



Minerals and energy commodities

2010

234

Summary of Australian statistics for bauxite and alumina

	Production		Alumina exports ^a		
	Bauxite	Alumina	Volume	Value	Unit value ^b
	kt	kt	kt	\$m	\$/t
1965	1 186	202	na	na	na
1966	1 827	307	na	7	na
1967	4 244	854	na	29	na
1968	4 955	1 310	na	60	na
1969	7 921	1 931	na	72	na
1970	9 256	2 152	na	97	na
1971	12 733	2 713	2 148	115	53.5
1972	14 437	3 068	2 646	135	51.0
1973	17 596	4 089	3 507	181	51.6
1974	19 994	4 900	4 705	251	53.3
1975	21 033	5 129	4 514	344	76.2
1976	24 084	6 206	5 826	527	90.5
1977	26 086	6 659	6 119	629	102.8
1978	24 293	6 776	6 250	671	107.4
1979	27 583	7 415	6 476	775	119.7
1980	27 179	7 246	6 994	1 021	146.0
1981	25 441	7 079	6 510	1 082	166.2
1982	23 625	6 631	5 953	1 103	185.3
1983	24 372	7 231	6 378	1 185	185.8
1984	31 537	8 781	6 905	1 579	228.7
1985	31 839	8 792	7 169	1 433	199.9
1986	32 384	9 423	7 688	1 427	185.6
1987	34 008	10 109	8 301	1 545	186.1
1988	36 192	10 518	8 519	1 836	215.6
1989	38 579	10 800	8 636	2 725	315.5
1990	41 389	11 231	8 708	2 940	337.6
1991	40 504	11 713	9 275	2 490	268.5
1992	39 741	11 783	9 604	2 253	234.6
1993	41 320	12 598	9 753	2 383	244.3
1994	42 159	12 819	10 570	2 193	207.4
1995	42 655	13 161	10 727	2 504	233.4
1996	43 063	13 348	10 754	2 612	242.9
1997	44 464	13 384	10 902	2 735	250.8
1998	44 653	13 853	10 804	3 055	282.7
1999	48 416	14 532	11 130	2 879	258.6
2000	53 802	15 680	12 419	4 222	340.0
2001	53 799	16 313	12 972	4 430	341.5
2002	54 135	16 382	12 932	3 752	290.2
2003	55 602	16 529	13 498	3 655	270.8
2004	56 593	16 701	13 702	4 110	299.9
2005	59 959	17 704	14 358	4 647	323.7
2006	61 780	18 312	14 986	6 082	405.9
2007	62 398	18 843	15 264	5 975	391.5
2008	64 038	19 446	15 909	6 382	401.2
2009	65 844	19 939	16 616	4 757	286.3

^a Alumina (hydrate and oxide) only. ^b Average export unit value. **na** Not available.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; International Monetary Fund, *International Financial Statistics*, Washington DC; World Bureau of Metal Statistics, *World Metal Statistics*, London.

235

Summary of Australian statistics for aluminium

	Primary aluminium		Exports		
	Production	Consumption ^a	Volume ^b	Value	Unit value ^c
	kt	kt	kt	\$m	\$/t
1965	88	67	22	9	409.1
1966	92	76	16	7	437.5
1967	92	82	11	5	454.5
1968	97	104	6	3	500.0
1969	126	107	21	10	476.2
1970	204	123	82	38	463.4
1971	224	138	85	35	411.8
1972	206	112	95	35	368.4
1973	207	151	57	24	421.1
1974	219	176	53	28	528.3
1975	214	138	77	46	597.4
1976	232	168	65	45	692.3
1977	248	170	78	70	897.4
1978	263	184	77	72	935.1
1979	270	198	76	86	1 131.6
1980	303	267	46	62	1 347.8
1981	379	254	79	97	1 227.8
1982	378	219	156	168	1 076.9
1983	478	245	235	333	1 417.0
1984	758	265	404	637	1 576.7
1985	851	288	564	862	1 528.4
1986	882	287	579	975	1 685.4
1987	1 004	319	711	1 423	2 001.4
1988	1 150	328	816	2 218	2 719.2
1989	1 244	324	922	2 347	2 546.4
1990	1 234	288	936	1 990	2 125.6
1991	1 235	298	954	1 771	1 857.2
1992	1 245	309	930	1 618	1 739.1
1993	1 388	338	1 056	1 822	1 725.2
1994	1 317	354	948	1 804	1 902.5
1995	1 297	343	957	2 431	2 540.7
1996	1 372	322	1 068	2 140	2 003.7
1997	1 495	352	1 156	2 527	2 186.3
1998	1 627	367	1 310	2 929	2 235.6
1999	1 718	344	1 381	2 919	2 114.2
2000	1 769	346	1 402	3 785	2 700.3
2001	1 797	317	1 489	4 233	2 842.3
2002	1 836	299	1 527	3 845	2 518.4
2003	1 857	337	1 528	3 426	2 242.4
2004	1 894	362	1 534	3 626	2 364.2
2005	1 903	380	1 585	4 024	2 539.5
2006	1 929	312	1 618	5 464	3 377.1
2007	1 957	327	1 652	5 365	3 247.0
2008	1 974	312	1 679	5 244	3 123.9
2009	1 943	312	1 674	3 672	2 192.8

^a Apparent primary consumption. ^b Aluminium ingot metal. ^c Average export unit value. ^{na} Not available.

Sources: Australian Aluminium Council, *Australian Aluminium Statistical Summary*, Canberra; ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; International Monetary Fund, *International Financial Statistics*, Washington DC; World Bureau of Metal Statistics, *World Metal Statistics*, London.

236 Australian supply, disposal and prices of alumina and aluminium

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Production									
Bauxite	kt	54 472	56 316	57 648	60 874	62 684	63 463	64 055	67 485
Alumina	kt	16 413	16 690	17 161	17 826	18 506	19 359	19 597	20 057
Aluminium	kt	1 855	1 877	1 890	1 912	1 954	1 964	1 974	1 918
Secondary metal ^a	kt	127	127	127	127	127	126	127	127
Exports									
Alumina ^b	kt	13 168	13 572	14 073	14 499	15 056	15 739	16 395	16 653
- value	\$m	3 660	3 781	4 383	5 262	6 243	5 809	6 015	4 969
Aluminium ^a	kt	1 551	1 546	1 512	1 617	1 638	1 650	1 748	1 624
- value	\$m	3 696	3 441	3 726	4 788	5 650	4 967	4 724	3 838
Imports									
Alumina	kt	11.4	9.9	9.3	9.6	10.7	11.9	10.5	9.7
- value	\$m	13.1	9.7	10.2	11.5	12.2	12.7	13.1	12.1
Aluminium ^a	kt	4.8	6.7	5.9	6.3	2.7	3.0	3.5	12.2
- value	\$m	14.3	16.2	16.6	19.9	10.7	10.2	10.1	26.9
Consumption ^c	kt	303.7	319.8	313.2	343.1	330.8	313.1	312.0	312.0
Export unit values									
Alumina	\$/t	277.97	278.60	311.47	362.90	414.63	369.08	366.90	298.39
Aluminium	\$/t	2 382.64	2 226.28	2 463.63	2 961.66	3 449.95	3 010.77	2 702.10	2 363.32

^a Ingot metal. ^b Includes aluminium hydroxide. ^c Estimated apparent consumption (primary and secondary).

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Australian Aluminium Council, *Australian Statistical Summary*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

237 Volume of Australian exports of aluminium, by destination

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt	kt
China	20.0	46.4	72.0	75.2	59.5	37.4	29.3	15.9	139.3
Chinese Taipei	151.5	219.0	184.1	203.0	159.4	184.3	170.9	181.0	175.2
Hong Kong, China	61.6	74.3	90.0	108.8	85.5	66.0	42.3	30.4	47.3
Indonesia	47.6	51.3	56.3	57.1	88.1	83.3	77.7	91.7	91.2
Japan	610.8	577.5	569.9	551.9	581.0	578.1	591.5	645.8	373.0
Korea, Rep. of	210.2	234.8	217.2	188.5	222.4	233.0	243.2	229.7	409.5
Malaysia	52.1	53.4	61.8	75.2	81.3	82.1	105.6	111.4	138.9
Philippines	5.6	8.6	9.6	7.5	7.7	7.8	7.7	6.6	3.2
Singapore	5.3	5.4	6.0	13.5	16.0	27.9	23.8	17.2	26.6
Thailand	121.4	121.9	152.4	134.4	186.3	196.9	210.1	216.9	165.1
Other countries	203.1	133.9	108.6	118.6	97.4	121.2	150.3	131.9	105.3
Total	1 489.2	1 526.6	1 527.8	1 533.7	1 584.7	1 617.9	1 652.4	1 678.6	1 674.5

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra.

238

World production, consumption, stocks and prices for aluminium

	Production					Primary consumption	Stocks	Price b
	Bauxite	Alumina a	Aluminium		Total			
			Primary	Secondary				
	kt	kt	kt	kt	kt	kt	kt	US\$/t
1965	37 233	na	4 253	1 311	5 564	4 322	na	540.1
1966	41 070	11 510	4 800	1 657	6 457	4 809	na	540.1
1967	45 087	13 118	5 098	1 700	6 798	5 226	na	540.1
1968	46 571	13 983	5 592	1 946	7 538	6 137	na	552.9
1969	54 475	16 175	6 160	2 256	8 416	6 088	na	588.4
1970	59 490	20 003	6 583	2 181	8 764	7 035	na	614.2
1971	66 663	22 719	7 439	2 295	9 734	7 732	na	627.9
1972	69 215	24 539	8 056	2 451	10 507	7 935	1 687	590.2
1973	75 208	21 908	8 621	2 817	11 438	8 471	1 352	599.2
1974	84 176	22 878	9 205	2 887	12 092	9 450	2 012	764.8
1975	77 380	22 093	10 129	2 542	12 671	11 350	3 129	868.4
1976	80 662	22 663	12 863	2 781	15 644	14 077	2 321	890.0
1977	84 480	25 186	14 322	3 052	17 374	14 511	2 505	1 143.8
1978	83 927	25 146	14 776	3 240	18 016	15 329	2 052	1 325.0
1979	89 131	26 034	15 175	3 316	18 491	15 981	1 513	1 602.8
1980	93 061	28 106	16 035	3 318	19 353	15 298	2 078	1 774.9
1981	88 552	26 648	15 698	3 618	19 316	14 516	3 275	1 262.8
1982	77 896	22 230	13 990	3 583	17 573	14 161	3 185	991.6
1983	78 585	23 342	14 334	3 960	18 294	15 361	2 249	1 438.3
1984	92 299	27 055	15 941	3 950	19 891	15 574	2 775	1 251.6
1985	89 609	25 543	15 555	4 022	19 577	15 858	2 444	1 042.8
1986	92 842	26 114	15 619	4 196	19 815	16 071	1 964	1 150.0
1987	96 499	28 053	16 483	4 511	20 994	17 053	1 474	1 580.0
1988	102 588	29 155	18 575	4 943	23 518	18 867	1 619	2 603.0
1989	107 584	31 537	19 135	4 943	24 078	19 253	1 634	1 953.0
1990	114 750	40 500	19 348	5 062	24 410	19 227	1 847	1 639.0
1991	114 977	40 890	19 653	5 336	24 988	18 743	2 741	1 303.5
1992	109 468	40 783	19 459	5 476	24 935	18 558	3 244	1 254.6
1993	114 124	42 978	19 715	6 058	25 773	18 134	4 497	1 139.4
1994	112 230	41 953	19 112	6 447	25 559	19 715	3 733	1 477.1
1995	118 231	43 809	19 668	6 876	26 544	20 552	2 576	1 806.0
1996	123 965	40 841	20 848	6 914	27 762	20 684	3 135	1 506.0
1997	126 381	43 297	21 798	7 484	29 282	21 870	2 749	1 599.8
1998	123 034	45 043	22 654	7 594	30 248	21 889	2 837	1 357.9
1999	130 158	45 784	23 707	8 132	31 839	23 356	3 020	1 361.1
2000	138 915	48 119	24 418	8 389	32 807	25 059	2 623	1 549.5
2001	139 044	48 488	24 436	7 864	32 300	23 722	3 103	1 443.8
2002	147 312	49 785	26 076	7 910	33 986	25 372	3 444	1 350.3
2003	158 315	52 591	28 001	8 113	36 114	27 607	3 672	1 431.6
2004	168 035	62 576	29 922	8 395	38 316	29 961	3 033	1 715.9
2005	176 930	66 692	32 017	8 599	40 616	31 689	3 010	1 898.8
2006	191 655	72 790	33 975	9 092	43 067	33 935	2 764	2 569.8
2007	209 014	79 619	38 136	9 662	47 798	37 566	2 961	2 638.5
2008	218 864	78 905	39 693	8 839	48 532	37 009	4 709	2 486.7
2009	193 266	77 334	37 180	7 895	45 075	34 811	6 485	1 663.2

^a Western world production to 1989, total world production from 1990. ^b London Metal Exchange, 99.5 per cent purity, spot cash settlement until 1988; 99.7 per cent purity from 1989. Before 1979, UK producer price. na Not available.

Sources: International Monetary Fund, *International Financial Statistics*, Washington DC; Metallgesellschaft AG, *Metallstatistik*, Frankfurt; World Bureau of Metal Statistics, *World Metal Statistics*, London.

