

**MINING OPERATIONS**

AUSTRALIA

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## NOTES

### ABOUT THIS PUBLICATION

This publication presents estimates of the economic and financial performance in 2006–07 of the Australian mining industry. The estimates are compiled from the ABS Economic Activity Survey and from business tax data reported to the Australian Taxation Office.

### CHANGES TO THIS PUBLICATION

The estimates in this publication are based on the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* 2006 edition. Data in previous issues are based on the 1993 version of the ANZSIC. ANZSIC 2006 was adopted to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands, and compatibility with major international classification standards.

The methodology used to produce these estimates has also substantially changed, notably, the way in which business tax data are used.

For these reasons, a new statistical series has commenced with the 2006–07 collection.

This publication includes key data from 2004–05 and 2005–06 compiled using the new methodology and on a 2006 ANZSIC basis, as an aid to analysis.

For further details see paragraph 25 of the Explanatory Notes.

Because of the earlier release of this publication compared to previous years, summary estimates of the value of mineral production by state and for the Northern Territory (drawn from their administrative sources) are not available for inclusion. Detailed estimates of the quantity and value of mineral production, by state and for the Northern Territory, will be available as a datacube under this same catalogue number later in 2008.

As a result of changes to the ABS economic surveys work program, this publication will not be produced for the 2007–08 reference year. Future estimates for the Mining industry will continue to be available in *Australian Industry*, (ABS cat. no. 8155.0).

### INFORMATION AVAILABLE ON-LINE

The text components of this publication are available free on-line. A PDF publication and extended data spreadsheets are also available free on-line. Further information on the ABS and its products and services is available on the ABS website.

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## ABBREVIATIONS .....

'000	thousand
\$b	billion (thousand million) dollars
\$m	million dollars
ABARE	Australian Bureau of Agricultural and Resource Economics
ABN	Australian Business Number
ABR	Australian Business Register
ABS	Australian Bureau of Statistics
ABSBR	Australian Bureau of Statistics Business Register
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
BAS	Business Activity Statement
EAS	Economic Activity Survey
EBITDA	earnings before interest, tax, depreciation and amortisation
IVA	industry value added
JPDA	Joint Petroleum Development Area
LNG	liquefied natural gas
n.e.c.	not elsewhere classified
OPBT	operating profit before tax
RSE	relative standard error
SISCA	Standard Institutional Sector Classification of Australia
TAU	type of activity unit
TNTS	The New Tax System
UJV	unincorporated joint venture

# CHAPTER 1

## OVERVIEW

### INTRODUCTION

This publication presents estimates, from the annual Economic Activity Survey, of the economic and financial performance of the Australian mining industry.

This industry is specified in Division B of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition. Please see paragraph 2 of the Explanatory Notes for a full definition.

### KEY DATA

Table 1.1 presents a time series for selected variables, from 2004–05 to 2006–07. All value data in this table are shown at current prices.

In each of the eight major aggregates presented, the Australian mining industry showed significant growth in 2006–07 when compared to 2005–06. Sales and service income increased by 17% and industry value added by 22%. The industry paid 21% more in wages and salaries than in 2005–06, and its employment rose by 7%. Commentary about these variables is presented in Chapter 2.

For information about survey methodology, see Technical Note 1.

The Glossary provides definitions for terms used.

### LABOUR COSTS

Table 1.2 provides estimates of labour costs.

The Australian mining industry incurred \$13.6b in total labour costs during 2006–07. COAL MINING accounted for \$3.7b (27%), followed by OIL AND GAS EXTRACTION \$1.5b (11%).

Wages and salaries represented 87% of labour costs for the industry overall.

### INDUSTRY VALUE ADDED

Table 1.3 presents the components of industry value added for these industries.

Of the \$71.8b of industry value added produced by the Mining industry in 2006–07, \$22.4b (or 31%) is attributable to OIL AND GAS EXTRACTION.

# 1.1 KEY DATA

	<i>Employment at end of June (a)</i>	<i>Wages and salaries (b)</i>	<i>Sales and service income (c)</i>	<i>Total income</i>	<i>Total expenses</i>	<i>Operating profit before tax</i>	<i>Earnings before interest tax depreciation and amortisation</i>	<i>Industry value added</i>
	no.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
COAL MINING								
2004-05	21 269	2 020	20 553	21 693	16 513	5 522	7 081	10 579
2005-06	25 343	2 669	29 411	30 471	21 320	^ 9 559	11 650	16 527
2006-07	26 491	3 218	30 479	32 258	23 350	9 027	10 939	16 364
OIL AND GAS EXTRACTION								
2004-05	8 442	927	18 893	21 050	11 283	9 822	11 531	15 737
2005-06	9 979	1 064	23 354	25 161	13 063	12 211	14 745	19 591
2006-07	10 241	1 340	26 647	28 297	14 706	13 668	17 141	22 420
METAL ORE MINING								
2004-05	29 473	2 348	24 043	26 199	21 077	5 489	7 234	11 304
2005-06	30 954	2 861	32 301	34 345	24 634	10 048	12 376	17 642
2006-07	33 617	3 400	43 303	46 235	27 739	19 108	21 042	27 388
TOTAL COAL MINING, OIL AND GAS EXTRACTION AND METAL ORE MINING								
2004-05	59 184	5 295	63 489	68 942	48 872	20 832	25 845	37 619
2005-06	66 276	6 594	85 065	89 977	59 017	31 818	38 771	53 759
2006-07	70 348	7 958	100 429	106 791	65 795	41 802	49 122	66 173
NON-METALLIC MINERAL MINING AND QUARRYING								
2004-05	11 468	590	3 604	3 956	3 618	^ 325	573	1 395
2005-06	11 902	687	4 801	5 245	4 710	*543	849	1 825
2006-07	12 260	864	4 700	4 650	4 748	**147	813	2 034
EXPLORATION AND OTHER MINING SUPPORT SERVICES								
2004-05	24 992	1 942	7 755	8 956	8 541	**342	172	2 731
2005-06	31 586	2 431	8 998	9 500	9 899	*-379	-22	^ 3 288
2006-07	34 856	2 947	10 351	11 592	11 300	**209	-14	^ 3 563
TOTAL MINING								
2004-05	95 644	7 826	74 849	81 855	61 031	21 499	26 590	41 746
2005-06	109 764	9 712	98 864	104 722	73 626	31 982	39 597	58 872
2006-07	117 464	11 769	115 480	123 032	81 843	42 159	49 921	71 770

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

\* estimate has a relative standard error of 25% to 50% and should be used with caution

\*\* estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

## 1.2 LABOUR COSTS

	Coal mining	Oil and gas extraction	Metal ore mining	Total coal mining, oil and gas extraction and metal ore mining	Non-metallic mineral mining and quarrying	Exploration and other mining support services	Total mining
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Wages and salaries(a)	3 218	1 340	3 400	7 958	864	2 947	11 769
Employer contributions into superannuation	224	121	265	610	73	216	899
Workers' compensation premiums/costs	75	10	42	127	21	78	226
<b>Selected labour costs</b>	<b>3 517</b>	<b>1 470</b>	<b>3 707</b>	<b>8 694</b>	<b>958</b>	<b>3 241</b>	<b>12 893</b>
Payroll tax	144	69	151	364	38	132	533
Fringe benefits tax	26	28	46	101	13	22	136
<b>Total labour costs</b>	<b>3 687</b>	<b>1 567</b>	<b>3 904</b>	<b>9 159</b>	<b>1 009</b>	<b>3 395</b>	<b>13 563</b>

(a) Excludes the drawings of working proprietors.

## 1.3 INDUSTRY VALUE ADDED

	Coal mining	Oil and gas extraction	Metal ore mining	Total coal mining, oil and gas extraction and metal ore mining	Non-metallic mineral mining and quarrying	Exploration and other mining support services	Total mining
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sales and service income(a)	30 479	26 647	43 303	100 429	4 700	10 351	115 480
Plus							
Government funding							
Energy grants credit	383	33	206	621	29	130	780
Other operational costs	100	7	50	157	2	13	172
Capital work done for own use	94	163	694	951	68	190	1 209
Change in inventories	119	76	612	807	245	-83	969
Less							
Purchases of goods and materials	3 816	999	5 531	10 346	1 153	2 120	13 620
Other intermediate input expenses	10 995	3 506	11 945	26 447	1 856	4 918	33 221
<b>Industry value added</b>	<b>16 364</b>	<b>22 420</b>	<b>27 388</b>	<b>66 173</b>	<b>2 034</b>	<b>^ 3 563</b>	<b>71 770</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes rent, leasing and hiring income.

## INTRODUCTION

Statistics in this Chapter relate to all subdivisions of the mining industry as defined in the *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition. The data presented include all activities of mining businesses, some of which may be activities other than mining. Explanatory Notes paragraphs 4-21 provide further details. The commentary refers mainly to the tables in this chapter, as well as to the employment data presented in table 1.1.

## MARKET CONDITIONS

Average prices for most mineral commodities increased in 2006–07 compared to the previous year, largely the result of strong global demand driven in part by the continuing strong economic growth of China. Reserve Bank of Australia data shows a 16% increase in its US dollar non-rural commodity price index for 2006–07. In Australian dollar terms this translated to a 10% increase, reflecting a 6% appreciation in the Australian dollar.

As reported in ABARE's *Australian Mineral Statistics*, export earnings for most minerals increased in 2006–07, due principally to the rise in commodity prices. On average the export unit returns for total mineral resources were 16% higher than in 2005–06. At the same time, the volume of mine production indexes show production of total minerals to have decreased by 4%.

Export earnings for black coal fell by 9% to \$21.8b in 2006–07. The average Australian dollar export price for coking coal decreased by 19%, offset by a rise of 9% in export volumes. The average price for steaming coal decreased more moderately, by 7%, with export volumes rising by 1%. Production of black saleable coal was less than 6% higher than the previous year.

Iron ore export earnings were \$15.5b, an increase of 21%. The volume of iron ore exported increased by 7%, slightly less than the 9% increase in production. The average export unit value of iron ore rose by 12%, reflecting the effect of a 19% increase in contract prices in May/June 2006. A further increase of 9% was agreed by major steel producers in May/June 2007.

The world trade weighted average price of crude oil in 2006–07 was A\$75.08 per barrel, an increase of 3% over 2005–06. Production increased by 24%, the increase in production was mainly attributed to new projects coming on line. Export earnings for liquefied natural gas (LNG) increased 18% to \$5.2b. Export volumes of LNG reached their highest level at 15.2Mt. In previous years LNG production was solely from the North West Shelf (Western Australia), but in February 2006 production from the Bayu-Undan fields commenced when the LNG plant in Darwin (Northern Territory) began operating.

Higher average US dollar prices for copper (up 62%) and zinc (up 73%) contributed to significant increases in export earnings for these commodities.



## MARKET CONDITIONS

*continued*

A number of large mining businesses report in the Economic Activity Survey for financial years ending on dates other than 30 June. For this reason, these changes in market conditions may not be directly reflected in the data of financial and economic performance. See Explanatory Notes paragraph 27 and 28, where the contribution of such businesses is quantified.

SALES AND SERVICE  
INCOME

Sales and service income for total mining was \$115.5b in 2006–07, an increase of \$16.6b (17%) over the previous year. Most mining industries presented in this publication increased their sales and service income in 2006–07. Sales and service income for the 'core' mining industries of COAL MINING, OIL AND GAS EXTRACTION, and METAL ORE MINING increased by \$15.4b (18%) to \$100b.

