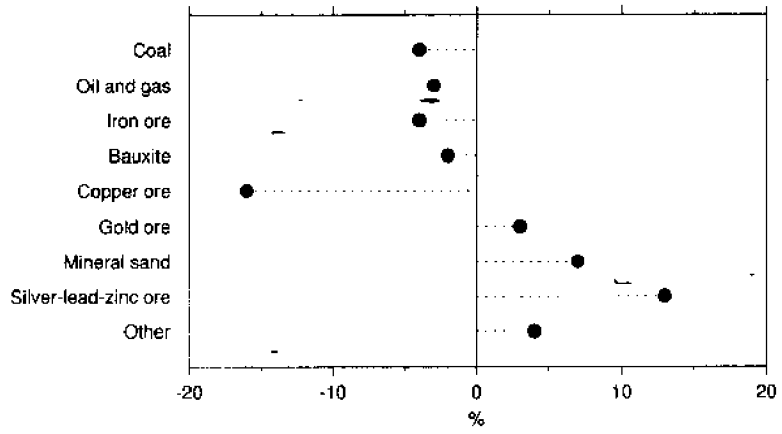
		Establishments	*Employment*			*Wages and salaries*
			Males	*Females*	*Total*	
		no.	no.	no.	no.	$m
Coal mining						
110	Coal mining	162	24 603	692	25 295	1 830
Oil and gas extraction						
1200	Oil and gas extraction	96	3 684	626	4 310	330
Metal ore mining						
1311	Iron ore mining	21	5 416	674	6 090	402
1312	Bauxite mining	10	1 683	30	1 713	92
1313	Copper ore mining	14	2 079	157	2 236	133
1314	Gold ore mining	153	7 127	1 111	8 238	413
1315	Mineral sand mining	12	1 613	275	1 888	81
1317	Silver-lead-zinc ore mining	16	3 147	219	3 366	185
	Other(b)	20	1 884	328	2 212	125
131	Total metal ore mining	246	22 949	2 794	25 743	1 431
Total 1994–95		**504**	**51 236**	**4 112**	**55 348**	**3 590**
Total 1993–94		516	52 348	4 117	56 465	3 627

(a) See Explanatory Notes, Statistical unit.
(b) Includes ANZSIC classes 1316 and 1319.

Employment in the oil and gas extraction industry declined by 134 persons (3%) and in the coal mining industry by 1,086 persons (4%), the latter mainly due to the closure of a mine in New South Wales.

The metal ore mining industry showed an overall increase of 103 persons (less than 1%). Increases in employment in the gold ore mining industry of 235 persons (3%), mineral sand mining (118 persons, 7%), silver-lead-zinc ore mining (391 persons, 13%) and other metal ore mining (79 persons, 4%) were offset by decreases in the iron ore mining industry (246 persons, 4%), bauxite mining (36 persons, 2%) and copper ore mining (438 persons, 16%).

10.6 PERCENTAGE CHANGE IN EMPLOYMENT BY INDUSTRY BETWEEN JUNE 1994 AND JUNE 1995



The coal mining industry remained the largest contributor to national mining employment, accounting for 25,295 persons (46%). Gold ore mining was next with 15% of the total employed. The number of production and other employees declined by 392 persons (1%). The number of administrative, office and sales employees fell by 634 persons (7%) to 8,799 persons, with most of this decrease occurring in the iron ore mining industry.

EMPLOYMENT BY STATE

Employment in New South Wales fell by 645 persons (4%) to 14,869 persons. Most of these were employees within the coal mining industry. Victorian and Tasmanian mining employment also decreased by 189 persons (8%) and 312 persons (22%), respectively. The Northern Territory was the only State or Territory to record an increase in employment, up 279 persons (19%).

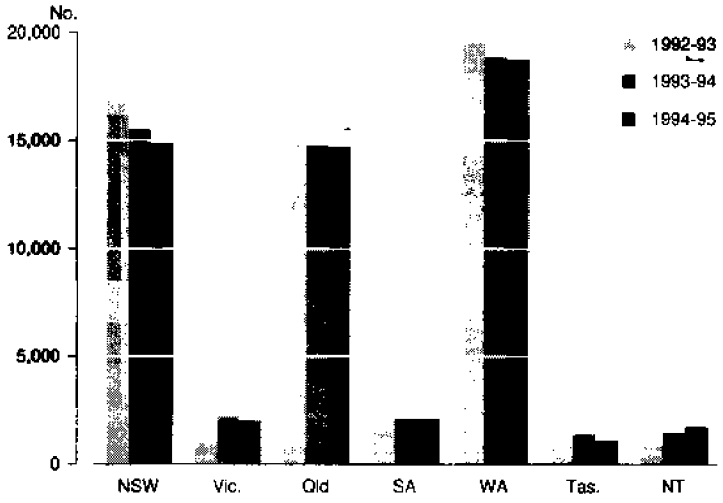
10.7 ESTABLISHMENT LEVEL(a), EMPLOYMENT BY STATE, JUNE 1995

	Establish-ments	*Employment*			*Wages and salaries*
		Males	*Females*	*Total*	
	no.	no.	no.	no.	$m
New South Wales	110	14 516	353	14 869	1 059
Victoria	25	1 926	110	2 036	140
Queensland	125	13 995	761	14 756	964
South Australia	15	1 876	247	2 123	107
Western Australia	189	16 353	2 383	18 736	1 140
Tasmania	9	1 007	79	1 086	77
Northern Territory	31	1 563	179	1 742	104
Australia	**504**	**51 236**	**4 112**	**55 348**	**3 590**

(a) See Explanatory Notes, Statistical unit.

Businesses in Western Australia employed the majority of persons within the mining industry (18,736 persons, or 34% of the total). New South Wales with 14,869 persons (27%) and Queensland with 14,756 persons (27%) were the next largest States of employment.

10.8 EMPLOYMENT BY STATE



EMPLOYMENT CHARACTERISTICS

The following information is drawn from a range of ABS labour surveys covering businesses included in ANZSIC Division B Mining which is a broader scope than the Mining Census, with the inclusion of Services to mining. While details are not strictly comparable with the Mining Census information, they enable a broad comparison of the mining industry to be made against all industries.

10.9 EMPLOYMENT CHARACTERISTICS OF WORKERS, MAY 1995

	Unit	Mining industry	All industries
Sex of employed persons			
Proportion of male workers	%	88.1	56.8
Proportion of female workers	%	11.9	43.2
Occupation of employed persons			
Plant and machine operators	%	27.5	10.7
Tradespersons	%	21.0	22.8
Professionals	%	10.9	13.7
Labour and related workers	%	22.4	16.8
Clerks	%	8.1	6.1
Managers and administrators	%	4.1	14.2
Other	%	6.0	15.7
Overtime			
Average weekly overtime hours worked per employee	hrs	4.59	1.19
Percentage of employees working overtime	%	39.77	16.61
Average weekly overtime hours per employee working overtime	hrs	11.55	7.16
Composition of average weekly earnings			
Base pay	$	835	592
Payment by measured result	$	108	8
Over-award pay	$	10	9
Overtime	$	120	48
Other			
Average weekly hours worked	hrs	41.8	35.9
Unemployment rate	%	3.2	9.0
Proportion covered by superannuation(a)	%	97.3	94.4

(a) At November 1995.