239

World primary aluminium production, by region and country

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt	kt
Africa									
Cameroon	81	67	77	86	86	91	87	90	73
Egypt	191	195	195	216	244	252	258	259	245
Ghana	162	132	16	0	13	76	13	9	0
Nigeria	0	0	0	0	0	0	0	20	150
South Africa	654	704	733	864	851	887	898	811	817
Americas									
Argentina	245	269	272	272	271	273	287	400	413
Brazil	1 132	1 318	1 381	1 457	1 498	1 605	1 655	1 661	1 536
Canada	2 583	2 709	2 792	2 592	2 894	3 051	3 083	3 119	3 030
Mexico	52	38	18	0	0	0	0	0	0
Surinam	0	0	0	0	0	0	0	0	0
United States	2 637	2 705	2 705	2 517	2 480	2 281	2 560	2 659	1 727
Venezuela	572	605	606	631	624	617	616	608	561
Asia									
China	3 371	4 321	5 547	6 689	7 806	9 358	12 588	13 178	12 846
India	624	671	799	861	942	1 105	1 222	1 308	1 479
Indonesia	209	163	197	241	252	250	242	242	258
Japan	7	6	7	7	6	6	6	7	5
Tajikistan	289	308	319	358	380	414	419	402	361
Europe									
France	461	463	443	451	442	443	428	432	421
Germany	652	653	661	668	648	516	551	606	292
Greece	162	164	165	167	165	165	168	162	135
Hungary	35	35	35	34	31	0	0	0	0
Iceland	243	264	266	271	272	325	399	760	663
Italy	188	190	191	195	193	194	180	186	166
Netherlands	293	284	283	326	341	312	296	321	306
Norway	1 068	1 096	1 192	1 322	1 376	1 427	1 357	1 368	1 094
Poland	55	59	53	54	54	56	58	47	21
Romania	182	187	196	219	244	258	286	290	183
Russian Federation	3 302	3 348	3 478	3 594	3 647	3 718	3 955	4 190	3 815
Slovakia	110	112	131	157	158	157	160	163	150
Slovenia	77	88	110	121	139	140	125	83	88
Spain	376	380	389	398	394	367	405	406	335
Sweden	102	101	101	101	103	101	100	112	70
Switzerland	36	40	44	45	44	12	0	0	0
Ukraine	106	113	114	113	114	113	113	89	46
United Kingdom	341	344	343	360	368	360	365	327	314
Yugoslavia	108	117	120	121	120	122	124	112	64
Middle East									
Bahrain	522	517	526	524	708	872	860	872	858
Iran	145	166	172	203	232	205	204	241	242
Turkey	62	63	63	62	59	60	63	61	30
United Arab Emirates	536	536	536	683	850	789	890	892	1 010
Oceania									
Australia	1 797	1 836	1 857	1 894	1 903	1 929	1 957	1 974	1 943
New Zealand	322	334	334	350	349	338	353	316	271
Total	24 436	26 076	28 001	29 922	32 017	33 975	38 136	39 693	37 180

Sources: ABARE, *Australian Mineral Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

240

World primary aluminium consumption, by region and country

	2001 kt	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Africa									
Cameroon	25	27	27	19	19	19	19	19	19
Egypt	97	91	101	98	98	110	107	120	129
Ghana	16	16	16	20	22	24	28	31	31
South Africa	198	180	180	222	240	264	279	409	467
Other Africa	31	32	33	41	19	20	21	29	29
Total	366	347	357	401	426	466	492	648	715
Americas									
Argentina	54	51	81	116	113	133	138	134	143
Brazil	553	578	589	651	759	773	854	932	799
Canada	743	747	736	755	801	846	722	714	657
Mexico	113	113	113	130	158	164	124	134	131
United States	5 230	5 509	5 667	5 800	6 114	6 150	5 545	4 906	3 854
Venezuela	165	173	181	208	179	160	226	306	358
Other Americas	85	99	100	118	56	58	66	66	66
Total	6 942	7 270	7 467	7 777	8 254	8 365	7 751	7 253	6 056
Asia									
China ^a	3 492	4 115	5 178	6 043	7 119	8 648	12 347	12 413	14 276
Chinese Taipei	321	407	431	497	412	422	368	361	288
Hong Kong, China	50	42	28	25	30	30	30	30	30
India	589	604	798	861	958	1 079	1 207	1 284	1 458
Indonesia	163	127	211	249	268	288	267	311	350
Japan	2 014	2 010	2 235	2 319	2 276	2 323	2 197	2 250	1 523
Korea, Rep. of	850	921	982	1 118	1 201	1 153	1 081	964	1 038
Malaysia	153	149	126	140	150	193	221	181	207
Philippines	25	30	26	29	28	26	19	16	16
Singapore	48	48	56	63	60	60	60	60	60
Thailand	227	250	323	378	374	407	401	407	330
Other Asia	206	237	242	258	121	131	168	168	168
Total	8 802	9 661	11 448	12 968	14 216	16 010	19 769	19 917	21 180
Europe									
Austria	201	208	241	234	218	269	307	286	198
Belgium	327	333	322	402	442	467	510	442	273
Croatia	38	41	28	56	71	70	76	79	66
Czech Republic	88	105	103	114	134	130	143	133	105
Denmark	44	56	60	66	63	69	75	69	48
Finland	37	32	29	33	37	39	46	39	29
France	746	762	754	749	719	713	737	689	538
Germany	1 580	1 690	1 916	1 795	1 758	1 823	2 008	1 936	1 277
Greece	218	220	243	266	281	280	277	277	205
Hungary	223	240	244	226	226	225	213	210	147
Italy	756	851	956	987	977	1 021	1 087	951	661
Netherlands	155	155	153	146	146	146	146	146	146
Norway	233	246	246	246	245	261	243	217	180
Poland	149	133	152	160	128	155	181	242	182
Portugal	67	78	72	90	88	93	92	98	71
Romania	113	112	163	163	213	246	263	232	164
Russian Federation	786	990	803	1 020	1 020	1 047	1 020	1 020	750
Slovakia	39	28	24	20	25	25	27	30	24
Slovenia	116	76	87	119	115	112	126	115	160
Spain	508	533	596	603	624	620	642	603	481

Continued

240

World primary aluminium consumption, by region and country continued

	2001 kt	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Europe (continued)									
Sweden	119	127	126	124	113	106	114	184	47
Switzerland	161	152	168	169	162	193	185	180	144
Ukraine	50	50	30	33	37	40	51	51	49
United Kingdom	433	428	302	439	353	362	363	339	270
Yugoslavia	18	23	38	45	62	96	96	96	106
Total	7 249	7 721	7 925	8 380	8 342	8 720	9 158	8 805	6 470
Middle East									
Bahrain	261	248	255	353	355	328	323	323	323
Iran	117	126	126	161	154	158	175	175	175
Saudi Arabia	65	70	77	77	80	85	90	95	95
Turkey	176	231	308	351	390	433	555	576	544
Total	664	721	812	988	1 028	1 054	1 192	1 208	1 270
Oceania									
Australia	317	299	337	362	380	312	327	312	312
New Zealand	46	74	73	75	71	62	68	73	79
Total	363	373	410	437	451	374	395	385	391
Total	23 722	25 372	27 607	29 961	31 689	33 935	37 566	37 009	34 811

■ Excludes Hong Kong.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

241

Volume of world aluminium trade, by country a

	2001 kt	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Exports									
Argentina	182.5	203.4	199.9	163.1	168.5	131.1	152.7	243.0	288.5
Australia	1 489.2	1 526.6	1 527.8	1 533.7	1 584.7	1 617.9	1 652.4	1 678.6	1 674.5
Austria	102.2	108.9	103.7	136.0	132.8	126.5	120.0	114.1	101.3
Bahrain	261.1	268.8	270.9	na	na	na	530.0	na	na
Belgium	184.4	287.3	198.7	308.7	306.7	240.4	203.6	194.7	144.4
Brazil	587.9	749.4	798.8	818.4	753.1	842.1	823.3	747.9	754.1
Cameroon	56.8	39.8	51.4	72.9	65.0	62.7	62.9	na	na
Canada	2 046.1	2 133.3	2 233.2	1 996.9	2 239.6	2 359.9	2 500.4	2 532.1	2 475.5
Chinese Taipei	96.1	113.6	121.1	125.8	111.3	117.5	139.3	142.2	138.6
Denmark	26.1	23.4	17.7	14.1	23.6	31.9	37.8	33.3	8.5
Egypt	95.1	108.7	99.2	119.8	144.6	140.7	60.7	132.0	141.9
Finland	33.7	23.5	18.6	17.3	14.1	11.4	12.9	14.3	8.9
France	151.0	156.7	139.0	148.1	172.8	214.2	185.5	185.8	217.3
Germany	366.7	387.6	389.3	413.4	391.6	432.3	423.0	444.2	355.4
Ghana	68.7	na	na	na	na	na	na	na	na
Greece	15.8	62.9	67.6	70.4	76.0	83.3	94.9	91.1	75.2
Hong Kong, China	134.4	145.9	183.4	203.3	118.1	80.2	42.7	40.2	32.5
Hungary	10.9	10.6	16.2	10.0	22.6	28.9	27.6	11.0	26.2
Iceland	258.0	282.5	286.0	278.0	283.6	303.3	446.3	760.8	791.9
India	101.5	135.7	71.4	76.2	108.3	119.9	163.7	193.4	278.2
Indonesia	149.6	142.7	119.9	167.7	166.1	186.1	168.3	153.9	160.2
Italy	31.5	42.0	34.5	47.8	66.3	93.5	123.3	115.0	152.3
Japan	12.6	12.4	18.2	36.3	34.4	24.3	26.8	19.0	29.4
Korea, Rep. of	8.0	24.3	49.9	56.1	48.6	50.8	77.7	120.9	60.6
Mexico	7.5	5.5	4.7	13.6	14.7	22.2	46.3	61.3	66.0
Netherlands	470.0	581.7	635.6	609.6	482.3	608.8	795.0	643.3	620.1
New Zealand	293.5	298.5	289.7	316.1	319.5	308.9	327.8	304.0	241.9
Norway	1 187.6	1 127.8	1 362.5	1 485.0	1 513.2	1 539.4	1 609.9	1 590.6	1 356.4
Russian Federation	3 074.4	2 782.0	3 107.9	3 700.2	2 740.3	3 163.6	3 948.6	4 817.9	4 695.5
Singapore	88.8	127.5	127.9	101.6	103.9	107.2	226.8	156.5	283.7
South Africa	461.0	584.6	625.8	646.4	671.2	601.3	625.2	597.9	643.0
Spain	92.2	70.9	88.3	103.2	115.0	136.5	141.0	162.9	250.4
Sweden	66.2	81.2	76.0	127.8	97.7	113.5	90.3	95.5	147.7
Switzerland	5.5	7.1	0.8	8.2	14.5	21.3	22.7	9.9	14.4
Tajikistan	287.0	304.0	316.7	342.6	374.9	408.9	411.2	393.4	na
United Arab Emirates	452.8	377.3	341.0	327.2	301.0	287.4	189.8	110.7	130.4
United Kingdom	263.3	250.4	271.2	335.9	379.1	350.2	298.2	330.5	321.8
United States	339.3	305.2	241.6	344.1	379.0	419.5	399.1	379.2	353.1
Venezuela	398.0	437.4	392.1	389.7	403.3	373.6	336.3	291.8	222.5
Yugoslavia	95.8	116.5	35.0	1.7	1.3	4.2	7.0	13.2	7.4
Total	15 176.3	15 911.5	16 852.3	18 090.7	17 016.3	17 699.0	18 868.4	19 525.9	18 178.6

Continued

241

Volume of world aluminium trade, by country ^a continued

	2001 kt	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Imports									
Australia	7.6	4.4	6.1	6.9	5.1	4.7	2.9	2.6	7.5
Austria	293.0	307.3	326.3	336.0	297.1	350.3	391.3	375.0	278.7
Belgium	599.8	669.7	599.6	749.6	763.0	737.7	754.4	557.9	449.3
Brazil	8.7	8.9	6.8	12.0	18.6	11.6	22.4	18.5	16.8
Canada	223.0	196.1	137.9	165.5	163.2	155.3	139.4	127.7	101.4
China	529.6	581.8	880.8	1 033.3	637.0	512.0	282.2	260.1	1 739.8
Chinese Taipei	417.4	520.8	552.1	622.5	523.5	540.0	504.0	503.7	426.4
Denmark	48.7	61.5	65.4	75.2	70.6	79.6	86.4	85.3	61.5
Finland	50.5	37.5	36.7	41.3	44.6	40.9	50.5	43.0	30.5
France	506.9	474.3	490.5	513.8	517.2	593.0	604.6	509.4	398.4
Germany	1 602.0	1 666.6	1 895.6	1 798.9	1 770.5	2 073.0	2 230.8	2 115.8	1 652.8
Greece	122.4	118.9	144.3	167.6	190.2	188.4	198.7	191.3	142.6
Hong Kong, China	162.9	188.1	211.2	228.5	148.8	114.9	47.1	36.4	25.4
Hungary	203.3	209.3	227.9	366.6	163.7	182.1	282.0	229.4	180.3
India	66.6	68.3	70.6	76.4	123.8	109.7	149.1	170.0	257.7
Ireland	11.5	6.8	6.5	6.6	4.1	2.8	1.4	0.3	0.3
Italy	670.2	781.2	871.5	903.3	890.1	986.1	1 079.4	882.1	595.3
Japan	2 611.6	2 575.1	2 941.3	3 021.4	2 976.7	3 036.1	2 985.7	3 064.1	1 957.8
Korea, Rep. of	880.6	973.3	1 080.2	1 197.1	1 230.6	1 204.4	1 190.5	1 085.0	1 123.4
Mexico	229.4	292.1	325.3	403.9	406.8	439.7	453.1	459.5	374.4
Netherlands	520.6	526.0	583.5	594.3	656.3	971.4	1 043.2	731.4	647.1
New Zealand	5.7	10.7	17.3	22.1	19.1	17.1	16.1	16.1	8.3
Norway	224.1	282.2	301.6	355.5	370.8	387.1	508.3	440.6	335.5
Portugal	175.0	172.9	193.2	211.2	238.6	253.9	231.8	232.3	165.0
Singapore	229.9	271.7	85.0	188.7	234.2	292.9	217.8	288.8	613.9
South Africa	5.4	4.8	7.7	3.9	18.1	29.3	6.6	7.7	8.8
Spain	216.1	222.7	283.3	326.5	333.9	399.0	450.6	363.8	257.5
Sweden	97.2	120.2	118.9	150.2	135.1	143.2	205.3	191.6	158.0
Switzerland	130.5	119.4	125.1	132.5	132.0	191.7	214.9	190.0	158.4
Thailand	232.2	259.3	330.3	390.7	386.9	418.4	420.9	437.4	368.7
Turkey	125.5	185.5	274.0	327.0	382.9	414.4	572.1	598.4	559.9
United Kingdom	346.9	371.1	294.7	234.2	200.8	294.2	295.3	255.6	346.9
United States	2 677.1	2 918.2	2 982.7	3 297.7	3 690.7	3 461.1	2 951.1	2 931.7	3 128.8
Yugoslavia	4.2	11.0	20.1	24.5	39.7	63.1	77.8	73.5	54.2
Total	14 686.3	15 642.8	17 008.3	18 551.3	18 318.2	19 253.9	19 351.7	18 148.5	17 250.3