The largest contributor to sales and service income was COAL MINING, at \$30.5b. This was an increase of \$1.0b (or 4%). According to ABARE, the average export unit value of coking coal fell by 19% to A\$114.35 in 2006–07, while steaming coal fell by 7% to A\$60.57. Prices were more favourable for businesses reporting for the year ended 31 December 2006 (see Explanatory Notes paragraphs 27 and 28 for more details), when the price of coking coal was on average 11% higher, and steaming coal 3% higher, than in 2006–07.

Sales and service income for OIL AND GAS EXTRACTION increased by \$3.3b (14%) to \$26.6b. According to ABARE, the export value of crude oil rose by 25% in 2006–07. The increase in sales and service income can be attributed to the increase in prices and production. The world trade weighted average price of crude oil in 2006–07 was A\$75.08 per barrel, an increase of 3% over 2005–06. The increase in production reflects the commencement of operations at a number of fields such as Enfield in Western Australia and improved performance from existing operations. Prices were more favourable for businesses reporting for the year ended 31 December 2006 (see Explanatory Notes paragraphs 27 and 28 for more details), when the price of crude oil was on average 6% higher than in 2006–07.

IRON ORE MINING and SILVER-LEAD-ZINC MINING recorded the largest contribution to sales and service income (53%) for METAL ORE MINING. In absolute terms this equated to a \$16.3b increase in IRON ORE MINING and a \$6.6b increase in SILVER-LEAD-ZINC ORE MINING. ABARE reported the average Australian dollar export price of iron ore increased by 12% in 2006–07, coupled with a 21% increase in export volumes. The average US dollar price of silver rose by 37% and zinc rose 73%. Table 2.2 presents industry value added (IVA) and the elements to arrive at its derivation.

## INDUSTRY VALUE ADDED

In 2006–07, industry value added (IVA) increased by \$12.9b (22%) to \$71.8b. OIL AND GAS EXTRACTION was the largest source of the increase, its IVA rising by \$2.8b (14%). The only mining industry shown in which IVA decreased was COAL MINING (down 1% to \$16.4b).

Contributing 31% (or \$22.4b) in 2006–07, OIL AND GAS EXTRACTION continues to be the most significant source of IVA in MINING.

In terms of IVA components, the main source of the increase in IVA for TOTAL MINING was the \$16.6b (17%) increase in sales and service income mentioned above. In contrast total expenses increased by \$8.2b (11%). Purchases of goods and materials rose by \$1.4b (11%). The increase in total expenses reflected principally increases of \$1.6b (13%) in the OIL AND GAS EXTRACTION industry.

## EMPLOYMENT

Employment in the Australian mining industry at the end of June 2007 was estimated at 117,500 persons, an increase of 7% (or 7,700 persons) compared to the estimate for June 2006. The major sources of this increase were EXPLORATION AND OTHER MINING SUPPORT SERVICES (up by 3,200 persons), METAL ORE MINING (by 2,600 persons) and COAL MINING (by 1,100 persons). Employment increased in all constituent industries for which data are shown. Employment in the 'core' mining industries of COAL MINING, OIL AND GAS EXTRACTION and METAL ORE MINING increased by 6% overall.

At the industry subdivision level, 23% of MINING employment at the end of June 2007 was in COAL MINING, 9% in OIL AND GAS EXTRACTION, 29% in METAL ORE MINING, 10% in NON-METALLIC MINERAL MINING AND QUARRYING, and 30% in EXPLORATION AND OTHER MINING SUPPORT SERVICES.

## LABOUR COSTS

The Australian mining industry paid \$11.8b in wages and salaries in 2006–07. All industries for which data are shown incurred higher wages and salaries costs than in 2005–06. The 'core' mining industries of COAL MINING, OIL AND GAS EXTRACTION and METAL ORE MINING recorded a 21% (\$1.4b) increase in wages and salaries overall.

In percentage terms, the largest increases in wages and salaries occurred in OIL AND GAS EXTRACTION (up 26%), EXPLORATION AND OTHER MINING SUPPORT SERVICES (up 26%) and COAL MINING (up 21%).

The estimate of wages and salaries per person employed increased to \$100,000 in 2006–07, up from \$88,000 in 2005–06.

It should be noted that employment is measured at a point in time, i.e. end of June, whereas wages and salaries relate to a twelve month period. In times of significant change in the performance of an industry, as is the case in MINING in 2006–07, changes in wages and salaries may not be as great as changes in employment. This will be exacerbated by the effect of those businesses (refer paragraphs 27 and 28 of the Explanatory Notes) that report on a December year end. Their employment will be reported as at June 2007, whereas wages and salaries will be in respect of the twelve months ended December 2006.

In 2006–07 selected labour costs for total mining were \$12.9b. Contract mining expenses exceeded selected labour costs in IRON ORE MINING (by 29%). For the mining industry, about 91% of the value of selected labour costs is represented by wages and salaries. The value of employer contributions to superannuation was \$899m in 2006–07.

## PROFITABILITY AND EARNINGS

At the total mining level, indicators of profitability showed similarly strong increases (in percentage terms) to the increase in IVA. This reflects the extent to which prices received rose by more than expenses. Earnings before interest, tax, depreciation and amortisation (EBITDA) increased in 2006–07 by 26%, or \$10.3b, the largest increases in dollar terms having occurred in METAL ORE MINING (up \$8.6b, or 70%).

In terms of operating profit before tax (OPBT), the mining industry improved its returns by 32% (or \$10.2b) during 2006–07, earning \$42.2b. Total trading profit for the mining industry in 2006–07 was \$68.6b, an increase of \$12.6b (22%) over the previous year.

**CAPITAL EXPENDITURE**

Net capital expenditure by the mining industry in 2006–07 was \$27.6b. The largest absolute contribution (\$7.8b, or 28%) occurred in OIL AND GAS EXTRACTION, followed by COAL MINING (\$6.1b, or 22%) and IRON ORE MINING (\$4.2b, or 15%).

**INDUSTRY PERFORMANCE MEASURES**

A range of performance measures, mainly expressed as ratios, can be produced from the data available from businesses' financial statements. A selection of these are presented in this Chapter for the various mining industries. Information about the uses and limitations of these measures can be found in Explanatory Notes paragraphs 36–40.

*Performance ratios*

The following summarises the mining industry's performance ratios for 2006–07, which appear in detail in table 2.1:

- The highest profit margins were recorded by IRON ORE MINING (60%) and OIL AND GAS EXTRACTION (52%). GOLD ORE MINING remained the industry with the lowest profit margin in 2006–07 (2%).
- The interest coverage in 2006–07 was highest for SILVER-LEAD-ZINC ORE MINING and COPPER ORE MINING.
- The highest value of IVA to selected labour costs occurred in the OIL AND GAS EXTRACTION industry, where IVA exceeded selected labour costs by 15.2 times. The next highest value (11.9 times) occurred in IRON ORE MINING. The EXPLORATION AND OTHER MINING SUPPORT SERVICES shows the lowest value (1.1 times) for this ratio.
- Of all mining industries shown, OIL AND GAS EXTRACTION (at \$144,000) recorded the highest selected labour costs per person employed, followed by IRON ORE MINING (\$143,000). For total mining, the estimate was \$110,000.
- EXPLORATION AND OTHER MINING SUPPORT SERVICES recorded the highest investment rate (value added) of 88.7% in 2006–07, with GOLD ORE MINING recording the next highest value (66.6%).

**2.1**

## INDUSTRY PERFORMANCE

		Coal mining	Oil and gas extraction	Iron ore mining	Copper ore mining	Gold ore mining
Employment at end of June(a)	no.	26 491	10 241	6 594	4 596	9 914
Income						
Sales of goods	\$m	28 468	25 432	16 045	5 317	6 271
Service income	\$m	1 863	1 125	191	14	158
Rent, leasing and hiring income	\$m	148	90	48	1	4
Interest income	\$m	293	508	881	28	200
Government funding						
Energy grants credit	\$m	383	33	6	18	124
Other operational costs	\$m	100	7	46	—	—
Other income	\$m	1 004	1 103	692	–47	553
Total income	\$m	32 258	28 297	17 907	5 329	7 310
Expenses						
Wages and salaries(b)	\$m	3 218	1 340	866	477	974
Employer contributions into superannuation	\$m	224	121	74	47	73
Workers' compensation premiums/costs	\$m	75	10	2	14	11
Selected labour costs	\$m	3 517	1 470	942	538	1 057
Purchases of goods and materials	\$m	3 816	999	1 500	591	1 411
Rent, leasing and hiring expenses	\$m	422	245	73	50	71
Freight and cartage expenses	\$m	1 756	289	491	59	78
Motor vehicle running expenses	\$m	32	19	49	11	14
Repair and maintenance expenses	\$m	1 255	269	147	277	263
Contract mining expenses	\$m	2 957	127	1 219	418	706
Other contract, subcontract and commission expenses	\$m	967	359	637	368	334
Other selected expenses	\$m	3 672	2 870	1 414	277	1 681
Purchases and selected expenses	\$m	14 877	5 178	5 530	2 051	4 557
Depreciation and amortisation	\$m	2 121	4 009	810	479	1 337
Interest expenses	\$m	1 088	1 075	338	67	296
Insurance premiums	\$m	139	137	42	32	29
Natural resource royalties expenses	\$m	1 696	2 990	849	190	194
Bad and doubtful debts	\$m	7	9	—	—	—
Less						
Capitalised purchases	\$m	67	1	72	227	61
Capitalised wages and salaries	\$m	28	162	3	49	117
Total expenses	\$m	23 350	14 706	8 436	3 080	7 293
Opening inventories	\$m	1 812	563	592	582	558
Closing inventories	\$m	1 931	639	849	690	659
Cost of sales	\$m	14 692	5 101	5 201	1 716	4 407
Trading profit	\$m	15 788	21 545	11 082	3 615	2 026
Earnings before interest, tax, depreciation and amortisation	\$m	10 939	17 141	9 303	2 922	986
Operating profit before tax	\$m	9 027	13 668	9 728	2 356	**106
Industry ratios						
Profit margin	%	29.6	51.3	59.7	44.2	1.6
Interest coverage	times	10.1	15.9	27.5	43.7	3.3
Investment rate (value added)	%	39.0	37.7	37.5	20.5	66.6
Industry value added to selected labour costs	times	4.7	15.2	11.9	6.9	2.5
Industry value added per person employed(c)	\$'000	618	2 189	1 700	805	265
Sales and service income per person employed(c)	\$'000	1 151	2 602	2 470	1 160	649
Selected labour costs per person employed(c)	\$'000	133	144	143	117	107
Wages and salaries per person employed(c)	\$'000	121	131	131	104	98

\*\* estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) See Explanatory Notes paragraph 38.