Sources: Labour Force, Australia, May 1995 (Cat. no. 6203.0); *Job Vacancies and Overtime, Australia, May 1995* (Cat. no. 6354.0); *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

10.10 MANAGEMENT UNIT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY INDUSTRY SUBDIVISION

Items	Unit	*Coal mining*		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Management units(a) at 30 June	no.	91	100	40	45	175	182	306	327	77
Employment at end of June	no.	26 706	26 429	5 654	5 473	28 747	28 545	61 107	60 447	2 140
Persons employed per management unit	no.	293.5	264.3	141.4	121.6	164.3	156.8	199.7	184.9	27.8
Labour ratios										
Profit to employment	$'000/ employee	26.5	18.0	457.8	536.7	76.8	75.4	90.1	92.0	105.0
Industry gross product to employment	$'000/ employee	149.8	145.3	1 077.0	1 054.2	192.7	210.8	255.8	258.6	234.6
To selected labour costs	times	2.0	1.9	14.5	13.2	3.5	3.6	3.9	3.8	4.2
Selected labour costs to employment	$'000/ employee	75.8	77.3	74.5	79.6	55.9	58.2	66.3	68.5	55.5

(a) See Explanatory Notes, Statistical unit.

10.11 ESTABLISHMENT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY INDUSTRY CLASS

Items	Unit	*Coal mining*		*Oil and gas extraction*		*Iron ore mining*		*Bauxite mining*	
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Number of establishments at 30 June(b)	no.	154	162	101	96	18	21	9	10
Employment at end of June(c)									
Males	no.	25 703	24 603	3 696	3 684	5 624	5 416	1 719	1 683
Females	no.	678	692	748	626	712	674	30	30
Total	*no.*	*26 381*	*25 295*	*4 444*	*4 310*	6 336	6 090	*1 749*	*1 713*
Persons employed per establishment(b)(c)	no.	171.3	156.1	44.0	44.9	352.0	290.0	194.3	171.3
Employment type									
Administrative, office and sales employees(c)	no.	3 132	3 495	1 832	1 584	1 963	1 341	55	68
Production and all other employees	no.	23 231	21 788	2 538	2 722	4 369	4 749	1 694	1 645
Employees working below ground	no.	7 441	8 317	—	—	—	—	—	—
Wages and salaries(d)	$m	1 951.8	1 829.7	321.8	329.7	399.8	402.0	85.8	91.7

Items	Unit	*Copper ore mining*		*Gold ore mining*		*Mineral sand mining*		*Silver-lead-zinc ore mining*	
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Number of establishments at 30 June(b)	no.	15	14	168	153	16	12	17	16
Employment at end of June(c)									
Males	no.	2 515	2 079	6 928	7 127	1 503	1 613	2 800	3 147
Females	no.	159	157	1 075	1 111	267	275	175	219
Total	*no.*	*2 674*	*2 236*	*8 003*	*8 238*	*1 770*	*1 888*	*2 975*	*3 366*
Persons employed per establishment(b)(c)	no.	178.3	159.7	47.6	53.8	110.6	157.3	175.0	210.4
Employment type									
Administrative, office and sales employees(c)	no.	189	109	1 180	1 116	298	363	282	336
Production and all other employees	no.	2 485	2 127	6 809	7 119	1 472	1 525	2 693	3 030
Employees working below ground	no.	1 257	1 184	1 227	1 161	—	—	1 717	1 875
Wages and salaries(d)	$m	154.4	132.8	362.8	413.2	75.9	81.2	172.5	185.4

For footnotes see end of table.

10.11 ESTABLISHMENT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY INDUSTRY CLASS—*continued*

Items	Unit	*Other metal ore mining*		*Total metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
		1993–94	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Number of establishments at 30 June(b)	no.	18	20	261	246	516	504	90
Employment at end of June(c)								
Males	no.	1 860	1 884	22 949	22 949	52 348	51 236	1 505
Females	no.	273	328	2 691	2 794	4 117	4 112	345
Total	*no.*	*2 133*	*2 212*	*25 640*	*25 743*	*56 465*	*55 348*	*1 850*
Persons employed per establishment(b)(c)	no.	118.5	110.6	98.2	104.7	109.4	109.8	20.6
Employment type								
Administrative, office and sales employees(c)	no.	502	387	4 469	3 720	9 433	8 799	208
Production and all other employees	no.	1 631	1 825	21 153	22 020	46 922	46 530	1 642
Employees working below ground	no.	478	564	4 679	4 784	12 120	13 101	15
Wages and salaries(d)	$m	101.7	124.6	1 352.8	1 431.0	3 626.5	3 590.4	98.1

(a) See Explanatory Notes, Statistical unit.
(b) See 'Glossary of terms'.
(c) Includes working proprietors.
(d) Excludes amounts drawn by working proprietors.

10.12 ESTABLISHMENT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY STATE AND INDUSTRY SUBDIVISION

		NEW SOUTH WALES						
		Coal mining		*Metal ore mining*		*Total coal mining and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Number of establishments at 30 June(b)	no.	86	88	19	22	105	110	33
Employment at end of June(c)								
Males	no.	13 341	12 503	1 876	2 013	15 217	14 516	102
Females	no.	188	211	109	142	297	353	26
Total	*no.*	*13 529*	*12 714*	*1 985*	*2 155*	*15 514*	*14 869*	*128*
Persons employed per establishment(b)(c)	no.	157.3	144.5	104.5	98.0	147.8	135.2	3.9
Employment type								
Administrative, office and sales(c)	no.	1 572	1 886	214	225	1 786	2 111	28
Production and all other	no.	11 949	10 816	1 768	1 927	13 717	12 743	100
Employees working below ground	no.	6 284	6 586	875	924	7 159	7 510	13
Wages and salaries(d)	$m	1 006.7	943.1	110.1	116.0	1 116.9	1 059.1	3.6

		VICTORIA						
		Coal mining and metal ore mining		*Oil and gas extraction*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Number of establishments at 30 June(b)	no.	26	22	3	3	29	25	7
Employment at end of June(c)								
Males	no.	1 600	1 400	511	526	2 111	1 926	n.p.
Females	no.	74	70	40	40	114	110	n.p.
Total	*no.*	*1 674*	*1 470*	*551*	*566*	*2 225*	*2 036*	*n.p.*
Persons employed per establishment(b)(c)	no.	64.4	66.8	183.7	188.7	76.7	81.4	n.p.
Employment type								
Administrative, office and sales(c)	no.	177	164	186	188	363	352	n.p.
Production and all other	no.	1 497	1 306	365	378	1 862	1 684	n.p.
Employees working below ground	no.	114	90	—	—	114	90	n.p.
Wages and salaries(d)	$m	103.1	100.7	36.4	38.8	139.6	139.5	n.p.

For footnotes see end of table.

10.12 ESTABLISHMENT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY STATE AND INDUSTRY SUBDIVISION—*continued*

		QUEENSLAND								
		Coal mining		*Oil and gas extraction*		*Metal ore mining*		*Total coal mining, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Number of establishments at 30 June(b)	no.	57	63	34	25	35	37	126	125	14
Employment at end of June(c)										
Males	no.	9 757	9 770	238	257	4 084	3 968	14 079	13 995	154
Females	no.	374	384	65	61	276	316	715	761	27
Total	*no.*	*10 131*	*10 154*	*303*	*318*	*4 360*	*4 284*	*14 794*	*14 756*	*181*
Persons employed per establishment(b)(c)	no.	177.7	161.2	8.9	12.7	124.6	115.8	117.4	118.1	12.9
Employment type										
Administrative, office and sales(c)	no.	1 178	1 240	110	130	301	334	1 589	1 704	22
Production and all other	no.	8 943	8 914	193	184	4 059	3 950	13 195	13 048	159
Employees working below ground	no.	1 105	1 704	—	—	1 517	1 641	2 622	3 345	—
Wages and salaries(d)	$m	746.6	718.2	16.3	17.2	224.3	228.2	987.3	963.6	6.7

