



# Australian **mineral statistics**

2008



September quarter 2008

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# Data sources

The statistics in this publication are obtained from several sources, as follows.

- The bulk of mine production data (other than petroleum) is obtained from companies, published company reports and ABARE estimates. Data are supplemented where necessary by information from state mines departments (or their equivalents).
- Petroleum production and sales are based on data obtained from the Resources Division of the Australian Government Department of Resources, Energy and Tourism.
- Smelter and refinery production data are provided by companies operating the major smelters and refineries.
- Trade data are obtained from official ABS compiled statistics, supplemented by ABARE estimates where necessary.
- Price information is from published sources.

The assistance of the organisations supplying data is gratefully acknowledged by ABARE.

## Note on mine production data

In most instances, data refer to actual mine output. However, in a small number of cases, despatches or sales data are used as proxies for production.

Quantities of minerals produced are reported in terms of the product in which they leave each mine site. This includes various stages of ore dressing, processing and elementary smelting where these are carried out in an associated plant at, or near, the mine. The output is recorded as ore where no treatment is undertaken at the mine, or as a concentrate where ore dressing operations are carried out.

# Definitions

## Definitions and explanations

Small discrepancies in totals are generally because of the rounding of components.

zero is used to denote nil or a negligible amount.  
p denotes a preliminary figure.  
s denotes an ABARE estimate.

**Australian merchandise exports:** are valued on a free on board (fob) basis at the Australian port of export. The costs of freight, insurance and other distributive services beyond the Australian customs border are not included.

**Australian merchandise imports:** are valued on a customs value for duty (vfd) basis that is identical to a free on board (fob) basis. The customs vfd is the price actually paid at the port of origin, including inland freight and insurance costs incurred in delivering the commodity to the port of origin. The freight and insurance costs of delivering the commodity(s) to the Australian port of destination are excluded.

**Accounting of international merchandise trade:** the valuation of Australian merchandise exports and imports used in the accounting of international trade in the Australian Balance of Payments and the international trade statistical system are in accordance with the definitions published in the harmonised international standards determined by the International Monetary Fund, *Balance of Payments Manual* (version 5), 1993 and the United Nations, *System of National Accounts*, 1993.

## Common abbreviations and conversions

kg	kilogram	2.20462 lb (pounds)
t	tonne	1000 kilograms
kt	kilotonne	1000 tonnes
Mt	megatonne	1 000 000 tonnes
mtu	metric ton unit	10 kilograms
ct	metric carat	
L	litre	1.761 pints
kL	kilolitre	1000 litres
ML	megalitre	1 000 000 litres
Mm <sup>3</sup>	million cubic metres	1 000 000 cubic metres
bbL	barrel	159 litres
oz	troy ounce	0.031 kilograms
\$m	million dollars (Australian)	
fob	free on board	
for	free on rail	
fot	free on truck	
cif	cost, insurance and freight	

# Main features

## Overview

- The index of export prices of energy and mineral resources increased by 20 per cent in the September quarter of 2008, with this growth underpinned by a 28 per cent increase in energy prices and a 6 per cent depreciation of the Australian dollar.
- In the September quarter, Australia's mineral resource export earnings increased by 22 per cent to \$42.6 billion.
- Export volumes were higher for most major commodities including thermal coal, crude oil, uranium, iron ore, copper, diamonds and zinc.
- Australian production of mineral commodities was higher in the September quarter with around two-thirds of commodities analysed recording increased production.

### Recent commodity price movements

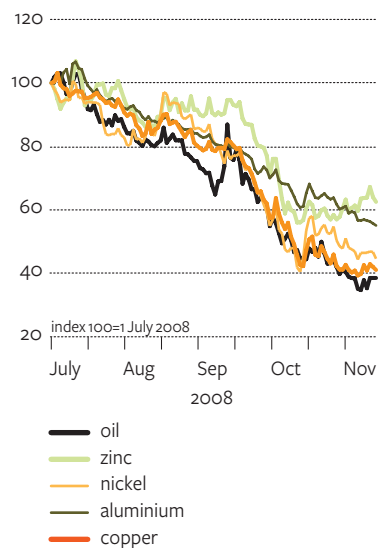
Commodity prices have fallen sharply from record highs in early July 2008 as the global financial crisis has adversely affected world economic growth and demand for commodities. While prices had begun to fall from the highs early in the September quarter, the most significant declines in commodity prices occurred following the collapse of a number of key financial institutions in the United States and Europe in late September 2008.

This publication provides price, production and export data for Australia's energy and mineral sector for the period from July to September 2008 and, therefore, does not fully capture the effects of the collapse in commodity prices.

### Prices

In the September quarter, the index of export prices of Australia's energy and mineral resources (export unit returns) increased by 20 per cent compared with the June quarter 2008. Prices for energy minerals increased by 28 per cent, reflecting substantial increases for metallurgical coal (55 per cent) and thermal coal (24 per cent). Metals and other minerals prices increased by nearly 13 per cent as the export unit value for iron ore increased by 27 per cent. Supporting export prices for energy and mineral resources was a 6 per cent depreciation of the Australian dollar.

Commodity spot prices (\$us)  
daily, ended 28 November 2008



### Australian energy and mineral exports

Percentage change June quarter to September quarter 2008

	export volume	export value	prices
crude oil <sup>a</sup>	▲ 3%	▲ 6%	▼ -8%
lng	— 0%	▲ 21%	▲ 21%
lpg	▲ 28%	▲ 31%	▲ 3%
metallurgical coal	▼ -1%	▲ 53%	▲ 55%
refinery products	▼ -18%	▼ -17%	— 0%
thermal coal	▲ 10%	▲ 37%	▲ 24%
uranium oxide (U <sub>3</sub> O <sub>8</sub> )	▲ 18%	▼ -14%	▼ -27%
alumina	▼ -3%	▲ 5%	▲ 9%
aluminium (ingot metal) <sup>a</sup>	▲ 14%	▲ 20%	▼ -5%
bauxite	▲ 70%	▲ 97%	▲ 16%
copper <sup>a</sup>	▲ 10%	▲ 9%	▼ -9%
diamonds	▲ 55%	▼ -30%	na
gold <sup>a</sup>	▲ 32%	▲ 34%	▼ -3%
iron and steel	▼ -7%	▲ 19%	▲ 28%
iron ore and pellets	▲ 8%	▲ 38%	▲ 27%
lead <sup>a</sup>	▲ 9%	▼ -3%	▼ -17%
manganese ore and concentrate	▼ -17%	▲ 5%	▲ 27%
nickel <sup>a</sup>	▼ -51%	▼ -63%	▼ -26%
silver <sup>a</sup>	▲ 38%	▲ 32%	▼ -12%
tin <sup>a</sup>	▼ -71%	▼ -71%	▼ -9%
titanium and zircon	▲ 13%	▲ 4%	▼ -8%
zinc <sup>a</sup>	▲ 14%	▼ -1%	▼ -16%

<sup>a</sup> Prices in US dollars. All other prices are export unit values denominated in Australian dollars

Compared with the September quarter 2007, the index of export prices for energy and mineral resources was 52 per cent higher, as prices for energy minerals increased by 95 per cent and prices for metals and other minerals increased by 26 per cent.

### *Exports*

Earnings from energy and mineral resource exports increased by 22 per cent to \$42.6 billion in the September quarter 2008 compared with the June quarter. This reflects the combined effect of higher export prices for bulk commodities and increased export volumes for most major commodities.

Commodities that recorded significant increases in export earnings include: metallurgical coal, up \$3.5 billion (53 per cent) to \$9.9 billion; iron ore, up \$2.6 billion (38 per cent) to \$9.4 billion; thermal coal, up \$1 billion (37 per cent) to \$3.8 billion; gold, up \$967 million (34 per cent) to \$3.8 billion; liquefied natural gas (LNG), up \$365 million (21 per cent) to \$2 billion; aluminium, up \$237 million (20 per cent) to \$1.4 billion; crude oil, up \$187 million (6 per cent) to \$3.3 billion; and copper, up \$159 million (9 per cent) to \$1.9 billion. With the exception of metallurgical coal and copper, higher export earnings reflect both higher export volumes and export prices.

Commodities that recorded significant declines in export earnings in the September quarter include: nickel, down \$603 million (63 per cent) to \$355 million; diamonds, down \$48 million (30 per cent) to \$110 million; petroleum refinery products, down \$41 million (17 per cent) to \$199 million; uranium, down \$23 million (13 per cent) to \$148 million; and titanium dioxide, down \$17 million (19 per cent) to \$73 million.

Lower export values for nickel are in line with lower prices and lower export volumes. Export values for diamonds and uranium declined as increased export volumes were outweighed by a decline in export prices. Refined petroleum and titanium dioxide export earnings declined as lower export volumes offset increased export prices.

## Exports: value

	unit	2008 Sept qtr	Sept 07 to Sept 08 % change	June 08 to Sept 08 % change
<b>Bauxite</b>	\$m	74	26	100
<b>Alumina</b> <sup>a</sup>	\$m	1 552	1	6
<b>Aluminium</b> (ingot metal)	\$m	1 439	4	20
<b>Coal, black</b>				
metallurgical	\$m	9 941	196	53
thermal	\$m	3 763	122	37
<b>Copper</b> <sup>b</sup>	\$m	1 934	17	9
<b>Diamonds</b> <sup>cs</sup>	\$m	110	-40	-30
<b>Gems, other than diamonds</b>	\$m	10	-29	-9
<b>Gold, refined</b>	\$m	3 789	39	34
<b>Iron</b>				
iron ore and pellets	\$m	9 390	127	38
iron and steel	\$m	520	30	19
<b>Lead</b> <sup>b</sup>	\$m	485	-6	-3
<b>Manganese ore And concentrate</b>	\$m	718	243	5
<b>Nickel</b> <sup>bs</sup>	\$m	355	-65	-63
<b>Petroleum</b>				
crude oil and other				
refinery feedstock	\$m	3 303	48	6
LNG	\$m	2 063	76	22
LPG	\$m	340	11	31
Refinery products	\$m	199	-44	-17
<b>Salt</b>	\$m	59	12	-2
<b>Silver, refined</b>	\$m	48	-3	33
<b>Tin</b> <sup>b</sup>	\$m	2	-75	-71
<b>Titanium</b>				
ilmenite concentrate <sup>d</sup>	\$m	31	38	48
leucoxene concentrate	\$m	4	-56	100
rutile concentrate	\$m	69	5	3
synthetic rutile <sup>s</sup>	\$m	69	-16	-3
titanium dioxide pigment	\$m	73	-28	-19
<b>Uranium oxide</b> (U <sub>3</sub> O <sub>8</sub> )	\$m	148	-48	-13
<b>Zinc</b> <sup>b</sup>	\$m	632	-44	-1
<b>Zircon concentrate</b> <sup>e</sup>	\$m	127	26	21
<b>Other mineral resources</b> <sup>f</sup>	\$m	1 319	3	-39
<b>Total mineral resources</b> <sup>g</sup>	\$m	42 566	63	22
<b>Total merchandise</b>	\$m	61 014	42	14
<b>Total goods and services</b>	\$m	75 203	36	13

<sup>a</sup> Includes aluminium hydroxide. <sup>b</sup> Value of all ores, concentrates, intermediate products (where applicable) and refined metal. <sup>c</sup> Unsorted and sorted. <sup>d</sup> Bulk and bagged ilmenite before January 1992; bulk only thereafter. <sup>e</sup> All grades, bulk and bagged, before January 1992, standard grade only thereafter. <sup>f</sup> Derived as the difference between total mineral resource exports, below, and the sum of the above items. <sup>g</sup> Total mineral resource exports on an ABARE balance of payments basis. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

## Exports: volume

	unit	2008 Sept qtr	Sept 07 to Sept 08 % change	June 08 to Sept 08 % change
<b>Bauxite</b>	kt	2 822	29	70
<b>Alumina</b> <sup>a</sup>	kt	3 771	-3	-3
<b>Aluminium</b> (ingot metal)	kt	438	0	14
<b>Coal, black</b>				
metallurgical	Mt	36	5	-1
thermal	Mt	32	18	10
Total	Mt			
<b>Copper</b> <sup>bs</sup>	kt	204	13	10
<b>Diamonds</b> <sup>cs</sup>	'000 ct	4 839	-3	55
<b>Gold</b> <sup>bs</sup>	t	125	16	32
<b>Iron</b>				
iron ore and pellets	kt	86 191	26	8
iron and steel	kt	444	-28	-7
<b>Lead</b> <sup>bs</sup>	kt	172	14	9
<b>Manganese ore and concentrate</b>	kt	1 131	-5	-17
<b>Nickel</b> <sup>bs</sup>	kt	22	-37	-51
<b>Petroleum</b>				
crude oil and other refinery feedstock	ML	4 066	1	3
LNG	Mt	4	12	0
LPG	ML	660	-16	28
Refinery products	ML	237	-57	-18
<b>Salt</b>	kt	2 734	14	0
<b>Tin</b> <sup>b</sup>	t	132	-77	-71
<b>Titanium</b>				
ilmenite concentrate <sup>d</sup>	kt	265	19	48
leucoxene concentrate	kt	9	-81	157
rutile concentrate	kt	110	26	-1
synthetic rutile <sup>s</sup>	kt	129	-2	0
titanium dioxide pigment	kt	31	-31	-29
<b>Uranium oxide</b> (U <sub>3</sub> O <sub>8</sub> )	t	2 572	3	18
<b>Zinc</b> <sup>b</sup>	kt	436	13	14
<b>Zircon concentrate</b> <sup>e</sup>	kt	166	9	3

a Includes aluminium hydroxide. b Metallic content of all ores, concentrates, intermediate products (where applicable) and refined metal. c Unsorted and sorted. d Bulk and bagged ilmenite before January 1992; bulk only thereafter. e All grades, bulk and bagged, before January 1992, standard grade only thereafter. s ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

### *Production*

Production was higher in the September quarter compared with the June quarter, with around two-thirds of commodities recording production increases. Increased production was observed for diamonds (55 per cent); refined silver (26 per cent); uranium oxide (18 per cent); refined gold (14 per cent) and iron ore (6 per cent). It is estimated black coal production increased by 9 per cent in the September quarter compared with the previous quarter.

Silver production was higher in the September quarter as production increased at Nyrstar's Port Pirie smelter in South Australia. Diamond production was also higher as a result of re-established access to higher grade ores at Rio Tinto's Argyle mine in Western Australia following heavy rainfall earlier in the year. Production of both thermal and metallurgical coal expanded as production recovered after heavy rainfall earlier in the year and some mines increased output to take advantage of higher spot prices. Refined gold production increased, being supported by higher imports of unrefined and scrap gold.

Energy Resources Australia's Ranger mine in the Northern Territory regained access to higher grades of ore following heavy rainfall in the March quarter, thereby contributing to higher uranium ( $U_3O_8$ ) production volumes. Expanded extraction of ore and enhanced uranium recovery at BHP Billiton's Olympic Dam in South Australia also contributed to increased uranium production. Growth in iron ore production in the September quarter was underpinned by ramped up operations at the Fortescue Metals' Pilbara Iron Ore Project in Western Australia.