**2.1****INDUSTRY PERFORMANCE** *continued*

		Mineral sand mining	Silver-lead-zinc ore mining	Bauxite mining, nickel ore mining and other metal ore mining	Total metal ore mining
Employment at end of June(a)	no.	2 236	4 064	6 213	33 617
Income					
Sales of goods	\$m	1 025	6 545	7 517	42 720
Service income	\$m	23	36	94	514
Rent, leasing and hiring income	\$m	11	1	4	68
Interest income	\$m	10	59	96	1 274
Government funding					
Energy grants credit	\$m	1	22	36	206
Other operational costs	\$m	—	—	5	50
Other income	\$m	33	–18	189	1 402
<b>Total income</b>	<b>\$m</b>	<b>1 104</b>	<b>6 645</b>	<b>7 940</b>	<b>46 235</b>
Expenses					
Wages and salaries(b)	\$m	90	421	572	3 400
Employer contributions into superannuation	\$m	6	21	44	265
Workers' compensation premiums/costs	\$m	2	9	5	42
<b>Selected labour costs</b>	<b>\$m</b>	<b>98</b>	<b>451</b>	<b>621</b>	<b>3 707</b>
Purchases of goods and materials	\$m	255	906	869	5 531
Rent, leasing and hiring expenses	\$m	15	40	69	317
Freight and cartage expenses	\$m	67	230	172	1 097
Motor vehicle running expenses	\$m	6	9	10	98
Repair and maintenance expenses	\$m	25	119	173	1 003
Contract mining expenses	\$m	28	310	419	3 098
Other contract, subcontract and commission expenses	\$m	326	383	252	2 300
Other selected expenses	\$m	28	435	873	4 708
<b>Purchases and selected expenses</b>	<b>\$m</b>	<b>748</b>	<b>2 431</b>	<b>2 836</b>	<b>18 153</b>
Depreciation and amortisation	\$m	135	455	510	3 726
Interest expenses	\$m	12	72	98	884
Insurance premiums	\$m	7	23	32	165
Natural resource royalties expenses	\$m	34	197	332	1 796
Bad and doubtful debts	\$m	—	—	1	1
Less					
Capitalised purchases	\$m	20	87	17	485
Capitalised wages and salaries	\$m	12	10	20	209
<b>Total expenses</b>	<b>\$m</b>	<b>1 003</b>	<b>3 533</b>	<b>4 394</b>	<b>27 739</b>
Opening inventories	\$m	100	237	629	2 699
Closing inventories	\$m	128	291	715	3 330
Cost of sales	\$m	701	2 292	2 740	17 057
Trading profit	\$m	358	4 290	4 875	26 246
Earnings before interest, tax, depreciation and amortisation	\$m	231	3 650	3 949	21 042
Operating profit before tax	\$m	127	3 164	3 626	19 108
Industry ratios					
Profit margin	%	12.0	48.1	47.6	44.1
Interest coverage	times	19.2	50.6	40.2	23.8
Investment rate (value added)	%	50.5	21.8	45.5	37.2
Industry value added to selected labour costs	times	3.8	9.6	8.3	7.4
Industry value added per person employed(c)	\$'000	167	1 068	827	815
Sales and service income per person employed(c)	\$'000	474	1 620	1 226	1 288
Selected labour costs per person employed(c)	\$'000	44	111	100	110
Wages and salaries per person employed(c)	\$'000	40	104	92	101

— nil or rounded to zero (including null cells)

(b) Excludes the drawings of working proprietors.

(a) Includes working proprietors.

(c) See Explanatory Notes paragraph 38.

**2.1**INDUSTRY PERFORMANCE *continued*

		Total coal mining, oil and gas extraction and metal ore mining	Non-metallic mineral mining and quarrying	Exploration and other mining support services	Total mining
Employment at end of June(a)	no.	70 348	12 260	34 856	117 464
Income					
Sales of goods	\$m	96 620	4 204	1 367	102 191
Service income	\$m	3 502	344	8 822	12 669
Rent, leasing and hiring income	\$m	307	152	162	621
Interest income	\$m	2 074	56	267	2 398
Government funding					
Energy grants credit	\$m	621	29	130	780
Other operational costs	\$m	157	2	13	172
Other income	\$m	3 509	-137	831	4 203
Total income	\$m	106 791	4 650	11 592	123 032
Expenses					
Wages and salaries(b)	\$m	7 958	864	2 947	11 769
Employer contributions into superannuation	\$m	610	73	216	899
Workers' compensation premiums/costs	\$m	127	21	78	226
Selected labour costs	\$m	8 694	958	3 241	12 893
Purchases of goods and materials	\$m	10 346	1 153	2 120	13 620
Rent, leasing and hiring expenses	\$m	985	124	807	1 915
Freight and cartage expenses	\$m	3 142	309	104	3 555
Motor vehicle running expenses	\$m	150	69	76	295
Repair and maintenance expenses	\$m	2 528	323	457	3 308
Contract mining expenses	\$m	6 183	44	771	6 998
Other contract, subcontract and commission expenses	\$m	3 626	159	355	4 140
Other selected expenses	\$m	11 250	903	2 566	14 718
Purchases and selected expenses	\$m	38 209	3 084	7 255	48 548
Depreciation and amortisation	\$m	9 856	455	539	10 850
Interest expenses	\$m	3 047	130	335	3 513
Insurance premiums	\$m	441	36	87	564
Natural resource royalties expenses	\$m	6 482	79	12	6 573
Bad and doubtful debts	\$m	17	74	20	111
Less					
Capitalised purchases	\$m	552	55	133	740
Capitalised wages and salaries	\$m	399	13	57	469
Total expenses	\$m	65 795	4 748	11 300	81 843
Opening inventories	\$m	5 074	530	400	6 004
Closing inventories	\$m	5 900	744	335	6 979
Cost of sales	\$m	36 850	2 784	7 205	46 839
Trading profit	\$m	63 579	1 916	3 146	68 641
Earnings before interest, tax, depreciation and amortisation	\$m	49 122	813	-14	49 921
Operating profit before tax	\$m	41 802	**147	**209	42 159
Industry ratios					
Profit margin	%	41.6	3.1	2.0	36.5
Interest coverage	times	16.1	6.3	—	14.2
Investment rate (value added)	%	37.8	40.0	88.7	40.4
Industry value added to selected labour costs	times	7.6	2.1	1.1	5.6
Industry value added per person employed(c)	\$'000	941	166	102	611
Sales and service income per person employed(c)	\$'000	1 428	383	297	983
Selected labour costs per person employed(c)	\$'000	124	78	93	110
Wages and salaries per person employed(c)	\$'000	113	70	85	100

\*\* estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) See Explanatory Notes paragraph 38.

**2.2****INDUSTRY VALUE ADDED**

	PLUS					LESS		
	Sales and service income (a)	Energy grants credit	Government funding for other operational costs	Capital work done for own use	Change in inventories	Purchases of goods and materials	Other intermediate input expenses	Industry value added
Industry	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>06 Coal mining</b>	30 479	383	100	94	119	3 816	10 995	16 364
<b>07 Oil and gas extraction</b>	26 647	33	7	163	76	999	3 506	22 420
<b>08 Metal ore mining</b>								
0801 Iron ore mining	16 283	6	46	75	257	1 500	3 958	11 208
0803 Copper ore mining	5 331	18	—	276	108	591	1 442	3 699
0804 Gold ore mining	6 433	124	—	178	89	1 411	2 784	^ 2 629
0805 Mineral sand mining	1 059	1	—	32	27	255	492	373
0807 Silver-lead-zinc ore mining	6 582	22	—	97	52	906	1 508	4 339
0802, 0806 and 0809 Bauxite mining, nickel ore mining and other metal ore mining	7 615	36	5	37	80	869	1 761	5 141
<b>Total 08 Metal ore mining</b>	<b>43 303</b>	<b>206</b>	<b>50</b>	<b>694</b>	<b>612</b>	<b>5 531</b>	<b>11 945</b>	<b>27 388</b>
<b>06–08 Total coal mining, oil and gas extraction and metal ore mining</b>	<b>100 429</b>	<b>621</b>	<b>157</b>	<b>951</b>	<b>807</b>	<b>10 346</b>	<b>26 447</b>	<b>66 173</b>
<b>09 Non-metallic mineral mining and quarrying</b>	<b>4 700</b>	<b>29</b>	<b>2</b>	<b>68</b>	<b>245</b>	<b>1 153</b>	<b>1 856</b>	<b>2 034</b>
<b>10 Exploration and other mining support services</b>	<b>10 351</b>	<b>130</b>	<b>13</b>	<b>190</b>	<b>–83</b>	<b>2 120</b>	<b>4 918</b>	<b>^ 3 563</b>
<b>06–10 Total mining</b>	<b>115 480</b>	<b>780</b>	<b>172</b>	<b>1 209</b>	<b>969</b>	<b>13 620</b>	<b>33 221</b>	<b>71 770</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Includes rent, leasing and hiring income.

## 2.3 ACQUISITION AND DISPOSAL OF ASSETS

### CAPITAL EXPENDITURE(a)

<i>Industry</i>	<i>Plant, machinery and equipment</i>	<i>Dwellings, other buildings and other structures</i>	<i>Other (including land and intangible assets)</i>	<i>Total acquisitions</i>	<i>Total disposals</i>	<i>Net capital expenditure</i>	<i>Gross fixed capital formation</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>06 Coal mining</b>	3 084	2 428	868	6 380	231	6 149	5 423
<b>07 Oil and gas extraction</b>	646	5 863	1 941	8 450	629	7 821	6 530
<b>08 Metal ore mining</b>							
0801 Iron ore mining	505	3 548	154	4 207	21	4 186	4 103
0803 Copper ore mining	219	434	104	757	10	747	656
0804 Gold ore mining	619	507	625	1 751	29	1 722	1 453
0805 Mineral sand mining	138	36	15	188	4	184	172
0807 Silver-lead-zinc ore mining	280	600	64	944	-1	944	893
0802, 0806 and 0809 Bauxite mining, nickel ore mining and other metal ore mining	391	1 621	329	2 341	57	2 284	2 157
<b>Total 08 Metal ore mining</b>	2 151	6 747	1 291	10 189	121	10 067	9 433
<b>06–08 Total coal mining, oil and gas extraction and metal ore mining</b>	5 881	15 039	4 100	25 019	982	24 038	21 386
<b>09 Non-metallic mineral mining and quarrying</b>	376	180	258	814	54	759	599
<b>10 Exploration and other mining support services</b>	1 085	1 078	998	3 161	319	2 842	^ 2 121
<b>06–10 Total mining</b>	<b>7 342</b>	<b>16 297</b>	<b>5 355</b>	<b>28 994</b>	<b>1 355</b>	<b>27 639</b>	<b>24 106</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes the value of capital work done for own use reported in table 2.2.

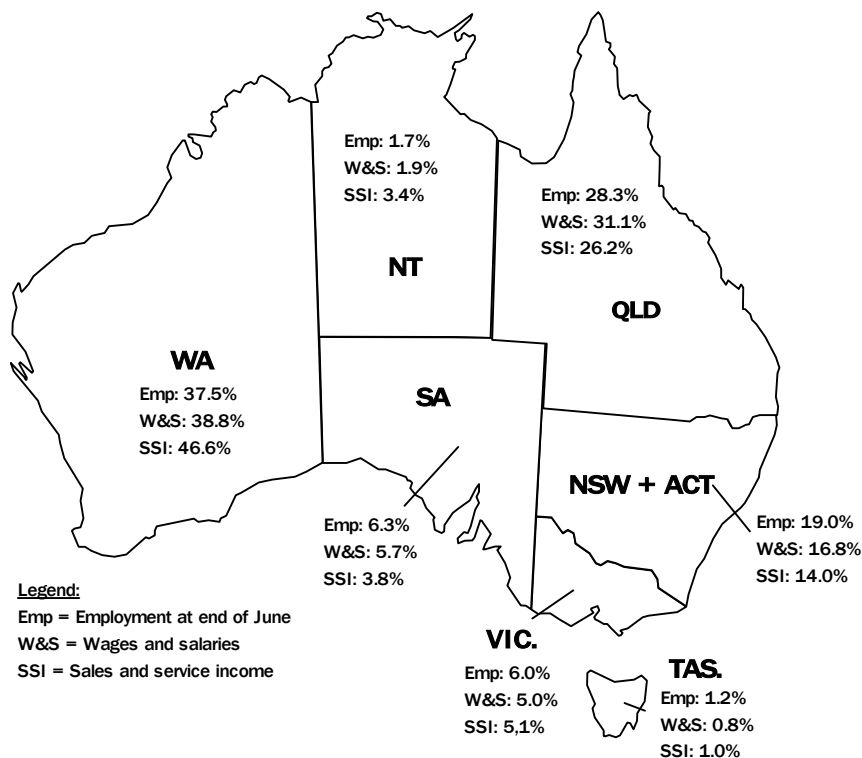


**INTRODUCTION**

This chapter contains key data of industry performance at the state and territory level, together with data illustrating the contribution of the mining industry in each state and territory. Data for the Australian Capital Territory are included with those for New South Wales and are not available separately. For convenience, the combined estimates are designated as New South Wales data in the commentary below.