		SOUTH AUSTRALIA			WESTERN AUSTRALIA					
		Total coal mining, oil and gas extraction and metal ore mining		*Mining n.e.c.*	*Coal mining and oil and gas extraction*		*Metal ore mining*		*Total coal mining,, oil and gas extraction and metal ore mining*		*Mining n.e.c.*
Items	*Unit*	*1993–94*	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1994–95*
Number of establishments at 30 June(b)	no.	16	15	11	40	43	161	146	201	189	23
Employment at end of June(c)											
Males	no.	1 908	1 876	117	2 644	2 513	13 784	13 840	16 428	16 353	1 079
Females	no.	252	247	11	464	353	2 019	2 030	2 483	2 383	273
Total	*no.*	*2 160*	*2 123*	*128*	*3 108*	*2 866*	*15 803*	*15 870*	*18 911*	*18 736*	*1 352*
Persons employed per establishment(b)(c)	no.	135.0	141.5	11.6	77.7	66.7	98.2	108.7	94.1	99.1	58.8
Employment type											
Administrative, office and sales(c)	no.	287	263	23	1 506	1 264	3 319	2 605	4 825	3 869	124
Production and all other	no.	1 873	1 860	105	1 528	1 602	12 469	13 265	13 997	14 867	1 228
Employees working below ground	no.	164	165	1	—	—	1 419	1 445	1 419	1 445	1
Wages and salaries(d)	$m	109.4	107.4	4.6	270.7	252.1	828.2	888.1	1 098.9	1 140.2	82.2

For footnotes see end of table.

10.12 ESTABLISHMENT LEVEL(a), EMPLOYMENT (AT END OF JUNE) BY STATE AND INDUSTRY SUBDIVISION—*continued*

		TASMANIA			NORTHERN TERRITORY					
		Total coal mining and metal ore mining		*Mining n.e.c.*	*Oil and gas extraction*		*Metal ore mining*		*Total oil and gas extraction and metal ore mining*	
Items	*Unit*	*1993–94*	*1994–95*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*	*1993–94*	*1994–95*
Number of establishments at 30 June(b)	no.	9	9	2	16	17	14	14	30	31
Employment at end of June(c)										
Males	no.	1 298	1 007	n.p.	145	202	1 162	1 361	1 307	1 563
Females	no.	100	79	n.p.	15	3	141	176	156	179
Total	*no.*	*1 398*	*1 086*	*n.p.*	*160*	*205*	*1 303*	*1 537*	*1 463*	*1 742*
Persons employed per establishment(b)(c)	no.	155.3	120.7	n.p.	10.0	12.1	93.1	109.8	48.8	56.2
Employment type										
Administrative, office and sales(c)	no.	239	187	n.p.	20	9	324	304	344	313
Production and all other	no.	1 159	899	n.p.	140	196	979	1 233	1 119	1 429
Employees working below ground	no.	560	363	n.p.	—	—	82	183	82	183
Wages and salaries(d)	$m	84.7	77.0	n.p.	19.7	17.8	70.1	85.8	89.8	103.6

(a) See Explanatory Notes, Statistical unit.
(b) See 'Glossary of terms'.
(c) Includes working proprietors.
(d) Excludes amounts drawn by working proprietors.

SECTION 11 INDUSTRIAL RELATIONS

TRADE UNION MEMBERSHIP

In August 1995, 46% of employees in the mining industry in Australia were members of a trade union, compared with 33% for all industries. While some other industries have higher rates of unionisation, this is a relatively high level for what is a mainly private sector industry. Across all industries, 25% of all private sector employees are trade union members. The Electricity, Gas and Water industry has 65% of employees in a trade union, while Manufacturing has 39% and Construction 31%.

Along with all industries, the level of unionisation in the mining industry is falling. The decline has been more marked in mining, having fallen from 72% in 1986 to 46% in 1995. Total all industries dropped from 46% to 33% over the same period.

INDUSTRIAL DISPUTES

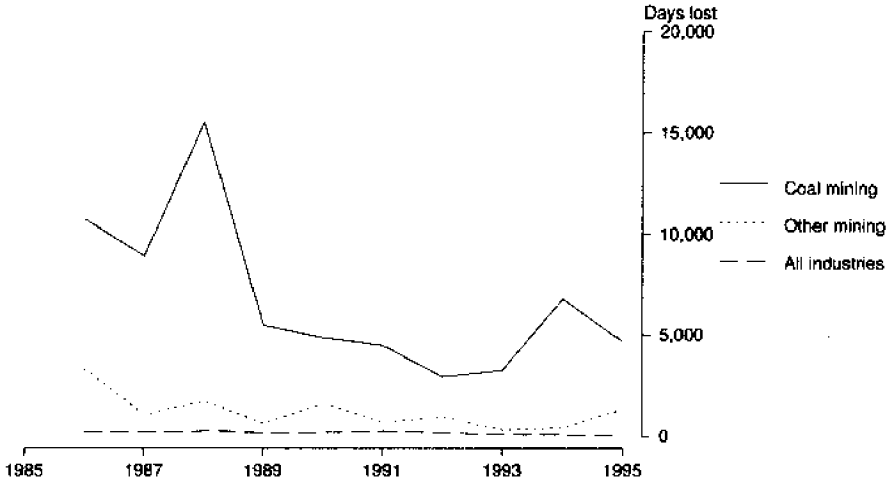
In 1995 the mining industry suffered a loss of 2,231 working days per thousand employees, which was 28 times the level of all industries (79 days). This high level of disputation continues to be principally attributable to workers in the coal industry where the level of working days lost per thousand employees in 1995 was three times the level of other than coal mining (4,660 days compared with 1,359 days). The disparity was more marked in 1994 when the level of disputation was as much as 15 times higher in the coal industry than in the other mining industries.

11.1 WORKING DAYS LOST PER THOUSAND EMPLOYEES

	Coal mining	*Other mining*	*Total mining*	*All industries*
1986	10 741	3 328	5 308	242
1987	8 920	1 072	3 410	223
1988	15 543	1 777	5 941	269
1989	5 505	642	1 930	190
1990	4 879	1 631	2 405	217
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

Source: Industrial Disputes, Australia (Cat. no. 6322.0).

11.2 INDUSTRIAL DISPUTES: MINING INDUSTRY, WORKING DAYS LOST PER THOUSAND EMPLOYEES



Source: Industrial Disputes, Australia (Cat. no. 6322.0).

SECTION 12 ENVIRONMENTAL PROTECTION EXPENDITURE

For the 1994–95 financial year, a similar suite of questions were asked of mining establishments as in previous years, in order to determine their total expenditure on pollution abatement and control measures. These included capital and current expenditure on environment protection and research and development expenditure on environment protection.

Capital expenditure on environment protection in the mining industry is defined as expenditure on any element of the production processes specifically concerned with protecting the environment by reduction or elimination of pollutants and wastes. This could be by either remedial (end of line) or preventative (change in production) measures. The former refers to 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, on the other hand, reduces or eliminates the production of 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 pollutants.

Capital expenditure on environment protection has been sought over a number of domains. These domains are protection of water, non-hazardous waste, hazardous waste, protection of air, noise abatement, land rehabilitation and other pollution abatement.

Current expenditure on environment protection in the mining industry is defined as expenditure to operate or maintain plant and equipment to abate pollution, payments to contractors to remove and dispose of waste, costs associated with wind and water erosion, ongoing site rehabilitation, regular sampling tests and related research and development expenditure.

Table 12.1 summarises both current and capital environment expenditure during 1994–95. Detailed tables at industry subdivision and State level appear at the end of this section. Data are also presented in the ABS publication *Environment Protection Expenditure, Australia, 1992–93 and 1993–94.*

12.1 SUMMARY OF ENVIRONMENTAL EXPENDITURE

	Expenditure		
	Current	*Capital*	*Total*
	$m	$m	$m
By Industry subdivision			
Coal mining	35	22	57
Oil and gas extraction	5	14	19
Metal ore mining	82	38	120
Mining n.e.c.	1	—	1
Total	*122*	*74*	*196*
By State			
New South Wales	14	8	22
Victoria	2	2	4
Queensland	53	26	79
South Australia	—	1	2
Western Australia	43	34	78
Tasmania	3	—	4
Northern Territory	5	2	7
Total	*122*	*74*	*196*

CURRENT EXPENDITURE

For the 1994–95 financial year, total pollution abatement and control (PAC) expenditure in the mining industry was $196 million. Current expenditure accounted for 62% of total pollution abatement expenditure with capital expenditure accounting for the remaining 38%.