^a Covers principal imports and exports of aluminium and aluminium alloys. ^{na} Not available or not applicable.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

242 Australian exports of clays, by destination ^a

	Japan	New Zealand	United Kingdom	Other	Total	
	†	†	†	†	Volume †	Value \$'000
1965	0	552	na	na	2 560	56
1966	0	714	na	na	3 514	120
1967	0	650	na	na	4 890	223
1968	0	657	na	na	4 544	224
1969	0	614	na	na	6 145	182
1970	2 894	973	2 433	1 004	7 304	324
1971	2 271	681	2 827	598	6 377	299
1972	1 554	703	1 998	489	4 744	211
1973	2 038	1 011	3 249	332	6 630	286
1974	1 198	895	3 953	201	6 247	278
1975	1 732	175	4 816	126	6 849	294
1976	1 500	101	3 025	326	4 952	228
1977	2 115	462	5 400	1 950	9 927	679
1978	1 609	600	5 001	6 198	13 408	1 054
1979	1 939	1 175	2 597	381	6 092	525
1980	735	125	1 206	327	2 393	281
1981	1 539	313	596	577	3 025	364
1982	1 364	463	1 376	2 133	5 336	983
1983	927	365	1 601	5 025	7 918	1 041
1984	2 878	829	2 234	11 074	17 015	1 683
1985	1 549	719	1 877	4 259	8 404	1 021
1986	9 670	1 241	2 106	4 428	17 445	1 980
1987	14 990	3 908	1 059	11 401	31 358	4 743
1988	40 983	9 003	1 965	16 133	68 084	10 480
1988-89	71 466	10 044	1 808	27 281	110 599	16 315
1989-90	94 507	6 779	2 303	39 601	143 190	19 953
1990-91	119 979	7 528	1 175	32 203	160 885	24 557
1991-92	97 614	5 260	135	46 424	149 433	23 408
1992-93	115 735	5 009	100	43 774	164 618	28 090
1993-94	122 866	5 495	0	43 209	171 570	30 926
1994-95	85 853	4 987	844	60 509	152 193	24 656
1995-96	103 848	5 226	1 224	68 504	178 802	33 523
1996-97	52 775	5 671	43	47 208	105 697	20 801
1997-98	2 797	6 036	1 321	34 068	44 222	10 609
1998-99	4 886	6 237	2 320	30 059	43 502	10 570
1999-00	4 039	11 760	3 474	60 069	79 342	10 203
2000-01	6 152	4 768	266	21 539	32 725	7 924
2001-02	31 119	7 963	332	100 828	140 242	11 109
2002-03	12 137	11 346	231	87 538	111 252	15 862
2003-04	18 364	7 869	232	33 132	59 597	13 738
2004-05	2 893	19 366	308	37 147	59 714	12 420
2005-06	2 875	25 084	82	27 530	55 571	9 976
2006-07	2 407	17 603	122	44 151	64 283	10 933
2007-08	2 525	34 494	61	232 816	269 896	11 958
2008-09	2 018	4 057	20	61 478	67 573	11 145
2009-10	2 298	5 488	85	45 782	53 653	16 230

^a Excludes activated clays. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; ABARES.

243 Australian imports of clays

	Bentonite a		Kaolin b		Refractory clays c		Other clays d	
	t	\$'000	t	\$'000	t	\$'000	t	\$'000
1965	16 312	644	26 128	517	3 524	182	14 793	271
1966	15 346	494	31 991	686	3 705	148	9 939	406
1967	21 263	615	37 908	878	2 391	101	14 270	519
1968	44 513	984	44 603	1 030	5 071	173	12 578	548
1969	54 597	1 134	43 606	1 075	4 825	112	13 177	590
1970	66 484	1 474	56 571	1 458	7 720	285	20 245	686
1971	88 803	1 887	42 579	1 268	10 565	267	12 178	726
1972	49 861	1 540	33 314	991	5 949	174	12 442	504
1973	57 965	1 390	38 344	1 130	2 154	70	16 920	665
1974	85 363	1 649	37 535	1 028	4 880	106	25 616	1 207
1975	54 736	1 142	5 572	387	16 139	561	26 654	1 286
1976	22 204	708	8 620	426	5 054	231	25 711	1 679
1977	13 191	558	7 488	521	6 665	367	29 342	2 051
1978	30 355	1 375	11 773	750	3 652	350	57 957	3 872
1979	57 241	2 028	6 751	537	2 610	198	45 635	3 842
1980	55 917	2 424	3 624	404	15 119	1 125	25 097	2 505
1981	43 034	1 828	11 737	1 113	16 564	1 431	36 658	2 720
1982	32 571	2 067	15 668	1 780	10 874	1 141	8 649	1 836
1983	17 767	1 611	9 829	1 663	3 327	461	9 261	1 373
1984	24 419	2 617	7 652	1 580	13 408	1 485	16 216	2 606
1985	30 531	3 474	2 586	870	904	209	29 166	5 412
1986	24 942	2 643	4 785	2 892	2 719	431	21 776	4 400
1987	8 654	1 822	12 641	6 002	17 367	2 079	14 021	3 773
1988	22 269	3 530	12 487	3 113	17 324	2 253	5 217	1 946
1988-89	21 344	2 553	17 174	3 927	30 795	3 793	9 441	4 410
1989-90	28 476	4 427	11 896	3 204	10 953	1 653	24 462	5 070
1990-91	28 348	3 858	11 331	3 172	4 979	813	18 574	4 146
1991-92	12 529	2 596	7 119	3 413	13 752	1 834	8 330	2 950
1992-93	21 004	4 078	11 965	6 104	1 442	371	10 569	3 806
1993-94	16 227	3 537	12 476	4 774	2 016	464	6 875	3 155
1994-95	29 151	3 290	17 686	7 450	6 038	1 717	26 312	5 524
1995-96	4 202	2 864	17 167	5 284	5 192	927	44 704	8 194
1996-97	9 633	2 481	19 535	6 919	1 910	473	23 648	5 340
1997-98	12 124	3 872	16 298	7 500	5 220	1 021	26 641	7 427
1998-99	7 035	3 179	13 525	8 510	1 539	443	19 873	6 553
1999-00	15 291	4 353	9 410	6 235	3 414	819	19 988	6 875
2000-01	25 611	5 524	11 629	9 321	8 985	1 559	23 333	9 563
2001-02	28 900	6 636	10 239	9 113	2 794	754	19 963	8 068
2002-03	26 841	4 870	6 957	4 097	10 402	2 176	12 086	5 702
2003-04	26 629	5 854	13 379	8 293	12 819	2 231	14 846	5 322
2004-05	22 009	5 130	13 376	6 714	6 417	1 071	11 856	4 755
2005-06	36 930	4 751	18 772	8 477	9 469	1 748	5 728	2 970
2006-07	37 945	4 617	16 861	7 573	5 090	1 036	7 813	4 372
2007-08	43 574	6 351	19 182	8 180	4 500	1 154	9 338	4 468
2008-09	35 684	7 306	13 828	7 314	2 820	977	7 408	4 687
2009-10	49 781	7 250	9 279	4 857	2 878	520	4 277	2 251

a Includes bentonitic clay. b Includes ball and china clay. c Includes fireclay and chamotte. d Includes andalusite, mullite, kyanite, sillimanite and other clays.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; ABARE, Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; ABARES.

244

Summary of Australian statistics for black coal

	Production		Domestic consumption	Exports		Closing stocks ^b
	Raw	Net ^a		Volume	Unit value	
	Mt	Mt	Mt	Mt	\$/t	Mt
1966-67	35.95	32.29	23.15	8.04	8.03	na
1967-68	39.06	34.71	24.04	10.48	8.21	na
1968-69	44.86	39.81	24.71	14.41	8.33	na
1969-70	50.41	44.30	25.57	17.97	9.32	na
1970-71	52.97	45.00	24.96	18.96	10.50	7.59
1971-72	58.86	49.02	25.49	21.85	10.89	9.27
1972-73	66.19	54.63	27.39	25.83	11.28	10.68
1973-74	66.58	54.74	27.68	28.39	12.50	9.35
1974-75	72.21	63.78	30.19	32.42	22.10	10.52
1975-76	77.13	62.33	29.45	30.43	34.96	12.97
1976-77	85.96	69.55	32.19	35.37	37.23	14.95
1977-78	87.79	71.01	32.56	37.91	39.14	15.50
1978-79	91.90	73.37	33.43	38.28	38.99	17.17
1979-80	90.20	73.59	35.62	43.16	39.35	11.97
1980-81	106.20	87.39	37.71	47.25	41.64	14.22
1981-82	110.20	91.08	36.79	46.12	49.64	21.34
1982-83	120.34	99.59	37.29	54.65	56.21	28.02
1983-84	129.44	105.55	38.64	64.33	51.77	27.98
1984-85	145.14	118.26	40.67	86.10	54.09	21.95
1985-86	163.62	134.31	42.56	90.30	57.49	23.93
1986-87	182.43	148.73	44.07	97.70	55.46	32.71
1987-88	167.69	136.35	46.01	102.10	46.61	20.59
1988-89	184.05	149.35	49.87	97.66	48.04	20.91
1989-90	196.85	160.41	50.68	104.58	55.74	27.37
1990-91	204.68	166.56	50.92	113.37	56.08	29.10
1991-92	218.25	176.51	52.81	123.30	55.38	29.61
1992-93	222.50	177.99	52.94	129.18	58.28	26.23
1993-94	221.50	177.98	54.18	129.06	55.49	21.81
1994-95	237.23	192.35	55.36	136.24	50.45	23.30
1995-96	243.02	194.53	57.41	138.55	56.00	21.29
1996-97	261.34	207.50	57.88	145.75	54.42	24.91
1997-98	278.64	222.37	61.26	162.61	58.62	25.77
1998-99	284.29	225.01	61.64	169.41	54.54	19.92
1999-00	298.66	239.43	61.30	175.78	47.20	20.03
2000-01	321.48	258.22	64.13	193.50	55.81	21.48
2001-02	345.14	272.59	66.16	197.87	67.37	27.39
2002-03	349.51	274.85	66.34	207.74	57.26	27.14
2003-04	363.07	283.96	69.24	218.43	49.82	21.87
2004-05	394.09	303.44	71.29	231.31	73.90	23.66
2005-06	401.19	306.92	71.58	231.30	104.67	25.36
2006-07	416.98	325.43	na	243.59	89.48	na
2007-08	423.53	326.62	na	251.99	96.84	na
2008-09	440.81	333.77	na	261.60	209.09	na
2009-10	460.97 ^s	356.62 ^s	na	292.24	124.59	na

^a Before 1980-81, net production referred to raw coal production less rejects removed at coal industry washeries plus/less unexplained stock adjustments at mines and ports. From 1980-81, net production refers to raw coal production less rejects removed at coal industry washeries plus/less unexplained stock adjustments at mines only. Thus, from 1980-81, net production is identical to salable production. ^b Calendar year basis before 1984-85. ^s ABARES estimate. **na** Not available.

Sources: Joint Coal Board, *Black Coal in Australia 1987-88*, Sydney; Coal Services Pty Ltd, *Australian Black Coal Statistics*, Sydney; Queensland Department of Natural Resources, Mines and Energy; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABARES.