**KEY DATA**

Table 3.1 presents a time series for selected items for all states and the Northern Territory, from 2004–05 to 2006–07. The data relate to the industry designated as 'SELECTED MINING', that is, ANZSIC subdivisions 06–09 (COAL MINING, OIL AND GAS EXTRACTION, METAL ORE MINING and NON-METALLIC MINERAL MINING AND QUARRYING) only. ANZSIC subdivision 10 (EXPLORATION AND OTHER MINING SUPPORT SERVICES) is excluded from the data in this table, because the design of the survey does not support production of data at the state and territory level for this industry. See Explanatory Notes paragraphs 43 and 44 for an outline of the methodology used in deriving these estimates.

**CONTRIBUTION OF STATES / TERRITORIES TO TOTAL SELECTED MINING, 2006–07**

The above graphic illustrates each state or territory's share of Australian economic aggregates relating to SELECTED MINING in 2006–07.

KEY DATA *continued*

Between 2005–06 and 2006–07, estimates of most of the four key variables shown increased in most jurisdictions. The largest increases in dollar terms occurred in Western Australia and Queensland, reflecting the size and importance of METAL ORE MINING and COAL MINING in those states and the strong performance of those industries as described (at the national level) in Chapter 2. Similarly, these states also contributed the largest increases in employment in SELECTED MINING.

SALES AND SERVICE  
INCOME

Between 2005–06 and 2006–07, sales and service income of the SELECTED MINING industry increased in all states and territories. Western Australia recorded the largest increase, rising \$8.1b (20%) to \$48.9b. The largest percentage increase in sales and service income occurred in Tasmania (56%), increasing by \$0.4b to \$1.0b. Other large increases were recorded by Northern Territory (40%, or \$1.0b).

Over the period from 2004–05 to 2006–07, the largest absolute increase in sales and service income of SELECTED MINING occurred in Western Australia (\$19.0b), and the largest percentage increase was in Northern Territory (71.4%).

In 2006–07, Western Australia accounted for 47% of sales and service income of the SELECTED MINING industry (compared to 45% in 2005–06), followed by Queensland at 26% (compared to 27% in 2005–06). New South Wales accounted for 14% of sales and service income in 2006–07 (compared to 15% the previous year), and Victoria's share was 5% (the same proportion as in 2005–06).

## EMPLOYMENT

The SELECTED MINING industry increased employment between 2005–06 and 2006–07 in most states and territories, gaining 6% nationally. Employment increased most strongly in Western Australia (2,400 persons, or 9%), followed by Queensland (1,400 persons, or 6%).

Over the period from 2004–05 to 2006–07, the biggest increase in employment in SELECTED MINING occurred in Western Australia (5,700 persons, or 22%), followed by Queensland (2,400 persons, or 12%) and Victoria (1,400 persons, or 38%).

In 2006–07, 38% of employment in the SELECTED MINING industry was recorded against Western Australia, followed by Queensland with 28%; New South Wales contributed 19% of the total. This pattern differs from the shares of sales and service income and IVA among the major states as outlined above, largely reflecting differing labour intensities in the types of mining predominant in each state and territory.

**3.1****KEY DATA, Selected mining(a)**

	<i>Employment at end of June(b)</i>	<i>Wages and salaries(c)</i>	<i>Sales and service income(d)</i>	<i>Wages and salaries per person employed(e)</i>
	no.	\$m	\$m	\$'000
<b>New South Wales and Australian Capital Territory</b>				
2004–05	13 539	1 093	11 034	81
2005–06	16 220	1 448	13 616	89
2006–07	15 665	1 477	14 710	94
<b>Victoria</b>				
2004–05	3 597	295	4 292	82
2005–06	4 402	373	4 547	85
2006–07	4 970	444	5 382	89
<b>Queensland</b>				
2004–05	20 959	1 736	16 389	83
2005–06	22 016	2 097	23 825	95
2006–07	23 381	2 739	27 553	117
<b>South Australia</b>				
2004–05	3 963	303	2 570	76
2005–06	4 141	399	3 878	96
2006–07	5 222	502	4 012	96
<b>Western Australia</b>				
2004–05	25 369	2 169	29 937	85
2005–06	28 569	2 692	40 827	94
2006–07	31 004	3 421	48 934	110
<b>Tasmania</b>				
2004–05	1 533	103	805	67
2005–06	1 034	83	641	80
2006–07	969	69	997	71
<b>Northern Territory</b>				
2004–05	1 690	185	2 067	110
2005–06	1 797	189	2 532	105
2006–07	1 397	169	3 542	121
<b>Australia</b>				
2004–05	70 652	5 884	67 094	83
2005–06	78 178	7 281	89 866	93
2006–07	82 608	8 821	105 129	107

(a) TOTAL MINING excluding ANZSIC subdivision 10 EXPLORATION AND OTHER MINING SUPPORT SERVICES.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

(e) See Explanatory Notes paragraph 38.

## EXPLANATORY NOTES .....

### INTRODUCTION

- 1** This publication, *Mining Operations, Australia, 2006–07* (cat. no. 8415.0), presents estimates of the economic and financial performance of the mining industry.
- 2** MINING, as specified in Division B of the 2006 edition of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (cat. no. 1292.0), 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 or open-cut mining, quarrying, operation of wells or evaporation pans, and recovery from ore dumps or tailings. Beneficiation activities (ie. preparing, including crushing, screening, washing, and flotation) are included, because they are generally carried out at or near mine sites as an integral part of mining operations. The division also includes mining sites under development, as well as mineral and petroleum exploration and other mining support services.
- 3** This publication represents the first release of these estimates using the 2006 edition of ANZSIC. Because of the combined effect of this new classification and methodological changes, a new series has commenced with the 2006–07 data. See Technical Note 1 for further details.

### STATISTICAL UNITS USED

- 4** Statistical units are those entities from which statistics are collected, or about which statistics are compiled. In ABS economic statistics, the statistical unit is generally the business. All businesses are recorded on the ABS Business Register (ABSBR).
- 5** The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.
- 6** This units model allocates businesses to one of two sub-populations:
  - Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). The vast majority of these businesses are simple in structure and are allocated to the population which is maintained by the ATO. These are termed (by the ABS) ABN units.
  - The remaining businesses are in the ABS maintained population, and are termed type of activity units, or TAUs.
- 7** Together, these two sub-populations (of ABN units and TAUs) make up the ABSBR population, from which the Economic Activity Survey (EAS) samples are taken.
- 8** For details about the ABSBR and how ABN units and TAUs contribute to the industry statistics in this publication, see Technical Note 1.

### SCOPE

- 9** The mining industry collection is conducted annually as a component of the ABS's Economic Activity Survey (EAS). The scope of the 2006–07 mining collection comprises all businesses (including non-employing businesses) on the ABS Business Register (ABSBR) at time of selection, whose industry is classified to ANZSIC Division B MINING. However, some categories of business are excluded. The ABSBR includes information supplied from the Australian Taxation Office (ATO) which assists in determining the scope of ABS collections. Using this, businesses in the following two categories have been excluded from the scope of this collection with effect from 2006–07 (although they were included in previous years):

SCOPE *continued*

- businesses which have an Income Tax Instalment Provision (ITIP) taxation 'role' but no other taxation role;
- long term non-remitters of Business Activity Statement (BAS) data.

**10** Division B comprises the following subdivisions and their component groups and classes:

- 06 Coal mining
  - 060 Coal mining
    - 0600 Coal mining
- 07 Oil and gas extraction
  - 070 Oil and gas extraction
    - 0700 Oil and gas extraction
- 08 Metal ore mining
  - 080 Metal ore mining
    - 0801 Iron ore mining
    - 0802 Bauxite mining
    - 0803 Copper ore mining
    - 0804 Gold ore mining
    - 0805 Mineral sand mining
    - 0806 Nickel ore mining
    - 0807 Silver–lead–zinc ore mining
    - 0809 Other metal ore mining
- 09 Non-metallic mineral mining and quarrying
  - 091 Construction material mining
    - 0911 Gravel and sand quarrying
    - 0919 Other construction material mining
  - 099 Other non-metallic mineral mining and quarrying
    - 0990 Other non-metallic mineral mining and quarrying
- 10 Exploration and other mining support services
  - 101 Exploration
    - 1011 Petroleum exploration
    - 1012 Mineral exploration
  - 109 Other mining support services
    - 1090 Other mining support services

**11** Industry statistics in Chapters 1 and 2 of this publication are presented at subdivision level. ANZSIC Subdivision 08 METAL ORE MINING is also presented at the ANZSIC class level in Chapter 2.

## COVERAGE

**12** The frame used for the survey of the mining industry, like most ABS economic surveys, was taken from the ABSBR. The ABSBR is updated monthly to take account of new businesses and businesses which have ceased operating.

**13** The ANZSIC-based industry statistics presented in this publication are compiled differently from activity statistics. Each ABN unit or TAU on the ABSBR has been classified (by the ATO and the ABS respectively) to a single industry irrespective of any diversity of activities undertaken. The industry class allocated is the one which relates to those activities that provide the main source of income. A mining business is one predominantly engaged in mining activities, but the data collected for it cover all activities of the business (including any non-mining activities). Conversely, there are some businesses predominantly engaged in non-mining activities which also undertake limited mining activities; these are excluded from the collection.

COVERAGE *continued*

**14** Businesses mainly engaged in refining or smelting minerals or ores (other than preliminary smelting of gold), or in manufacturing such products of mineral origin as coke or cement, are excluded, as they are engaged in activities classified to ANZSIC Division C MANUFACTURING.

**15** Businesses engaged in providing contract mining services are not always within the scope of the annual mining collection. Under ANZSIC principles, only those contract mining organisations responsible for all facets of a mining operation are classified to MINING. Businesses which contract to provide selected services are classified to the (predominant) activity they are performing, rather than to the industry they are serving. For example, businesses contracted to perform tasks such as mine site preparation (and/or construction), and removal of overburden, are classified to ANZSIC Division E CONSTRUCTION and are, therefore, outside the scope of the mining collection.

**16** Some mining businesses engage, to a significant extent, in activities which are normally carried out by different industries. For example, a predominantly mining business may also undertake significant amounts of manufacturing. Similarly, a mining business may produce significant volumes of goods which are normally produced in different mining industries. Where a business makes a significant economic contribution to industries classified to different ANZSIC subdivisions, the ABS includes the business in the ABS maintained population and 'splits' the TAU's reported data between the industries involved. Significance is determined using total income.

**17** A TAU's reported data will be split if the inclusion of data relating to the secondary activity in the statistics for the industry of the primary activity distorts (by overstating or understating) either the primary or secondary industry statistics at the ANZSIC subdivision level by:

- 3% or more, where the industries of the primary and secondary activities are in the same ANZSIC division
- 2% or more, where the industries of the primary and secondary activities are in different ANZSIC divisions.

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

**19** The mining collection includes mining businesses which are operators and/or participants in UJVs. Generally, each participant supplies data of its share of income, while the operator reports all expenses and employment.