The highest total pollution abatement and control expenditure was recorded by the metal ore mining ($120 million) and the coal mining ($57 million) industries. The former accounted for 61% of total PAC expenditure and the latter 29%.

Reported data indicated current expenditure of $71 million (58%) in the other category (e.g. environmental impact statements, environmental audits, energy audits). This was down on the $99 million reported for this category in 1993–94. This category also included the cost of mine site rehabilitation, a significant environmental remediation measure undertaken by mining establishments. Expenditure on purchased services (e.g. to contractors to remove wastes) rose from $14 million in 1993–94 to $31 million in 1994–95 and accounted for 26% of total current environmental expenditure.

Queensland with $53 million and Western Australia with $44 million were the States with the largest current expenditures on environment protection.

At a national level, expenditure specifically on environment protection accounted for just over 1% ($122 million) of total current expenditure ($10,063 million) in 1994–95.

CAPITAL EXPENDITURE

Capital expenditure on pollution abatement and control was split into two separate elements, end of line and change in production. End of line techniques accounted for 80% of capital expenditure while change in production accounted for the remaining 20%. 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.

In the case of end of line measures, expenditure on land rehabilitation and abatement of other pollutants accounted for $22 million as did expenditure on water pollutants. These two categories combined accounted for 60% of total capital expenditure. The $10 million spent to abate air pollutants accounted for a further 13% of expenditure.

In terms of total capital expenditure, spending on measures to abate water pollution accounted for 37% of spending ($27 million). Measures to rehabilitate land accounted for 31% ($23 million) while capital expenditure for the abatement of air pollution resulted in a further 25% ($19 million).

The largest capital expenditure on environmental expenditure was recorded in Western Australia with $34 million in 1994–95. This was followed by Queensland with $26 million during the same period.

At a national level, capital expenditure specifically on environment protection accounted for under 2% ($74 million) of total capital expenditure ($5,075 million) in 1994–95.

Further information providing background about the impact of mining activities on the environment, and a guide to the types of activities for which the pollution abatement and control expenditures reported in this section are incurred, can be found in the publication *Ecologically Sustainable Development Working Groups Final Report—Mining, November 1991,* AGPS 1991.

12.2 EXPENDITURE ON ENVIRONMENT PROTECTION BY INDUSTRY SUBDIVISION

Items	*Coal mining* $m	*Oil and gas extraction* $m	*Metal ore mining* $m	*Total coal mining, oil and gas extraction and metal ore mining* $m	*Mining n.e.c.* $m
Expenditure on environment protection					
Current expenditure					
Government fees, charges and taxes	6.8	0.4	12.7	19.9	0.1
Purchased services	5.0	2.3	24.0	31.2	0.3
Other expenditure	23.4	2.6	44.9	70.9	0.7
Total	*35.2*	*5.3*	*81.5*	*122.0*	*1.1*
Capital expenditure					
End-of-line techniques					
Land rehabilitation and other pollutants	6.1	1.4	14.9	22.4	—
Water pollutants	11.6	0.9	9.8	22.3	—
Solid waste pollutants					
Non-hazardous	0.2	0.4	0.8	1.4	—
Hazardous	—	0.3	3.0	3.3	—
Air pollutants	0.4	0.4	8.7	9.5	—
Noise pollutants	0.3	—	0.1	0.4	—
Change-in-production processes					
Land rehabilitation and other pollutants	0.2	—	0.1	0.3	—
Water pollutants	2.8	2.1	0.2	5.1	—
Solid waste pollutants					
Non-hazardous	—	—	—	—	0.1
Hazardous	—	—	—	—	—
Air pollutants	0.1	8.3	0.7	9.0	—
Noise pollutants	0.2	—	—	0.2	—
Total	*21.8*	*13.7*	*38.3*	*73.9*	*0.1*
Total expenditure	**57.0**	**19.0**	**119.9**	**195.8**	**1.2**
Expenditure on environment protection compared with total mining expenditure					
Current expenditure on environment	35.2	5.3	81.5	122.0	35.2
Total current expenditure	4 226.2	715.9	5 121.0	10 063.1	256.0
Percentage spent on environment (%)	0.8	0.7	1.6	1.2	13.7
Capital expenditure on environment	21.8	13.7	38.3	73.9	21.8
Total capital expenditure	1 101.3	1 414.2	2 559.5	5 075.0	98.2
Percentage spent on environment (%)	2.0	1.0	1.5	1.5	22.2

12.3 EXPENDITURE ON ENVIRONMENT PROTECTION(a)

Items	NSW $m	Vic. $m	Qld $m	SA $m	WA $m	Tas. $m	NT $m	Aust. $m
Expenditure on environment protection								
Current expenditure								
Government fees, charges and taxes	0.7	0.4	8.2	0.1	8.2	2.2	—	19.9
Purchased services	5.4	0.9	17.7	0.3	6.0	0.4	0.4	31.2
Other expenditure	7.7	1.1	27.3	0.1	29.3	0.9	4.6	70.9
Total	*13.8*	*2.5*	*53.2*	*0.5*	*43.5*	*3.5*	*5.0*	*122.0*
Capital expenditure								
End-of-line techniques								
Land rehabilitation and other pollutants	0.4	0.2	8.9	0.9	9.7	—	2.2	22.4
Water pollutants	4.0	0.3	14.5	0.5	2.9	0.1	—	22.3
Solid waste pollutants								
Non-hazardous	0.1	0.5	0.4	—	0.4	—	—	1.4
Hazardous	0.2	0.2	—	—	2.9	—	—	3.3
Air pollutants	0.3	0.1	2.2	—	6.8	—	—	9.5
Noise pollutants	0.3	—	—	—	0.1	—	—	0.4
Change-in-production processes								
Land rehabilitation and other pollutants	—	—	0.2	—	0.1	—	—	0.3
Water pollutants	2.4	0.5	—	—	2.2	—	—	5.1
Solid waste pollutants								
Non-hazardous	—	—	—	—	—	—	—	—
Hazardous	—	—	—	—	—	—	—	—
Air pollutants	0.1	—	—	—	8.9	—	—	9.0
Noise pollutants	0.2	—	—	—	—	—	—	0.2
Total	*7.9*	*1.7*	*26.2*	*1.4*	*34.2*	*0.1*	*2.2*	*73.9*
Total expenditure	**21.8**	**4.2**	**79.5**	**1.9**	**77.7**	**3.6**	**7.3**	**195.8**
Expenditure on environment protection compared with total mining expenditure								
Current expenditure on environment	13.8	2.5	53.2	0.5	43.5	3.5	5.0	122.0
Total current expenditure	1 978.8	266.7	3 123.8	187.2	3 981.6	149.4	375.5	10 063.1
Percentage spent on environment (%)	0.7	0.9	1.7	0.2	1.1	2.3	1.3	1.2
Capital expenditure on environment	7.9	1.7	26.2	1.4	34.2	0.1	2.2	73.9
Total capital expenditure	674.2	570.8	705.5	76.7	2 876.1	50.8	120.8	5 075.0
Percentage spent on environment (%)	1.2	0.3	3.7	1.8	1.2	0.2	1.8	1.5

(a) Excludes mining n.e.c.

EXPORTS

Australia is the world's largest exporter of black coal, alumina, diamonds, lead, zinc, ilmenite, rutile and zircon and the second largest exporter of iron ore and refined gold.