Significant production declines occurred for intermediate nickel (57 per cent); refined nickel class 1 (50 per cent); refined nickel class 2 (33 per cent); manganese (16 per cent); refined zinc (7 per cent); and tin ores and concentrates (6 per cent).

Production of intermediate nickel was lower in the quarter as BHP Billiton's Kalgoorlie Nickel Smelter in Western Australia was closed for a furnace rebuild. The closure of the smelter resulted in BHP Billiton bringing forward maintenance at its Kwinana Nickel Refinery leading to lower refined output. Manganese production was lower reflecting declining production in Western Australia. Refined zinc production fell in the quarter as production declined because of reduced feedstock from Queensland mines. Despite the commissioning of the Renison tin project in Tasmania, production of tin ores and concentrates was lower as a result of the closure of Metals X's Collingwood tin mine in Queensland.

## Production

	unit	2008 Sept qtr	Sept 07 to Sept 08 % change	June 08 to Sept 08 % change
<b>Bauxite</b>	kt	15 781	2	-2
<b>Alumina</b>	kt	4 813	0	-1
<b>Aluminium (ingot metal)</b>	kt	498	1	1
<b>Coal</b>				
Black, raw	Mt	117	4	6
Black, salable	Mt	94	11	9
<b>Copper</b>				
Mine as	kt	234	17	7
Blister b	kt	120	50	1
Refined	kt	134	49	0
<b>Diamonds</b>	'000 ct	4 839	-3	55
<b>Gold</b>				
Mine as	t	55	-8	2
Refined	t	92	10	14
<b>Iron</b>				
Iron ore and concentrate	kt	93 741	26	6
Iron and steel	kt	1 996	-4	-4
<b>Lead</b>				
Mine as	kt	157	-1	2
Bullion b	kt	44	29	5
Refined	kt	56	27	0
<b>Manganese</b>	kt	1 233	-9	-16
<b>Nickel</b>				
Mine as	kt	53	20	6
Intermediate	kt	3	-77	-57
Refined, class 1	kt	13	-52	-50
Refined, class 2	kt	4	100	-33
<b>Petroleum, field</b>				
Crude oil and condensate	ML	6 740	-1	2
LPG (naturally occurring)	ML	1 056	-8	6
Natural gas	Mm <sup>3</sup>	9 631	-10	1
<b>Total Refined Petroleum</b>	ML	9 945	-4	2

*continued...*

Production *continued*

	unit	2008 Sept qtr	Sept 07 to Sept 08 % change	June 08 to Sept 08 % change
<b>Salt</b>	kt	2 790	-4	0
<b>Silver</b>				
Mine as	t	451	-5	5
Refined	t	183	5	26
<b>Tin</b>				
Mine as	t	207	-47	-6
Refined	t	0	0	0
<b>Titanium</b>				
Ilmenite concentrate	kt	493	-14	0
Leucoxene concentrate	kt	40	0	-22
Rutile concentrate	kt	82	2	6
Synthetic rutile s	kt	188	5	21
Titanium dioxide pigment	kt	49	-8	9
<b>Uranium oxide (U<sub>3</sub>O<sub>8</sub>)</b>	t	2 649	7	18
<b>Zinc</b>				
Mine as	kt	376	-4	-4
Refined	kt	122	-4	-7
<b>Zircon concentrate</b>	kt	139	-7	9

a Total metallic content of minerals produced. b Metallic content. s ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; Joint Coal Board; Queensland Coal Board; ABARE.

## Commodity highlights

### Energy

#### *Oil and Gas*

In the September quarter 2008, Australia's crude oil and natural gas production was steady at around 6.7 gigalitres and 9.6 million cubic metres, respectively. New oil projects in the Carnarvon basin, including Woodside's Vincent and Neptune projects, offset natural field decline in mature fields. Steady gas production is underpinned by reduced production in the Carnarvon Basin, partially caused by the June 2008 Varanus Island fire, offsetting higher production in the Gippsland Basin. Production of naturally occurring LPG increased by 6 per cent in the quarter as production in the Gippsland Basin increased.

Export earnings from crude oil increased by 6 per cent to \$3.3 billion in the September quarter, as increased export volumes and the depreciation of the Australian dollar offset a moderate decline in the crude oil price.

#### *Coal*

Production of salable and raw black coal increased in the quarter, consistent with higher output of both metallurgical and thermal coal. Queensland metallurgical coal production picked up in the quarter following heavy rainfall earlier in the year. In New South Wales, Xstrata, BHP Billiton and Rio Tinto recorded increased thermal coal production from the Hunter Valley.

In the September quarter, export unit values for metallurgical and thermal coal rose by 55 per cent and 24 per cent, respectively, reflecting the full effect of higher contract prices, increased spot prices and a depreciation of the Australian dollar. Higher export prices combined with increased export volumes resulted in black coal export earnings increasing by 48 per cent to \$13.7 billion.

#### *Uranium*

Australia's uranium production ( $U_3O_8$ ) increased by 402 tonnes (18 per cent) to 2649 tonnes in the September quarter compared with the June quarter. Energy Resources Australia's Ranger mine in the Northern Territory regained access to high ore grades following heavy rainfall in the March quarter and BHP Billiton expanded production at Olympic Dam. Nonetheless, uranium export earnings declined by 13 per cent to \$148 million in the quarter as falling export unit values offset increased export volumes.

## Metals and other minerals

### *Iron ore*

Iron ore production was significantly higher in the September quarter as newly commenced production at Fortescue Metals' Pilbara Iron Ore Project approached capacity and production increased at Rio Tinto's Hammersley mine and BHP Billiton's Pilbara operations. Total production increased by 4.9 million tonnes (6 per cent) to 93.7 million tonnes in the September quarter.

Iron ore export unit value increased by 27 per cent in the September quarter reflecting the full effect of higher contract prices flowing through and the depreciation of the Australian dollar. This, combined with higher export volumes, led export earnings to increase by 38 per cent to \$9.4 billion in the quarter.

### *Gold*

Gold mine production remained steady at around 55 tonnes in the September quarter as production increases from a number of Australia's largest mines offset the closure of some smaller mines. Despite steady concentrate production, refined gold production increased by 14 per cent to 92 tonnes, supported by higher imports of scrap and unrefined gold. In the September quarter, lower gold prices were offset by increased export volumes, resulting in export earnings from refined gold increasing by 34 per cent to \$3.8 billion.

### *Copper*

Copper mine production increased by 7 per cent in the September quarter with higher production at a number of mines. Refined copper production was steady as lower output at BHP Billiton's Olympic Dam was offset by increased production at Xstrata's Townsville Refinery. The volume of copper exports rose by 10 per cent in the quarter. This, combined with a steady export price, resulted in export earnings increasing by 9 per cent to \$1.9 billion.

### *Nickel*

In Western Australia, nickel mine production increased by 6 per cent in the September quarter as higher production from BHP Billiton's Nickel West operation was not offset by lower production from Minara Resources' Murrin Murrin operation and the closure of Fox Resources' Radio Hill. Production of intermediate and refined nickel was lower in the quarter as the Kalgoorlie nickel smelter was closed for a furnace rebuild. In line with lower production and declining nickel prices, export earnings declined by 63 per cent to \$355 million in the quarter.

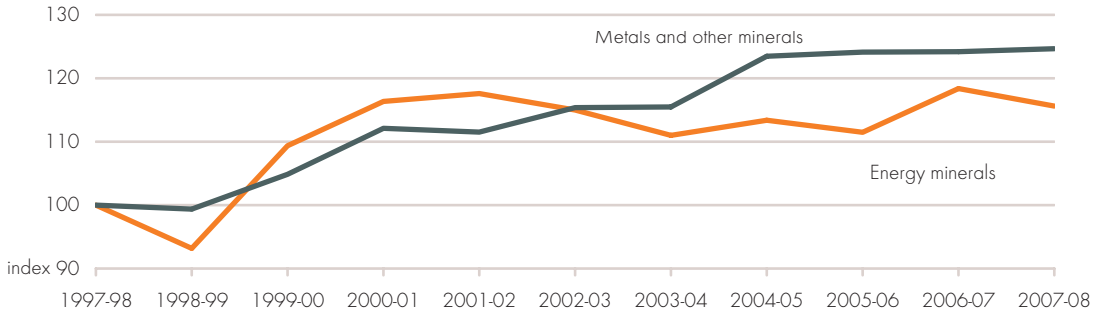
## Zinc

Mined and refined zinc production declined by 4 per cent and 7 per cent, respectively, in the September quarter as some producers responded to lower zinc prices. These include Teck Cominco's Lenard Shelf (Western Australia) and Intec's Hellyer (Tasmania) mines (entered care and maintenance) and Perilya's Broken Hill and CBH Resources' Endeavor mines (reductions to planned production) both in New South Wales. Despite declining production, the volume of zinc exports increased by 14 per cent as stockpiles were drawn down. Higher export volumes were offset by lower export prices resulting in the value of zinc exports declining by 1 per cent to \$632 million.

## Resources sector indicators

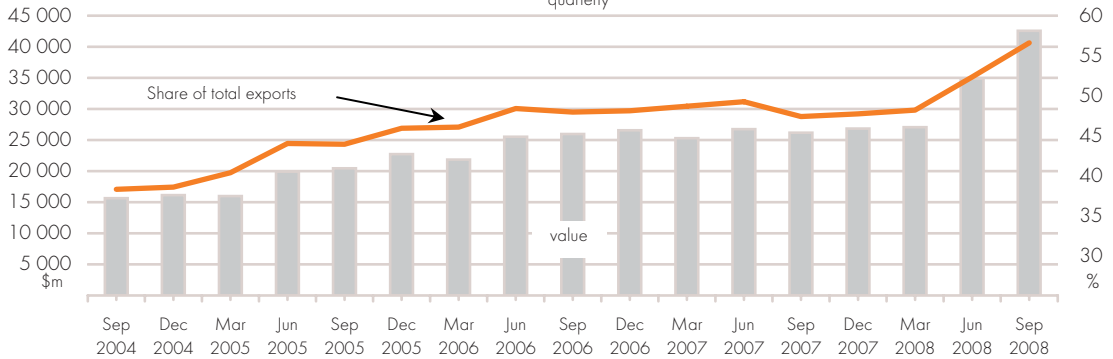
### Mine production

base: 1997-98 = 100



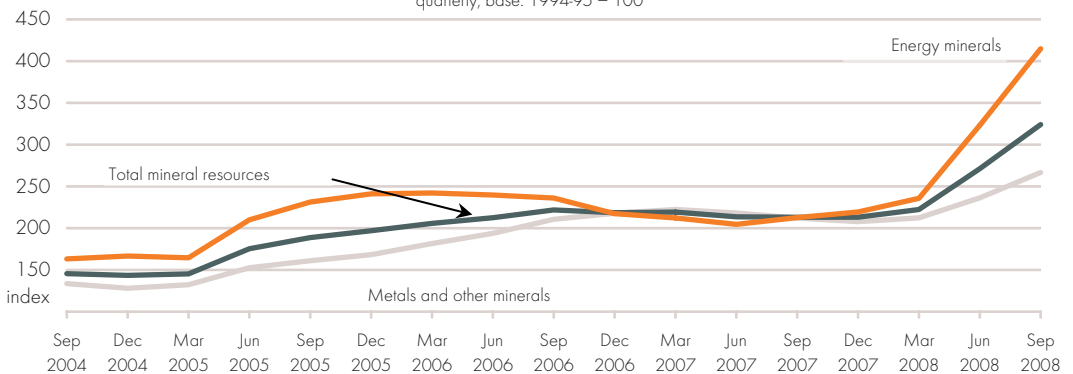
### Mineral resources exports

quarterly



### Export unit returns

quarterly, base: 1994-95 = 100



# 1 Production summary

		quarter								
		2006-07	2007-08 <sup>p</sup>	2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
Bauxite	kt	62 684	63 463	15 621	15 426	16 063	15 905	16 069	15 781	
Alumina	kt	18 506	19 359	4 671	4 802	4 924	4 792	4 841	4 813	
Aluminium (ingot metal)	kt	1 954	1 964	488	493	494	486	491	498	
Coal										
Black, raw	Mt	414	417 <sup>s</sup>	106	112	103	92	110 <sup>s</sup>	117 <sup>s</sup>	
Black, salable	Mt	324	325 <sup>s</sup>	82	85	80	74	86 <sup>s</sup>	94 <sup>s</sup>	
Brown <sup>as</sup>	Mt	66	72	na	na	na	na	na	na	
Copper										
Mine <sup>bs</sup>	kt	859	863	213	200	238	205	219	234	
Blister <sup>c</sup>	kt	389	395	103	80	108	88	119	120	
Refined <sup>s</sup>	kt	435	442	113	90	120	101	134	134	
Diamonds	'000 ct	24 632	16 528	4 524	4 980	6 145	2 277	3 126	4 839	
Gold										
Mine <sup>bs</sup>	t	249	227	62	60	62	52	54	55	
Refined	t	360	364	99	84	100	99	81	92	
Iron										
Iron ore and concentrate	kt	287 693	324 693	75 819	74 190	81 733	79 935	88 835	93 741	
Iron and steel <sup>s</sup>	Mt	8 010	8 121	2 001	2 058	2 006	2 010	2 047	1 966	
Lead										
Mine <sup>bs</sup>	kt	642	641	157	158	160	169	154	157	
Bullion <sup>c</sup>	kt	114	152	32	34	34	41	42	44	
Refined	kt	191	203	60	44	51	52	56	56	
Manganese <sup>s</sup>	kt	5 071	5 436	1 345	1 355	1 360	1 254	1 468	1 233	
Nickel										
Mine <sup>bs</sup>	kt	191	190	46	44	47	49	50	53	
Intermediate	kt	57	45	13	13	12	13	7	3	
Refined, class 1	kt	104	105	25	27	25	27	26	13	
Refined, class 2	kt	15	15	4	2	3	4	6	4	
Petroleum, field										
Crude oil and condensate <sup>s</sup>	ML	28 555	25 537	7 151	6 779	6 489	5 923	6 598	6 740	
LPG (naturally occurring)	ML	4 550	3 971	1 077	1 145	1 002	829	994	1 056	
Natural gas	Mm <sup>3</sup>	39 331	39 283	10 184	10 681	10 031	8 989	9 582	9 631	
Petroleum, total refinery	ML	38 795	39 575	10 149	10 343	10 084	9 368	9 780	9 945	
Salt <sup>s</sup>	kt	10 857	11 243	2 596	2 899	2 764	2 790	2 790	2 790	
Silver										
Mine <sup>bs</sup>	t	1 674	1 867	467	475	464	500	429	451	
Refined	t	618	605	156	174	138	148	145	183	
Tin										
Mine <sup>bs</sup>	t	2 061	1 631	558	391	536	483	221	207	
Refined <sup>s</sup>	t	321	0	50	0	0	0	0	0	
Titanium										
Ilmenite concentrate <sup>s</sup>	kt	2 383	2 205	572	575	592	545	493	493	
Leucoxene concentrate <sup>s</sup>	kt	169	156	50	40	40	26	51	40	
Rutile concentrate <sup>s</sup>	kt	279	333	76	80	90	85	77	82	
Synthetic rutile <sup>s</sup>	kt	729	672	190	179	182	155	155	188	
Titanium dioxide pigment <sup>s</sup>	kt	207	201	52	53	52	50	45	49	
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	t	9 594	10 151	2 670	2 473	2 921	2 510	2 247	2 649	
Zinc										
Mine <sup>bs</sup>	kt	1 375	1 571	375	392	423	365	391	376	
Refined	kt	496	507	127	127	129	121	131	122	
Zircon concentrate <sup>s</sup>	kt	557	580	159	149	157	148	127	139	

<sup>a</sup> Quarterly data are not available. <sup>b</sup> Total metallic content of minerals produced. <sup>c</sup> Metallic content. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. <sup>na</sup> Not available.