**20** The ABS attempts to maintain a current understanding of the structure of the large, complex and diverse business groups that form the ABS maintained population on the ABSBR, through direct contact with those businesses. Resultant changes in their structures on the ABSBR can affect:

- the availability of such businesses (or units within them) for inclusion in the annual economic collections,
- the delineation of the units, within those groups, for which data are to be reported.

**21** The ABS attempts to obtain data for those businesses which ceased operation during the year, but it is not possible to obtain data for all of them.

IMPROVEMENTS TO  
COVERAGE

**22** Data in this publication have been adjusted to allow for lags in processing new businesses to the ABSBR. The effect of these adjustments is an increase of 0.3% on the Australian estimate of sales and service income for total Mining.

## ANZSIC93 AND ANZSIC06

**23** The estimates in this publication are based on ANZSIC06. Data in previous issues were based on the 1993 version of the ANZSIC (ANZSIC93). ANZSIC06 was adopted to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with international classification standards.

**24** All businesses formerly coded to ANZSIC93 Division B MINING are classified to ANZSIC06 Division B MINING. Essentially there has been a lateral transfer of MINING subdivisions between ANZSIC93 and ANZSIC06. There have, however, been some changes to classification names. There has also been amalgamation of classes within some subdivisions. For details, see *Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006* (cat. no. 1292.0).

## HISTORICAL COMPARISONS

**25** To provide comparability with the 2006–07 estimates, the historical estimates presented in Table 1.1 take into account the various changes in collection design, estimation methodology and scope, as well as the introduction of ANZSIC06. Data collected for 2004–05 and 2005–06 (under ANZSIC93) have been updated to take account of any revisions to the data since they were published in the previous issue of this publication. The data so revised have then been mapped to ANZSIC06, and further adjusted to incorporate the scope changes outlined in paragraph 4 above and the methodological changes described in Technical Note 1 (paragraphs 8–19). This process is known as 'bridging'.

## SURVEY SAMPLE DESIGN

**26** The mining collection is conducted annually as a component of the ABS's Economic Activity Survey:

- A sample of 852 mining businesses were asked by the ABS to provide employment details and data obtained from their financial statements, mainly via mail out questionnaires. Businesses were also asked to supply key details of their operations by state and territory, enabling the production of the state/territory estimates contained in table 3.1.
- Auxiliary information about wages and salaries and turnover for 7,334 mining industry businesses, sourced from Australian Tax Office (ATO) Business Activity Statement (BAS) data, were used to improve the estimates produced from the survey data. These businesses included all those selected in the survey. Section 16(4)(ga) of the *Income Tax Assessment Act 1936* provides for the ATO to pass information to the Australian Statistician for the purposes of the *Census and Statistics Act 1905*.

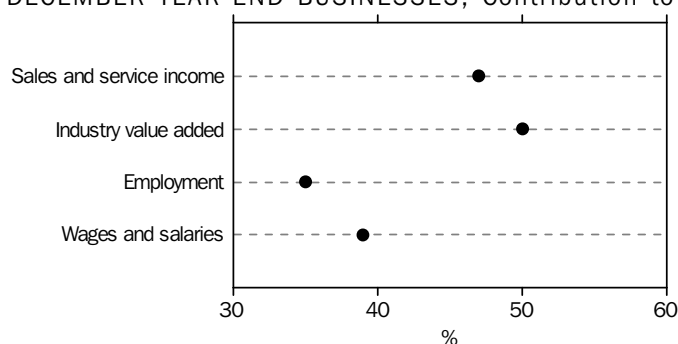
## REFERENCE PERIOD

**27** The period covered by the collection is intended to be 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. Such businesses make a substantial contribution to some of the estimates presented in this publication. As a result, the estimates can reflect trading conditions that prevailed in periods outside the twelve months ended June in the relevant year.

**28** The following graph illustrates the contribution of businesses which reported for the year ended 31 December 2006 to estimates of key aggregates for TOTAL MINING in 2006–07. The contribution is much greater in COAL MINING, OIL AND EXTRACTION and METAL ORE MINING than in the remaining mining industry subdivisions.

REFERENCE PERIOD *continued*

## DECEMBER YEAR-END BUSINESSES, Contribution to total mining



**29** Although financial data estimates relate to the full twelve months, employment estimates relate to the last pay period ending in June of the given year. As such, estimates of wages and salaries per person employed can be affected by any fluctuations in employment during the reference period.

**30** Financial data presented incorporate all units in scope of the mining collection that were at the production stage at any time during the year. They also include any temporarily inactive units, i.e. those units which were in the development stage or which were not in production, but which still existed and held assets and liabilities and/or incurred some non-operating expenses (e.g. depreciation, administration costs).

## RELIABILITY OF ESTIMATES

**31** Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error.

**32** Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all businesses in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all businesses had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors for the current estimates of key variables are shown in Technical Note 2.

**33** Non-sampling error arises from inaccuracies in collecting, recording and processing the data. The most significant of these errors are: misreporting of data items; deficiencies in coverage; non-response; and processing errors. Every effort is made to minimise reporting error by the careful design of questionnaires and efficient data processing procedures.

**34** For more detailed information about this subject, see Technical Note 2.

## QUALITY INDICATORS

**35** In the 2006–07 survey of the mining industry, there was a 93.5% response rate from all businesses that were surveyed and found to be operating during the reference period. Data were imputed for the remaining 6.5% of operating businesses. This imputation contributed 0.3% to the estimate of sales and service income for the mining industry.

## INDUSTRY PERFORMANCE MEASURES

**36** Differences in accounting policy and practices across businesses and industries can lead to some inconsistencies in the data input to the statistics. Although much of the accounting process is subject to standards, there is still a great deal of flexibility left to managers and accountants in the accounting policy and practices that they adopt. For example, the way profit is measured is affected by management policy about such issues as depreciation rates, bad debt provisions and write off, and goodwill write off. The varying degree to which businesses consolidate their accounts may also affect any industry performance measures calculated.



## INDUSTRY PERFORMANCE MEASURES *continued*

**37** A range of performance measures, usually expressed as ratios, can be produced from the data available from businesses' financial statements. Others, relating to labour inputs, can be derived by expressing financial or economic variables on a per person employed basis. The performance measures presented in this publication comprise:

- profitability ratios, which measure the rate of profit on sales
- debt ratios, which indicate the ability of businesses to meet the cost of debt financing
- labour measures, which relate output, labour costs and employment
- capital expenditure ratios, which indicate the extent of business investment in capital assets.

**38** A further explanation of each ratio can be found in the Glossary. Those ratios compiled from a combination of flow (whole period) and level (beginning or end of period) items need to be treated with additional caution. Ratios which include both level and flow items in their derivation may be volatile due to the timing differences involved. In particular, this should be taken into account when considering those measures expressed as values per person employed. It may, therefore, be preferable to base any analysis on a range of data presented rather than focusing on one variable.

**39** Similarly, the extent of change in inventories is a component of several of the measures of industry output and earnings. Although the closing inventories held by businesses in an industry in one period should, in concept, equate to its opening inventories in the next period, differences will be observed in many cases. These differences can arise from re-selection of the sample between years and/or changes in the structure of businesses selected, as well as revaluations of inventories in businesses' accounts.

**40** The above limitations are not meant to imply that analysis based on these data should be avoided, only that they should be borne in mind when interpreting the data presented in this publication.

## INTERNATIONAL FINANCIAL REPORTING STANDARDS

**41** The new Australian equivalents to International Financial Reporting Standards (AIFRS) began to be progressively implemented in Australia from 1 January 2005. As a result, a number of items in the financial accounts of Australian businesses have been affected by changed definitions, which have in turn affected both Income Statements and Balance Sheets. A range of ABS economic collections source data from financial accounts of businesses, and use those data to derive economic statistics. There have been no changes in the associated economic definitions.

**42** After monitoring data items since March quarter 2005 it has been concluded that most affected published data series have been affected by data breaks, but that the magnitude of such breaks cannot be determined without imposing disproportionate load upon data providers to ABS surveys and other administratively collected data.

## STATE AND TERRITORY ESTIMATES

**43** State and territory summary estimates for selected mining (i.e. TOTAL MINING excluding ANZSIC Subdivision 10 EXPLORATION AND OTHER MINING SUPPORT SERVICES) are presented in table 3.1. To enable the production of these estimates, businesses included in the mail out survey were asked to report data for employment, wages and salaries, and sales of goods and services, for each state and/or territory in which they operated, if more than one. The relevant data for all other businesses, including those whose contribution was sourced from BAS data, were allocated to their state/territory of operations as recorded on the ABSBR.

**44** The Joint Petroleum Development Area (JPDA) is an area in the Timor Sea, about 500 km north west of Darwin. A Treaty between Australia and East Timor, which entered into force on 2 April 2003, provides the necessary framework arrangements for companies to exploit resources in the JPDA. Data relating to activity in the JPDA is

## STATE AND TERRITORY

ESTIMATES *continued*

included in estimates for the Northern Territory. Further, as a reflection of the joint Australia/East Timor administration of exploration and production activity in the JPDA, 50% of income and expenditure relating to the JPDA is excluded from the estimates.

## ACKNOWLEDGMENT

**45** 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. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

## RELATED PUBLICATIONS

**46** The ABS produces industry estimates for a range of selected industries (including mining) and these results are to be available in *Australian Industry, 2006–07* (cat. no. 8155.0), expected to be released in September 2008. National estimates of income, output, expenditure and associated ratios will be available at the ANZSIC division level (with a greater range of data available via the ABS web site in spreadsheet form).

**47** For a list of publications and electronic releases that present data about the mining industry using ANZSIC93, please refer to the 2005–06 edition of this publication.

**48** Current publications and other products released by the ABS are available from the Statistics View on the ABS web site. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

*Non-ABS data*

**49** The following organisations also publish mining and related statistics for Australia: ABARE, web site <<http://www.abareconomics.com>>

*Australian Commodities* (forecasts and issues)

*Australian Commodity Statistics*

*Australian Mineral Statistics*

Geoscience Australia, web site <<http://www.ga.gov.au>>

*Australia's Identified Mineral Resources*

*Oil and Gas Resources of Australia*

Minerals Council of Australia, web site <<http://www.minerals.org.au>>

*Minerals Industry Survey Report*

United States Department of the Interior, US Geological Survey,

web site <<http://www.minerals.usgs.gov>>

*Mineral Commodity Summaries*

*The Mineral Industry of Australia*

ABS DATA AVAILABLE ON  
REQUEST

**50** As well as the statistics included in this and related publications, the ABS may have other relevant data available on request and for a charge. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

## ROUNDING

**51** Where figures have been rounded, discrepancies may occur between totals and the sums of the component items. Due to data being adjusted for lags in processing new businesses to the ABS Business Register (see paragraph 22), this 'rounding rule' also applies to employment estimates.

**52** Proportions, ratios and other calculated figures shown in this publication have been calculated using unrounded estimates and may be different from, but are more accurate than, calculations based on the rounded estimates.

## TECHNICAL NOTE 1      **METHODOLOGY** .....

### INTRODUCTION

**1** The industry estimates in this publication are produced using a combination of ABS directly collected data and Business Activity Statement (BAS) tax data sourced from the Australian Taxation Office (ATO).

**2** The directly collected data have been reported by a sample of mining businesses, as recorded on the ABS Business Register (ABSBR). The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

### STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

**3** The current economic statistics units model was introduced in mid 2002, to better use the information available as a result of The New Tax System (TNTS). This units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO maintained population, while the remaining businesses are in the ABS maintained population. Together, these two sub-populations make up the ABSBR population.