Exports of mining products rose in value by 2% from $14,603 million in 1993–94 to $14,914 million in 1994–95. The value of coal exports decreased by 4% from $7,189 million in 1993–94 to $6,893 million in 1994–95. The value of coal exports fell $296 million, despite increased export volumes, because of lower negotiated contract prices with Japanese steel mills and electricity utilities. The value of oil and gas exports rose by $417 million (16%).

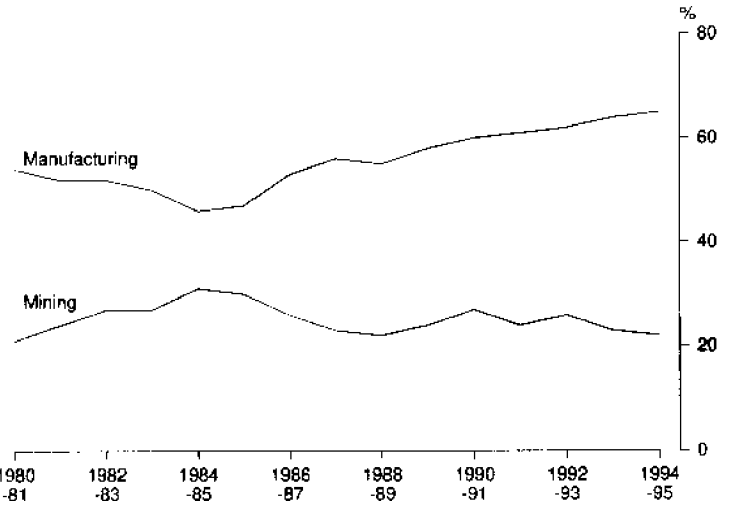
13.1 MERCHANDISE EXPORTS BY INDUSTRY OF ORIGIN

ANZSIC Division/subdivision	1992–93 $m	1992–93 %	1993–94 $m	1993–94 %	1994–95 $m	1994–95 %
Mining						
11 Coal mining	7 542	12	7 189	11	6 893	10
12 Oil and gas extraction	3 036	5	2 581	4	2 998	5
13 Metal ore mining	5 061	8	4 553	7	4 787	7
14 Other mining	222	—	281	—	236	—
Total	*15 860*	*26*	*14 603*	*23*	*14 914*	*22*
Manufacturing	37 448	62	41 458	64	43 685	65
Agriculture, forestry, fishing and hunting	6 042	10	7 114	11	6 982	10
Other industries(a)	1 428	2	1 478	2	1 454	2
Total exports	**60 778**	**100**	**64 651**	**100**	**67 037**	**100**

(a) Includes commodities subject to a 'No Commodity Details' restriction. See Explanatory Notes in *International Merchandise Trade, Australia* (Cat. no. 5422.0) for details.

Source: International Merchandise Trade, Australia, June Quarter 1995 (Cat. no. 5422.0).

13.2 PROPORTION OF AUSTRALIAN EXPORTS BY VALUE, MINING AND MANUFACTURING INDUSTRY



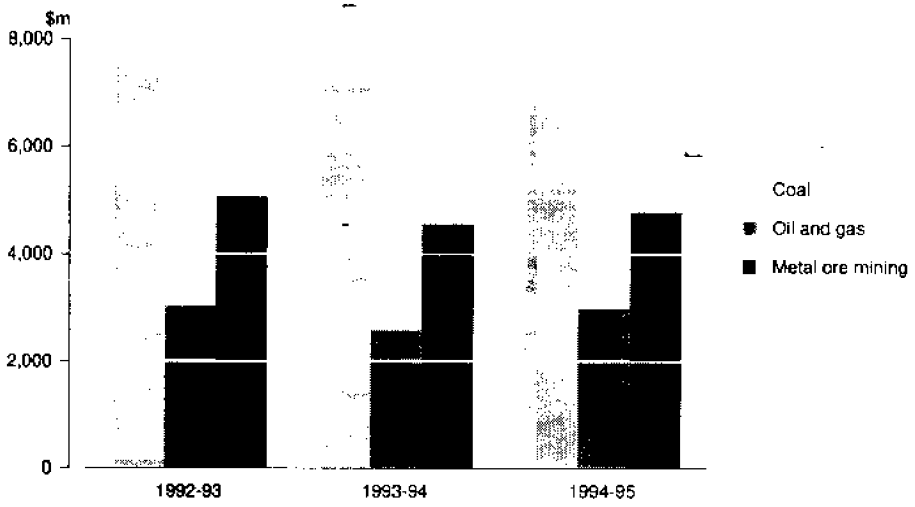
Source: Year Book, Australia (Cat. no. 1301.0).

Black coal was the largest mineral commodity exported in 1994–95 with a total value of $6,893 million (46% of mining exports and 10% of total exports). Japan bought $3,226 million (47%) of coal, followed by the Republic of Korea with $881 million (13%).

Other major exports were iron ore $2,771 million (19% of mining exports), of which $1,267 million was exported to Japan; crude oil $1,644 million (11%), of which $529 million was exported to Japan and $228 million to Indonesia. Exports of zinc ores accounted for $404 million (3%) and uranium $188 million (1%).

Refined gold exports fell 9% from $5,286 million in 1993–94 to $4,820 million in 1994–95 because of lower Australian and overseas origin bullion production. The three main countries to which refined gold was exported in 1994–95 were Singapore ($1,573 million), Japan ($1,327 million) and the Republic of Korea ($1,004 million).

13.3 VALUE OF EXPORTS BY MAJOR MINING SUBDIVISION



Source: International Merchandise Trade, Australia, June Quarter 1995 (Cat. no. 5422.0).

JAPAN AND OTHER REGIONS

The Northeast Asia region (includes Japan, Republic of Korea, China and Taiwan) was the main market for Australian mining commodities, taking 66% of the total value of mining exports in 1994–95. Shares for other regions were, Europe 12%, Southeast Asia (includes Indonesia, Singapore, Thailand) 3% 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 1994–95, 47% of coal, 60% of oil and gas and 36% of metal ore was exported to Japan, 13% of coal and 12% of metal ore was exported to the Republic of Korea, 6% of coal was exported to Taiwan and 12% of metal ore was exported to China.

13.4 EXPORTS BY COUNTRY OF DESTINATION

Principal country/region	*1992–93* $m	*1993–94* $m	*1994–95* $m
Coal mining			
Total Oceania	8	5	10
Total Europe	1 154	1 106	1 081
United Kingdom	231	231	197
Netherlands	222	204	172
France	208	173	162
Total Middle East and North Africa	243	220	211
Total Southeast Asia	66	43	39
Japan	3 762	3 391	3 226
Republic of Korea	918	934	881
Taiwan	441	433	399
Total Northeast Asia	5 340	4 943	4 679
India	377	487	538
Total Southern Asia	442	556	582
Total Northern America	6	4	6
Total South America and Central America	281	311	283
Total Africa (excluding North Africa)	2	—	—
No country details(a)	—	—	—
Total coal mining	*7 542*	*7 189*	*6 893*
Oil and gas extraction			
Total Oceania	43	60	86
Total Europe	27	40	86
Total Middle East	—	—	19
Indonesia	231	248	219
Singapore	232	241	159
Thailand	143	18	29
Total Southeast Asia	638	564	413
Japan	1 767	1 559	1 808
Total Northeast Asia	1 979	1 690	2 121
Total Southern Asia	11	—	22
Total Northern America	179	158	252
No country details(a)	159	69	—
Total oil and gas extraction	*3 036*	*2 581*	*2 999*
Metal ore mining			
Germany	123	121	142
United Kingdom	80	126	124
Italy	77	45	57
France	71	71	83
Total Europe and the former USSR	481	495	615
Total Middle East	2	11	12
Total Southeast Asia	295	55	61
Japan	1 906	1 708	1 718
Republic of Korea	666	570	570
China	442	445	586
Total Northeast Asia	3 282	2 885	3 001
Total Southern Asia	41	43	52
Total Northern America	74	39	44
Total South and Central America	24	16	3
Total Africa (excluding North Africa)	1	—	—
No country details(a)	860	1 008	1 000
Total metal ore mining	*5 061*	*4 552*	*4 787*
Total other mining	*222*	*281*	*237*
Total mining exports(b)	**15 860**	**14 603**	**14 914**

(a) Includes commodities subject to a 'No Country Details' restriction.