245 Australian raw coal production, by state

	New South Wales Mt	Victoria ^a Mt	Queensland Mt	Western Australia Mt	South Australia Mt	Tasmania Mt
1964-65	22.16	19.87	4.86	0.97	1.94	0.13
1965-66	25.41	21.90	5.56	1.08	2.04	0.10
1966-67	26.63	22.87	6.06	1.10	2.05	0.08
1967-68	28.57	23.43	7.19	1.08	2.02	0.09
1968-69	32.24	23.50	9.20	1.12	2.18	0.11
1969-70	35.32	24.31	11.65	1.17	2.15	0.12
1970-71	35.72	23.18	14.32	1.18	1.62	0.12
1971-72	36.96	23.63	19.01	1.21	1.56	0.12
1972-73	38.66	24.12	25.27	1.15	1.58	0.13
1973-74	36.63	26.44	27.15	1.20	1.49	0.12
1974-75	42.31	27.54	32.10	1.88	1.79	0.14
1975-76	40.59	29.21	32.40	2.14	1.82	0.18
1976-77	46.79	30.99	34.66	2.38	1.95	0.20
1977-78	49.25	30.47	34.14	2.42	1.78	0.19
1978-79	50.52	32.10	37.26	2.41	1.47	0.25
1979-80	48.71	32.90	36.53	3.03	1.72	0.21
1980-81	58.29	32.10	42.76	3.12	1.73	0.30
1981-82	59.82	37.57	45.14	3.42	1.44	0.39
1982-83	67.46	34.71	46.91	3.96	1.45	0.56
1983-84	66.53	33.20	57.20	3.93	1.33	0.45
1984-85	70.03	38.38	69.21	3.65	1.75	0.49
1985-86	77.19	36.07	80.01	3.75	2.17	0.50
1986-87	88.51	41.81	87.09	3.78	2.43	0.62
1987-88	76.27	44.29	84.61	3.69	2.52	0.60
1988-89	81.27	48.65	95.48	3.89	2.76	0.65
1989-90	93.89	45.96	95.30	4.13	2.94	0.60
1990-91	96.70	49.39	99.67	5.21	2.53	0.59
1991-92	101.17	50.72	108.32	5.48	2.74	0.54
1992-93	102.91	47.90	110.93	5.40	2.79	0.48
1993-94	101.95	49.68	111.12	5.15	2.69	0.57
1994-95	107.78	49.92	119.97	5.82	3.04	0.61
1995-96	113.09	54.28	120.93	5.97	2.45	0.58
1996-97	123.68	60.80	128.92	5.59	2.59	0.56
1997-98	134.01	65.27	135.56	5.80	2.70	0.58
1998-99	131.38	66.65	143.79	5.74	2.80	0.57
1999-00	132.90	67.36	155.72	6.63	2.87	0.55
2000-01	138.78	64.96	172.88	6.19	3.16	0.47
2001-02	145.23	66.66	190.07	6.25	3.06	0.54
2002-03	143.07	66.81	195.96	6.52	3.44	0.52
2003-04	147.05	66.34	204.05	7.48	4.01	0.48
2004-05	155.09	67.15	226.62	7.62	4.23	0.53
2005-06	161.14	67.74	226.69	8.38	4.35	0.63
2006-07	169.72	65.61	234.12	7.52	4.85	0.77
2007-08	177.02	66.03	233.24	7.79	4.84	0.64
2008-09 ^s	182.18	68.25	244.52	8.75	4.73	0.64
2009-10 ^s	190.66	68.70	257.44	8.39	3.84	0.64

^a Brown coal. Between 1960-61 and 1968-69, Victoria produced small quantities of black coal which are not included in this table. ^s ABARES estimate.

Sources: Joint Coal Board, *Black Coal in Australia 1987-88*, Sydney; Joint Coal Board and the Queensland Department of Mines and Energy, *Australian Black Coal Statistics*, Sydney; Victorian Department of Natural Resources and Environment; ABARES.

246 Australian consumption of coal, by state

	Black coal							Brown coal
	New South	Victoria	Queensland	Western	South	Tasmania	Australia	Australia
	Wales ^a			Australia	Australia			
	kt	kt	kt	kt	kt	kt	kt	kt
1964-65	14 058	721	2 744	995	2 313	145	20 976	19 685
1965-66	14 405	634	2 928	1 112	2 364	94	21 537	21 902
1966-67	14 848	553	2 923	1 111	2 384	81	21 900	22 871
1967-68	15 458	494	3 141	1 135	2 407	81	22 716	23 434
1968-69	15 553	427	3 277	1 097	2 862	99	23 315	23 499
1969-70	15 650	298	3 554	1 161	3 313	105	24 081	24 311
1970-71	15 850	89	3 668	1 186	2 751	100	23 644	23 180
1971-72	16 336	65	3 931	1 198	2 390	112	24 032	23 630
1972-73	17 845	42	4 249	1 173	2 663	101	26 073	24 121
1973-74	17 657	11	4 679	1 164	2 615	104	26 230	26 441
1974-75	18 670	3	5 256	1 830	2 889	110	28 758	27 542
1975-76	17 904	3	5 344	2 153	2 887	129	28 420	29 212
1976-77	19 443	4	5 790	2 287	2 823	187	30 534	30 994
1977-78	20 422	2	6 066	2 339	2 570	172	31 571	30 473
1978-79	20 617	2	6 183	2 411	2 693	187	32 093	32 101
1979-80	21 997	4	6 655	2 919	2 698	188	34 461	32 895
1980-81	22 857	4	7 083	3 167	2 894	207	36 212	32 103
1981-82	21 619	5	7 597	3 262	2 437	267	35 186	37 567
1982-83	21 011	3	8 504	3 440	2 185	324	35 467	34 708
1983-84	21 586	4	9 865	3 601	2 305	305	37 666	33 257
1984-85	22 480	4	10 433	4 176	2 666	349	40 108	38 380
1985-86	23 562	4	11 001	3 230	3 476	391	41 664	36 075
1986-87	24 266	3	11 963	3 071	3 540	385	43 228	41 804
1987-88	24 870	9	12 233	3 096	3 947	408	44 563	43 399
1988-89	26 335	2	12 892	3 993	3 943	448	47 613	48 289
1989-90	26 328	2	13 575	4 750	4 214	429	49 298	45 989
1990-91	25 928	0	13 874	5 538	3 722	432	49 494	49 386
1991-92	26 296	0	14 627	5 639	3 908	389	50 859	50 723
1992-93	26 732	0	15 222	5 798	3 816	357	51 925	47 648
1993-94	27 480	0	15 717	5 601	3 665	422	52 886	48 752
1994-95	27 892	0	16 658	5 340	3 644	439	53 974	50 751
1995-96	28 454	0	17 602	6 178	3 524	432	56 192	53 712
1996-97	29 045	0	18 076	5 964	3 743	442	57 270	58 156
1997-98	29 385	0	19 910	5 724	3 835	439	59 294	66 259
1998-99	29 851	0	20 547	5 655	3 980	420	60 452	69 546
1999-00	29 557	0	20 298	6 080	3 849	419	60 203	69 957
2000-01	30 602	1	21 657	6 015	4 243	415	62 933	67 957
2001-02	30 849	1	22 991	6 159	3 980	411	64 389	68 712
2002-03	32 419	0	22 144	6 646	4 580	428	66 217	68 810
2003-04	33 910	1	24 115	6 740	4 949	543	70 258	69 829
2004-05	33 707	2	26 306	6 557	4 689	596	71 857	70 271
2005-06	34 325	2	26 738	6 384	4 622	627	72 698	71 912
2006-07	34 498	2	27 681	6 319	5 993	654	75 147	62 319
2007-08	37 011	2	24 590	5 840	5 481	640	73 564	64 253
2008-09	34 990	2	24 765	6 048	5 240	644	71 689	66 386

^a Includes ACT. Totals may not add because of rounding

Sources: ABARE, Australian Energy Statistics, Canberra.

247 Australian consumption of coal, by major end use

	Black coal					Brown coal
	Electricity	Iron and	Cement	Other	Total	Electricity
	generation	steel ^a	industry	consumers		generation
	Mt	Mt	Mt	Mt	Mt	Mt
1984-85	29.74	6.25	1.02	3.67	40.67	37.09
1985-86	31.48	6.20	0.93	3.95	42.56	34.89
1986-87	32.76	6.44	0.70	4.18	44.07	40.49
1987-88	33.91	7.22	0.69	4.20	46.01	43.07
1988-89	36.82	7.92	0.79	4.34	49.87	47.35
1989-90	38.17	7.43	0.85	4.23	50.68	44.87
1990-91	38.41	7.40	0.86	4.25	50.92	49.39
1991-92	39.88	7.35	0.85	4.72	52.81	50.72
1992-93	40.68	7.11	0.87	4.28	52.94	47.65
1993-94	41.83	7.09	0.90	4.37	54.18	48.75
1994-95	42.82	7.55	0.74	4.26	55.36	50.75
1995-96	45.60	6.39	0.82	4.60	57.41	53.71
1996-97	46.15	6.24	0.80	4.68	57.88	58.16
1997-98	48.16	7.55	0.86	4.69	61.26	66.26
1998-99	49.68	6.48	0.87	4.61	61.64	69.55
1999-00	50.16	5.63	0.85	4.66	61.30	69.96
2000-01	53.54	5.20	0.74	4.66	64.13	67.96
2001-02	55.46	5.46	0.78	4.46	66.16	68.71
2002-03	55.55	5.41	0.85	4.52	66.34	68.81
2003-04	58.51	5.28	0.90	4.55	69.24	69.83
2004-05	60.43	4.99	0.90	4.97	71.29	70.27
2005-06	61.48	4.26	0.94	4.90	71.58	67.74
2006-07	na	na	na	na	na	65.61
2007-08	na	na	na	na	na	66.03
2008-09	na	na	na	na	na	68.25

^a As received basis. na Not available.

Sources: Joint Coal Board, *Black Coal in Australia 1987-88*, Sydney; Joint Coal Board and the Queensland Department of Mines and Energy, *Australian Black Coal Statistics*, Sydney; Victorian Department of Natural Resources and Environment; ABARES.

248 Australian exports of coal, by coal type

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Metallurgical coal									
High quality									
Volume	Mt	66.45	67.55	80.73	77.48	82.81	83.65	79.63	97.72
Value	\$m	5 122	4 340	7 692	12 203	11 010	10 847	25 344	17 060
Unit value	\$/t	77.08	64.26	95.28	157.49	132.96	129.66	318.28	174.59
Excluding high quality									
Volume	Mt	41.34	44.19	44.19	42.99	49.15	53.27	45.61	59.55
Value	\$m	2 325	2 169	3 067	4 800	4 029	5 191	11 469	7 465
Unit value	\$/t	56.25	49.10	69.40	111.65	81.97	97.46	251.46	125.37
Total									
Volume	Mt	107.79	111.73	124.92	120.48	131.97	136.92	125.24	157.26
Value	\$m	7 448	6 510	10 758	17 003	15 039	16 038	36 813	24 526
Unit value	\$/t	69.09	58.26	86.12	141.13	113.96	117.14	293.94	155.95
Thermal coal									
Volume	Mt	99.95	106.69	106.40	110.82	111.62	115.07	136.36	134.97
Value	\$m	4 448	4 372	6 336	7 206	6 758	8 365	17 885	11 884
Unit value	\$/t	44.50	40.98	59.55	65.02	60.54	72.70	131.16	88.05

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Foreign Affairs and Trade, computer database compiled from trade data supplied by the ABS.

249 Volume of Australian exports of thermal coal, by destination

	2002-03 Mt	2003-04 Mt	2004-05 Mt	2005-06 Mt	2006-07 Mt	2007-08 Mt	2008-09 Mt	2009-10 Mt
Asia								
ASEAN a	2.62	2.61	3.79	4.12	7.22	4.82	6.18	3.84
China b	3.99	2.45	1.75	3.99	3.22	1.48	8.40	13.91
Chinese Taipei	10.82	9.89	14.33	13.21	16.23	18.56	20.30	19.55
Hong Kong, China	0.73	1.20	0.37	0.08	0.01	0.00	0.76	0.90
Japan	52.44	58.78	57.28	59.33	58.64	66.92	62.58	66.41
Korea, Rep. of	14.20	16.22	17.95	20.24	15.06	18.55	30.14	24.84
Other Asia	2.79	3.51	2.42	1.59	1.17	0.87	1.50	1.13
Total	87.59	94.66	97.89	102.55	101.56	111.20	129.86	130.58
Europe								
European Union c	7.49	7.86	3.48	2.32	3.81	2.15	3.72	0.28
Denmark	0.41	0.79	0.00	0.28	0.16	0.00	0.15	0.00
Germany	0.00	0.26	0.12	0.00	0.13	0.00	0.00	0.00
Netherlands	1.82	1.59	0.73	0.30	0.74	0.19	0.93	0.13
United Kingdom	1.28	1.88	0.99	0.43	0.60	0.07	0.38	0.01
Other Europe	4.87	4.18	5.02	5.96	6.25	1.72	2.79	4.11
Total all countries	99.95	106.69	106.40	110.82	111.62	115.07	136.36	134.97

a Includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Thailand and Vietnam. **b** Excludes Hong Kong. **c** Regarded as 27 countries for all years.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Foreign Affairs and Trade, computer database compiled from trade data provided by the ABS.

250 Volume of Australian exports of high quality metallurgical coal, by destination

	2002-03 Mt	2003-04 Mt	2004-05 Mt	2005-06 Mt	2006-07 Mt	2007-08 Mt	2008-09 Mt	2009-10 Mt
Asia								
China a	0.68	3.07	3.73	2.22	2.41	1.37	9.81	15.52
Chinese Taipei	3.82	3.43	3.51	3.31	3.47	3.43	2.66	3.49
India	11.08	10.09	13.41	13.63	16.30	18.94	19.17	24.51
Japan	18.22	17.78	22.87	23.87	25.42	24.87	22.78	26.25
Korea, Rep. of	7.44	6.80	8.01	6.58	6.25	6.57	5.47	6.89
Pakistan	0.44	0.43	0.59	0.05	0.20	0.21	0.26	0.16
Other Asia	1.80	1.20	1.18	1.34	1.48	1.59	1.84	1.26
Total Asia	43.50	42.82	53.32	51.00	55.53	56.99	61.99	78.07
Europe								
European Union b	17.11	18.39	19.91	19.61	20.38	19.82	12.79	13.54
France	2.54	2.32	2.47	2.20	2.26	1.89	1.17	1.88
Germany	1.46	1.37	1.58	1.78	2.16	1.62	1.38	1.16
Italy	1.63	1.93	2.53	2.26	2.29	2.25	1.50	1.56
United Kingdom	3.72	3.67	4.01	3.52	3.65	3.28	2.31	2.43
Other Europe	5.84	6.34	7.50	6.88	6.90	6.84	4.85	6.11
Total all countries	66.45	67.55	80.73	77.48	82.81	83.65	79.63	97.72

a Excludes Hong Kong. **b** Regarded as 27 countries for all years.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Foreign Affairs and Trade, computer database compiled from trade data provided by the ABS.