### ATO MAINTAINED POPULATION

**4** Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). They are then included on the whole-of-government register of businesses, the Australian Business Register (ABR), which is maintained by the ATO. Most of these businesses have simple structures; therefore, the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO maintained population, and the ABN unit is used as the statistical unit for all ABS economic collections.

### ABS MAINTAINED POPULATION

**5** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS maintained population. This population consists typically of large, complex and diverse businesses. The statistical units model described below caters for such businesses.

*Enterprise group:* This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the *Corporations Legislation Amendment Act 1991*), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.

*Enterprise:* An institutional unit comprising:

- (i) a single legal entity or business entity, or
- (ii) more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).

ABS MAINTAINED  
POPULATION *continued*

*Type of activity unit (TAU):* The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

CONTRIBUTION OF THE  
STATISTICAL UNITS TO THE  
ESTIMATES

**6** *TAUs:* All units in the ABS maintained population (i.e. TAUs) classified to MINING were eligible to be selected for direct collection. Direct collection of data from these units is necessary because:

- many large and complex employing businesses have more than one legal entity, making it difficult to identify all legal entities for that business in the BAS data.
- BAS data do not include the range of detailed information that the ABS requires from large and complex businesses.
- 'tax exempt' businesses that are not required to complete business activity statements would otherwise not contribute to the statistics.

**7** *ABN units:* The balance of units on the ABSBR classified to MINING were ABN units, from the ATO maintained population.

COLLECTION DESIGN

**8** In order to decrease the statistical reporting load placed on providers while maintaining the range and quality of information available to users of statistical data, the strategy for this survey was to adopt the use of directly collected data from a smaller sample of businesses, in combination with information sourced from the ATO. The frame (from which the direct collect sample was selected) was stratified using information held on the ABS Business Register. Businesses eligible for selection in the direct collect sample were then selected from the frame using stratified random sampling techniques.

**9** Businesses were selected to participate in the survey (the direct collect sample) only if they met two criteria: their turnover exceeded a threshold level and the business was identified as having been an employing business (based on ATO information) during the reference period. Turnover thresholds were set for each ANZSIC class so that the contribution of surveyed businesses accounted for 97.5% of total industry class turnover as determined by ATO Business Activity Statement data.

**10** Businesses which met neither of these criteria are referred to as 'micro non-employing businesses'. These businesses were not eligible for selection in the sample. For these units, BAS data were obtained and annualised, then added to the directly collected estimates to produce the statistics in this publication. The total estimated value of annual turnover of micro non-employing businesses during the 2006–07 reference year, as determined by ATO Business Activity Statement data, was \$314m.

ESTIMATION METHODOLOGY

**11** Estimates from previous iterations of this survey were produced using number raised estimation methodology. The 2006–07 survey used generalised regression estimation. This estimation method enables maximum use of observed linear relationships between data directly collected from businesses in the survey and auxiliary information. When the auxiliary information is strongly correlated with data items collected in a survey, the generalised regression estimation methodology will improve the accuracy of the estimates. The auxiliary variables used in this survey were turnover and wages sourced from ATO Business Activity Statement data.

PRODUCING ESTIMATES

**12** The following diagram illustrates the ways in which Australian businesses contribute to the estimates in this publication.

# PRODUCING ESTIMATES

continued

Summary of Data Sources, 2006–07

Total Selected Industries			
Type of business	Completely Enumerated (CE) Stream	Generalised Regression (GREG) Estimation Stream	Business Activity Statement (BAS) Stream
The source used to identify businesses of each type	ABS Business Register	ABS Business Register	ABS Business Register
The number of each type of business	231	3,567	3,536
Sources of data	ABS survey	ABS Survey and ATO Business Activity Statements	ATO Business Activity Statements
The number of businesses that are selected to provide data	231	621	3,536
Contribution to total income for total selected industries	83%	17%	< 1%

## DATA STREAMING

*Completely Enumerated (CE) Stream:*

*Generalised regression (GREG) estimation Stream:*

*Business Activity Statement (BAS) Stream:*

**13** For the purpose of compiling the estimates in this publication, data for businesses as recorded on the ABSBR contribute via one of three categories (or 'streams') in accordance with significance and collection-related characteristics.

**14** The CE stream consists of directly collected survey data for those units recorded on the ABSBR as having employment greater than 300, plus additional 'significant' units in the ABS maintained population and units significant to small state estimates.

**15** The GREG stream comprises directly collected data for those sampled units which are not in the CE stream and have turnover, in aggregate, above the bottom 2.5 percentile of BAS sales for that industry. The accuracy of the estimates produced from this data is then improved by using wages and turnover data sourced from businesses' BAS data.

**16** The BAS stream comprises data for those businesses in the ATO maintained population whose turnover, in aggregate, is below the bottom 2.5 percentile of BAS sales for that industry.

## PRODUCING MINING INDUSTRY ESTIMATES

**17** Estimates for each of the selected industries were produced by aggregating the contributing data streams.

**18** An indication of the importance of these populations to the data can be gained from their contribution to the national estimate of sales and service income for TOTAL MINING. The following table shows their proportional contributions to sales and service income.

PRODUCING MINING

INDUSTRY ESTIMATES *continued*

CONTRIBUTION TO SALES AND SERVICE INCOME

	TAU	ABN unit	Total
	%	%	%
06 Coal mining	96.1	3.9	100
07 Oil and gas extraction	95.6	4.4	100
08 Metal ore mining	92.1	7.9	100
09 Non-metallic mineral mining and quarrying	51.7	48.3	100
10 Exploration and other mining support services	50.0	50.0	100
06–10 Total mining	88.6	11.4	100

**19** One implication of the use of BAS data in these statistics is that no direct measure of employment is available for those units which contribute to the estimates solely through the BAS source. This is because the ATO does not collect information about employment numbers. Unlike financial variables, which have a direct relationship to the data available from the BAS files, employment data are not amenable to being modelled using the same techniques. Hence a different methodology is used in order to estimate employment for those units whose data are sourced solely from the BAS files. For each such business, the number of employees is assumed to be zero. For each unincorporated business an estimate of its number of working proprietors or partners is used as the estimate of its total employment. These estimates are then aggregated to the directly collected data to produce the estimates in this publication.

## TECHNICAL NOTE 2      **DATA RELIABILITY** .....

### INTRODUCTION

**1** For 2006–07 the mining collection was a sample survey designed primarily to deliver national estimates at the industry subdivision and selected class level. Industry division estimates (excluding Subdivision 10 Exploration and Other Mining Support Services) for states and territories for key data variables are also produced, but the survey was not specifically designed for these purposes.

### SAMPLING ERROR

**2** The majority of data in this publication have been obtained from a sample of mining businesses. As such, these data are subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all mining businesses in the population. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because the data were obtained from only a sample of units.

**3** There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the data had been obtained from all units, and about 19 chances in 20 that the difference will be less than two standard errors.

**4** The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error (RSE). RSEs at the industry subdivision and selected class level for Australia for selected data items representing the full range of data contained in this publication are shown in the table below. The relative standard errors of the selected estimates for the states and territories are mainly 5% or less. Detailed RSEs can be made available on request.

**5** To illustrate the above, the estimate of sales and service income for total mining in 2006–07 was \$115,480m. The RSE of the estimate is shown as 0.8%, giving a standard error of approximately \$924m (rounded). This implies that there are two chances in three that, if all units had been included in the survey, an estimate in the range of \$114,556m to \$116,404m would have been obtained. Similarly, it implies that there are 19 chances in 20 (i.e., a confidence interval of 95%) that the estimate would have been within the range of \$113,632m to \$117,328m.

**6** The size of the RSE may be a misleading indicator of the reliability of some of the estimates for trading profit, OPBT, EBITDA and IVA. Estimates of these variables may legitimately include positive and negative values, reflecting the financial performance of individual businesses. In these cases the aggregated estimate can be small relative to the contribution of individual businesses, resulting in a standard error which is large relative to the estimate.

SAMPLING ERROR *continued*

RELATIVE STANDARD ERRORS

	<i>Employment at end of June</i>	<i>Wages and salaries</i>	<i>Sales and service income</i>	<i>Industry value added</i>
	%	%	%	%
06 Coal mining	0.5	0.6	0.3	0.3
07 Oil and gas extraction	2.2	2.3	2.1	0.9
0801 Iron ore mining	0.3	0.1	0.4	0.5
0803 Copper ore mining	0.8	0.3	0.4	0.4
0804 Gold ore mining	4.5	4.1	7.5	12.4
0805 Mineral sand mining	2.9	4.7	2.1	2.7
0807 Silver-lead-zinc ore mining	4.1	6.9	3.6	3.6
0802, 0806 and 0809 Bauxite mining, nickel ore mining and other metal ore mining	2.5	3.2	1.5	1.7
08 Metal ore mining	1.2	1.4	1.2	1.4
06–08 Total coal mining, oil and gas extraction and metal ore mining	0.7	0.7	0.7	0.6
09 Non-metallic mineral mining and quarrying	8.0	8.8	4.7	5.2
10 Exploration and other mining support services	4.5	5.0	6.0	13.0
<b>06–10 Total mining</b>	<b>1.6</b>	<b>1.4</b>	<b>0.8</b>	<b>0.8</b>

NON-SAMPLING ERROR

**7** All data presented in this publication are subject to non-sampling error.

**8** The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of inadequacies in available sources from which the population frame was compiled, imperfections in reporting by providers, errors made in collection such as in recording and coding data, and errors made in processing data. Inaccuracies of this kind are referred to collectively as non-sampling error and they may occur in any enumeration, whether a full census or a sample.

**9** For the purpose of compiling the estimates in this publication, businesses in the ATO maintained population (see Technical Note 1) are coded to ANZSIC industry classes on the basis of the activity reported to the ATO when they registered for an ABN. There are a number of reasons why a business classified to any given ANZSIC industry on the ABS Business Register may not have been mainly engaged in activities associated with that industry during the 2006–07 reference year. This may be because of inaccurate or incomplete information at the time the business was registered or it may be because the business has changed activity, either temporarily or permanently.

**10** Although it is not possible to quantify non-sampling error, every effort is made to reduce it to a minimum. Collection forms are designed to be easy to complete and assist businesses to report accurately. Efficient and effective operating procedures and systems are used to compile the statistics. The ABS compares data from different ABS (and non-ABS) sources relating to the one industry, to ensure consistency and coherence.



## GLOSSARY .....

Data presented in Chapters 1 to 3 of this publication have been compiled from the standard financial accounts of businesses; therefore, the definition of each reported item aligns closely with that adopted in standard business accounting practice. Definitions of particular terms, as used in this publication, are also included.