(b) Excludes commodities subject to a 'No Commodity Details' restriction. See Explanatory Notes in *International Merchandise Trade, Australia* (Cat. no. 5422.0) for details.

EXPORT PRICES

The export price index measures changes in the prices of all exports of merchandise from Australia. Despite firmer world minerals prices and flatter energy prices, a stronger Australian dollar meant that the mining export price index fell by 7% in 1994–95. Coal mining decreased by

10%, the drop mainly reflecting the exchange rate variations. Metal ore mining and oil and gas extraction fell by 5% and 1% respectively. The fall in metal ore mining is mostly due to declining metal prices over that period.

13.5 EXPORT PRICE INDEX(a)(b)

ANZSIC Division/subdivision	*1992–93*	*1993–94*	*1994–95*
11 Coal mining	110.3	106.3	96.1
12 Oil and gas extraction	128.5	115.1	113.8
13 Metal ore mining	101.9	92.9	88.6
Mining	**108.0**	**101.0**	**94.2**

(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, Australia, June 1995* (Cat. no. 6405.0).

IMPORTS

Mining imports into Australia were principally crude oil. The value of imports of mining products rose by $231 million (9%) from $2,573 million in 1993–94 to $2,804 million in 1994–95. The major contributor to the increase was crude oil, up $208 million to $2,506 million.

13.6 IMPORTS BY INDUSTRY OF ORIGIN

ANZSIC Division/subdivision	*1992–93*		*1993–94*		*1994–95*	
	$m	%	$m	%	$m	%
Mining						
11 Coal mining	1	—	14	—	12	—
12 Oil and gas extraction	2 279	4	2 298	4	2 506	3
13 Metal ore mining	130	—	117	—	130	—
14 Other mining	140	—	143	—	157	—
Total	*2 551*	*4*	*2 573*	*4*	*2 804*	*4*
Manufacturing	56 174	94	61 113	95	70 763	95
Agriculture, forestry, fishing and hunting	570	1	545	1	824	1
Other industries(a)	283	—	241	—	246	—
Total imports	**59 577**	**100**	**64 469**	**100**	**74 638**	**100**

(a) Includes commodities subject to a 'No Commodity Details' restriction. See Explanatory Notes in *International Merchandise Trade, Australia* (Cat. no. 5422.0) for details.

Source: International Merchandise Trade, Australia, June Quarter 1995 (Cat. no. 5422.0).

IMPORT PRICES

The mining import price index rose by 5% to 102.5. Oil and gas extraction showed a similar increase, rising 4% to 102.8.

13.7 IMPORT PRICE INDEX(a)(b)

ANZSIC Division/subdivision	*1992–93*	*1993–94*	*1994–95*
Mining	113.7	97.8	102.5
12 Oil and gas extraction	115.8	98.6	102.8
Manufacturing	111.7	115.5	113.8
Agriculture, forestry and fishing	102.6	107.3	141.7

(a) Base: 1989–90 = 100.0.
(b) The indexes of aggregate Australian import prices are compiled by weighting together components of the *Import Price Index, Australia, June 1995* (Cat. no. 6414.0).

SECTION 14

WORLD COMPARISON

WORLD PRODUCTION

As a leading mineral resource nation, Australia is the world's largest producer of bauxite, diamonds, lead and the mineral sand concentrates, ilmenite, rutile and zircon. In 1995 Australia produced 43 million tonnes of bauxite (39% of world production), 43 million carats of diamonds (40%), 540,000 tonnes of lead (19%), 1,030,000 tonnes of titanium dioxide(TiO_2) contained in ilmenite (31%), 220,000 tonnes of TiO2 in rutile (61%) and 500,000 tonnes of zirconium (56%). As well, in the world context, significant amounts of zinc, iron ore, uranium, gold, silver and nickel were produced.

The Australian proportion of world production increased between 1993 and 1995 for a number of minerals. The most significant increase was in zirconium, up from 41% to 56%.

14.1 SELECTED MINERALS, AUSTRALIAN AND ESTIMATED WORLD PRODUCTION, 1995

Mineral	*Unit*	*Estimated world production*	*Australian production*	*Australian proportion of estimated world production*
				%
Bauxite(a)	megatonnes	109	43	39.4
Copper in ores and concentrates	kilotonnes	9 800	420	4.3
Diamonds(b)	megacarats	108	43	39.8
Gold in ores and concentrates	tonnes	2 200	250	11.4
Iron ore	megatonnes	1 000	130	13.0
Lead in ores and concentrates	kilotonnes	2 800	540	19.3
Manganese in ores and concentrates	kilotonnes	7 300	950	13.0
Mineral sands				
Ilmenite(a)(c)(d)	kilotonnes	3 310	1 030	31.1
Rutile(a)(c)	kilotonnes	360	220	61.1
Zircon(a)(e)	kilotonnes	900	500	55.6
Nickel in ores and concentrates	kilotonnes	920	80	8.7
Salt	megatonnes	185	8	4.3
Silver in ores and concentrates	tonnes	14 000	1 100	7.9
Tin in ores and concentrates(a)	kilotonnes	180	6	3.3
Tungsten in concentrates(a)	tonnes	20 000	—	—
Zinc in ores and concentrates	kilotonnes	7 070	1 000	14.1

(a) Excludes United States of America production.
(b) Includes industrial diamonds.
(c) Titanium dioxide content.
(d) Includes synthetic rutile.
(e) Zirconium content.

Source: United States Department of the Interior, Bureau of Mines, *Mineral Commodity Summaries 1996*.

PRINCIPAL COUNTRIES

The world's leading producers of selected minerals in 1995 are shown in the following table. There has been a steady decrease in tungsten output in Australia and the rest of the world since 1992. The world's leading producer, China, produced 10 kilotonnes in 1995 as opposed to 17 kilotonnes in 1992, a 41% fall. World production fell by 37% in the same period, from 32 kilotonnes in 1992 to 20 kilotonnes in 1995. Production of gold from the world's leading producer, South Africa declined to 530 tonnes in 1995 from 630 tonnes in 1993, a fall of 16%.