Sources: Australian Bureau of Statistics, Canberra; Coal Services Pty Limited; Queensland Government, Department of Natural Resources and Mines; ABARE.

## 2 Volume of mine production indexes <sup>a</sup>

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 <sup>p</sup>
Energy minerals	116.4	117.6	115.0	111.0	113.4	111.5	118.4	115.6
Metals and other minerals	112.1	111.5	115.4	115.5	123.5	124.1	124.2	124.7
Total minerals	114.5	114.9	115.2	113.3	118.6	118.0	121.0	120.1

<sup>a</sup> Uranium included with energy.

Note: ABARE revised the method for calculating production indexes in October 1999. The indexes are now calculated on a chained weight basis using Fishers' ideal index with a reference year of 1997-98 = 100.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

## 3 Exports summary

		2006-07	2007-08 <sup>p</sup>	quarter					2008-09 <sup>p</sup>	
				2006-07	2007-08 <sup>p</sup>					2008-09 <sup>p</sup>
					June	Sept	Dec	Mar		
Bauxite	kt	5 700	7 917	1 575	2 191	2 061	2 005	1 660	2 822	
Alumina <sup>a</sup>	kt	15 056	15 739	3 720	3 894	4 103	3 835	3 907	3 771	
Aluminium (ingot metal)	kt	1 638	1 650	398	439	412	415	385	438	
Coal, black										
Metallurgical	Mt	131.97	136.92	35.08	34.71	35.86	29.61	36.75	36.32	
Thermal	Mt	111.62	115.07	27.49	27.59	28.55	29.42	29.51	32.44	
Copper <sup>bs</sup>	kt	699	733	167	180	178	191	184	204	
Diamonds <sup>cs</sup>	'000 ct	24 632	16 528	4 524	4 980	6 145	2 277	3 126	4 839	
Gold <sup>bs</sup>	t	399.69	381.58	117.75	107.84	89.40	89.46	94.88	125.35	
Iron										
Iron ore and pellets	kt	257 365	294 358	67 179	68 321	72 759	73 749	79 529	86 191	
Iron and steel <sup>s</sup>	kt	2 648	2 131	663	618	543	495	476	444	
Lead <sup>bs</sup>	kt	635	589	142	152	169	109	159	172	
Manganese ore and concentrate	kt	4 667	5 105	1 248	1 190	1 326	1 226	1 363	1 131	
Nickel <sup>ds</sup>	kt	166	166	42	35	41	45	45	22	
Petroleum										
Crude oil and other refinery feedstock	ML	15 965	15 975	3 734	4 017	4 020	3 980	3 958	4 066	
LNG	Mt	15.20	14.80	3.90	3.40	3.90	3.70	3.80	3.80	
LPG	ML	2 824	2 589	686	788	690	595	516	660	
Refinery products	ML	1 762	1 807	421	555	507	456	288	237	
Salt	kt	10 749	10 686 <sup>s</sup>	2 821	2 396	2 822	2 734 <sup>s</sup>	2 734 <sup>s</sup>	2 734	
Tin <sup>b</sup>	t	1 867	3 079	550	569	751	1 304	455	132	
Titanium										
Ilmenite concentrate	kt	999	894	169	224	234	257	179	265	
Leucoxene concentrate	kt	123	56	26	47	3	3	3	9	
Rutile concentrate	kt	307	399	82	87	99	102	111	110	
Synthetic rutile <sup>s</sup>	kt	508	513	126	131	128	126	128	129	
Titanium dioxide pigment	kt	171	175	48	45	44	43	43	31	
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	t	9 519	10 139	2 933	2 486	3 088	2 385	2 180	2 572	
Zinc <sup>b</sup>	kt	1 321	1 508	374	387	406	332	383	436	
Zircon concentrate	kt	555	637	152	152	163	161	161	166	

continued

### 3 Exports summary

*continued*

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
Bauxite	\$m	153	206	44	59	53	57	37	74	
Alumina <sup>a</sup>	\$m	6 243	5 809	1 499	1 530	1 461	1 346	1 471	1 552	
Aluminium (ingot metal)	\$m	5 650	4 967	1 360	1 390	1 166	1 209	1 202	1 439	
Coal, black										
Metallurgical	\$m	15 039	16 033	3 521	3 358	3 297	2 897	6 481	9 941	
Thermal	\$m	6 758	8 365	1 635	1 694	1 802	2 115	2 754	3 763	
Copper <sup>e</sup>	\$m	6 526	6 747	1 648	1 657	1 554	1 760	1 775	1 934	
Diamonds <sup>cs</sup>	\$m	726	664	125	183	183	141	158	110	
Gems, other than diamonds	\$m	49	52	9	13	9	18	11	10	
Gold, refined	\$m	10 320	10 903	3 030	2 734	2 496	2 851	2 822	3 789	
Iron										
Iron ore and pellets	\$m	15 512	20 462	4 085	4 143	4 528	4 967	6 825	9 390	
Iron and steel <sup>s</sup>	\$m	1 743	1 562	431	401	382	342	437	520	
Lead <sup>e</sup>	\$m	1 579	2 050	425	514	681	354	501	485	
Manganese ore										
and concentrate	\$m	482	1 532	136	209	263	378	682	718	
Nickel <sup>es</sup>	\$m	6 372	4 236	1 928	1 020	1 098	1 160	958	355	
Petroleum										
Crude oil and other refinery feedstock	\$m	8 317	10 484	2 009	2 236	2 541	2 591	3 116	3 303	
LNG	\$m	5 222	5 854	1 188	1 173	1 443	1 541	1 698	2 063	
LPG	\$m	1 038	1 182	257	305	319	299	259	340	
Refinery products	\$m	1 098	1 323	275	356	368	358	240	199	
Salt	\$m	239	232 <sup>s</sup>	62	53	59	60 <sup>s</sup>	60 <sup>s</sup>	59 <sup>s</sup>	
Silver, refined	\$m	221	187	67	49	46	55	36	48	
Tin <sup>e</sup>	\$m	25	42	8	9	7	18	7	2	
Titanium										
Ilmenite concentrate	\$m	113	104	20	22	30	31	21	31	
Leucoxene concentrate	\$m	35	15	8	9	2	2	2	4	
Rutile concentrate	\$m	259	277	74	66	72	71	67	69	
Synthetic rutile <sup>s</sup>	\$m	361	305	96	82	78	74	71	69	
Titanium dioxide pigment	\$m	408	375	107	101	94	91	90	73	
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	\$m	660	887	198	285	259	172	171	148	
Zinc <sup>e</sup>	\$m	4 298	3 352	1 121	1 138	933	640	640	632	
Zircon concentrate	\$m	478	421	113	101	108	107	105	127	
Other mineral resources <sup>f</sup>	\$m	4 653	6 322	1 270	1 281	1 504	1 359	2 179	1 319	
Total mineral resources <sup>g</sup>	\$m	104 583	114 961	26 750	26 174	26 840	27 067	34 880	42 566	
Total merchandise	\$m	169 514	182 989	42 823	43 028	43 699	42 901	53 361	61 014	
<b>Total goods and services</b>	\$m	<b>215 695</b>	<b>234 308</b>	<b>54 326</b>	<b>55 242</b>	<b>56 243</b>	<b>56 171</b>	<b>66 652</b>	<b>75 203</b>	

<sup>a</sup> Includes aluminium hydroxide. <sup>b</sup> Metallic content of all ores, concentrates, intermediate products (where applicable) and refined metal. <sup>c</sup> Unsorted and sorted. <sup>d</sup> Includes metal content of ores and concentrates, intermediate products and nickel metal. <sup>e</sup> Value of all ores, concentrates, intermediate products (where applicable) and refined metal. <sup>f</sup> Derived as the difference between total mineral resources exports, below, and the sum of the above items. <sup>g</sup> Total mineral resource exports on an ABARE balance of payments basis. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

### 4 Mineral resources export unit returns <sup>a</sup>

	quarter							
	2006-07 <sup>p</sup>		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>		
	Dec	Mar	June	Sept	Dec	Mar	June	Sept
Energy minerals	217.4	212.2	204.6	212.6	219.4	235.7	323.2	414.8
Metals and other minerals	217.8	222.4	218.2	212.1	207.8	212.3	236.3	266.6
Total mineral resources	218.6	219.2	213.6	213.0	213.2	222.4	271.2	324.1

<sup>a</sup> Base: 1994-95 = 100. <sup>p</sup> Preliminary.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

## 5 Imports summary

		2006-07	2007-08 p	quarter						
				2006-07		2007-08 p			2008-09 p	
				June	Sept	Dec	Mar	June	Sept	
<b>Quantity</b>										
Diamonds <b>a</b>	'000 ct	3 430	2 964	817	803	930	620	611	211	
Iron ore	kt	4 722	4 401	1 017	1 098	1 345	1 074	884	1 130	
Ingot steel	kt	2 318	1 848	513	489	456	411	492	812	
Ferroalloys	kt	87	97	17	17	18	38	24	20	
Petroleum										
Crude oil and other refinery feedstock	ML	25 345	26 223	6 594	6 965	7 141	6 382	5 735	6 326	
Natural gas	kt	4 268	4 032	1 157	1 158	637	1 212	1 024	1 295	
Refinery products	ML	14 018	17 982	4 103	3 630	4 083	5 062	5 207	4 527	
Phosphate rock	kt	472	707	148	93	279	109	226	322	
<b>Value</b>										
Diamonds <b>a</b>	\$m	397	444	102	104	120	113	107	115	
Gold <b>b</b>	\$m	5 309	7 311	1 537	1 882	1 414	1 905	2 110	2 663	
Iron ore	\$m	338	311	89	84	92	73	62	64	
Ingot steel	\$m	2 479	2 225	609	562	514	526	623	1 025	
Ferroalloys	\$m	116	154	30	33	35	37	49	57	
Petroleum										
Crude oil and other refinery feedstock	\$m	13 360	17 131	3 574	3 882	4 434	4 302	4 514	5 572	
Natural gas	\$m	800	724	205	201	97	252	174	319	
Refinery products	\$m	7 784	12 730	2 283	2 054	2 659	3 593	4 424	3 979	
Phosphate rock	\$m	32	80	11	7	23	8	42	93	
Silver	\$m	98	80	4	4	21	26	29	32	
Other	\$m	985	1 272	170	227	357	362	326	381	
Total	\$m	31 698	42 462	8 615	9 040	9 764	11 197	12 461	14 300	

## 6 Private mineral exploration expenditure

		2006-07	2007-08 p	quarter					
				2006-07 p		2007-08 p			
				Mar	June	Sept	Dec	Mar	June
<b>Energy</b>									
Petroleum									
Onshore	\$m	498.2	493.8	110.3	135.6	113.4	159.8	94.6	126.0
Offshore	\$m	1 727.3	2 541.1	350.0	596.5	584.9	610.2	614.8	731.2
Total	\$m	2 225.5	3 034.9	460.3	732.1	698.3	770.0	709.4	857.2
Coal	\$m	193.2	234.8	38.8	43.9	50.1	59.8	54.1	70.8
Uranium	\$m	114.1	231.5	24.3	37.5	50.0	69.6	49.2	62.7
Total energy	\$m	2 532.8	3 501.2	523.4	813.5	798.4	899.4	812.7	990.7
<b>Metals and other minerals</b>									
Copper	\$m	234.5	293.5	51.2	77.1	65.2	70.2	64.8	93.3
Diamonds	\$m	26.9	21.7	3.3	4.8	5.0	5.3	6.1	5.3
Gold	\$m	455.9	592.6	103.6	123.0	129.6	146.7	142.4	173.9
Iron ore	\$m	285.4	449.8	54.0	88.8	112.8	98.5	91.9	146.6
Mineral sands	\$m	37.3	37.0	9.5	9.3	7.2	10.5	8.9	10.4
Nickel, cobalt	\$m	181.1	303.2	40.6	57.9	66.8	85.9	64.0	86.5
Silver, lead and zinc	\$m	139.4	186.5	33.5	45.5	56.9	51.5	39.0	39.1
Other	\$m	46.8	110.8	10.5	14.7	19.8	27.9	23.6	39.5
Total metals and other minerals	\$m	1 407.3	1 995.1	306.2	421.1	463.3	496.5	440.7	594.6
Total expenditure	\$m	3 940.1	5 496.3	829.6	1 234.6	1 261.7	1 395.9	1 253.4	1 585.3

Sources: Australian Bureau of Statistics, Canberra; ABARE.