<b>ABN unit</b>	The statistical unit used by the ABS to represent businesses, and for which statistics are reported, in most cases. The ABN unit is the business unit which has registered for an ABN, and thus appears on the ATO administered Australian Business Register. In most cases, the ABN unit represents the legal entity. This unit is suitable for ABS statistical needs when the business is simple in structure. For more significant and diverse businesses where the ABN unit is not suitable for ABS statistical needs, the statistical unit used is the type of activity unit (TAU).
<b>Acquisitions</b>	See the various capital expenditure entries.
<b>Bad and doubtful debts</b>	Represents the amount of bad and doubtful debts written-off, net of bad and doubtful debts previously written-off but recovered.
<b>Business</b>	<p>A business is generally considered to be a person, partnership, or corporation engaged in business or commerce; for example, a gold mining business.</p> <p>In this publication, the term represents the ABN unit or type of activity unit (TAU), which are the two standard statistical units for the 2006–07 mining collection (these two units are explained under separate entries). For details, see Explanatory Notes paragraphs 4–8.</p>
<b>Business Activity Statement (BAS) total sales</b>	Represented by the form item G1 <i>Total sales</i> on businesses' Business Activity Statements, supplied by them to the ATO. This item comprises all payments and other consideration (including GST) received during the nominated tax period for supplies made in the course of business.
<b>Capital expenditure on dwellings, other buildings and structures</b>	Capital expenditure incurred acquiring dwellings, other buildings and structures, including roads, factories, warehouses, offices, bridges, mine development, and oil and gas platforms. Represents expenditure before deduction of trade-in allowances, and includes expenses (except capitalised interest) incurred during the year in acquiring such assets.
<b>Capital expenditure on other assets (including land and intangible assets)</b>	Capital expenditure incurred acquiring other assets (including land and intangible assets). Intangible asset purchases may include items such as exploration expenditure capitalised, patents, licences and goodwill. Also included is computer software capitalised, including capitalised computer software licence fees, installation costs, the purchase or development of large databases, software developed in-house (but excluded is software maintenance expenditure), and capitalised payments to contractors and consultants for software development. Note that if the cost of software and hardware cannot be separated, the total cost is included in acquisition of plant, machinery and equipment.
<b>Capital expenditure on plant, machinery and equipment</b>	Capital expenditure incurred acquiring plant, machinery and other equipment, including motor vehicles. Includes expenses (except capitalised interest) incurred during the year in acquiring such assets.

<b>Capital work done for own use</b>	Capitalised work done by the employees or proprietors of a business in manufacturing, constructing, installing or repairing assets, in mineral and petroleum exploration activities, and the in-house development of computer software, for use by the business or for rental or lease. This work is valued at the capitalised costs of the materials and the wages and salaries involved.
<b>Capitalised purchases</b>	Goods drawn from inventories for use as fixed tangible assets in capital work done by the employees or proprietors of a business for use by the business or for rental or lease.
<b>Capitalised wages and salaries</b>	Capitalised payments for work done by employees of a business in manufacturing, constructing, installing or repairing assets, in mineral and petroleum exploration activities, and in the in-house development of computer software, for use by the business or for rental or lease.
<b>Change in inventories</b>	The value of total closing inventories less total opening inventories.
<b>Closing inventories</b>	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers at the end of the reporting period.
<b>Contract mining expenses</b>	Contract payments for mining services. Includes amounts paid/payable to mining contractors and associated freight charges for materials brought in by the contractor.
<b>Cost of sales</b>	The sum of purchases, selected expenses and opening inventories less closing inventories. Any capitalised purchases or capitalised wages and salaries are excluded.
<b>Current prices</b>	Estimates at current prices are valued at the prices of the period to which the observation relates. For example, estimates for 2006–07 are valued using 2006–07 prices. This contrasts to chain volume measures, where the prices used in valuation refer to the prices of a previous period.
<b>Depreciation and amortisation</b>	Depreciation/amortisation allowed on tangible and intangible assets. Includes, for lessees only, depreciation/amortisation in respect of finance leases.
<b>Disposal of assets</b>	Proceeds from the sale of tangible assets (plant, machinery, equipment, land, dwellings, other buildings and structures), and intangible assets (such as patents, licences and goodwill). Includes the disposal of motor vehicles.
<b>Earnings before interest, tax, depreciation and amortisation (EBITDA)</b>	Profit prior to the deduction of net interest (interest income minus interest expenses), income tax, depreciation and amortisation. Items classifiable to other income are also excluded.
<b>Employer contributions into superannuation</b>	Includes all employer contributions to superannuation funds (including the employer productivity contribution) and provisions for employer contributions to superannuation funds. Also includes expenses relating to employer funded defined benefit schemes. Employee contributions and salary sacrifice contributions are excluded. Note that salary sacrifice contributions were included in estimates of this item in previous issues of this publication.
<b>Employment at end of June</b>	<p>Number of persons working for mining businesses during the last pay period ending in June of the given year. Includes working proprietors and partners, employees absent on paid or prepaid leave, employees on workers' compensation who continue to be paid through the payroll, and contract miners paid through the payroll. Excludes persons paid by commission only, non-salaried directors, and self-employed persons such as consultants and contractors.</p> <p>In order to produce data by state and territory, businesses which received mail out questionnaires were also asked to report employment (as well as wages and salaries, and sales of goods and services) for each state and/or territory in which they operated. For details, see Explanatory Notes paragraphs 44 and 45.</p> <p>For details of how employment estimates have been derived, see Technical Note 1 paragraph 19.</p>

<b>Energy grants credit</b>	See the entry for funding from government: energy grants credit.																																
<b>Enterprise</b>	<p>An institutional unit comprising:</p> <ul style="list-style-type: none"> <li>■ a single legal entity or business entity; or</li> <li>■ more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).</li> </ul>																																
<b>Enterprise group</b>	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the <i>Corporations Legislation Amendment Act 1991</i> ), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.																																
<b>Freight and cartage expenses</b>	Includes handling charges and payments to owner/drivers for delivery of minerals. Excludes the cost of delivery by own vehicles and employees, overseas freight and cartage on goods exported, and payments to couriers.																																
<b>Funding from government: energy grants credit</b>	Amount reimbursed under the Australian Government's Energy Grants (Credit) Scheme. This scheme replaced the Diesel Fuel Rebate Scheme and the Diesel and Alternate Fuels Grant on 1 July 2003, and provides a grant for diesel and alternative fuels used in specified activities.																																
<b>Funding from government for other operational costs</b>	Funding from federal, state and/or local government for operational costs (e.g. wages and salaries, rent, food) apart from Energy Grants (Credit) Scheme funding (which is separately published). Includes bounties, subsidies, export grants, apprenticeship and traineeship schemes, and community service obligation payments.																																
<b>Funding from government for specific capital items</b>	Includes capital grants, and low interest or interest free loans made by government to businesses to encourage expenditure on specific equipment (e.g. environmental protection equipment).																																
<b>Gross fixed capital formation (GFCF)</b>	<p>Gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the reference period, plus certain additions to the value of non-produced assets realised by the productive activity of institutional units.</p> <p>Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year.</p> <p>The derivation of GFCF is as follows:</p> <table> <tr> <td></td><td>Acquisition of</td></tr> <tr> <td></td><td>Road vehicles</td></tr> <tr> <td><i>plus</i></td><td>Other transport equipment</td></tr> <tr> <td></td><td>Industrial machinery and equipment</td></tr> <tr> <td></td><td>Computer software capitalised</td></tr> <tr> <td></td><td>Computers and computer peripherals</td></tr> <tr> <td></td><td>Electronic equipment and electrical machinery</td></tr> <tr> <td></td><td>Communications equipment</td></tr> <tr> <td></td><td>Other plant and equipment</td></tr> <tr> <td></td><td>Dwellings, other buildings and structures</td></tr> <tr> <td></td><td>Computer software expensed</td></tr> <tr> <td></td><td>Mining exploration expenditure expensed</td></tr> <tr> <td></td><td>Mining exploration expenditure written-off</td></tr> <tr> <td><i>less</i></td><td>Disposal of plant, machinery and equipment (including motor vehicles)</td></tr> <tr> <td></td><td>Disposal of dwellings, other buildings and structures</td></tr> <tr> <td><i>equals</i></td><td>GFCF</td></tr> </table>		Acquisition of		Road vehicles	<i>plus</i>	Other transport equipment		Industrial machinery and equipment		Computer software capitalised		Computers and computer peripherals		Electronic equipment and electrical machinery		Communications equipment		Other plant and equipment		Dwellings, other buildings and structures		Computer software expensed		Mining exploration expenditure expensed		Mining exploration expenditure written-off	<i>less</i>	Disposal of plant, machinery and equipment (including motor vehicles)		Disposal of dwellings, other buildings and structures	<i>equals</i>	GFCF
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<i>plus</i>	Other transport equipment																																
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	Communications equipment																																
	Other plant and equipment																																
	Dwellings, other buildings and structures																																
	Computer software expensed																																
	Mining exploration expenditure expensed																																
	Mining exploration expenditure written-off																																
<i>less</i>	Disposal of plant, machinery and equipment (including motor vehicles)																																
	Disposal of dwellings, other buildings and structures																																
<i>equals</i>	GFCF																																

**Industry value added (IVA)** IVA represents the value added by an industry to the intermediate inputs used by the industry. IVA is the measure of the contribution by mining businesses to gross domestic product.

The derivation of IVA is as follows:

	Sales and service income
<i>plus</i>	Funding from federal, state and/or local government for operational costs
<i>plus</i>	Capital work done for own use
<i>plus</i>	Closing inventories
<i>less</i>	Opening inventories
<i>less</i>	Purchases of goods and materials
<i>less</i>	Other intermediate input expenses (for details, see the entry for total expenses)
<i>equals</i>	IVA

However, it should be noted that IVA is a measure of economic activity and is not equivalent to operating profit before tax (OPBT). Wage and salary expenses and most other labour costs are not taken into account in its calculation, and nor are most insurance premiums, interest expenses or depreciation and a number of lesser expenses (see the entry for total expenses for further detail). On the income side, OPBT includes total income whereas IVA only includes sales and service income.

Industry value added is related to, but different from, the national accounting variable gross value added.

For national accounts purposes, gross value added is calculated by adjusting industry value added to include General Government units and to also account for some other effects.

**Industry value added per person employed** IVA of mining businesses which operated during the year ended 30 June 2007 divided by the number of persons employed by mining businesses during the last pay period ending in June of the same year.

**Industry value added to selected labour costs** IVA of mining businesses which operated during the year ended 30 June 2007 divided by their selected labour costs, i.e. industry value added / selected labour costs.

**Insurance premiums** Premiums for fire, general, accident, public liability, optional third-party and comprehensive motor vehicle insurance, professional indemnity insurance and common law liability. Excludes workers' compensation insurance premiums/costs (included in selected labour costs), compulsory third party motor vehicle insurance premiums (included in motor vehicle running expenses), and reinsurance premiums paid.

**Interest coverage** The number of times that businesses can meet their interest expenses from their earnings before net interest, tax, depreciation and amortisation (EBITDA), i.e. earnings before interest, tax, depreciation and amortisation / interest expenses.

**Interest expenses** Includes interest paid on loans from banks, finance companies, partners, and related or unrelated businesses, and in respect of finance leases. Includes interest equivalents, such as hedging costs, and expenses associated with discounted bills. Excludes bank charges other than interest, and capital repayments.

<b>Interest income</b>	Includes interest received from deposits in banks and non-bank financial institutions, loans, advances, finance leases and earnings on discounted bills. Excludes capital repayments received, and charges between companies in the same TAU.
<b>Intermediate input expenses</b>	For details, see the entry for total expenses.
<b>Intermediate inputs</b>	<p>Intermediate inputs consist of materials and certain services which are used up in the production process.</p> <p>The calculation is:</p> <div style="margin-left: 100px;"> <p>Intermediate input expenses (for details, see the entry for total expenses)</p> <p><i>plus</i>      Opening inventories</p> <p><i>less</i>      Closing inventories</p> <p><i>equals</i>     Intermediate inputs</p> </div>
<b>Inventories – opening/closing</b>	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers, at the beginning and end of the reporting period respectively.
<b>Investment rate (value added)</b>	The proportion of industry value added (IVA) used to acquire capital, i.e. (capital expenditure / IVA) x 100.
<b>Motor vehicle running expenses</b>	Includes expenditure on registration fees, compulsory third-party insurance premiums, fuel, and repair and maintenance expenses. Excludes expenses for off-road motor vehicles (e.g. mobile plant, quarry dump trucks) and lease payments, optional third party and comprehensive motor vehicle insurance premiums, and depreciation.
<b>Natural resource royalties expenses</b>	Includes payments under mineral lease arrangements, and resource rent taxes and royalties. Excludes payments for royalties from intellectual property (e.g. patents and copyrights) and expensed computer software licence fees, (both of which are included under other operating expenses), and capitalised computer software licence fees (included under capital expenditure). Gold tax payments are also excluded. See the entry for total expenses for the definition of other operating expenses.
<b>Net capital expenditure</b>	The value of total capital expenditure less proceeds received from the disposal of assets.
<b>Opening inventories</b>	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers at the beginning of the reporting period.
<b>Operating profit before tax (OPBT)</b>	Profit before extraordinary items are brought to account and prior to the deduction of income tax and appropriations to owners (e.g. dividends paid), i.e. total income – total expenses + change in inventories.
<b>Other contract, subcontract and commission expenses</b>	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 are also included. Includes payments to owner drivers for removal of material, but not for delivery of the final mineral product. Excludes contract mining expenses, published separately.