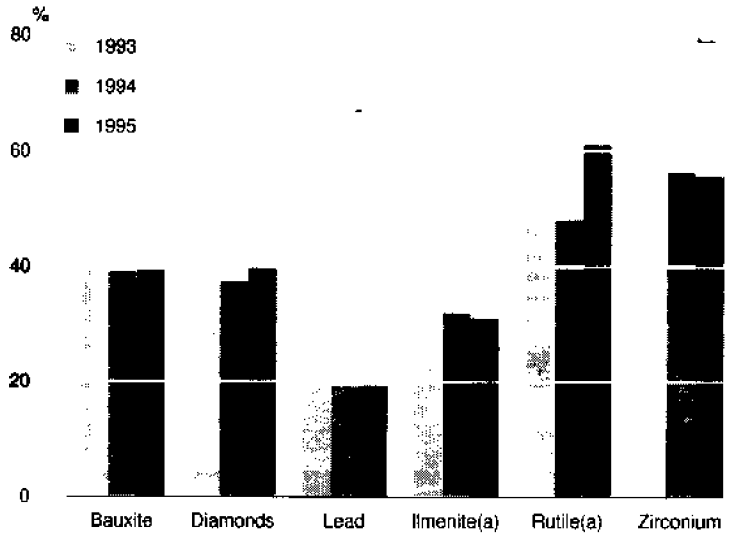
14.2 PRINCIPAL PRODUCING COUNTRIES OF SELECTED MINERALS, 1995

Mineral	*Unit*	*Country*	*Production*
Bauxite	megatonnes	Australia	43
Copper in ores and concentrates	kilotonnes	Chile	2 350
Diamonds(a)	megacarats	Australia	43
Gold in ores and concentrates	tonnes	South Africa	530
Iron ore	megatonnes	China	250
Lead in ores and concentrates	kilotonnes	Australia	540
Manganese in ores and concentrates	kilotonnes	South Africa	1 300
Mineral sands			
Ilmenite(b)(c)	kilotonnes	Australia	1 030
Rutile(b)	kilotonnes	Australia	220
Zircon(d)	kilotonnes	Australia	500
Nickel in ores and concentrates	kilotonnes	Russia	235
Salt	megatonnes	United States	42
Silver in ores and concentrates	tonnes	Mexico	2 200
Tin in ores and concentrates	kilotonnes	China	50
Tungsten in concentrates	tonnes	China	10 000
Zinc in ores and concentrates	kilotonnes	Canada	1 100

(a) Includes industrial diamonds.
(b) Titanium dioxide content.
(c) Includes synthetic rutile.
(d) Zirconium content.

Source: United States Department of the Interior, Bureau of Mines, *Mineral Commodity Summaries 1996*.

14.3 PERCENTAGE OF WORLD PRODUCTION FOR SELECTED COMMODITIES



(a) Titanium dioxide content.

SECTION 15 MINING TECHNOLOGY

The data presented in this section are extracted from the publication *Mining Technology Statistics, Australia, 30 June 1994* (Cat. no. 8413.0).

That publication presents statistics from the ABS Survey of Mining Technology. The survey objective was to provide information on innovation in Australian mining. It also collected information on future plans to utilise advanced mining technology as well as details on the current usage of mining technologies.

Details were collected from selected mining and exploration establishments about their acquisition or future intentions regarding a variety of mining technologies within the broad ranges of exploration, mining, mineral processing, engineering and environment technologies. The publication also includes details on staff training issues, employment, reasons for introducing mining technologies, planned expenditure, use of pollution abatement and control techniques and effects on production factors.

USE OF TECHNOLOGY

Of the 559 mining establishments with 10 or more employees included in the survey, 80% had acquired one or more of the advanced technologies at 30 June 1994.

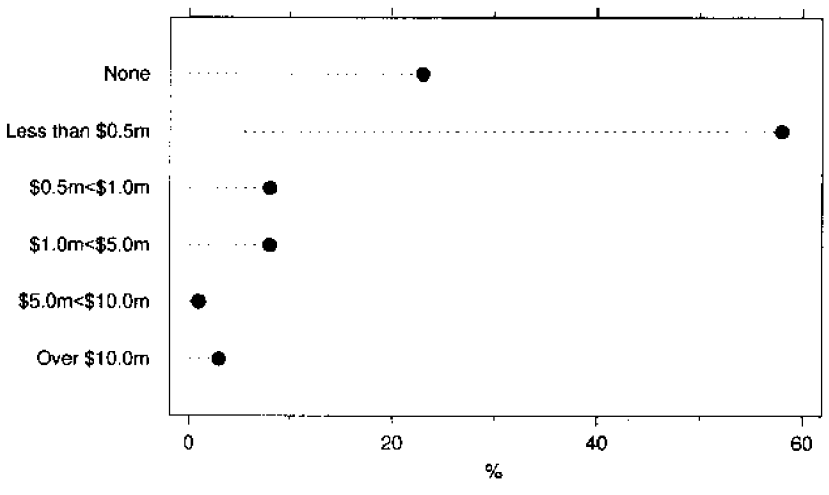
Almost all (98%) coal mining establishments had acquired one or more advanced technologies by 30 June 1994.

PLANNED EXPENDITURE

The number of mining establishments planning no expenditure during the next five years on advanced technologies was 23% at 30 June 1994, compared with 41% at 30 June 1991.

Establishments in the oil and gas extraction industry planning to spend over $10 million during the next five years on advanced technologies, increased from 6% in 1990–91 to 18% in 1993–94.

15.1 PLANNED EXPENDITURE ON TECHNOLOGY



USE BY STATE

Establishments located in Western Australia reported the highest proportion of technology acquisition with 86% having acquired at least one advanced technology prior to June 1994. This compares with 74% prior to June 1991.

MOST COMMONLY ACQUIRED

The most commonly acquired broad level technology type was environmental technologies with 64% of establishments having these technologies.

Rehabilitation design was the most commonly acquired specific technology with 55% of mining establishments in Australia having this technology at 30 June 1994.

SOURCE OF TECHNOLOGY

Australia continued to be the main source for technologies with at least 71% of each technology being acquired locally.

OVERSEAS OWNERSHIP

In the oil and gas extraction industry 30% of establishments with technology were overseas owned, while in the coal mining industry 29% of establishments with technology were overseas owned.

STAFF SKILL ISSUES

A total of 83% of mining establishments using at least one of the technologies reported no difficulty getting staff with the required skills necessary to ensure the normal operation, maintenance or programming associated with those surveyed technologies.

REASONS FOR INTRODUCTION

Primary reasons reported for introducing advanced mining technologies were to improve efficiency (72%) and increase output (63%). These were also rated as the most important reasons in 1990–91.

Major reasons for introducing environmental monitoring and pollution abatement and control techniques were legislative requirements (79%) and concern for the environment (68%).

EFFECT ON PRODUCTION

Over half (52%) of the mining establishments in the survey reported an increase in output as a result of the introduction of the technology. A similar proportion (54%) reported an improvement in product quality as a result of the introduction of technology.

ENVIRONMENTAL TECHNIQUES

Techniques being used by a large proportion of establishments included silencers and protective equipment for the control of noise levels for employees and/or concern for the environment and revegetation and rehabilitation of sites.

15.2 ESTABLISHMENTS WITH TECHNOLOGY BY TYPE AND INDUSTRY SUBDIVISION, AT 30 JUNE 1994

Detailed technology type	*Coal mining* %	*Oil and gas extraction* %	*Metal ore mining* %	*Other mining* %	*Services to mining* %	*Total mining* %
Exploration						
Aerial photography	57	36	69	36	34	46
Satellite/airborne scanner data	14	27	42	1	32	23
Airborne geophysics	19	55	51	3	28	25
Ground geophysics	63	64	57	8	31	35
Geochemical techniques	9	36	58	4	36	28
Image processing	52	73	61	10	35	37
Analytical techniques	37	64	72	15	35	38
Global positioning systems	23	82	46	5	36	28
Mining technologies						
Computer modelling and simulation systems	79	64	64	8	16	35
Blasting analysis	37	—	34	26	11	24
Rock mechanics technology	42	9	40	7	8	20
Ground reinforcement design	41	9	38	6	4	18
Truck despatch technology	27	—	15	30	5	18
In-mine data transfer	58	9	30	7	7	20
Automated ground movement sensors	23	—	25	6	6	13
Drill rig monitoring	16	45	12	12	11	13
In-seam drilling	20	—	—	—	2	4
Guidance control mechanisms	30	9	25	2	4	12
Mineral processing technologies						
In-mine rock crushing	33	—	38	16	4	19
Automated material handling: particulate	44	9	30	7	5	17
Automated material handling: slurries	23	—	37	4	2	13
On-stream analysis	57	18	49	7	7	24
On-stream size analysis	10	—	17	5	5	8
Interactive expert systems for process supervision	22	18	16	7	2	10
Programmable logic controller(s)	75	55	74	15	6	35
Supervisory control and data acquisition	63	55	55	15	6	29
Material characterisation and liberation analysis	15	—	33	2	2	11
Engineering technologies						
Welding technology	35	45	38	21	8	23
Condition monitoring systems	75	55	53	18	11	32
Energy conservation	58	18	38	17	4	23
Environmental technologies						
Air quality monitoring	62	27	62	31	9	35
Meteorological monitoring	36	36	33	7	7	18
Water quality monitoring	72	73	79	41	15	46
Biological monitoring	21	55	43	8	7	18
Rehabilitation design	73	45	72	65	25	55
Waste disposal design	42	36	58	17	8	27
Proportion of establishments having one or more technologies	**98**	**91**	**94**	**75**	**67**	**80**

EXPLANATORY NOTES

INTRODUCTION

1 A range of financial statistics appearing in this publication have been derived from the 1994–95 Census of Mining Operations. The Census 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 Census 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 findings for 1994–95 are now final and replace those previously issued in the 1993–94 issue of the publication *Australian Mining Industry* (Cat. no. 8414.0), released in January 1996.