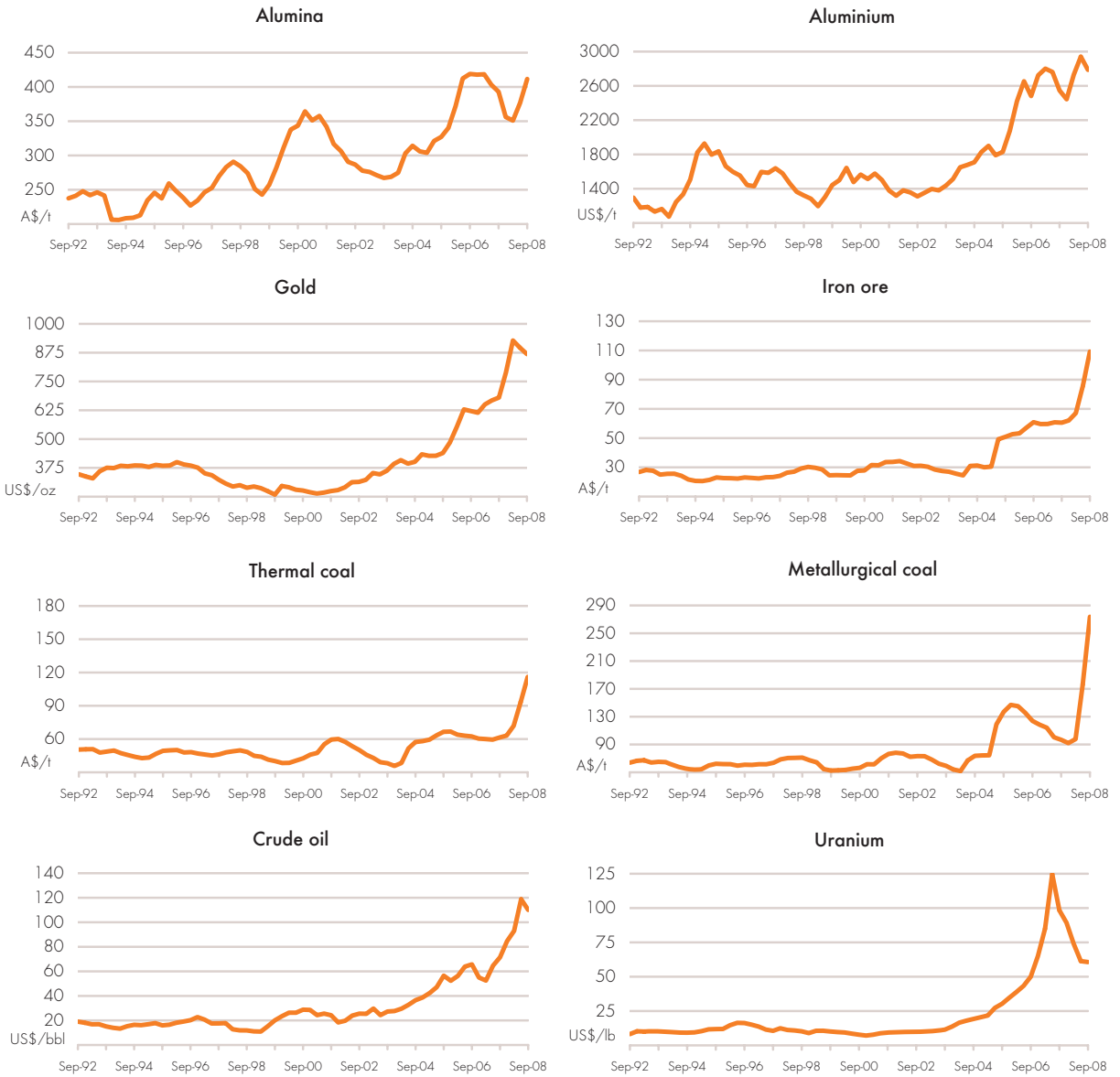
# 7 Mineral resources prices

	Alumina avg export unit value A\$/t	Aluminium (high grade) LME cash US\$/t	Gold London AM fix US\$/oz	Iron ore <sup>a</sup> avg export unit value A\$/t	Thermal coal avg export unit value A\$/t	Metallurgical coal avg export unit value A\$/t	Crude oil <sup>b</sup> world trade wtd ave US\$/bbl	Uranium <sup>c</sup> Industry spot price US\$/lb
<b>2005-06</b>	362.90	2 244.69	526.95	53.70	65.02	141.13	57.25	36.79
<b>2006-07</b>	414.63	2 692.18	638.56	60.27	60.54	113.96	59.45	81.17
<b>2007-08</b>	369.08	2 665.02	823.35	69.51	72.70	117.10	91.97	80.75
<b>2007</b>								
July	379.18	2 732.91	665.27	59.43	58.23	92.69	72.87	120.00
August	408.13	2 515.77	664.53	61.65	62.87	98.00	69.48	90.00
September	391.37	2 391.25	710.65	60.61	63.22	99.35	73.88	85.00
October	351.16	2 442.37	754.48	58.60	60.33	90.41	78.16	85.00
November	350.42	2 508.25	808.31	62.28	61.67	91.74	88.86	93.00
December	365.25	2 381.69	803.62	65.36	66.50	93.73	87.62	90.00
<b>2008</b>								
January	347.94	2 445.52	887.78	68.56	68.05	93.61	89.87	78.00
February	348.02	2 776.93	924.28	64.58	69.44	96.66	90.84	73.00
March	355.89	3 005.29	971.06	68.20	77.82	103.51	100.48	71.00
April	385.70	2 959.27	911.60	83.86	88.58	126.55	104.98	65.00
May	377.35	2 902.90	889.13	86.80	92.02	172.27	118.93	60.00
June	368.15	2 957.86	889.54	86.61	99.40	221.22	128.06	59.00
July	384.40	3 071.24	941.17	99.41	105.15	245.04	133.52	64.50
August	408.67	2 764.38	840.39	108.26	113.24	270.80	113.97	64.50
September	444.87	2 525.82	824.92	120.00	130.52	301.83	98.52	53.00
	Copper (high grade) LME cash US\$/t	Lead LME cash US\$/t	Zinc (high grade) LME cash US\$/t	Silver <sup>d</sup> London fix US\$/troy oz	Nickel LME cash US\$/t	Ilmenite <sup>e</sup> avg export unit value A\$/t	Rutile <sup>f</sup> avg export unit value A\$/t	Zircon <sup>g</sup> avg export unit value A\$/t
<b>2005-06</b>	5 062.00	1 061.35	2 117.81	927.82	15 487.81	105.92	816.59	908.63
<b>2006-07</b>	7 086.78	1 694.20	3 672.41	1 274.16	37 942.21	112.89	845.61	861.55
<b>2007-08</b>	7 791.82	2 891.49	2 598.83	1 544.29	28 512.09	116.32	693.21	660.98
<b>2007</b>								
July	7 977.05	3 089.50	3 546.91	1 290.93	33 425.68	101.32	722.80	1 071.78
August	7 513.50	3 119.45	3 244.73	1 236.32	27 606.82	96.45	765.74	1 057.47
September	7 648.98	3 226.55	2 896.40	1 283.35	29 537.50	na	758.86	1 045.24
October	8 008.43	3 719.72	2 975.33	1 365.26	31 055.43	na	716.54	1 011.43
November	6 966.70	3 328.18	2 541.32	1 470.16	30 610.23	na	709.63	967.93
December	6 587.67	2 596.08	2 353.08	1 429.87	25 991.94	na	760.17	981.94
<b>2008</b>								
January	7 061.02	2 608.14	2 340.11	1 596.11	27 689.55	na	715.88	950.93
February	7 887.69	3 079.88	2 438.14	1 756.90	27 955.48	na	656.48	964.96
March	8 439.29	3 008.58	2 509.53	1 950.55	31 225.26	na	782.47	872.26
April	8 684.93	2 822.75	2 263.80	1 750.00	28 763.18	na	789.49	861.56
May	8 382.75	2 233.38	2 182.10	1 705.15	25 735.00	na	791.89	842.09
June	8 260.60	1 863.05	1 894.48	1 696.90	22 549.05	na	773.94	850.30
July	8 414.04	1 944.91	1 852.37	1 803.39	20 160.22	na	753.36	899.29
August	7 634.70	1 923.58	1 723.28	1 468.58	18 927.75	na	831.04	971.60
September	6 990.86	1 868.36	1 736.84	1 240.84	17 794.55	na	905.30	1 128.50

<sup>a</sup> Lump and fines. <sup>b</sup> US Department of Energy, *Energy Information Administration*. <sup>c</sup> Average of weekly restricted spot price published by The Ux Consulting Company. <sup>d</sup> London fix rate from May 2001; Handy and Harman, commercial bar, minimum 99.9 per cent prior to May 2001. <sup>e</sup> Bulk grade only after January 1992, confidential after August 2007. <sup>f</sup> Bagged only after August 1999. <sup>g</sup> Based on all grades, bagged only from September 1999. **na** Not available.

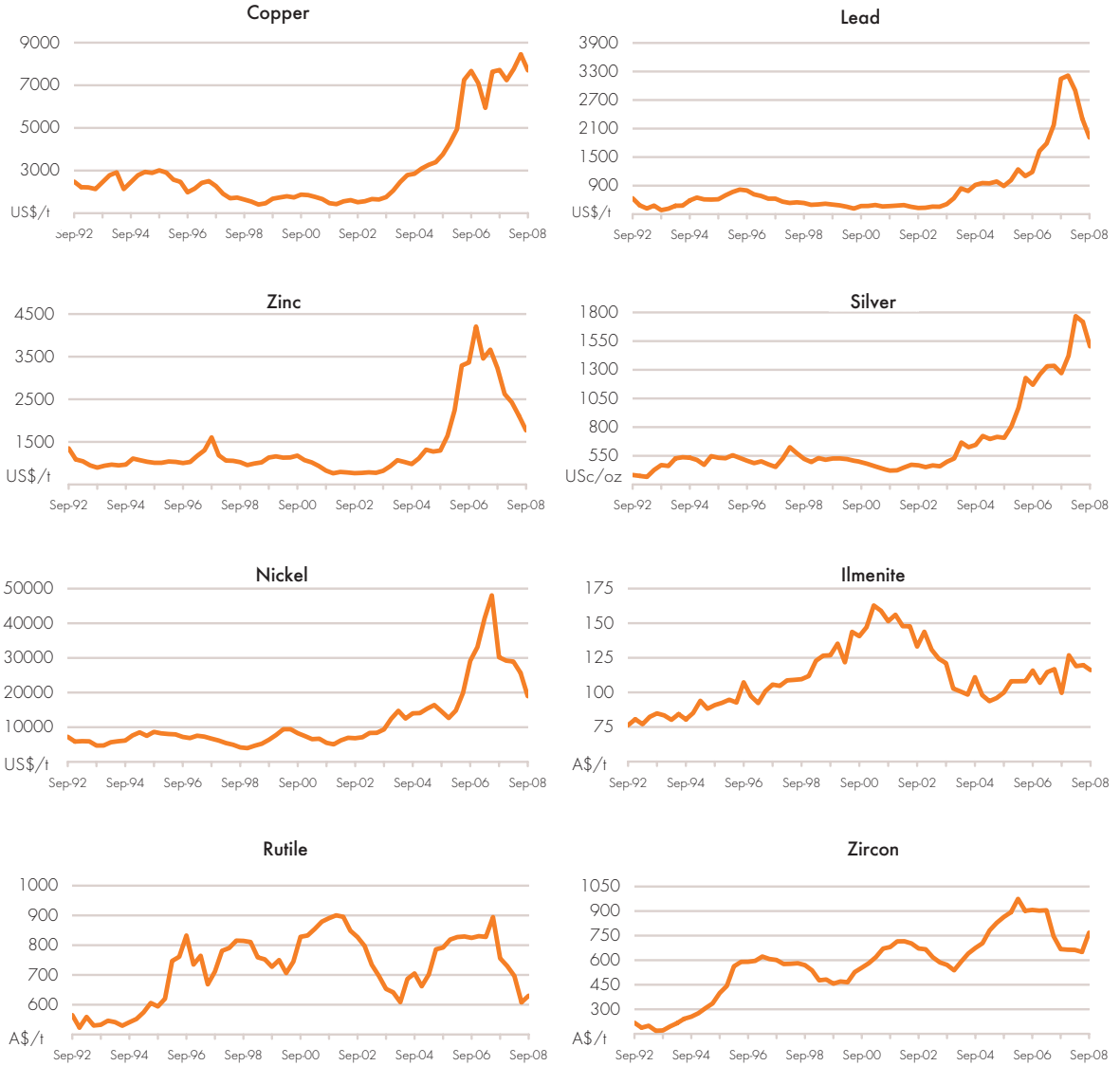
Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; London Bullion Market Association; The Ux Consulting Company; US Department of Energy; ABARE.

## Mineral resources prices, ended September quarter 2008



## Mineral resources prices, ended September quarter 2008

continued



Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; London Bullion Market Association; The Ux Consulting Company; US Department of Energy, Energy Information Administration; ABARE

# 8 Aluminium

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine</b>									
Bauxite									
Queensland	kt	16 969	16 814	4 125	4 095	4 285	4 215	4 218	3 750
Western Australia	kt	41 363	41 398	10 409	10 211	10 415	10 363	10 409	10 584
Northern Territory	kt	4 352	5 251	1 087	1 119	1 363	1 327	1 442	1 447
Australia	kt	62 684	63 463	15 621	15 426	16 063	15 905	16 069	15 781
Alumina content	kt	23 224	23 406	5 756	5 698	5 977	5 910	5 821	5 782
<b>Smelter and refinery</b>									
Alumina	kt	18 506	19 359	4 671	4 802	4 924	4 792	4 841	4 813
Aluminium (ingot metal)	kt	1 954	1 964	488	493	494	486	491	498
<b>Exports</b>									
<b>Quantity</b>									
Bauxite <sup>a</sup>	kt	5 700	7 917	1 575	2 191	2 061	2 005	1 660	2 822
Alumina <sup>bc</sup>	kt	15 056	15 739	3 720	3 894	4 103	3 835	3 907	3 771
Aluminium (ingot metal)									
Chinese Taipei	kt	153	195	38	49	53	47	46	52
Indonesia	kt	78	85	21	20	19	24	22	26
Japan	kt	634	609	136	159	139	166	144	173
Korea, Rep. of	kt	213	231	53	65	72	52	42	59
Malaysia	kt	92	101	27	24	29	26	22	25
Thailand	kt	200	220	51	55	53	52	61	55
Other	kt	268	207	72	66	46	48	48	47
Total	kt	1 638	1 650	398	439	412	415	385	438
<b>Value</b>									
Bauxite <sup>a</sup>	\$m	153	206	44	59	53	57	37	74
Alumina <sup>bc</sup>	\$m	6 243	5 809	1 499	1 530	1 461	1 346	1 471	1 552
Aluminium (ingot metal)	\$m	5 650	4 967	1 360	1 390	1 166	1 209	1 202	1 439
<b>Imports</b>									
<b>Quantity</b>									
Bauxite	kt	10	8	5	2	2	2	3	5
Alumina <sup>b</sup>	kt	11	12	3	3	3	2	3	4
Aluminium (ingot metal)	kt	3	3	1	1	1	1	1	1
<b>Value</b>									
Bauxite	\$m	3	3	1	0	1	1	1	3
Alumina <sup>b</sup>	\$m	12	13	3	3	3	3	4	4
Aluminium (ingot metal)	\$m	11	10	3	3	2	2	2	2
<b>Prices</b>									
Alumina <sup>d</sup>	A\$/t	415	369	403	393	356	351	377	412
Aluminium									
LME cash <sup>e</sup>	US\$/t	2 692	2 665	2 762	2 547	2 444	2 729	2 940	2 787
Australia <sup>d</sup>	A\$/t	3 450	3 011	3 416	3 169	2 833	2 914	3 124	3 288

<sup>a</sup> Bauxite export quantities are not available prior to September quarter 2004. Bauxite export values up to and including June quarter 2004 are ABARE estimates. <sup>b</sup> Includes aluminium hydroxide. <sup>c</sup> Country details confidential. <sup>d</sup> Average export unit value. <sup>e</sup> High grade. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.  
Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; ABARE.