<b>Other income</b>	Includes natural resource royalty income, dividend income and other income such as net profit (or loss) on the sale of fixed tangible assets, net profit (or loss) resulting from variations in foreign exchange rates/transactions, and funding from federal, state and/or local government for specific capital items. It excludes extraordinary profits (or losses), i.e. those not associated with the normal operations of the business and of a non-recurring nature.
<b>Other intermediate input expenses</b>	Comprises intermediate input expenses less purchases of goods and materials used in production (i.e. excludes any capitalised purchases). Further detail is included in the entry for total expenses.
<b>Other selected expenses</b>	Includes expenditure on management fees/charges paid to related and unrelated businesses, bank charges other than interest, audit and other accounting expenses, legal fees, advertising expenses, postal and telecommunication expenses, office supplies and printing expenses, travelling, accommodation and entertainment expenses, staff training, payments for royalties from intellectual property (e.g. patents, copyrights), payments to employment agencies for staff, payroll tax, fringe benefits tax, land tax and land rates, exploration expenditure written off, and computer software expenses not capitalised. Some of these expense items are treated as intermediate input expenses in the calculation of industry value added. For details, see the entry for total expenses.
<b>Profit margin</b>	The percentage of sales and service income available as operating profit before tax (OPBT), i.e. $(\text{OPBT} / \text{sales and service income}) \times 100$ .
<b>Purchases and selected expenses</b>	Purchases of goods and materials, rent, leasing and hiring expenses, freight and cartage expenses, motor vehicle running expenses, repair and maintenance expenses, contract mining and other contract, subcontract and commission expenses, and other selected expenses.
<b>Purchases of goods and materials</b>	Purchases of materials, components, explosives, containers, packaging materials, fuels, electricity and water, and purchases of minerals and other goods for resale. Also includes capitalised purchases. Excludes purchases of parts and fuels for motor vehicles, but includes fuels for off-road vehicles, such as mobile plant and quarry dump trucks.
<b>Reference period</b>	For each collection year, businesses are asked to report data for the financial year ended 30 June. However, if a business has a different financial year, it is asked to report (apart from employment) for the 12 month period which ends between 1 October of the previous year and 30 September of the current year. This period is then used as a substitute for the financial year ended 30 June. For example, for the 2006–07 collection, a business may have reported data for the year ended 31 December 2006.
<b>Rent, leasing and hiring expenses</b>	Payments for the rent, leasing and hiring of land, dwellings, other buildings and structures, motor vehicles, plant, machinery and other equipment (including telecommunication equipment). Includes operating lease payments; excludes finance lease payments.
<b>Rent, leasing and hiring income</b>	For details, see the entry for sales and service income.
<b>Repair and maintenance expenses</b>	Includes computer and communication software and hardware maintenance, and repair and maintenance of off-road motor vehicles. Excludes wages and salaries of own employees and the repair and maintenance costs of on-road motor vehicles.

<b>Sales and service income</b>	<p>Includes:</p> <p><i>Sales of goods</i></p> <ul style="list-style-type: none"> <li>■ whether or not produced by the business (including goods produced for the business on a commission basis). Includes sales or transfers to related businesses or to overseas branches of the business, progress payments relating to long term contracts if they are billed in the period, delivery charges not separately invoiced to customers, and sales of goods produced by the business from crude materials purchased. Excludes excise and duties received on behalf of the Government (e.g. the petroleum production excise duty), sales of assets, royalties income, interest income, and delivery charges separately invoiced to customers. Exports are valued free on board (f.o.b.) (i.e. export freight charges are excluded).</li> </ul> <p><i>Income from services</i></p> <ul style="list-style-type: none"> <li>■ includes income from consulting services, repair, maintenance and service income and fees, contract, subcontract and commission income, management fees/charges from related and unrelated businesses, installation charges, delivery charges separately invoiced to customers and royalties from intellectual property (e.g. patents and copyrights). Excludes interest income, and delivery charges not separately invoiced to customers. Under current international standards, rent, leasing and hiring income (except from finance leases) is also classified as service income.</li> </ul> <p><i>Rent, leasing and hiring income</i></p> <ul style="list-style-type: none"> <li>■ derived from the ownership of land, dwellings, buildings and other structures, motor vehicles, plant, machinery and other equipment. Excludes royalties from mineral leases, income from finance leases, and payments received under hire purchase arrangements. This item is included in sales and service income, and is not separately published.</li> </ul> <p>These are valued net of discounts given and exclusive of goods and services tax (GST). Extraordinary items are also excluded.</p> <p>In order to produce data by state and territory, businesses which received mail out questionnaires were also asked to report sales of goods and services (as well as employment and wages and salaries) for each state and/or territory in which they operated. For details, see Explanatory Notes paragraphs 35–37.</p>
<b>Selected expenses</b>	See the entry for purchases and selected expenses.
<b>Selected labour costs</b>	See the entry for total expenses.
<b>Selected labour costs per person employed</b>	The value of selected labour costs paid by mining businesses which operated during the year ended 30 June 2007, divided by the number of persons employed by mining businesses during the last pay period ending in June of that same year.
<b>Selected mining (Table 3.1)</b>	Comprises all classes in ANZSIC Division B MINING except Subdivision 10 EXPLORATION AND OTHER MINING SUPPORT SERVICES.
<b>Standard Institutional Sector Classification of Australia (SISCA)</b>	The SISCA is the central classification among ABS Standard Economic Sector Classifications. It is based on the System of National Accounts 1993 (SNA93) institutional sector classification, and comprises the sectors: non-financial corporations, financial corporations, general government, households, non-profit institutions serving households, and rest of the world (which includes only non-resident units, these being excluded from all other sectors). For more information, please refer to <i>Standard Economic Sector Classifications of Australia (SESCA)</i> (cat. no. 1218.0).
<b>Superannuation</b>	See the entry for employer contributions into superannuation.

**Total expenses** For the purposes of calculating economic and accounting variables, expenses incurred by businesses are divided into several categories. However, some expenses are excluded entirely from all such calculations: excluded are capital repayments, costs associated with the transfer of real estate, dividends, donations, export freight charges, extraordinary losses, foreign exchange losses, goods and services tax (GST), excise and duties payable to governments, income tax and other direct taxes, losses on asset sales, and unrealised gains/losses from revaluations of assets.

Those expenses used for calculations are categorised as follows:

*Intermediate input expenses*

This category covers the major expenses incurred by businesses in producing and distributing goods and services (except labour costs), and comprises two sub-categories of operating expenses:

Purchases of goods, materials and services used in production, which include:

- purchases of materials, components, explosives, containers and packaging materials, electricity, fuels and water
- purchases of minerals and other goods for resale (without any further processing or assembly)
- motor vehicle running expenses
- freight and cartage expenses
- repair and maintenance expenses
- rent, leasing and hiring expenses (excluding finance lease payments) contract, subcontract and commission expenses.

Expenses related to the sale of goods and administrative expenses, which include:

- management fees/charges paid to related and unrelated businesses
- bank charges other than interest
- audit and other accounting expenses
- legal fees
- advertising expenses
- postal and telecommunication expenses
- office supplies and printing expenses
- travelling, accommodation and entertainment expenses
- staff training
- payments for royalties from intellectual property (e.g. patents and copyrights)
- payments to employment agencies for staff.

Excluded from intermediate input expenses are selected labour costs and other operating expenses as detailed below:

*Selected labour costs*

- wages and salaries (including provisions for employee entitlements, salary sacrificed earnings, share based payments and stock options)
- employer contributions into superannuation
- workers' compensation premiums/costs.

*Other operating expenses*

Some expenses are excluded from the calculation of intermediate input expenses and selected labour costs, but are included in the calculation of the accounting variable operating profit before tax (OPBT).

These expenses are included in table 2.1 as:



<b>Total expenses <i>continued</i></b>	<p>individually listed items</p> <ul style="list-style-type: none"> <li>■ bad and doubtful debts</li> <li>■ depreciation and amortisation</li> <li>■ insurance premiums (except workers' compensation and compulsory third party motor vehicle insurance premiums)</li> <li>■ interest expenses</li> <li>■ natural resource royalties expenses</li> </ul> <p>part of <i>other selected expenses</i></p> <ul style="list-style-type: none"> <li>■ computer software expenses not capitalised by businesses</li> <li>■ land tax and land rates</li> <li>■ mineral/petroleum exploration expenses not capitalised by businesses</li> <li>■ payroll tax and fringe benefits tax</li> <li>■ other expenses not capitalised by businesses.</li> </ul>
<b>Total income</b>	Comprises sales and service income, interest income, energy grants credits and other funding from government for operational costs, and other income (for details, see the entries for these items).
<b>Total mining</b>	Comprises all classes in ANZSIC Division B MINING (i.e. Subdivisions 06–10).
<b>Trading profit</b>	<p>A measure of profit directly attributable to trading in goods and services. It is derived by subtracting the cost of sales from the value of sales and service income.</p> <p>It should not be inferred that all of this profit is available as surplus, as other expenses such as selected labour costs, depreciation, insurance premiums, natural resource royalties, bad debts and interest have not been taken into account. Also, other income items such as funding from government and interest income have not been included.</p>
<b>Type of activity unit (TAU)</b>	<p>The TAU is the statistical unit used by the ABS to represent businesses, and for which statistics are reported, in cases where the ABN unit is not suitable for ABS statistical needs.</p> <p>The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.</p>
<b>Wages and salaries</b>	<p>The gross wages and salaries (including capitalised wages and salaries) of all employees of the business. The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer, bonuses, and annual and other types of leave. Provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are also included, as are salary sacrificed earnings and remuneration of employees in the form of share based payments and stock options. (Note that in previous issues of this publication, salary sacrificed earnings and remuneration of employees in the form of share based payments and stock options were reported under related expense items. For example, salary sacrificed for superannuation was included in employer contributions into superannuation.)</p> <p>Payments to self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer are excluded. The drawings of working proprietors and partners are also excluded.</p> <p>In order to produce data by state and territory, businesses which received mail out questionnaires were also asked to report wages and salaries (as well as employment and sales of goods and services) for each state and/or territory in which they operated. For details, see Explanatory Notes paragraphs 44 and 45.</p>

<b>Wages and salaries per person employed</b>	The value of wages and salaries paid by mining businesses which operated during the given year ended 30 June 2007, divided by the number of persons employed by mining businesses during the last pay period ending in June of the same year.
<b>Workers' compensation premiums/costs</b>	Workers' compensation is a compulsory insurance cover to be taken out by all employers, except for self-insured workers, according to legislative schemes to cover employees suffering injury or disease in the course of or arising out of employment.



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