SCOPE

4 The 1993 edition of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (Cat. no. 1292.0) has been used to classify management units (and establishments) included in the Census 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.

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 census. Under the principles set down within ANZSIC, contract mining organisations will only be included in the annual census 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 whilst companies that are engaged in providing other services on a fee or contract basis are classified to Services to mining which are outside the scope of the annual census.

9 The annual Census of Mining Operations covers the ANZSIC classes for coal mining, oil and gas extraction and metal ore mining and from 1994–95 will include mining n.e.c. On a triennial basis data are collected for construction material mining. The next such collection is being undertaken with respect to the 1995–96 financial year.

10 It should be noted that industry performance measures for the mining industry published in *Business Operations and Industry Performance, Australia* (Cat. no. 8140.0) include ANZSIC group 141 (Construction material mining) and subdivision 15 (Services to mining). In 1994–95 these subdivisions accounted for less than 10% of the economic activity of ANZSIC Division B.

11 Information on mineral production is collected from the 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

that would be classified to other ANZSIC industries (e.g. industries which carry out mining or quarrying as a secondary activity) that are out of scope of the annual census.

STATISTICAL UNIT

12 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.

13 The basic unit for which statistics are reported in ABS integrated industry collections is the establishment. This publication also includes some data on the establishment basis. Prior to the 1989–90 Census, 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.

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

MANAGEMENT UNIT

15 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

16 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.

17 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).

18 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.

19 The majority of establishments continue to cover the operations at a single physical location.

REFERENCE PERIOD

20 The period covered by the Census 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.

MINERAL PRODUCTION DATA

21 Details are presented about the quantity and value of minerals produced during the year ended June 1994 for each State, the Northern Territory and Australia with some comparative statistics relating to preceding years. (Generally details are not available for publication for the Australian Capital Territory).

22 Statistics on mineral production were derived from information supplied to the various State mines departments and the ABS, supplemented in some cases by information made available by the Department of Primary Industries and Energy and the Joint Coal Board. The statistics for New South Wales, Queensland and the Northern Territory were compiled using data supplied by the State mines department or equivalent in those States. Data for Victoria and South Australia were compiled using the data supplied by the State 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 Western Australia and Tasmania use State mines 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. In addition to the basic quantity data, the contents of metallic minerals (based on assay) are recorded; no allowance has been made for losses in smelting and refining and the quantities shown are therefore, in general, greater than the contents actually recovered.

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.

INDUSTRY PERFORMANCE MEASURES

27 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.

28 Users should take particular note of the following limitations in respect of the ratios presented in this publication. The usefulness of the ratios for analytical purposes depends on how they are calculated. Comparison between industries on a total industry basis may be best served by the estimates presented here, i.e. based on industry estimates for numerators and denominators. Users should be aware that assessment of individual businesses performance based on comparisons with industry estimates may be misleading for other reasons. 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.

29 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.

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. Therefore the ratios should be viewed with some caution.

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

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

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

- turnover ratios indicate the efficiency of selling activities (including the sale of services as well as goods);
- profitability ratios measure rates of profit on sales, funds and assets;
- liquidity ratios measure the ability of businesses to meet short-term financial obligations, i.e. how quickly 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.

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

CONCENTRATION STATISTICS

34 Industry concentration statistics provide measures of the extent to which a few management units predominate in individual industries. They are useful in assessing the degree of competition in an industry. These statistics provide measures of concentration in industries as a whole and therefore are not measures of concentration in the market for commodities or activities. The concentration statistics provided in this publication relate to Australia as a whole. Similar information is not available for States or other regional areas.

35 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;
    - fourth largest four management units;
    - fifth largest four management units;
    - sixth largest four management units; and
    - remaining management units owning or controlling establishments in the industry.

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

37 Each of the six categories of four management units comprises statistics of units which were in operation in the industry concerned at any time during the year 1994–95. Included also are particulars of establishments which had not commenced operation by the end of June 1995, 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 '4' for the following reasons.

38 Where a management unit ceased operation before the end of June 1995 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. The break up is not available for a number of the industries because of the need to avoid disclosure of confidential data.

39 For each of the categories ranked management units in paragraph 35 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.

DATA SOURCES

40 Data contained in this publication are obtained mostly from the annual mining census (available as special data service) and from various ABS publications and in some cases unpublished data.

ABS DATA

41 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.

Actual and Expected Private Mineral Exploration (Cat. no. 8412.0)

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

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

Electricity and Gas Operations, Australia (Cat. no. 8208.0)

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

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

Export Price Index (Cat. no. 6405.0)

Import Price Index (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, Preliminary (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 Industry, Australia, Preliminary (Cat. no. 8401.0)

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

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

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42 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

43 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

44 The statistics presented in this publication represent only a portion of the information which is available from the Census of Mining Operations 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.

SYMBOLS AND ABBREVIATIONS

45 The following symbols have been used in this publication:

n.a.	not available
n.c.	not collected (but included in totals where applicable)
n.e.c.	not elsewhere classified
n.p.	not available for separate publication (but included in totals where applicable)
—	nil or rounded to zero
. .	not applicable

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

47 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. Details of industry classes for which revisions have been made can be obtained by contacting Helen Shannon on Adelaide (08) 8237 7382.

48 The following abbreviations are used within 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
EAR-I	Estimated additional resources category I
EBIT	Earnings before interest and tax
EDR	Economic demonstrated resource
GDP	Gross domestic product
IGP	Industry gross product
OPBT	Operating profit before tax
RAR	Reasonably assured resource
R&D	Research and development
UJV	Unincorporated joint venture

GLOSSARY

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

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.

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 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.

Industry gross product 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 industry gross product (IGP) is as follows:

IGP = Sales of goods and services
plus
Rent, leasing and hiring income
Government subsidies
Capital work done for own use
Closing stocks
less
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 Explanatory Notes, Statistical units 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 these 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 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 Include purchases of materials, components, containers, packaging materials, fuels, electricity and water, and purchases of other goods for resale.

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.

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 land, buildings and other structures Includes rent paid for land, premises, shops, warehouses, etc.

Rent, leasing and hiring expenses for plant, machinery and equipment Includes hiring of equipment without an operator.

Rent, leasing and hiring expenses for other Includes all expenses that are not covered by the previous rent, leasing and hiring expenses categories.

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. (Operating profit before tax/Total assets) x 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. (Earnings before interest and tax)/(Net worth + Non-current liabilities) x 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 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).

Note that at the establishment level Sales of goods and services includes the value of any 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.

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 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.

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.

Trading profit margin Derived by expressing total trading profit as a percentage of total sales of goods and services, i.e. (Trading profit/Sales of goods and services) x 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.

For more information . . .

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the ABS Catalogue of Publications and Products available from all ABS Offices.

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

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