# 9 Coal

		2006-07	2007-08 p	quarter					
				2006-07	2007-08 p			2008-09 p	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine</b>									
Black coal, raw									
Underground	Mt	93.82	100.62 s	25.43	30.11	22.80	21.72	25.99 s	28.45 s
Opencut	Mt	319.91	316.26 s	80.76	81.99	79.95	70.24	84.08 s	88.20 s
New South Wales	Mt	169.72	177.02	41.57	45.91	43.21	43.09	44.81	47.53
Queensland	Mt	233.47	228.94 s	61.98	63.49	56.82	46.13	62.50 s	66.30 s
Western Australia a	Mt	6.18	6.44	1.55	1.58	1.60	1.62	1.64	1.70
South Australia a	Mt	3.60	3.84	0.91	0.96	0.96	0.96	0.96	0.96
Tasmania a	Mt	0.77	0.64	0.18	0.16	0.16	0.16	0.16	0.16
Australia	Mt	413.74	416.88 s	106.19	112.10	102.75	91.96	110.07 s	116.65 s
Black coal, salable									
Underground	Mt	74.30	82.30 s	19.78	23.60	18.83	18.48	21.38 s	23.75 s
Opencut	Mt	249.62	242.54 s	62.18	61.54	61.26	55.19	64.55 s	70.12 s
New South Wales	Mt	130.88	134.98	32.32	35.97	32.72	32.26	34.02	38.89
Queensland	Mt	182.77	178.96 s	47.03	46.48	44.66	38.67	49.16 s	52.16 s
Western Australia a	Mt	6.10	6.44	1.53	1.58	1.60	1.62	1.64	1.70
South Australia a	Mt	3.60	3.84	0.91	0.96	0.96	0.96	0.96	0.96
Tasmania a	Mt	0.56	0.62	0.17	0.15	0.15	0.15	0.15	0.15
Australia	Mt	323.92	324.83 s	81.96	85.14	80.10	73.67	85.93 s	93.87 s
Brown coal b									
Victoria s	Mt	65.61	72.40	na	na	na	na	na	na
<b>Exports</b>									
<b>Quantity</b>									
Metallurgical coal, high quality									
Brazil	Mt	3.05	3.27	0.73	0.90	0.98	0.62	0.77	0.96
China	Mt	2.41	1.37	0.36	0.28	0.74	0.35	0.00	0.43
Chinese Taipei	Mt	3.47	3.43	0.88	0.75	0.83	0.79	1.06	0.73
European Union 25	Mt	20.20	19.49	5.33	5.84	4.89	3.40	5.36	4.96
India	Mt	16.30	18.94	4.22	4.86	4.82	4.16	5.11	6.05
Japan	Mt	25.42	24.89	6.73	5.50	6.70	5.33	7.37	6.78
Korea, Rep. of	Mt	6.25	6.57	1.55	1.70	1.44	1.71	1.72	1.22
Other	Mt	5.72	5.71	1.19	1.38	1.43	1.31	1.59	1.98
Total	Mt	82.81	83.67	20.98	21.21	21.83	17.67	22.97	23.11
Metallurgical coal, other c									
Chinese Taipei	Mt	4.57	2.96	1.23	0.83	1.12	0.67	0.33	0.00
European Union 25	Mt	4.34	4.62	1.23	1.42	0.95	1.07	1.17	0.91
India	Mt	3.32	5.28	0.86	1.18	1.35	1.04	1.71	1.67
Japan	Mt	23.44	25.31	6.43	6.61	6.61	5.99	6.10	6.01
Other	Mt	13.49	15.07	4.35	3.46	3.99	3.16	4.46	4.63
Total	Mt	49.15	53.25	14.10	13.50	14.03	11.94	13.78	13.22
Total metallurgical coal	Mt	131.97	136.92	35.08	34.71	35.86	29.61	36.75	36.32
Thermal coal									
Chinese Taipei	Mt	16.23	18.56	4.15	4.09	5.28	4.09	5.10	5.39
European Union 25	Mt	3.73	2.15	1.22	0.09	0.35	1.14	0.57	0.76
Japan	Mt	58.64	66.92	14.93	16.28	17.04	17.40	16.20	17.61
Korea, Rep. of	Mt	15.06	18.55	3.30	4.11	4.04	4.61	5.79	5.47
Other	Mt	17.96	8.89	3.89	3.02	1.83	2.18	1.86	3.22
Total	Mt	111.62	115.07	27.49	27.59	28.55	29.42	29.51	32.44

continued

# 9 Coal

*continued*

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Exports</b>										
<b>Quantity</b>										
Other coal	Mt	0.80	0.20	0.17	0.20	0.00	0.00	0.00	0.00	
Coke <sup>d</sup>	Mt	na	na	na	na	na	na	na	na	
<b>Value</b>										
Metallurgical coal										
High quality	\$m	11 010	10 849	2 456	2 305	2 249	1 958	4 337	6 976	
Other quality	\$m	4 029	5 184	1 066	1 052	1 048	939	2 145	2 965	
Total metallurgical coal	\$m	15 039	16 033	3 521	3 358	3 297	2 897	6 481	9 941	
Thermal coal	\$m	6 758	8 365	1 635	1 694	1 802	2 115	2 754	3 763	
Other coal	\$m	48	12	10	12	0	0	0	0	
Total coal	\$m	21 845	24 411	5 166	5 064	5 099	5 013	9 236	13 704	
Coke	\$m	80	176	28	40	19	60	57	49	
<b>Imports</b>										
<b>Quantity</b>										
Coke	Mt	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.00	
<b>Value</b>										
Coke	\$m	6	1	1	1	0	0	0	0	
<b>Prices <sup>e</sup></b>										
Metallurgical coal										
High quality	A\$/t	132.96	129.66	117.04	108.69	103.05	110.82	188.81	301.87	
Other quality	A\$/t	81.97	97.36	75.59	77.95	74.70	78.64	155.64	224.35	
Thermal coal	A\$/t	60.54	72.70	59.46	61.41	63.11	71.90	93.34	116.00	

<sup>a</sup> Quarterly data derived from annual ABARE estimates. <sup>b</sup> Quarterly data not available. <sup>c</sup> Country details confidential for various time periods for Brazil, Chinese Taipei, Dem. Peoples Rep. of Korea, Italy, Pakistan and Republic of Korea - commencing from October 1996. <sup>d</sup> Quantity details not available from August 2003. <sup>e</sup> Average export unit value. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. <sup>na</sup> Not available.

Sources: Australian Bureau of Statistics, Canberra; Coal Services Pty Limited; Queensland Government, Department of Natural Resources and Mines; ABARE.

# 10 Copper

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>f</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine <sup>s</sup></b>									
Copper ore and concentrate	kt	3 060	3 222	773	773	797	816	836	834
Copper content of all minerals produced									
New South Wales <sup>a</sup>	kt	195	146	45	39	38	34	35	37
Queensland <sup>a</sup>	kt	338	392	84	88	118	94	92	101
Western Australia <sup>a</sup>	kt	114	124	29	31	31	34	27	35
South Australia	kt	183	170	48	34	43	36	58	55
Tasmania	kt	29	30	7	9	7	7	7	6
Australia <sup>a</sup>	kt	859	863	213	200	238	205	219	234
<b>Smelter and refinery</b>									
Blister copper (primary) <sup>b</sup>	kt	389	395	103	80	108	88	119	120
Refined copper (primary) <sup>s</sup>	kt	435	442	113	90	120	101	134	134
<b>Exports</b>									
<b>Quantity</b>									
Copper concentrate									
China <sup>c</sup>	kt	394	568	54	142	121	188	118	136
India	kt	493	524	149	146	133	161	84	146
Japan	kt	414	339	110	110	75	88	67	113
Korea, Rep. of	kt	115	183	29	61	39	9	74	56
Other	kt	77	81	0	10	10	18	43	15
Total	kt	1 493	1 695	343	469	378	463	385	466
Refined copper									
Chinese Taipei	kt	88	95	27	24	19	21	31	25
Indonesia	kt	17	17	3	2	3	5	7	5
Japan	kt	2	9	0	0	1	0	8	3
Singapore	kt	5	1	0	0	0	1	0	6
Thailand	kt	40	43	8	8	13	8	13	9
Other	kt	138	131	40	22	37	39	32	39
Total	kt	290	296	79	57	73	74	92	87
Copper content of all primary materials exported <sup>ds</sup>	kt	699	733	167	180	178	191	184	204
<b>Value</b>									
Copper concentrate	\$m	3 914	4 169	921	1 136	940	1 129	963	1 158
Refined copper	\$m	2 612	2 578	728	521	614	631	812	776
Total	\$m	6 526	6 747	1 648	1 657	1 554	1 760	1 775	1 934
<b>Prices <sup>e</sup></b>									
LME cash	US\$/t	7 087	7 792	7 637	7 715	7 239	7 763	8 448	7 692
Australia	A\$/t	9 063	8 702	9 221	9 122	8 087	8 617	8 984	8 549

<sup>a</sup> Includes copper cathode and copper precipitate. <sup>b</sup> Copper content. <sup>c</sup> Excludes Hong Kong. <sup>d</sup> Copper content of all ores and concentrates, slags, residues, intermediate products, refined copper, copper powder and flakes. <sup>e</sup> Based on LME cash, midday, high grade, 25 tonne warrants. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; ABARE.

# 11 Diamonds and other gemstones

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07	2007-08 <sup>p</sup>				2008-09 <sup>p</sup>	
					June	Sept	Dec	Mar	June	Sept
<b>Production</b>										
Diamonds										
Northern Territory	'000 ct	10	0	0	0	0	0	0	0	
Western Australia	'000 ct	24 622	16 528	4 524	4 980	6 145	2 277	3 126	4 839	
Australia	'000 ct	24 632	16 528	4 524	4 980	6 145	2 277	3 126	4 839	
<b>Exports</b>										
<b>Quantity</b>										
Diamonds										
Unsorted <sup>s</sup>	'000 ct	24 359	16 266	4 306	4 960	6 128	2 255	2 923	4 816	
Sorted										
Gem	'000 ct	272	261	218	20	17	22	203	23	
Industrial <sup>a</sup>	'000 ct	1	0	1	0	0	0	0	0	
Total <sup>s</sup>	'000 ct	24 632	16 528	4 524	4 980	6 145	2 277	3 126	4 839	
<b>Value</b>										
Diamonds										
Unsorted <sup>s</sup>	\$m	602	514	100	147	144	100	123	65	
Sorted										
Gem	\$m	124	149	25	36	38	40	35	46	
Industrial <sup>a</sup>	\$m	0	0	0	0	0	0	0	0	
Total <sup>s</sup>	\$m	726	664	125	183	183	141	158	110	
Opals										
Rough	\$m	12	10	2	3	2	3	2	1	
Cut and polished	\$m	30	34	6	9	7	13	6	7	
Total	\$m	41	45	8	12	8	17	8	8	
Sapphires										
Rough	\$m	1	1	0	0	0	0	0	0	
Total	\$m	1	1	0	0	0	0	0	0	
Other gemstones <sup>b</sup>										
	\$m	7	7	1	2	1	1	3	1	
Total gemstones	\$m	49	52	9	13	9	18	11	10	
<b>Imports</b>										
<b>Quantity</b>										
Diamonds										
Unsorted	'000 ct	0	2	0	1	1	0	0	0	
Sorted										
Gem	'000 ct	421	493	101	135	194	90	74	90	
Industrial <sup>a</sup>	'000 ct	158	166	37	98	42	13	13	1	
Dust and powder	'000 ct	2 850	2 303	680	569	693	518	524	120	
<b>Value</b>										
Diamonds										
Unsorted	\$m	0	0	0	0	0	0	0	0	
Sorted										
Gem	\$m	392	440	101	103	118	112	107	114	
Industrial <sup>a</sup>	\$m	3	2	0	1	1	1	0	1	
Dust and powder	\$m	2	1	0	0	0	0	0	0	
Total	\$m	397	444	102	104	120	113	107	115	

<sup>a</sup> Excludes dust, powder and unsorted diamonds. <sup>b</sup> Includes cut and polished sapphires from 1 July 2000. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE; Department of Minerals and Energy, Western Australia; Department of Minerals and Energy, Northern Territory.

# 12 Gold

		2006-07	2007-08 p	quarter					
				2006-07	2007-08 p			2008-09 p	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine s</b>									
Gold content of all minerals produced									
New South Wales	t	32	34	9	8	10	8	7	9
Victoria	t	7	5	1	1	2	1	1	1
Queensland	t	21	20	5	6	5	4	5	4
Western Australia	t	163	142	39	38	39	31	34	33
South Australia	t	7	6	2	2	2	1	2	2
Tasmania	t	4	5	1	1	1	1	1	2
Northern Territory	t	17	16	5	4	4	4	4	4
Australia	t	249	227	62	60	62	52	54	55
<b>Refinery</b>									
Primary									
Australian origin	t	208	190	50	51	51	45	43	44
Overseas origin	t	55	58	12	14	14	14	16	17
Secondary									
Australian origin	t	5	5	1	1	1	1	1	1
Overseas origin	t	92	110	36	18	34	39	20	30
Total	t	360	364	99	84	100	99	81	92
<b>Exports</b>									
<b>Quantity</b>									
Refined and unrefined bullion									
Hong Kong, China	t	0	1	0	0	0	0	1	0
India	t	184	141	65	39	24	37	41	49
Japan	t	12	4	0	3	0	0	1	0
Korea, Rep. of	t	4	2	1	0	0	1	1	1
Malaysia	t	0	1	0	0	0	0	1	0
Middle East	t	23	37	10	21	2	0	13	19
Saudi Arabia	t	0	0	0	0	0	0	0	0
United Arab Emirates	t	23	37	10	21	2	0	13	19
Singapore	t	18	2	5	0	0	0	2	4
Switzerland	t	37	28	16	24	2	0	2	0
Thailand	t	24	20	7	4	3	5	9	12
United Kingdom	t	71	140	9	15	57	46	21	40
Other	t	28	7	5	2	1	1	3	1
Total	t	400	382	118	108	89	89	95	125
<b>Value</b>									
Refined	\$m	10 320	10 903	3 030	2 734	2 496	2 851	2 822	3 789
<b>Imports</b>									
<b>Value</b>									
Refined and unrefined bullion	\$m	5 309	7 311	1 537	1 882	1 414	1 905	2 110	2 663
<b>Prices</b>									
London AM fix	US\$/oz	639	823	668	680	789	928	897	869
Australia	A\$/oz	814	917	805	804	888	1 023	952	977

p Preliminary. s ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; London Bullion Market Association; ABARE.