251 Volume of Australian exports of metallurgical coal other than high quality, by destination

	2002-03 Mt	2003-04 Mt	2004-05 Mt	2005-06 Mt	2006-07 Mt	2007-08 Mt	2008-09 Mt	2009-10 Mt
Asia								
India	3.02	3.49	4.03	2.77	3.32	5.28	5.10	6.87
Japan	23.09	23.60	22.09	20.35	23.44	25.33	19.44	22.21
Europe								
European Union ^a	3.57	4.11	4.76	4.73	4.49	4.69	1.90	2.07
Americas								
Brazil	2.30	0.77	0.00	0.00	0.00	0.59	1.85	1.24
Total all countries	41.34	44.19	44.19	42.99	49.15	53.27	45.61	59.55

^a Regarded as 27 countries for all years.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Foreign Affairs and Trade, computer database compiled from trade data provided by the ABS.

252 Volume of world exports of coal, by coal type and major exporters

	2002 Mt	2003 Mt	2004 Mt	2005 Mt	2006 Mt	2007 Mt	2008 Mt	2009 Mt
Metallurgical coal								
Australia ^a	104.4	111.5	116.7	124.9	124.4	138.2	134.8	135.0
Canada	23.0	23.7	23.8	26.7	24.9	26.0	26.6	22.0
China	13.3	13.1	5.8	5.3	4.3	2.5	3.5	1.5
Poland	3.5	2.7	3.0	3.2	3.6	2.4	1.7	1.7
Russian Federation	9.2	9.5	11.9	10.0	10.0	10.0	15.5	13.2
United States	19.5	20.0	24.3	26.0	24.9	29.2	38.6	34.2
World ^a	186.1	189.8	199.9	205.6	209.6	227.2	236.7	211.2
Total seaborne	172.9	180.6	185.7	196.0	192.2	208.3	220.7	207.6
Thermal coal								
Australia	98.5	103.1	106.9	107.6	111.6	112.4	126.4	139.1
Canada	2.1	1.3	1.9	1.4	2.8	3.7	4.9	5.8
China ^a	70.6	80.9	80.9	66.4	58.9	50.6	42.7	21.5
Colombia	35.5	45.5	50.9	53.6	62.0	64.6	73.6	63.4
Indonesia	74.2	84.9	96.2	128.0	170.0	189.0	193.0	233.5
Poland	19.1	17.4	16.6	16.2	13.1	9.5	6.2	6.6
Russian Federation	34.3	45.2	56.7	76.0	81.4	88.0	85.8	93.7
South Africa	68.5	70.9	67.0	70.9	68.9	65.1	61.3	66.9
United States	16.3	18.9	19.0	19.1	19.9	24.2	35.1	19.6
World	492.7	534.8	582.6	610.2	672.8	696.5	704.0	725.1
Total seaborne	407.6	445.3	489.0	532.1	571.1	607.0	na	na

^a Includes pulverised coal injection-coal used for metallurgical purposes.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; International Energy Agency, *Coal Information*, OECD, Paris; ABARES.

253 Volume of Japanese imports of coal, by source

		2001	2002	2003	2004	2005	2006	2007	2008	2009
Thermal coal										
Total imports	Mt	97.99	102.9	108.7	119.9	120.4	121.4	128.8	126.8	112.5
Australia	%	58.02	55.5	56.1	55.6	57.1	58.3	60.6	60.9	72.8
Canada	%	6.44	5.7	5.2	3.2	4.2	4.8	5.9	5.4	2.4
China	%	16.99	19.8	18.8	15.9	12.9	11.2	7.7	7.4	5.7
Indonesia	%	10.65	11.8	12.5	14.4	16.6	17.5	17.5	18.3	9.3
Russian Federation	%	3.58	4.3	4.6	5.3	6.1	5.3	6.0	5.2	7.6
South Africa	%	0.69	0.3	0.1	0.0	0.0	0.0	0.2	0.1	0.6
United States	%	1.42	0.2	0.0	2.6	0.8	0.1	0.0	1.0	0.1
Other	%	2.21	2.4	2.7	3.0	2.4	2.5	2.0	1.7	1.5
Metallurgical coal										
Total imports	Mt	56.63	58.4	57.7	60.9	56.5	57.7	58.2	57.4	52.2
Australia	%	60.61	58.1	58.7	58.2	59.6	60.6	62.8	62.7	64.7
Canada	%	6.76	6.0	5.5	3.4	4.4	5.0	6.2	5.6	9.5
China	%	14.92	17.9	17.0	14.8	11.6	10.1	6.3	5.7	1.0
Indonesia	%	11.17	12.4	13.2	15.1	17.4	18.4	18.3	19.1	20.1
Russian Federation	%	3.76	4.4	4.8	5.2	5.6	5.1	6.0	5.2	2.7
South Africa	%	0.73	0.3	0.1	0.0	0.0	0.0	0.2	0.1	0.0
United States	%	1.49	0.2	0.0	2.7	0.8	0.1	0.0	1.0	1.4
Other	%	0.57	0.6	0.7	0.5	0.5	0.6	0.3	0.5	0.6

Source: ABS; International Energy Agency, *Coal Information*, OECD, Paris.

254 Volume of European Union imports of coal, by source ^a

		2001	2002	2003	2004	2005	2006	2007	2008	2009
Thermal coal										
Total imports	Mt	134.21	129.5	144.2	159.1	158.2	170.0	180.7	173.5	165.4
Australia	%	6.05	6.1	6.5	5.3	3.5	3.4	3.9	4.0	3.0
Indonesia	%	6.68	7.5	8.1	8.8	8.7	10.9	8.7	8.7	7.9
Columbia	%	13.46	13.9	14.6	13.1	13.5	12.5	14.3	11.6	16.2
Russian Federation	%	10.29	9.9	11.8	17.3	21.2	25.2	26.5	28.1	28.9
South Africa	%	30.11	33.5	34.5	31.1	30.8	27.4	23.2	18.3	17.3
United States	%	6.51	2.9	1.9	2.4	2.0	2.0	2.8	8.4	6.3
Other	%	26.90	26.1	22.6	22.1	20.3	18.5	20.5	20.9	20.4
Metallurgical coal										
Total imports	Mt	39.63	35.7	37.1	45.2	46.4	51.0	59.8	60.0	39.0
Australia	%	43.91	44.8	42.8	39.8	39.8	39.5	34.8	28.7	24.0
Canada	%	13.45	13.4	12.1	12.5	12.7	11.0	11.3	9.7	6.3
Columbia	%	0.18	0.0	0.4	1.1	0.7	0.0	0.9	2.2	2.5
Russian Federation	%	0.61	0.7	1.8	2.2	5.7	4.2	5.5	4.3	6.7
South Africa	%	4.27	2.7	6.6	6.1	4.0	2.4	1.2	1.5	1.9
United States	%	25.31	23.9	24.9	23.3	22.7	21.1	23.4	28.9	34.4
Other	%	12.27	14.5	11.4	14.9	14.4	21.7	23.0	24.8	24.1

^a Imports from non-EU countries only. Regarded as 15 countries.

Source: International Energy Agency, *Energy Prices and Taxes*, OECD, Paris.

255 Japanese and European Union coal import unit values, by country of origin ^a

	2001 US\$/t	2002 US\$/t	2003 US\$/t	2004 US\$/t	2005 US\$/t	2006 US\$/t	2007 US\$/t	2008 US\$/t	2009 US\$/t
Japan									
Thermal coal									
Australia	38.32	37.38	35.13	50.20	61.90	63.90	71.03	127.23	113.06
Canada	36.94	37.34	33.82	52.60	63.79	56.32	66.04	125.52	103.92
China	36.95	36.25	35.28	55.06	65.65	63.88	73.60	124.10	123.05
Indonesia	35.17	34.52	32.72	46.98	59.65	60.31	66.45	116.08	112.99
South Africa	38.05	40.30	35.21	na	80.64	na	77.46	105.49	87.62
United States	45.99	48.63	na	186.48	na	596.68	553.99	151.26	820.10
All sources ^b	37.95	36.95	34.93	51.48	62.73	63.33	70.92	125.42	112.39
Metallurgical coal									
Australia	40.96	43.32	43.56	56.85	96.44	106.20	96.03	206.71	193.65
Canada	47.30	50.50	51.64	62.04	106.05	125.68	112.61	234.34	221.77
China	39.35	38.97	39.09	72.57	100.45	91.98	100.91	256.42	200.21
Indonesia	35.13	34.12	31.94	40.78	53.51	53.73	60.43	104.80	142.19
South Africa	47.09	na	na	na	na	na	na	na	na
United States	47.81	52.07	42.93	163.61	159.01	159.35	516.32	308.56	246.05
All sources ^b	41.13	42.14	41.73	61.40	88.80	93.10	88.43	184.13	198.40
European Union ^c									
Thermal coal									
Australia	44.13	43.28	46.83	69.05	106.40	109.71	103.73	184.75	149.29
Columbia	42.32	36.99	41.65	61.54	67.98	66.07	78.16	138.32	94.76
Indonesia	36.08	36.48	39.29	52.56	61.27	61.85	71.95	113.71	93.70
South Africa	42.32	36.65	39.10	58.00	67.64	66.24	80.25	142.07	95.66
United States	46.52	43.48	47.37	61.50	86.75	82.08	97.50	138.40	107.28
All sources ^d	42.96	38.69	41.94	61.91	71.27	69.80	82.21	137.79	99.74
Metallurgical coal									
Australia	51.24	55.52	58.03	73.63	114.89	135.52	127.74	220.54	243.76
Canada	54.59	56.90	61.31	76.64	113.81	137.66	129.45	220.91	223.39
Russian Federation	58.89	58.11	47.45	86.41	86.05	81.34	92.15	147.83	108.78
South Africa	42.10	38.69	39.20	61.31	71.77	66.18	96.82	141.18	81.99
United States	58.54	61.48	64.18	84.75	110.91	123.44	126.95	175.35	160.22
All sources ^d	53.56	56.63	59.61	78.12	109.61	125.86	125.73	197.84	187.29

^a Average unit value cif. ^b Average includes countries not listed separately. ^c Fifteen countries for all years. ^d Average includes non-EU countries not listed separately. ^{na} Not available.

Source: International Energy Agency, *Energy Prices and Taxes*, OECD, Paris.

256 Selected Australian-Japanese prices for metallurgical and thermal coal ^a

	2003	2004	2005	2006	2007	2008	2009	2010
Metallurgical coal								
Hard ^b								
US\$/t	46.20	57.00	125.00	115.00	98.00	300.00	128.00	208.50 ^e
A\$/t	66.61	77.26	166.42	150.59	112.95	377.68	150.07	227.97
Real A\$/t	81.32	92.08	192.91	168.81	123.20	396.46	154.55	227.97
Other ^c								
US\$/t	31.05	41.00	80.00	56.00	64.00	240.00	85.00	163.00 ^e
A\$/t	44.77	55.57	106.51	73.33	73.77	302.14	99.66	178.22
Real A\$/t	54.66	66.23	123.46	82.21	80.45	317.17	102.63	178.22
Thermal coal ^d								
US\$/t	26.75	45.00	52.50	52.50	55.50	125.00	70.35	98.00
A\$/t	38.57	60.99	69.90	68.75	63.97	157.37	82.48	107.15
Real A\$/t	47.09	72.69	81.02	77.07	69.77	165.19	84.94	107.15

^a Japanese fiscal year beginning 1 April. Prices are fob; real prices are in 2010 Australian dollar terms. ^b For example, Goonyella export coal. ^c Non-hard coking coal price based on Australian/Japanese contract settlements. ^d For steaming coal with a calorific value of 6700 kcal/kg (gross air dried). ^e Average of first three quarters of year.

Sources: International Energy Agency, *Coal Information*, OECD, Paris; ABARES.

257 Australian and US coal export unit values, by destination ^a

	2001 US\$/t	2002 US\$/t	2003 US\$/t	2004 US\$/t	2005 US\$/t	2006 US\$/t	2007 US\$/t	2008 US\$/t	2009 US\$/t
Australia									
Thermal coal									
France	31.38	22.62	24.05	29.77	45.88	46.28	44.93	75.81	67.68
Italy	31.07	25.26	24.77	31.26	na	na	na	na	na
Japan	29.69	29.20	26.00	38.45	49.42	50.59	54.61	103.23	88.54
Netherlands	26.45	24.65	26.69	42.90	60.71	50.50	49.60	86.94	78.94
All destinations b	28.71	28.01	25.41	37.65	48.86	47.05	51.11	92.23	80.03
Metallurgical coal									
France	37.32	41.41	39.06	46.79	96.94	100.91	89.99	193.92	193.51
Italy	42.68	45.90	45.51	51.40	102.14	116.96	99.64	229.97	174.51
Japan	34.46	36.79	36.18	45.51	83.74	94.04	79.50	193.79	165.07
Netherlands	41.09	46.17	45.45	52.07	98.18	102.32	92.15	213.20	196.55
All destinations b	36.93	40.16	39.75	48.84	88.94	98.27	84.16	194.87	143.83
United States									
Thermal coal									
France	30.50	na	na	na	40.17	64.19	91.66	102.43	152.78
Italy	42.50	42.91	46.67	46.90	89.78	51.04	76.87	116.28	107.99
Japan	37.70	40.41	166.40	91.47	105.21	166.53	198.41	143.02	113.97
Netherlands	35.71	36.88	33.13	43.79	76.28	69.91	69.83	79.14	82.78
All destinations b	34.51	37.70	37.00	53.93	67.09	55.66	52.61	62.76	81.33
Metallurgical coal									
France	48.54	54.96	55.56	71.81	99.69	102.30	96.39	126.48	123.78
Italy	53.11	56.41	54.49	66.99	86.21	104.96	104.34	121.55	128.06
Japan	na	na	56.01	98.14	100.61	89.80	na	157.59	181.25
Netherlands	48.90	55.39	52.13	72.20	93.04	95.44	94.55	129.86	124.48
All destinations b	45.88	50.06	49.11	70.14	89.91	111.72	98.10	148.39	129.77

^a Average unit value, fob. ^b Average for all countries. ^{na} Not available.

Source: International Energy Agency, *Energy Prices and Taxes*, OECD, Paris.

258 World hard coal production, by country ^a

	2002 Mt	2003 Mt	2004 Mt	2005 Mt	2006 Mt	2007 Mt	2008 Mt	2009 Mt
Australia	273.2	274.9	285.9	300.2	299.7	323.8	325.4	335.2
Canada	29.6	26.6	29.3	29.1	29.9	32.8	32.8	28.0
China b	1 343.6	1 587.7	1 867.6	2 066.6	2 219.4	2 352.9	2 614.6	2 845.0
Colombia	40.1	50.5	54.2	59.1	65.6	69.9	73.5	72.9
Germany	29.2	28.8	29.2	28.0	23.8	24.2	19.1	15.0
India	332.9	353.5	374.8	399.1	422.5	448.2	483.3	520.0
Indonesia	83.3	97.4	118.2	143.6	195.7	230.3	235.1	263.3
Kazakhstan	71.0	80.8	83.1	82.8	92.0	93.5	106.2	96.2
Poland	102.7	101.7	100.5	97.1	94.4	87.4	83.7	77.4
Russian Federation	163.5	177.4	189.8	209.2	210.4	217.9	222.4	228.6
South Africa	220.2	238.8	242.8	245.0	244.8	247.7	252.3	247.3
United Kingdom	29.5	27.8	24.5	20.0	18.1	16.5	17.6	17.9
United States	917.0	892.9	932.2	949.7	977.7	967.9	993.1	905.5
World total c	3 798.9	4 105.6	4 503.4	4 812.4	5 092.8	5 306.0	5 653.3	5 842.3

^a Hard coal includes anthracite and bituminous coal, and for the United States and New Zealand, sub-bituminous coal. ^b Excludes Hong Kong. ^c Includes countries not listed separately.

Sources: International Energy Agency, *Coal Information*, OECD, Paris.

259

Summary of Australian statistics for dimension stone

	Production ^a	Exports		Imports
	Volume kt	Volume t	Value \$'000	Value \$'000
1968	280	657	32	407
1969	269	792	44	427
1970	90	1 821	84	466
1971	81	1 209	57	569
1972	318	731	42	708
1973	144	1 621	105	395
1974	143	2 347	155	440
1975	255	379	na	606
1976	112	112	na	489
1977	84	757	180	832
1978	115	387	133	2 371
1979	122	1 086	83	2 224
1980	116	2 762	220	4 472
1981	125	205	46	5 450
1982	129	84	33	7 768
1983	97	1 224	367	6 619
1984	102	4 244	1 861	9 980
1985	190	2 537	782	14 025
1986	106	5 226	1 893	12 097
1987	99	2 974	1 119	15 231
1988	149	1 659	776	16 295
1988-89	92	2 913	1 441	19 732
1989-90	198	1 665	1 520	17 455
1990-91	na	3 393	4 417	11 237
1991-92	na	11 672	2 963	11 466
1992-93	553	8 721	4 501	11 173
1993-94	na	10 007	5 829	10 604
1994-95	na	14 605	5 531	9 811
1995-96	na	17 372	6 220	8 411
1996-97	na	15 364	5 519	7 828
1997-98	na	10 107	5 804	9 560
1998-99	na	16 766	6 509	12 327
1999-00	119	21 747	6 249	14 818
2000-01	104	18 029	7 725	11 958
2001-02	132	39 651	8 716	6 902
2002-03	143	16 851	6 074	9 111
2003-04	147	27 067	8 606	8 875
2004-05	266	28 099	9 263	9 321
2005-06	227	28 823	9 096	9 872
2006-07	193	31 466	9 681	7 439
2007-08	na	30 020	8 699	6 372
2008-09	na	33 854	10 150	7 980
2009-10	na	41 104	11 310	4 278

^a Data incomplete because coverage differs between states. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z., Fraser, L.M. and Rawson, R.I., *Australian Mineral Industry: Production and Trade, 1842-1964*, BMR, Canberra; state mines departments and their equivalents; ABARES.

260 Australian production of dimension stone, by state ^a

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Australia
	kt	kt	kt	kt	kt	kt	kt
1968	42	7	5	148	42	4	280
1969	31	9	3	167	49	2	269
1970	23	8	na	4	51	2	90
1971	13	10	na	7	50	1	81 ^b
1972	27	13	na	228	47	1	318 ^c
1973	14	15	na	67	46	2	144 ^c
1974	14	11	na	67	49	2	143 ^c
1975	12	12	na	187	40	2	255 ^c
1976	15	11	na	30	36	2	112 ^c
1977	13	8	4	22	27	3	84 ^b
1978	14	13	2	45	29	4	115 ^b
1979	16	7	8	56	28	6	122 ^b
1980	14	26	12	31	32	3	116 ^d
1981	24	29	24	20	27	1	125 ^d
1982	16	20	44	24	24	1	129 ^e
1983	21	35	na	11	29	1	97 ^e
1984	22	18	na	25	35	1	102 ^e
1985	22	28	na	101	34	4	190 ^f
1986	21	19	na	32	31	2	106 ^f
1987	21	46	na	na	31	1	99 ^g
1988	32	31	na	50	34	2	149 ^h
1988-89	34	17	na	na	40	1	92 ^g
1989-90	32	52	9	72	31	2	198
1990-91	40	6	na	na	42	2	na
1991-92	35	na	na	na	61	2	na
1992-93	33	12	31	414	61	2	553
1993-94	na	na	25	na	na	na	na
1994-95	na	na	na	na	na	na	na
1995-96	29	na	na	na	31	na	na
1996-97	25	na	20	1	28	na	na
1997-98	25	na	17	3	37	na	na
1998-99	34	5	25	4	41	na	na
1999-00	32	4	20	3	52	7	119
2000-01	27	2	30	1	38	6	104
2001-02	28	21	39	2	36	5	132 ⁱ
2002-03	32	15	43	2	42	3	143 ⁱ
2003-04	29	16	49	3	40	5	147 ⁱ
2004-05	27	18	126	5	79	9	266 ⁱ
2005-06	62	28	74	2	46	14	227 ⁱ
2006-07	41	33	56	2	49	16	193 ⁱ
2007-08	84	33	55	na	42	14	na
2008-09	na	na	na	na	na	na	na

^a Data incomplete because coverage differs between states. Australian totals may include estimates for states for which data are not available separately. ^b Includes the Australian Capital Territory, the Northern Territory and Queensland. ^c Excludes the Australian Capital Territory, the Northern Territory and Queensland. ^d Excludes the Australian Capital Territory and the Northern Territory. ^e Excludes the Australian Capital Territory. ^f Excludes the Australian Capital Territory and Queensland. ^g Excludes the Australian Capital Territory, Queensland and Western Australia. ^h Excludes the Australian Capital Territory, Queensland and Tasmania. ⁱ Includes Northern Territory. ^{na} Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

261

Australian exports of dimension stone, by destination

	Italy	New Zealand	Other	Total	
	t	t	t	Volume t	Value \$'000
1964	na	na	na	0	12
1965	na	na	na	1 629	32
1966	na	na	na	280	16
1967	na	na	na	657	32
1968	na	na	na	792	44
1969	na	na	na	1 821	84
1970	na	na	na	1 209	57
1971	na	na	na	731	42
1972	na	na	na	1 621	105
1973	na	na	na	2 347	155
1974	na	na	na	379	na
1975	na	na	na	112	na
1976	na	na	na	757	180
1977	na	na	na	387	133
1978	na	na	na	1 086	83
1979	1 973	40	749	2 762	220
1980	na	4	201	205	46
1981	na	31	53	84	33
1982	1 178	6	40	1 224	367
1983	3 290	26	928	4 244	1 861
1984	2 364	133	40	2 537	782
1985	4 831	259	136	5 226	1 893
1986	1 903	324	747	2 974	1 119
1987	634	272	753	1 659	776
1988	530	290	2 092	2 913	1 441
1988-89	530	290	2 092	2 913	1 441
1989-90	249	158	1 258	1 665	1 520
1990-91	910	110	2 373	3 393	4 417
1991-92	490	57	11 125	11 672	2 963
1992-93	1 324	54	7 343	8 721	4 501
1993-94	203	199	9 604	10 007	5 829
1994-95	136	178	14 292	14 605	5 531
1995-96	2 168	23	15 180	17 372	6 220
1996-97	2 546	148	12 670	15 364	5 519
1997-98	1 962	75	8 070	10 107	5 804
1998-99	220	186	16 359	16 766	6 509
1999-00	1 015	106	20 626	21 747	6 249
2000-01	2 565	25	15 439	18 029	7 725
2001-02	3 400	268	35 983	39 651	8 716
2002-03	6 715	21	10 115	16 851	6 074
2003-04	6 339	80	20 648	27 067	8 606
2004-05	6 958	81	21 060	28 099	9 263
2005-06	5 996	90	22 736	28 823	9 096
2006-07	3 384	278	27 804	31 466	9 681
2007-08	2 193	154	27 672	30 020	8 699
2008-09	2 370	147	31 337	33 854	10 150
2009-10	1 921	110	39 073	41 104	11 310

na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; ABARES.

262 Australian imports of dimension stone

	Slate		Marble ^a		Crystalline rock ^b		Quartzite ^c		Total
	Volume '000 m ²	Value \$'000	Volume t	Value \$'000	Volume t	Value \$'000	Volume t	Value \$'000	Value \$'000
1970	na	na	1 910	246	1 591	77	na	na	466
1971	na	na	3 372	330	2 007	110	na	na	569
1972	na	na	2 711	407	1 468	85	na	na	708
1973	na	na	1 309	206	1 898	118	na	na	395
1974	na	na	1 376	204	1 267	73	na	na	440
1975	na	na	1 634	289	1 610	133	na	na	606
1976	na	na	1 183	218	2 791	177	na	na	489
1977	na	na	1 706	397	1 862	215	na	na	832
1978	na	na	1 578	457	1 658	160	na	na	2 371
1979	na	na	1 752	507	2 479	287	na	na	2 224
1980	na	2 109	2 707	995	2 026	391	na	na	4 472
1981	na	3 728	2 800	1 205	1 982	369	207	94	5 450
1982	na	5 510	3 631	1 516	3 277	572	659	170	7 768
1983	689	4 535	3 049	1 493	1 993	420	3 521	171	6 619
1984	988	6 521	3 569	1 964	3 517	1 170	5 703	325	9 980
1985	1 266	8 911	4 449	2 999	3 859	1 956	222	159	14 025
1986	1 062	7 717	3 001	2 354	2 685	1 698	357	328	12 097
1987	1 343	9 105	3 221	2 982	8 873	2 663	349	481	15 231
1988	1 674	11 414	2 300	1 903	17 122	2 552	580	426	16 295
1988-89	2 139	14 023	2 688	2 058	28 732	3 120	905	530	19 732
1989-90	1 687	11 584	1 975	2 087	15 232	3 348	744	436	17 455
1990-91	1 255	7 598	960	784	5 291	2 598	483	257	11 237
1991-92	1 659	8 330	694	663	3 688	2 110	463	363	11 466
1992-93	1 410	7 406	557	499	4 181	2 613	1 071	655	11 173
1993-94	1 200	6 401	702	618	4 824	3 241	659	343	10 604
1994-95	1 044	5 475	689	718	6 172	3 273	364	346	9 811
1995-96	608	3 098	700	750	7 350	4 211	217	352	8 411
1996-97	509	2 778	702	675	7 915	4 160	128	215	7 828
1997-98	401	2 316	1 330	1 238	10 435	5 743	200	264	9 560
1998-99	333	2 350	1 809	2 659	10 323	7 114	112	204	12 327
1999-00	370	3 452	1 654	2 000	14 576	8 967	248	398	14 818
2000-01	269	1 406	1 368	1 648	12 018	8 660	152	244	11 958
2001-02	215	1 373	406	273	10 283	4 827	434	429	6 902
2002-03	177	1 381	947	975	13 324	6 114	880	641	9 111
2003-04	123	898	1 398	1 173	15 929	6 527	316	277	8 875
2004-05	250	948	1 315	1 069	16 530	6 855	695	450	9 321
2005-06	94	863	1 468	1 092	15 376	7 129	1 085	788	9 872
2006-07	56	585	1 281	1 277	11 635	4 685	1 055	891	7 439
2007-08	54	621	1 385	1 338	9 277	3 894	895	518	6 372
2008-09	67	786	1 072	800	9 326	5 832	990	562	7 980
2009-10	51	541	525	576	6 280	2 758	927	402	4 278

^a Includes calcareous stone. ^b Includes sandstone. ^c Predominantly quartzite. **na** Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; ABARES.