# 13 Iron

		2006-07	2007-08 p	quarter					
				2006-07	2007-08 p			2008-09 p	
					June	Sept	Dec	Mar	June
<b>Production</b>									
Iron ore and concentrate <b>a</b>									
Western Australia	kt	281 157	313 505	74 013	71 942	78 352	77 262	85 949	90 854
South Australia	kt	4 698	8 138	1 282	1 574	2 494	2 006	2 065	1 909
Tasmania <b>s</b>	kt	1 838	2 435	524	607	617	602	610	550
Northern Territory	kt	0	615	0	68	271	66	211	428
Australia <b>s</b>	kt	287 693	324 693	75 819	74 190	81 733	79 935	88 835	93 741
Iron content <b>s</b>	kt	186 074	198 723	50 126	47 066	50 665	47 834	53 158	54 362
Iron and steel <b>bs</b>	kt	8 010	8 121	2 001	2 058	2 006	2 010	2 047	1 966
<b>Exports</b>									
<b>Quantity</b>									
Iron ore and pellets									
Pellets, sinters and briquettes	kt	718	1 142	195	288	356	215	284	385
Fines	kt	183 106	205 219	47 978	48 240	51 298	51 350	54 331	53 350
Lump and run of mine	kt	73 541	87 998	19 006	19 793	21 106	22 184	24 914	32 456
Total iron ore and pellets									
China <b>c</b>	kt	135 291	167 638	35 343	35 964	40 319	41 663	49 692	52 256
Chinese Taipei	kt	9 818	10 411	2 559	2 649	2 456	2 595	2 711	2 535
European Union 25	kt	7 602	5 918	1 669	1 682	1 069	2 087	1 079	2 040
Japan	kt	75 080	78 427	19 713	20 313	20 457	19 772	17 885	19 911
Korea, Rep. of	kt	28 973	31 614	7 780	7 659	8 258	7 579	8 118	9 261
Other	kt	602	350	116	53	200	52	44	189
Total	kt	257 365	294 358	67 179	68 321	72 759	73 749	79 529	86 191
Iron content	kt	159 977	183 147	41 751	42 485	45 249	45 887	49 526	53 898
Steel									
Iron and steel <b>s</b>	kt	2 648	2 131	663	618	543	495	476	444
Scrap	kt	1 328	1 783	465	297	430	307	748	336
<b>Value</b>									
Iron ore and pellets									
Pellets, sinters and briquettes	\$m	42	79	12	21	21	16	22	25
Fines	\$m	10 136	13 215	2 681	2 683	3 008	3 267	4 257	5 213
Lump and run of mine	\$m	5 334	7 168	1 392	1 439	1 499	1 684	2 546	4 152
Total	\$m	15 512	20 462	4 085	4 143	4 528	4 967	6 825	9 390
Steel									
Iron and steel <b>s</b>	\$m	1 743	1 562	431	401	382	342	437	520
Scrap	\$m	607	833	204	152	196	157	328	172
Total	\$m	2 350	2 396	634	554	578	499	765	692
<b>Imports</b>									
<b>Quantity</b>									
Iron ore <b>d</b>	kt	4 722	4 401	1 017	1 098	1 345	1 074	884	1 130
Iron and steel	kt	2 318	1 848	513	489	456	411	492	812
Ferroalloys	kt	87	97	17	17	18	38	24	20
<b>Value</b>									
Iron ore <b>d</b>	\$m	338	311	89	84	92	73	62	64
Iron and steel	\$m	2 479	2 225	609	562	514	526	623	1 025
Ferroalloys	\$m	116	154	30	33	35	37	49	57
Total	\$m	2 934	2 690	728	679	641	636	734	1 147
<b>Prices</b>									
Japanese negotiated <b>e</b>	USc/dmtu	73.45	80.43	80.43	80.43	80.43	80.43	144.67	144.67

**a** For use in iron and steel making; includes pellets for Tasmania. **b** Includes recovery from scrap. **c** Excludes Hong Kong. **d** Includes limonite ore used in the production of refined nickel products. **e** Indicative price: Australian hematite fines to Japan (fob), per dry metric tonne unit, for Japanese fiscal year commencing 1 April. **p** Preliminary. **s** ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

# 14 Lead

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Production</b>										
<b>Mine <sup>s</sup></b>										
Lead ore and concentrates	kt	908	888	218	219	226	234	209	218	
Lead content of all minerals produced										
New South Wales	kt	91	75	20	20	16	19	21	18	
Queensland	kt	415	469	112	115	121	127	107	119	
Western Australia	kt	74	30	9	8	7	7	9	3	
Tasmania	kt	29	32	8	8	7	8	9	8	
Northern Territory	kt	33	35	8	8	9	9	9	9	
Australia	kt	642	641	157	158	160	169	154	157	
<b>Smelter and refinery</b>										
Refined lead (primary) <sup>b</sup>	kt	191	203	60	44	51	52	56	56	
Domestic despatches										
Refined lead	kt	26	25	7	7	5	5	8	6	
<b>Exports</b>										
<b>Quantity</b>										
Lead concentrate										
China	kt	166	72	16	14	31	4	23	37	
European Union 25	kt	54	34	12	13	21	0	0	22	
Japan	kt	53	75	16	5	22	21	27	11	
Korea, Rep. of	kt	117	104	26	21	35	31	16	11	
Other	kt	33	25	19	6	7	9	3	27	
Total	kt	422	309	89	60	115	66	69	107	
Lead bullion <sup>c</sup>										
United Kingdom	kt	112	169	18	46	44	27	51	26	
Total	kt	112	169	18	46	44	27	51	26	
Refined lead										
Chinese Taipei	kt	5	5	1	2	1	2	0	1	
India	kt	41	26	10	7	8	4	6	9	
Indonesia	kt	6	7	1	1	2	2	2	4	
Korea, Rep. of	kt	42	40	10	12	10	10	8	8	
Thailand	kt	12	17	4	4	6	2	4	5	
Other	kt	109	100	31	30	21	13	36	45	
Total	kt	215	193	56	57	47	33	56	72	
Lead content of all primary materials exported <sup>ds</sup>	kt	635	589	142	152	169	109	159	172	
<b>Value</b>										
Lead concentrate	\$m	855	781	232	165	321	154	142	215	
Lead bullion	\$m	268	595	50	154	172	93	175	95	
Refined lead	\$m	457	674	143	195	188	108	183	175	
Total	\$m	1 579	2 050	425	514	681	354	501	485	
<b>Prices</b>										
LME cash <sup>e</sup>	US\$/t	1 694	2 891	2 176	3 145	3 215	2 900	2 306	1 912	
Australia <sup>f</sup>	A\$/t	2 347	3 639	2 785	3 716	4 095	3 515	3 229	2 319	

<sup>a</sup> Metallic content. <sup>b</sup> Includes lead content of lead alloys from primary sources. <sup>c</sup> Includes a substantial precious metal content, mainly silver. <sup>d</sup> Lead content of all ores, concentrates, slags, residues, bullion, and refined lead. <sup>e</sup> Based on LME cash, midday, standard grade, minimum 25 tonne warrants. <sup>f</sup> Pasmico Metals, 99.97-99.99 per cent, fob/for Port Pirie. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; ABARE.

# 15 Manganese

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
Manganese ore and concentrate									
Western Australia <sup>s</sup>	kt	1 217	1 262	315	313	332	281	335	149
Northern Territory	kt	3 854	4 174	1 031	1 043	1 027	972	1 132	1 084
Australia <sup>s</sup>	kt	5 071	5 436	1 345	1 355	1 360	1 254	1 468	1 233
Manganese content <sup>s</sup>	kt	2 434	2 609	646	651	653	602	704	592
<b>Exports <sup>a</sup></b>									
<b>Quantity</b>									
Manganese ore and concentrate	kt	4 667	5 105	1 248	1 190	1 326	1 226	1 363	1 131
<b>Value</b>									
Manganese ore and concentrate	\$m	482	1 532	136	209	263	378	682	718
<b>Prices</b>									
Japanese negotiated <sup>b</sup>	US\$/mtu	3.00	2.70	2.70	2.70	2.70	2.70	11.20	11.20
	A\$/t	183.55	144.66	156.21	153.17	145.61	143.23	570.38	603.88

<sup>a</sup> Quarterly data derived from annual ABARE estimates to June quarter 2004. ABS data from September quarter 2004. <sup>b</sup> Indicative price: high grade ore (48 per cent Mn) to Japan for Japanese fiscal year commencing 1 April. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

# 16 Nickel

		2006-07	2007-08 p	quarter						
				2006-07		2007-08 p			2008-09 p	
				June	Sept	Dec	Mar	June	Sept	
<b>Production as</b>										
<b>Mine</b>										
Nickel content										
Western Australia	kt	191	190	46	44	47	49	50	52	
Tasmania	kt	0	0	0	0	0	0	0	1	
Australia	kt	191	190	46	44	47	49	50	53	
<b>Smelter and refinery</b>										
Intermediate nickel	kt	57	45	13	13	12	13	7	3	
Refined nickel, class 1 <b>b</b>	kt	104	105	25	27	25	27	26	13	
Refined nickel, class 2 <b>c</b>	kt	15	15	4	2	3	4	6	4	
<b>Exports s</b>										
<b>Quantity</b>										
Nickel <b>d</b>	kt	166	166	42	35	41	45	45	22	
<b>Value</b>										
Ores and concentrates	\$m	1 070	762	214	217	151	214	180	146	
Intermediate products <b>e</b>	\$m	1 405	709	526	133	206	191	179	26	
Refined nickel, class 1 <b>b</b>	\$m	3 397	2 382	991	616	649	652	465	120	
Refined nickel, class 2 <b>c</b>	\$m	500	383	197	54	92	103	135	64	
Total	\$m	6 372	4 236	1 928	1 020	1 098	1 160	958	355	
<b>Imports</b>										
<b>Value</b>										
Primary nickel products <b>f</b>	\$m	257	262	84	57	88	62	56	52	
<b>Prices</b>										
LME cash <b>g</b>	US\$/t	37 942	28 512	48 055	30 190	29 219	28 957	25 682	18 961	
	A\$/t	48 362	31 826	57 922	35 680	32 828	32 003	27 248	21 298	

**a** Details of production of nickel metal, matte, oxide, sinter and nickel-cobalt sulphide are not available. **b** Products with a nickel content of 99 per cent or more. Includes electrolytic nickel, pellets, briquettes and powder. **c** Products with a nickel content of less than 99.8 per cent. Includes ferronickel, nickel oxides and oxide sinter. **d** Includes metal content of ores and concentrates, intermediate products and nickel metal. **e** Includes matte and speiss for further refining. **f** Includes matte, sinter and intermediate products; ferronickel, unwrought nickel metal and alloys and scrap. **g** Average cash settlement price for melting grade refined nickel. **p** Preliminary. **s** ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; International Nickel Study Group; London Metal Exchange; ABARE.

# 17 Petroleum

		2006-07	2007-08 p	quarter						
				2006-07	2007-08 p				2008-09 p	
					June	Sept	Dec	Mar	June	Sept
<b>Production</b>										
<b>Field</b>										
Crude oil s	ML	21 405	18 832	5 324	4 802	4 697	4 410	4 924	5 064	
Condensate s	ML	7 404	6 957	1 826	1 977	1 792	1 513	1 674	1 676	
Total s	ML	28 809	25 789	7 151	6 779	6 489	5 923	6 598	6 740	
Production rate s	'000 bbl/day	503	451	500	474	453	414	461	471	
LPG	ML	4 550	3 971	1 077	1 145	1 002	829	994	1 056	
Ethane a	Mm <sup>3</sup>	439	454	111	124	110	103	116	118	
Natural gas a	Mm <sup>3</sup>	39 331	39 283	10 184	10 681	10 031	8 989	9 582	9 631	
<b>Refinery</b>										
<b>Refinery input</b>	ML	39 465	38 346	9 857	9 845	9 623	9 452	9 426	9 398	
<b>Refinery output</b>										
LPG	ML	1 387	1 515	311	341	353	396	424	512	
Automotive gasoline	ML	17 732	17 079	4 528	4 738	4 288	3 814	4 239	4 249	
Aviation gasoline	ML	119	119	33	26	27	39	27	29	
Aviation turbine fuel	ML	5 332	5 182	1 288	1 295	1 333	1 262	1 291	1 381	
Kerosine	ML	2	1	1	1	0	0	1	1	
Heating oil	ML	86	102	20	33	28	9	33	27	
Automotive diesel oil	ML	11 055	12 177	3 173	3 133	3 156	2 926	2 962	2 981	
Industrial and marine diesel fuel	ML	21	3	5	5	7	4	- 12	4	
Fuel oil (excl. refinery fuel)	ML	942	979	260	225	242	242	270	204	
Lubricating oil basestock	ML	146	121	39	35	18	34	34	22	
Bitumen	ML	1 356	1 452	336	331	434	327	360	316	
Other products	ML	616	844	156	180	199	314	150	218	
Total	ML	38 795	39 575	10 149	10 343	10 084	9 368	9 780	9 945	
<b>Sales</b>										
<b>LPG</b>										
Automotive use b	ML	2 335	2 238	603	582	566	532	558	581	
Total	ML	4 038	4 024	1 070	1 118	1 002	912	992	1 078	
<b>Automotive gasoline</b>										
Premium unleaded	ML	1 819	1 780	449	458	469	434	419	408	
Regular unleaded	ML	15 892	15 212	3 845	3 905	3 936	3 763	3 609	3 562	
Other unleaded	ML	1 539	2 242	421	500	566	567	608	696	
Total	ML	19 251	19 234	4 716	4 863	4 971	4 764	4 636	4 667	
<b>Aviation gasoline</b>										
Aviation turbine fuel	ML	90	88	23	23	22	20	23	27	
Kerosine	ML	5 837	6 070	1 416	1 477	1 546	1 497	1 550	1 578	
Heating oil	ML	32	43	11	11	9	18	6	7	
Automotive diesel oil	ML	17 028	18 245	4 322	4 407	4 665	4 382	4 790	4 742	
<b>Industrial and marine diesel fuel</b>										
Industrial and marine diesel fuel	ML	15	11	3	3	3	3	2	4	
<b>Fuel oil</b>										
Fuel oil	ML	1 513	1 583	375	383	406	418	376	360	
<b>Lubricating oil and greases</b>										
Lubricating oil and greases	ML	421	435	104	110	105	105	113	116	
<b>Bitumen</b>										
Bitumen	ML	808	785	180	150	216	213	207	158	
<b>Other products</b>										
Other products	ML	699	258	63	64	63	61	69	72	
Total	ML	49 746	50 788	12 288	12 613	13 011	12 395	12 769	12 813	