263 Australian production of sand, by state ^a

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australia
	kt	kt	kt	kt	kt	kt	kt	kt
1966	4 246	4 356	na	na	1 611	232	na	10 838
1967	4 598	4 278	na	na	1 784	234	na	11 328
1968	6 718	5 075	na	na	2 110	281	na	14 637
1969	6 686	6 680	1 022	na	2 930	265	na	18 199
1970	6 174	5 242	2 282	na	2 627	271	na	16 973
1971	6 353	5 747	3 031	na	2 707	185	371	18 394 b
1972	7 603	5 619	3 619	na	2 387	185	471	19 884 b
1973	8 798	6 660	4 182	na	2 525	179	581	22 925 b
1974	8 797	7 788	4 733	na	2 476	252	474	24 520 b
1975	8 415	7 541	4 933	na	2 567	190	766	24 412 b
1976	7 793	7 766	5 172	na	2 575	391	568	24 264 b
1977	7 676	9 040	4 137	na	3 919	439	389	25 600 b
1978	7 077	8 951	3 768	na	2 808	349	310	23 264 b
1979	8 263	8 357	4 410	na	2 526	448	285	24 290 b
1980	9 553	8 400	4 800	na	2 287	361	293	25 694 b
1981	10 738	7 929	5 787	na	2 753	334	460	28 002 b
1982	10 767	7 449	6 337	na	2 564	332	1 268	28 718 b
1983	8 403	6 884	5 583	na	2 094	388	192	23 543 d
1984	8 401	6 951	5 876	na	2 542	450	455	24 675 d
1985	8 989	7 437	6 386	na	2 852	576	399	26 640 d
1986	10 239	6 653	5 949	na	4 145	510	396	27 892 d
1987	9 501	8 476	6 179	na	2 961	572	377	28 067 d
1988	10 176	7 339	7 596	na	3 435	713	75	29 334 d
1988-89	11 188	7 339	6 970	na	3 195	518	154	30 121 e
1989-90	11 605	6 633	7 561	na	3 646	498	146	33 856 e
1990-91	10 098	5 693	na	na	2 694	426	na	18 912 f
1991-92	10 035	na	na	na	2 745	448	na	na
1992-93	10 647	9 984	5 733	na	3 129	495	186	32 970
1993-94	na	na	na	na	3 185	na	na	na
1994-95	na	na	na	na	na	na	na	na
1995-96	8 902	na	na	na	2 225	na	na	na
1996-97	7 109	na	na	na	2 286	na	578	na
1997-98	9 428	na	na	na	2 389	na	na	na
1998-99	10 378	na	na	na	2 892	na	na	na
1999-00	10 498	na	na	na	na	423	306	na
2000-01	8 769	5 981	na	na	661	316	165	na
2001-02	8 634	6 905	5 034	1 545	4 104	382	196	26 800
2002-03	9 642	7 092	5 560	1 436	4 681	383	194	28 988
2003-04	8 632	6 408	6 376	2 240	4 530	485	154	28 825
2004-05	6 681	7 064	6 037	2 730	4 178	582	120	27 394
2005-06	8 101	7 545	6 520	3 660	4 027	580	109	30 540
2006-07	7 438	9 099	9 796	4 221	4 048	601	320	35 524
2007-08	7 113	9 429	11 976	3 360	4 712	610	227	37 427
2008-09	na	na	na	na	na	na	na	na

^a Data incomplete because coverage differs between states. Australian totals may include estimates for states for which data are not available separately. **b** Excludes Western Australia. **c** Includes the Australian Capital Territory. **d** Excludes the Australian Capital Territory and Western Australia. **e** Excludes the Australian Capital Territory. **f** Excludes the Australian Capital Territory, Queensland, Western Australia and the Northern Territory. **na** Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

264 Australian production of gravel, by state ^a

	New South Wales kt	Victoria kt	Queensland kt	South Australia kt	Tasmania kt	Northern Territory kt	Australia kt
1967	2 329	3 683	na	935	1 468	na	9 193
1968	3 043	3 247	na	350	1 621	na	8 473
1969	3 118	2 834	1 155	918	1 531	na	10 501
1970	3 869	2 797	2 106	820	1 295	na	12 093
1971	4 021	3 599	2 392	847	915	1 074	12 849 ^c
1972	3 341	3 486	3 306	833	1 034	770	12 771 ^c
1973	3 652	3 634	4 447	694	1 093	922	14 441 ^c
1974	3 667	4 858	5 481	754	1 016	1 725	17 500 ^c
1975	3 530	4 732	4 874	458	1 063	1 524	16 181 ^c
1976	3 498	4 493	5 045	490	1 004	1 110	15 640 ^c
1977	3 224	4 743	4 126	1 098	1 219	1 073	15 483 ^c
1978	3 522	4 807	3 178	806	1 184	679	14 176 ^c
1979	4 354	4 918	3 377	394	1 176	1 786	16 005 ^c
1980	4 736	5 131	3 030	331	1 102	1 336	15 667 ^c
1981	4 612	4 740	3 525	125	1 077	561	14 639 ^c
1982	5 552	5 053	3 513	74	1 156	1 323	16 813 ^c
1983	4 080	4 478	3 205	74	1 238	857	13 931 ^d
1984	4 486	3 494	3 777	284	1 165	1 824	15 031 ^d
1985	4 666	5 206	3 297	2 258	1 171	1 793	18 393 ^d
1986	5 461	4 176	3 186	221	986	1 870	15 900 ^d
1987	4 992	4 334	2 797	207	832	2 203	15 365 ^d
1988	5 003	3 558	3 548	442	314	2 819	15 684 ^d
1988-89	5 464	3 753	4 247	213	107	2 243	16 050 ^e
1989-90	6 532	1 002	3 069	176	91	1 380	12 259 ^e
1990-91	6 091	1 131	na	415	35	na	7 672 ^g
1991-92	6 241	na	na	424	33	na	na
1992-93	5 823	1 780	2 788	555	47	1 090	12 141
1993-94	na	na	na	na	na	na	na
1994-95	na	na	na	na	na	na	na
1995-96	5 871	na	na	na	na	na	na
1996-97	7 925	na	na	na	na	2 764	na
1997-98	5 495	na	na	na	na	na	na
1998-99	5 220	3 939	na	239	61	1 097	na
1999-00	4 565	2 479	na	181	64	276	7 771
2000-01	3 644	3 556	na	58	41	174	7 635
2001-02	3 087	3 404	1 110	85	1 549	270	9 858 ^s
2002-03	4 265	3 802	1 222	115	1 989	608	12 155 ^s
2003-04	4 355	3 542	2 391	79	1 801	414	12 718 ^s
2004-05	3 760	3 865	4 116	45	2 488	206	14 783 ^s
2005-06	3 956	5 027	1 906	198	2 182	181	13 581 ^s
2006-07	5 202	3 600	1 705	47	2 663	319	13 670 ^s
2007-08	3 892	4 275	1 727	55	2 256	38	na ^s
2008-09	na	na	na	na	na	na	na

^a Data incomplete because coverage differs between states. Australian totals may include estimates for states for which data are not available separately.

^b Includes the Australian Capital Territory. ^c Excludes Western Australia. ^d Excludes the Australian Capital Territory and Western Australia. ^e Excludes the Australian Capital Territory. ^f Victorian data after 1988-89 include only establishments holding titles under the *Extractive Industries Act 1966*. Previous details represent estimates for all establishments. ^g Excludes the Australian Capital Territory, Queensland, Western Australia and the Northern Territory.

^s ABARES estimate. ^{na} Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, BMR, Canberra; state mines departments and their equivalents; ABARES.

265 Australian production of crushed and broken stone, by state ^a

	New South Wales kt	Victoria kt	Queensland kt	Western Australia kt	South Australia kt	Tasmania kt	Northern Territory kt	Australia kt
1967	8 590	18 301	4 762	3 107	10 709	1 176	na	47 011
1968	9 345	17 575	3 917	3 719	9 016	1 206	na	45 087
1969	9 217	15 865	4 030	4 517	12 418	1 377	na	47 830
1970	10 867	15 451	4 159	4 743	1 027	1 313	na	50 793 ^b
1971	10 020	17 505	4 665	5 234	10 817	1 365	670	50 275 ^b
1972	11 322	16 079	4 218	4 574	12 680	1 336	906	51 115
1973	11 452	15 805	6 933	4 451	10 084	1 558	999	51 281
1974	11 451	17 499	8 246	5 128	9 864	1 486	996	54 671
1975	13 196	18 382	9 454	5 166	9 242	1 495	1 278	58 213
1976	10 581	16 885	8 241	5 043	9 765	1 697	820	53 033
1977	9 728	17 884	9 411	5 031	9 618	1 621	1 104	54 398
1978	10 699	18 665	10 811	5 258	8 848	1 582	1 046	56 910
1979	12 081	19 115	12 588	5 801	4 146	1 707	1 090	56 498
1980	14 436	18 001	12 722	4 762	4 460	1 746	1 611	57 737
1981	14 543	14 073	15 784	7 397	3 759	1 562	992	58 110
1982	12 765	13 279	19 601	5 145	4 189	1 719	303	57 100 ^c
1983	10 185	13 527	16 592	4 272	2 435	1 609	495	49 115 ^c
1984	10 452	14 756	19 869	5 067	3 613	2 023	551	56 331 ^c
1985	12 641	20 539	20 692	6 596	4 066	1 981	959	67 474 ^c
1986	13 819	20 658	21 597	6 160	4 335	3 040	646	70 255 ^c
1987	13 135	19 526	20 433	5 743	3 600	2 488	353	65 278 ^c
1988	12 575	20 001	22 644	6 297	3 432	2 361	193	67 503 ^c
1988-89	14 861	22 763	22 724	na	3 567	2 525	270	66 710 ^d
1989-90	15 437	21 232	25 623	8 176	3 703	2 460	367	76 998 ^d
1990-91	15 488	14 854	na	na	3 571	2 065	na	35 977 ^e
1991-92	14 326	na	na	na	3 192	2 013	na	na
1992-93	14 725	28 517	20 189	3 839	4 402	2 533	451	74 656
1993-94	na	na	na	na	na	na	na	na
1994-95	na	na	na	na	na	na	na	na
1995-96	na	na	na	na	na	na	na	na
1996-97	16 292	na	na	na	na	na	516	na
1997-98	15 171	na	na	na	na	na	na	na
1998-99	16 775	na	na	na	na	na	na	na
1999-00	17 620	21 864	na	480	3 445	1 452	626	58 556
2000-01	16 256	23 535	na	536	2 991	1 277	352	52 949
2001-02	15 130	24 249	22 394	900	4 311	1 868	1 548	70 400
2002-03	13 864	23 616	22 905	829	3 841	1 663	1 653	68 369
2003-04	11 679	25 096	31 156	826	4 197	1 930	765	75 649
2004-05	11 459	24 300	29 972	761	4 732	2 904	939	75 066
2005-06	14 141	28 048	29 634	1 480	4 354	2 736	585	80 978
2006-07	16 047	32 854	32 203	1 492	8 865	2 660	684	94 805
2007-08	17 723	35 199	39 425	3 139	12 907	2 417	535	111 345
2008-09	na	na	na	4 136	na	na	na	na

^a Data incomplete because coverage differs between states. Australian totals may include estimates for states for which data are not available separately.

^b Includes the Australian Capital Territory and the Northern Territory. ^c Excludes the Australian Capital Territory. ^d Excludes the Australian Capital Territory and Western Australia. ^e Excludes the Australian Capital Territory, Queensland, Western Australia and the Northern Territory. na Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, BMR, Canberra; state mines departments and their equivalents; ABARES.