continued

# 17 Petroleum

*continued*

		2006-07	2007-08 p	quarter						
				2006-07		2007-08 p			2008-09 p	
				June	Sept	Dec	Mar	June	Sept	
<b>Exports</b>										
<b>Quantity</b>										
Crude oil and other refinery feedstock										
China	ML	518	972	108	0	379	382	211	0	
Chinese Taipei	ML	446	343	119	125	8	196	13	110	
Japan	ML	1 957	2 280	481	650	643	416	570	659	
Korea, Rep. of	ML	3 873	3 701	588	1 272	1 067	726	636	995	
New Zealand	ML	1 045	600	400	147	56	81	315	143	
Singapore	ML	3 752	3 089	714	520	511	1 197	861	728	
United States	ML	190	1 157	0	0	360	296	501	513	
Other	ML	4 183	3 833	1 324	1 302	996	686	849	919	
Total	ML	15 965	15 975	3 734	4 017	4 020	3 980	3 958	4 066	
LNG	Mt	15.20	14.80	3.90	3.40	3.90	3.70	3.80	3.80	
LPG	ML	2 824	2 589	686	788	690	595	516	660	
Refinery products										
Automotive gasoline	ML	771	628	195	271	176	84	97	84	
Aviation turbine fuel	ML	120	149	27	38	39	43	29	28	
Diesel fuel c	ML	288	462	56	76	133	215	37	5	
Fuel oil	ML	209	257	44	85	60	55	57	45	
Aviation gasoline	ML	81	96	7	32	48	6	10	5	
Lubricants	ML	231	178	85	46	39	50	43	62	
Other products	ML	62	35	8	7	12	2	14	9	
Total	ML	1 762	1 807	421	555	507	456	288	237	
Ships' and aircraft stores										
Aviation turbine fuel	ML	1 893	1 893	473	473	473	473	473	473	
Fuel oil	ML	252	251	63	63	63	63	63	64	
Other products	ML	11	24	3	6	6	3	9	6	
Total	ML	2 156	2 169	539	542	542	540	545	543	
<b>Value</b>										
Crude oil and other refinery feedstock										
	\$m	8 317	10 484	2 009	2 236	2 541	2 591	3 116	3 303	
LNG	\$m	5 222	5 854	1 188	1 173	1 443	1 541	1 698	2 063	
LPG	\$m	1 038	1 182	257	305	319	299	259	340	
Refinery products										
Automotive gasoline	\$m	468	444	132	172	124	65	83	71	
Aviation turbine fuel	\$m	74	120	16	25	30	35	30	27	
Diesel fuel c	\$m	188	363	36	54	100	174	34	6	
Fuel oil	\$m	84	130	19	35	29	29	37	31	
Aviation gasoline	\$m	69	73	6	22	35	6	10	6	
Lubricants	\$m	157	152	54	37	36	43	37	43	
Other products	\$m	57	41	12	11	14	6	10	13	
Total	\$m	1 098	1 323	275	356	368	358	240	199	
Total	\$m	15 675	18 843	3 729	4 071	4 670	4 789	5 313	5 905	
Ships' and aircraft stores										
Aviation turbine fuel	\$m	1 176	1 325	290	293	325	344	363	399	
Fuel oil	\$m	108	107	26	26	27	27	27	27	
Other products	\$m	11	25	3	6	5	4	10	7	
Total	\$m	1 295	1 457	320	326	357	375	400	434	

*continued*

# 17 Petroleum

*continued*

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Imports</b>									
<b>Quantity</b>									
Crude oil and other refinery feedstock									
Indonesia	ML	3 391	3 289	836	1 010	692	759	827	666
Malaysia	ML	3 730	4 103	1 293	1 244	873	1 252	734	1 074
Middle East									
Qatar	ML	106	0	0	0	0	0	0	0
Saudi Arabia	ML	1 151	573	218	157	287	14	116	96
United Arab Emirates	ML	2 971	3 660	1 013	1 056	1 000	774	830	777
other	ML	118	43	0	0	0	43	0	0
Total Middle East	ML	4 346	4 276	1 231	1 213	1 287	830	946	874
New Zealand	ML	635	1 974	271	423	462	545	544	637
Papua New Guinea	ML	2 059	2 190	543	732	629	412	417	321
Singapore	ML	841	713	215	156	251	175	132	165
Viet Nam	ML	6 677	6 318	1 224	1 486	2 166	1 426	1 240	1 483
Other	ML	3 665	3 360	980	701	781	984	895	1 107
Total	ML	25 345	26 223	6 594	6 965	7 141	6 382	5 735	6 326
Natural gas	kt	4 268	4 032	1 157	1 158	637	1 212	1 024	1 295
Refined products									
LPG	ML	748	965	239	268	173	180	343	191
Automotive gasoline	ML	2 912	3 533	712	524	706	1 292	1 012	567
Aviation turbine fuel	ML	1 045	1 846	314	401	375	494	576	465
Diesel fuel <sup>c</sup>	ML	5 439	7 470	1 672	1 505	1 815	1 939	2 211	2 115
Fuel oil	ML	1 363	1 625	451	291	471	432	432	473
Lubricants	ML	365	396	92	94	105	99	98	105
Other products	ML	2 146	2 147	623	546	438	627	536	611
Total	ML	14 018	17 982	4 103	3 630	4 083	5 062	5 207	4 527
<b>Value</b>									
Crude oil and other refinery feedstock	\$m	13 360	17 131	3 574	3 882	4 434	4 302	4 514	5 572
Natural gas	\$m	800	724	205	201	97	252	174	319
Refined products									
LPG	\$m	261	436	84	101	81	90	164	98
Automotive gasoline	\$m	1 872	2 719	487	345	503	1 001	869	515
Aviation turbine fuel	\$m	668	1 505	196	263	273	381	589	481
Diesel fuel <sup>c</sup>	\$m	3 466	6 155	1 058	991	1 311	1 601	2 252	2 184
Fuel oil	\$m	536	831	183	128	229	226	249	341
Lubricants	\$m	495	477	120	112	120	117	128	170
Other products	\$m	1 285	1 331	359	315	239	430	347	509
Total	\$m	7 784	12 730	2 283	2 054	2 659	3 593	4 424	3 979
Total	\$m	21 943	30 585	6 062	6 137	7 189	8 147	9 112	9 870
<b>Prices</b>									
Dubai	US\$/bbl	60.86	90.19	64.80	69.98	82.83	90.71	117.23	108.53
West Texas intermediate	US\$/bbl	63.32	96.73	64.89	75.24	90.47	97.22	123.97	114.50
Brent	US\$/bbl	63.93	95.37	68.76	74.75	88.45	96.16	122.13	114.51
Tapis	US\$/bbl	69.32	100.84	74.99	79.64	93.34	102.29	128.82	125.81
World trade weighted average	US\$/bbl	59.45	91.97	64.62	71.46	84.64	93.00	118.79	110.10
	A\$/bbl	75.78	102.66	77.89	84.46	95.09	102.79	126.03	123.67

**a** Commercial sales plus field and plant usage. **b** This is a minimum level and includes only direct sales by the oil industry. The data do not include volumes sold to distributors etc. which are subsequently used or sold for automotive use. **c** Includes automotive diesel oil and industrial and marine diesel fuel. **p** Preliminary. **s** ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; Department of Resources, Energy and Tourism, Canberra; US Department of Energy, *Energy Information Administration*; Tokyo Commodity Exchange; ABARE.

# 18 Petroleum production, by basin

	Crude oil ML	Condensate ML	Total crude oil and condensate		LPG (naturally occurring) <sup>a</sup> ML	Ethane <sup>a</sup> Mm <sup>3</sup>	Natural gas <sup>a</sup> Mm <sup>3</sup>
			ML	'000 bbl/day			
<b>June quarter 2008</b>							
Adavale	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Amadeus	10.2	0.0	10.2	0.7	0.0	0.0	135.6
Bonaparte	207.0	0.0	207.0	14.5	0.0	0.0	0.0
Bowen-Surat	4.8	4.4	9.2	0.6	5.1	0.0	55.8
Canning	1.0	0.0	1.0	0.1	0.0	0.0	0.0
Carnarvon							
Barrow Island	1 204.0	0.0	1 204.0	84.1	0.0	0.0	339.5
North West Shelf	969.7	1 326.2	2 295.8	160.5	348.2	0.0	6 031.7
Other	943.6	24.2	967.8	67.6	0.0	0.0	207.5
Cooper-Eromanga							
Queensland	224.8	40.9	265.7	18.6	0.0	0.0	0.0
South Australia	336.5	43.9	380.4	26.6	139.9	64.0	691.2
Gippsland	887.3	212.5	1 099.7	76.9	494.8	52.1	2 047.5
Otway	0.0	21.7	21.7	1.5	6.5	0.0	3.6
Perth	134.9	0.7	135.6	9.5	0.0	0.0	67.0
Total	4 923.8	1 674.4	6 598.2	461.1	994.5	116.1	9 582.3
<b>September quarter 2008 p</b>							
Adavale	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Amadeus	13.6	0.0	13.6	1.0	0.0	0.0	135.1
Bonaparte	187.9	0.0	187.9	13.1	0.0	0.0	0.0
Bowen-Surat	5.6	5.8	11.4	0.8	5.6	0.0	59.2
Canning	1.8	0.0	1.8	0.1	0.0	0.0	0.0
Carnarvon							
Barrow Island	1 153.3	0.0	1 153.3	80.6	0.0	0.0	237.3
North West Shelf	955.1	1 307.1	2 262.2	158.1	346.6	0.0	6 116.6
Other	1 119.8	0.0	1 119.8	78.3	0.0	0.0	9.2
Cooper-Eromanga							
Queensland	223.8	40.9	264.7	18.5	0.0	0.0	0.0
South Australia	382.4	43.9	426.4	29.8	139.9	64.0	691.2
Gippsland	902.4	246.5	1 148.9	80.3	523.8	54.1	2 310.7
Otway	0.0	31.1	31.1	2.2	40.3	0.0	2.6
Perth	118.6	0.6	119.2	8.3	0.0	0.0	67.5
Total	5 064.4	1 675.9	6 740.3	471.1	1 056.1	118.1	9 631.4
<b>2007-08 p</b>							
Adavale	0.0	0.0	0.0	0.0	0.0	0.0	11.6
Amadeus	49.7	0.0	49.7	0.9	0.0	0.0	541.4
Bonaparte	826.3	32.8 s	859.1 s	15.0 s	0.0	0.0	0.0
Bowen-Surat	16.4	19.4	35.8	0.6	24.0	0.0	437.6
Canning	4.4	0.0	4.4	0.1	0.0	0.0	0.0
Carnarvon							
Barrow Island	2 848.6	0.0	2 848.6	49.8	0.0	0.0	1 803.8
North West Shelf	4 063.1 s	5 572.1	9 635.2 s	168.3 s	1 500.0	0.0	24 460.2
Other	4 709.6 s	143.3	4 852.9 s	84.8 s	0.0	0.0	955.9
Cooper-Eromanga							
Queensland	900.7	162.6	1 063.3	18.6	0.0	0.0	0.0
South Australia	1 353.9	192.7	1 546.6	27.0	557.2	258.6	2 968.0
Gippsland	3 391.9	804.2	4 196.1	73.3	1 883.1	194.9	7 809.7
Otway	0.0	27.5	27.5	0.5	6.5	0.0	15.9
Perth	667.7	2.4	670.1	11.7	0.0	0.0	279.1
Total	18 832.2 s	6 957.0 s	25 789.2 s	450.6 s	3 970.8	453.5	39 283.1

<sup>a</sup> Commercial sales plus field and plant usage. **p** Preliminary. **s** ABARE estimate.

Sources: Department of Resources, Energy and Tourism, Canberra; ABARE.

# 19 Sales of petroleum products, by state marketing area

	NSW <sup>a</sup>	Vic.	QLD	WA	SA	Tas.	NT	Aust.
	ML	ML	ML	ML	ML	ML	ML	ML
<b>September quarter 2008 p</b>								
<b>LPG <sup>b</sup></b>								
Automotive use <sup>c</sup>	176	233	59	49	58	3	2	581
Total	326	386	155	88	98	17	8	1 078
<b>Automotive gasoline</b>								
Premium unleaded	120	92	99	55	24	13	5	408
Regular unleaded	1 057	956	741	400	282	89	38	3 562
Other unleaded <sup>d</sup>	317	88	241	30	18	2	0	696
Total	1 494	1 137	1 081	485	324	103	43	4 667
of which sales to retailers	1 233	891	753	416	254	51	23	3 621
Aviation gasoline	5	3	8	6	2	1	3	27
Aviation turbine fuel	699	264	332	179	56	8	41	1 578
Kerosine	1	1	3	1	0	0	0	7
Heating oil	1	0	0	0	1	0	0	3
Automotive diesel oil	983	700	1 372	1 117	293	91	187	4 742
of which sales to retailers	342	282	318	184	78	9	21	1 234
Industrial and marine diesel fuel	3	1	1	0	0	0	0	4
Fuel oil <sup>e</sup>	88	94	10	51	0	0	118	360
Lubricating oil and greases	35	24	29	16	9	2	2	116
Bitumen	37	21	74	12	11	2	1	158
Other products <sup>f</sup>	47	9	10	3	2	0	1	72
Total	3 718	2 641	3 074	1 957	795	223	404	12 813
<b>2007-08 p</b>								
<b>LPG <sup>b</sup></b>								
Automotive use <sup>c</sup>	624	932	249	191	221	13	7	2 238
Total	1 139	1 485	613	325	368	67	28	4 024
<b>Automotive gasoline</b>								
Premium unleaded	524	409	434	225	108	62	19	1 780
Regular unleaded	4 666	3 998	3 282	1 614	1 139	384	131	15 212
Other unleaded <sup>d</sup>	882	380	759	133	78	9	0	2 242
Total	6 072	4 787	4 475	1 971	1 325	454	150	19 234
of which sales to retailers	4 759	3 797	3 000	1 610	1 006	211	77	14 459
Aviation gasoline	16	13	27	16	6	2	9	88
Aviation turbine fuel	2 722	950	1 286	696	236	33	146	6 070
Kerosine	4	5	32	1	0	1	0	43
Heating oil	4	1	0	0	2	4	0	12
Automotive diesel oil	3 769	3 005	5 160	4 060	1 204	396	650	18 245
of which sales to retailers	1 290	1 174	1 220	745	284	36	71	4 820
Industrial and marine diesel fuel	7	0	4	0	0	0	0	11
Fuel oil <sup>e</sup>	502	329	80	195	3	3	472	1 583
Lubricating oil and greases	115	97	115	62	33	6	7	435
Bitumen	163	190	285	63	58	18	8	785
Other products <sup>f</sup>	126	42	61	14	12	1	2	258
Total	14 638	10 903	12 138	7 404	3 247	985	1 473	50 788

<sup>a</sup> Includes Australian Capital Territory. <sup>b</sup> Includes sales for petrochemical feedstock. <sup>c</sup> This is a minimum level and includes only direct sales by the oil industry. The data do not include volumes sold to distributors etc. which are subsequently used or sold for automotive use. <sup>d</sup> Includes proprietary brand and other blends. <sup>e</sup> Excludes refinery fuel. <sup>f</sup> Sales of LPG for petrochemical feedstock are included in LPG sales. <sup>p</sup> Preliminary.

Source: Department of Resources, Energy and Tourism, Canberra.

# 20 Phosphate

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Production</b>										
Single superphosphate <sup>as</sup>	kt	944	1 413	296	186	558	218	452	644	
<b>Imports</b>										
<b>Quantity</b>										
Phosphate rock										
China	kt	23	55	1	1	30	0	24	13	
Morocco	kt	343	438	95	50	186	78	125	128	
Nauru	kt	27	112	27	27	27	31	27	58	
Togo	kt	0	0	0	0	0	0	0	0	
Other	kt	79	101	25	15	36	0	50	123	
Total	kt	472	707	148	93	279	109	226	322	
Phosphates										
Diammonium <sup>b</sup>	kt	83	313	29	6	67	107	133	24	
Monammonium <sup>c</sup>	kt	443	583	143	21	122	242	197	29	
High analysis <sup>d</sup>	kt	166	107	107	0	15	31	60	22	
<b>Value</b>										
Phosphate rock	\$m	32	80	11	7	23	8	42	93	
Phosphates										
Diammonium <sup>b</sup>	\$m	32	261	13	3	36	83	139	31	
Monammonium <sup>c</sup>	\$m	182	454	69	9	60	165	220	40	
High analysis <sup>d</sup>	\$m	54	63	40	0	6	16	41	23	
<b>Prices</b>										
Australia <sup>e</sup>	A\$/t	14.74	11.02	13.49	13.38	12.36	12.90	5.43	3.48	

<sup>a</sup> Single superphosphate manufactured from imported phosphate rock; P<sub>2</sub>O<sub>5</sub> equivalent: 21 per cent. <sup>b</sup> P<sub>2</sub>O<sub>5</sub> equivalent: 46 per cent. <sup>c</sup> P<sub>2</sub>O<sub>5</sub> equivalent: 50 per cent. <sup>d</sup> P<sub>2</sub>O<sub>5</sub> equivalent: 48 per cent. <sup>e</sup> Average import unit value. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

# 21 Salt

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Production</b>										
Australia <sup>as</sup>	kt	10 857	11 243 <sup>s</sup>	2 596	2 899	2 764	2 790 <sup>s</sup>	2 790 <sup>s</sup>	2 790 <sup>s</sup>	
<b>Exports</b>										
<b>Quantity</b>										
Bulk, bagged and table	kt	10 749	10 686 <sup>s</sup>	2 821	2 396	2 822	2 734 <sup>s</sup>	2 734 <sup>s</sup>	2 734 <sup>s</sup>	
<b>Value</b>										
Bulk, bagged and table	\$m	239	232 <sup>s</sup>	62	53	59	60 <sup>s</sup>	60 <sup>s</sup>	59 <sup>s</sup>	
<b>Prices</b>										
Australia <sup>b</sup>	A\$/t	22.24	21.67 <sup>s</sup>	22.04	21.92	20.83	22.00 <sup>s</sup>	22.00 <sup>s</sup>	21.50 <sup>s</sup>	

<sup>a</sup> Combination of sales and production data, excludes Victoria. <sup>b</sup> Average export unit value. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. <sup>na</sup> Not available.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

# 22 Silver

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>				2008-09 <sup>p</sup>
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine s</b>									
Silver content of all minerals produced									
New South Wales	t	81	77	19	13	24	19	21	18
Queensland	t	1 347	1 504	379	379	370	423	332	371
Western Australia	t	85	114	27	42	27	17	28	20
South Australia	t	28	29	7	7	7	7	8	8
Tasmania	t	96	106	26	25	26	25	29	24
Northern Territory	t	38	38	9	9	10	9	9	10
Australia	t	1 674	1 867	467	475	464	500	429	451
<b>Refinery</b>									
Refined silver	t	618	605	156	174	138	148	145	183
<b>Exports</b>									
<b>Quantity</b>									
Refined silver bullion	t	431	335	126	91	90	96	58	80
<b>Value</b>									
Refined silver <sup>a</sup>	\$m	221	187	67	49	46	55	36	48
<b>Imports</b>									
<b>Value</b>									
Refined silver bullion	\$m	98	80	4	4	21	26	29	32
<b>Prices</b>									
World <sup>b</sup>	US\$/oz	1 274	1 544	1 334	1 270	1 422	1 768	1 717	1 504
Australia <sup>c</sup>	A\$/kg	520	551	515	480	514	624	586	540

<sup>a</sup> Includes refined bullion, powder, unwrought silver and semi manufactured forms. <sup>b</sup> London Bullion Market Association, fixed rate. <sup>c</sup> Pasmenco Metals, fob/fot Port Pirie. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; London Bullion Market Association; ABARE.

# 23 Tin

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine</b>									
Tin content of all minerals produced									
Queensland <sup>s</sup>	t	3 218	1 631	548	391	536	483	221	0
Western Australia <sup>s</sup>	t	149	0	10	0	0	0	0	0
Tasmania	t	0	0	0	0	0	0	0	207
Australia <sup>s</sup>	t	2 061	1 631	558	391	536	483	221	207
<b>Smelter and refinery</b>									
Refined tin (primary) <sup>s</sup>	t	321	0	50	0	0	0	0	0
Domestic despatches <sup>s</sup>									
Tin concentrate	t	196	na	11	na	na	na	na	na
Tin content	t	147	na	8	na	na	na	na	na
<b>Exports</b>									
<b>Quantity</b>									
Tin concentrate	t	3 172	6 527	966	669	1 290	3 511	1 057	522
Refined tin	t	36	185	6	181	3	1	0	0
Tin content of primary materials exported <sup>bs</sup>	t	1 867	3 079	550	569	751	1 304	455	132
<b>Value</b>									
Tin concentrate	\$m	25	39	8	6	7	18	7	2
Refined tin	\$m	0	3	0	3	0	0	0	0
Total	\$m	25	42	8	9	7	18	7	2
<b>Imports</b>									
<b>Quantity</b>									
Refined tin	t	574	603	121	126	127	181	169	170
<b>Value</b>									
Refined tin	\$m	8	12	2	2	2	3	4	4
<b>Prices</b>									
LME <sup>c</sup>	US\$/t	11 455	19 912	14 103	14 983	16 342	17 784	22 650	20 551

<sup>a</sup> Primary and secondary. <sup>b</sup> Tin content of tin ores and concentrates and refined tin. <sup>c</sup> LME official close. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. <sup>na</sup> Not available.  
Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; ABARE.

# 24 Titanium minerals

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
Ilmenite concentrate <sup>s</sup>									
New South Wales	kt	179	197	64	47	57	43	49	40
Queensland	kt	177	222	43	45	57	57	63	59
South Australia	kt	0	5	0	0	0	2	4	5
Western Australia	kt	2 026	1 779	464	482	478	443	376	388
Northern Territory	kt	1	3	0	0	1	1	1	1
Australia	kt	2 383	2 205	572	575	592	545	493	493
Leucoxene concentrate <sup>s</sup>									
New South Wales	kt	69	86	29	23	20	10	34	23
Victoria	kt	1	5	1	0	1	2	2	1
South Australia	kt	0	3	0	0	0	1	2	2
Western Australia	kt	99	60	20	16	19	13	12	14
Northern Territory	kt	1	2	0	0	1	1	1	1
Australia	kt	169	156	50	40	40	26	51	40
Rutile concentrate <sup>s</sup>									
New South Wales	kt	56	63	13	16	16	15	16	20
Victoria	kt	22	72	16	18	19	19	16	15
Queensland	kt	71	85	17	20	25	20	19	18
South Australia	kt	0	2	0	0	0	1	1	1
Western Australia	kt	126	105	28	25	28	29	22	27
Northern Territory	kt	2	6	1	1	1	1	2	1
Australia	kt	279	333	76	80	90	85	77	82
Synthetic rutile <sup>s</sup>	kt	729	672	190	179	182	155	155	188
Titanium dioxide pigment <sup>s</sup>	kt	207	201	52	53	52	50	45	49
<b>Exports</b>									
<b>Quantity</b>									
Ilmenite concentrate <sup>a</sup>	kt	999	894	169	224	234	257	179	265
Leucoxene concentrate	kt	123	56	26	47	3	3	3	9
Rutile concentrate <sup>s</sup>	kt	307	399	82	87	99	102	111	110
Synthetic rutile <sup>s</sup>	kt	508	513	126	131	128	126	128	129
Titanium dioxide pigment	kt	171	175	48	45	44	43	43	31
<b>Value</b>									
Ilmenite concentrate <sup>a</sup>	\$m	113	104	20	22	30	31	21	31
Leucoxene concentrate	\$m	35	15	8	9	2	2	2	4
Rutile concentrate <sup>s</sup>	\$m	259	277	74	66	72	71	67	69
Synthetic rutile <sup>s</sup>	\$m	361	305	96	82	78	74	71	69
Titanium dioxide pigment	\$m	408	375	107	101	94	91	90	73
<b>Prices <sup>b</sup></b>									
Ilmenite concentrate									
Bulk	A\$/t	113	na	117	100	na	na	na	na
Leucoxene concentrate									
Bulk	A\$/t	249	166	230	166	na	na	na	na
Bagged	A\$/t	679	631	639	629	598	656	645	457
Rutile concentrate									
Bagged	A\$/t	861	742	802	749	730	710	785	825
Titanium dioxide pigment	A\$/t	2 391	2 137	2 253	2 245	2 117	2 112	2 072	2 346

<sup>a</sup> From January 1992, bulk only. <sup>b</sup> Average export unit value. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate. <sup>na</sup> Not available.

Sources: Australian Bureau of Statistics, Canberra; ABARE.

# 25 Uranium

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Production</b>										
<b>Mine</b>										
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	t	9 594	10 151	2 670	2 473	2 921	2 510	2 247	2 649	
Uranium (U content)										
South Australia	t	3 674	4 137	1 001	941	1 160	1 003	1 032	1 102	
Northern Territory	t	4 461	4 472	1 264	1 156	1 317	1 125	873	1 144	
Australia	t	8 135	8 608	2 264	2 097	2 477	2 128	1 905	2 246	
<b>Exports <sup>a</sup></b>										
<b>Quantity</b>										
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	t	9 519	10 139	2 933	2 486	3 088	2 385	2 180	2 572	
<b>Value</b>										
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )	\$m	660	887	198	285	259	172	171	148	
<b>Prices</b>										
Uranium oxide (U <sub>3</sub> O <sub>8</sub> )										
Industry spot <sup>b</sup>	US\$/lb	81.17	80.75	124.67	98.33	89.33	74.00	61.33	60.67	
Australia <sup>c</sup>	A\$/kg	69.28	87.45	67.54	114.50	83.93	72.11	78.36	57.39	

<sup>a</sup> Country details not available. <sup>b</sup> Average of weekly restricted spot price, published by The Ux Consulting Company. <sup>c</sup> Average export unit value. <sup>p</sup> Preliminary.  
Sources: Australian Bureau of Statistics, Canberra; The Ux Consulting Company; ABARE.

# 26 Zircon

		2006-07	2007-08 <sup>p</sup>	quarter						
				2006-07		2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept	
<b>Production</b>										
<b>Zircon concentrate <sup>s</sup></b>										
New South Wales	kt	37	48	12	12	11	13	12	12	
Victoria	kt	49	141	35	39	40	38	23	27	
Queensland	kt	56	66	15	20	18	14	14	13	
South Australia		0	15	0	0	0	5	10	11	
Western Australia	kt	409	295	96	74	84	74	63	74	
Northern Territory	kt	7	16	2	3	4	4	5	3	
Australia	kt	557	580	159	149	157	148	127	139	
<b>Exports</b>										
<b>Quantity</b>										
Zircon concentrate <sup>s</sup>	kt	555	637	152	152	163	161	161	166	
<b>Value</b>										
Zircon concentrate <sup>s</sup>	\$m	478	421	113	101	108	107	105	127	
<b>Prices <sup>a</sup></b>										
Zircon concentrate										
All grades - bagged	A\$/t	1 111	943	1 058	1 059	987	923	851	979	

<sup>a</sup> Average export unit value. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

# 27 Zinc

		2006-07	2007-08 <sup>p</sup>	quarter					
				2006-07	2007-08 <sup>p</sup>			2008-09 <sup>p</sup>	
				June	Sept	Dec	Mar	June	Sept
<b>Production</b>									
<b>Mine s</b>									
Zinc ore and concentrates	kt	2 508	3 074	716	744	897	697	736	696
Zinc content of all minerals produced									
New South Wales	kt	147	140	33	35	31	33	41	40
Queensland	kt	843	897	224	226	217	221	233	236
Western Australia	kt	144	205	49	57	51	41	56	33
South Australia	kt	4	94	4	13	69	12	0	7
Tasmania	kt	97	102	29	26	22	26	28	24
Northern Territory	kt	140	134	36	35	33	33	33	37
Australia	kt	1 375	1 571	375	392	423	365	391	376
<b>Smelter and refinery</b>									
Refined zinc (primary)	kt	496	507	127	127	129	121	131	122
Domestic despatches									
Refined zinc	kt	87	85	22	21	20	21	23	38
<b>Exports</b>									
<b>Quantity</b>									
Zinc concentrates									
Belgium-Luxembourg	kt	51	93	13	26	22	26	19	13
China	kt	426	823	207	204	248	153	217	268
Germany	kt	36	0	0	0	0	0	0	0
Japan	kt	315	312	75	72	92	69	78	72
Korea, Rep. of	kt	343	346	90	79	89	80	98	106
Netherlands	kt	284	351	56	97	90	84	81	80
Spain	kt	257	161	63	44	64	19	34	65
Other	kt	236	239	74	48	63	54	74	45
Total	kt	1 948	2 323	578	568	669	485	601	649
Refined zinc									
Chinese Taipei	kt	79	83	21	19	19	24	22	22
Hong Kong, China	kt	103	82	19	19	25	18	20	18
Indonesia	kt	17	15	4	4	3	4	4	4
Malaysia	kt	17	26	3	4	4	6	12	22
New Zealand	kt	12	12	3	3	3	3	3	3
United States	kt	5	0	0	0	0	0	0	0
Other	kt	141	192	50	63	39	46	44	48
Total	kt	374	411	100	111	94	101	105	116
Zinc content of all primary materials exported <sup>as</sup>									
	kt	1 321	1 508	374	387	406	332	383	436
<b>Value</b>									
Zinc concentrates	\$m	2 590	2 033	696	684	619	370	359	371
Refined zinc	\$m	1 707	1 319	424	454	314	270	281	261
Total	\$m	4 298	3 352	1 121	1 138	933	640	640	632
<b>Prices</b>									
LME cash <sup>b</sup>	US\$/t	3 672	2 599	3 664	3 229	2 623	2 429	2 113	1 771
Australia <sup>c</sup>	A\$/t	4 952	3 341	4 611	4 341	3 414	2 909	2 701	2 174

<sup>a</sup> Zinc content of all ores, concentrates, slags, residues, intermediate products, refined zinc, zinc powders, flakes and dust. <sup>b</sup> LME cash, midday, registered brands, minimum 98 per cent, 25 tonne warrants. <sup>c</sup> EZ Industries, Prime Western, 98.5 per cent. <sup>p</sup> Preliminary. <sup>s</sup> ABARE estimate.

Sources: Australian Bureau of Statistics, Canberra; London Metal Exchange; ABARE.