266

Summary of Australian statistics for copper

	Production					Consump- tion c	Exports d		Price e
	Mine a	Smelter b	Refined		Total		Volume	Value	
			Primary	Secondary					
	kt	kt	kt	kt	kt	kt	kt	\$m	\$/t
1968	109	103	84	17	101	105	38	40	1 099.0
1969	131	124	101	19	120	106	54	66	1 324.0
1970	158	120	104	21	125	114	70	86	1 317.0
1971	177	150	127	15	142	116	96	85	991.4
1972	186	150	139	17	156	112	109	91	942.3
1973	220	166	145	14	159	133	106	112	1 234.3
1974	251	200	162	12	174	120	133	177	1 298.2
1975	219	183	166	12	178	97	176	139	950.1
1976	218	170	161	15	176	119	139	157	1 143.3
1977	222	172	152	15	167	106	126	146	1 190.1
1978	222	167	152	14	166	127	102	114	1 189.8
1979	238	169	138	16	154	127	122	206	1 768.0
1980	242	182	145	20	165	128	120	250	1 956.6
1981	231	177	164	15	179	143	114	201	1 535.8
1982	245	180	160	11	171	131	110	156	1 474.5
1983	262	182	169	34	203	115	158	276	1 790.5
1984	236	188	171	26	197	118	126	226	1 592.5
1985	260	175	164	30	194	126	139	274	2 064.8
1986	248	179	164	21	185	117	125	248	2 111.2
1987	233	183	172	36	208	124	119	267	2 559.7
1988	238	193	196	27	223	128	157	510	3 319.4
1989	296	240	230	35	265	129	175	601	3 606.0
1990	330	235	247	24	271	118	230	765	3 413.9
1991	320	258	252	20	272	111	243	723	3 013.4
1992	378	315	300	13	313	123	258	770	3 114.2
1993	430	344	318	13	331	139	271	723	2 818.3
1994	418	337	340	20	360	150	305	816	3 158.2
1995	379	224	266	24	290	158	215	804	3 980.3
1996	548	264	311	24	314	162	363	993	2 948.7
1997	549	216	276	25	276	159	402	1 098	3 061.5
1998	618	211	279	25	279	160	488	1 298	2 636.9
1999	738	332	412	25	412	164	560	1 429	2 438.2
2000	839	390	484	0	484	165	621	1 931	3 127.6
2001	898	455	558	0	558	163	754	2 318	3 043.4
2002	872	456	543	0	542	189	683	2 000	2 869.6
2003	830	435	484	0	484	184	704	2 024	2 730.9
2004	854	443	498	0	490	169	653	2 589	3 902.0
2005	930	412	461	0	471	158	784	4 088	4 844.1
2006	875	377	429	0	429	144	723	6 600	8 937.3
2007	871	399	442	0	442	147	708	6 404	8 490.5
2008	886	450	503	0	503	160	811	6 734	7 993.4
2009	950	422	446	0	446	141	787	5 829	6 400.1

a Total metallic content of minerals produced. **b** Includes both primary and secondary (scrap) production of blister copper. **c** Primary refined; producers' shipments to domestic consumers plus imports. **d** Quantities refer to total metallic content of all ores, concentrates, intermediate products or refined metal; value of metals contained in host mine and smelter products (for example, copper in lead concentrate or lead bullion) is not available separately and is included in the value of the mineral product or metal in which it is exported. **e** Mount Isa Mines, cathode, for Townsville refinery, price discontinued end of June 2000. 2000 onwards based on average US\$ LME spot calendar price converted into A\$.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; Metallgesellschaft AG, *Metallstatistik*, Frankfurt; London Metal Exchange.

267 Australian supply, disposal and prices of copper

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Production									
Mine a	kt	883	811	895	936	859	863	890	825
Smelter	kt	469	389	434	404	389	395	459	379
Refined	kt	537	458	479	461	435	444	499	593
Primary	kt	537	458	486	461	435	444	499	392
Secondary	kt	0	0	0	0	0	0	0	0
Exports b									
Ores and concentrates c	kt	1 193	1 286	1 326	1 635	1 493	1 694	1 797	1 932
Value	\$m	1 048	1 242	1 750	3 492	3 914	4 151	3 618	4 510
Refined d	kt	359	301	322	314	290	296	361	271
Value	\$m	956	924	1 332	2 161	2 612	2 579	2 245	1 979
Consumption e	kt	222	236	168	136	146	156	160	141
Export unit value									
Ores and concentrates	A\$/t	878.8	966.3	1 319.7	2 135.6	2 621.8	2 450.7	2 012.8	2 334.3
Refined	A\$/t	2 666.9	3 075.5	4 140.5	6 882.0	9 004.4	8 722.7	6 218.8	7 303.0

a Total metallic content of minerals produced. **b** Value of metals contained in host mine and smelter products is not available separately and is included in the value of the mineral product or metal in which it is exported. **c** Gross weight of ores and concentrates. **d** Refinery shapes, unworked. **e** Refined copper, domestic despatches and imports.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

268 Volume of Australian exports of copper, by destination

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Ores and concentrates								
China	370.9	361.7	216.3	571.4	540.0	412.3	602.4	643.0
Germany	14.8	4.8	4.0	0.1	0.0	0.0	0.0	30.5
India	362.5	451.1	452.7	443.2	444.2	565.3	531.4	489.1
Japan	322.2	415.7	346.8	440.9	372.2	380.6	369.4	401.6
Korea, Rep. of	38.1	105.5	36.8	82.4	93.5	162.9	193.6	133.5
Philippines	34.3	26.9	76.1	35.9	67.7	20.5	109.7	97.8
Other	11.7	0.8	49.9	32.4	41.8	0.0	0.0	5.7
Total	1 154.5	1 366.5	1 182.5	1 606.4	1 559.3	1 541.6	1 806.6	1 801.2
Total Cu content s	317.0	371.2	328.3	449.1	432.9	399.7	447.1	466.5
Refined								
Chinese Taipei	89.8	81.6	96.0	65.4	83.6	95.5	94.6	34.9
European Union a	34.8	31.6	2.6	0.1	0.0	1.8	0.0	0.0
Indonesia	12.4	13.1	31.1	38.2	18.5	13.0	22.7	7.2
Korea, Rep. of	57.6	19.6	6.7	39.5	21.0	34.1	36.4	27.4
Malaysia	83.8	81.8	72.6	51.4	55.1	52.8	44.9	49.0
Thailand	35.0	39.6	52.6	64.3	52.7	38.6	36.6	17.0
Other	50.5	56.3	61.1	56.6	53.4	58.8	124.5	180.2
Total	363.8	323.7	322.7	315.5	284.4	294.6	359.8	315.8

a Regarded as 25 countries. **s** ABARES estimate.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

269

World copper production, consumption, stocks and prices

	Production					Consumption kt	Stocks c kt	Price	
	Mine kt	Smelter kt	Refined		producer d US\$/lb			LME e US\$/t	
			Secondary a kt	Total b kt					
1966	5 220	5 103	3 081	6 366	5 224	na	36.2	1 528.8	
1967	5 062	4 897	2 872	6 004	5 032	na	38.2	1 135.0	
1968	5 459	5 510	3 176	6 653	6 548	na	41.8	1 236.0	
1969	5 935	5 965	3 452	7 205	7 136	na	47.5	1 464.0	
1970	6 382	6 308	3 298	7 583	7 294	582	57.7	1 413.6	
1971	6 458	6 374	3 155	7 393	7 295	610	51.4	1 080.5	
1972	7 044	7 007	3 272	8 084	7 948	657	50.6	1 069.0	
1973	7 498	7 286	3 639	8 525	8 754	394	58.9	1 781.1	
1974	7 576	7 565	3 502	8 759	8 310	832	76.6	2 052.6	
1975	7 185	7 280	2 699	8 177	7 445	1 744	63.2	1 232.2	
1976	7 661	7 616	3 163	8 624	8 539	1 828	69.0	1 405.2	
1977	7 856	7 810	3 109	8 878	9 057	1 985	66.2	1 308.3	
1978	7 678	7 686	3 313	9 020	9 527	1 564	65.8	1 363.4	
1979	7 767	7 738	3 668	9 181	9 848	1 116	92.2	1 978.1	
1980	7 704	7 681	3 738	9 297	9 396	1 035	101.3	2 189.2	
1981	8 164	8 036	3 671	9 545	9 522	1 133	84.2	1 740.2	
1982	8 078	7 850	3 518	9 378	9 003	1 640	72.8	1 477.9	
1983	8 101	8 379	3 688	9 694	9 099	1 709	76.5	1 590.1	
1984	8 258	8 684	3 848	9 512	9 914	1 220	66.9	1 371.4	
1985	8 365	8 933	3 837	9 689	9 665	1 074	67.0	1 415.5	
1986	8 393	9 165	3 905	9 862	10 075	893	64.7	1 414.5	
1987	8 747	9 287	3 996	10 160	10 449	522	81.1	1 764.9	
1988	8 698	9 372	4 307	10 485	10 531	585	119.1	2 597.1	
1989	9 025	9 720	4 250	10 858	10 969	636	129.5	2 838.8	
1990	8 957	9 132	4 325	10 809	10 789	716	121.8	2 669.0	
1991	9 099	9 066	4 317	10 688	10 695	843	107.9	2 338.1	
1992	9 418	9 730	4 408	11 170	10 806	833	106.0	2 282.0	
1993	9 475	9 671	4 948	11 306	10 996	1 116	91.6	1 910.8	
1994	9 575	9 740	5 026	11 166	11 665	768	110.2	2 307.3	
1995	10 180	9 745	5 337	11 817	12 152	699	138.3	2 935.6	
1996	11 111	10 407	5 917	12 756	12 399	527	109.2	2 293.7	
1997	11 480	10 779	6 200	13 600	13 017	897	106.8	2 277.1	
1998	12 273	10 928	5 976	14 120	13 353	1 274	78.6	1 654.2	
1999	12 749	11 494	5 883	14 465	14 056	1 360	75.9	1 572.6	
2000	13 246	11 855	6 028	14 816	15 191	971	82.3	1 813.5	
2001	13 757	12 350	5 747	15 675	14 686	1 636	71.6	1 577.5	
2002	13 565	11 965	5 427	15 336	15 037	1 712	70.8	1 560.8	
2003	13 685	11 982	5 367	15 221	15 315	1 212	80.7	1 779.5	
2004	14 710	12 242	5 484	15 828	16 671	518	134.2	2 865.9	
2005	15 150	12 904	5 558	16 610	16 639	547	173.6	3 677.7	
2006	15 175	13 304	5 909	17 343	16 974	703	315.6	6 740.6	
2007	15 511	13 463	5 996	18 029	18 108	666	328.7	7 133.0	
2008	15 645	13 676	6 006	18 498	18 094	816	319.2	6 975.7	
2009	15 761	13 713	5 779	18 597	18 260	1 083	237.0	5 067.3	

a Includes direct use by manufacturers. **b** Excludes copper recovered from secondary materials by simple remelting. **c** Unwrought copper. **d** Average price for US producer cathodes. **e** LME average cash settlement price, grade A copper. Before December 1981, wirebars; from 1982 to 1986, higher grade copper. **na** Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; Metallgesellschaft AG, *Metallstatistik*, Frankfurt; World Bureau of Metal Statistics, *World Metal Statistics*, London; London Metal Exchange; International Copper Study Group, *Copper Bulletin*, Lisbon.

270

World copper production, by region and country

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Mine production a								
Africa	481	545	612	705	787	814	967	1 106
Congo, Dem. Rep. of	32	57	70	98	131	145	239	385
South Africa	90	89	86	97	99	106	118	116
Zambia	308	347	411	465	516	524	568	561
Americas	7 737	8 003	8 859	8 780	8 851	9 237	9 163	8 968
Argentina	204	199	177	187	180	180	157	143
Canada	603	557	563	595	603	596	607	495
Chile	4 581	4 904	5 413	5 321	5 361	5 557	5 330	5 390
Peru	845	843	1 036	1 010	1 048	1 190	1 268	1 275
Mexico	330	356	406	391	312	338	247	238
United States	1 140	1 116	1 160	1 140	1 197	1 168	1 334	1 200
Asia	2 730	2 611	2 577	2 876	2 828	2 865	2 912	3 132
China	568	604	742	762	873	928	1 076	962
Indonesia	1 163	1 003	842	1 064	817	789	650	970
Kazakhstan	473	485	468	436	446	407	420	406
Mongolia	135	132	130	129	132	133	129	132
Philippines	20	20	16	16	18	23	21	49
Uzbekistan	80	82	83	104	104	104	104	80
Europe	1 526	1 494	1 635	1 666	1 640	1 554	1 558	1 530
Bulgaria	84	80	80	95	110	103	109	108
Poland	503	503	531	512	497	452	429	439
Portugal	77	78	96	89	79	90	89	87
Russian Federation	685	665	767	805	779	770	785	742
Sweden	72	83	82	87	87	63	58	55
Middle East	215	207	203	241	288	315	325	316
Iran	141	146	153	193	230	249	255	255
Turkey	75	61	50	48	57	65	71	61
Oceania	1 090	1 032	1 027	1 123	1 069	1 040	1 046	1 027
Australia	872	830	854	930	875	871	886	950
Papua New Guinea	211	202	173	193	194	169	160	167
Total	13 565	13 685	14 710	15 150	15 175	15 511	15 645	15 761

Continued

270

World copper production, by region and country continued

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Smelter production ^b								
Africa	459	464	440	454	519	521	503	495
South Africa	117	112	89	101	103	111	96	86
Zambia	311	320	320	320	384	384	384	384
Americas	3 493	3 354	3 393	3 435	3 448	3 385	3 170	3 058
Canada	539	457	476	472	521	517	486	346
Chile	1 439	1 542	1 518	1 558	1 565	1 514	1 369	1 522
Mexico	263	220	271	301	260	223	153	99
Peru	380	376	378	382	381	296	360	342
United States	683	539	542	523	501	617	574	545
Asia	4 484	4 725	4 996	5 485	5 883	6 160	6 478	6 681
China	1 180	1 379	1 503	1 752	1 918	2 112	2 453	2 635
Japan	1 499	1 516	1 465	1 518	1 628	1 613	1 625	1 542
Kazakhstan	446	432	445	405	425	393	392	466
Korea, Rep. of	390	410	390	390	390	390	390	390
Philippines	138	112	217	201	240	220	240	223
Uzbekistan	80	82	85	115	115	115	115	80
Australia	456	435	443	412	377	399	450	422
Europe	3 061	3 004	3 050	3 118	3 077	2 997	3 076	3 057
Belgium	126	120	108	113	104	115	116	117
Germany	578	494	541	510	510	510	510	510
Poland	540	584	581	584	589	559	537	539
Russian Federation	800	790	850	850	850	850	850	850
Spain	298	290	224	284	264	256	260	269
Total	11 965	11 982	12 242	12 904	13 304	13 463	13 676	13 713
Refined copper production								
Africa	449	459	501	555	613	673	758	852
South Africa	92	90	81	97	102	116	95	94
Zambia	347	360	410	446	497	522	612	698
Americas	5 914	5 682	5 764	5 711	5 669	5 727	5 800	5 751
Canada	495	455	527	515	500	453	442	336
Chile	2 850	2 902	2 837	2 824	2 811	2 937	3 060	3 272
Peru	503	517	505	510	508	414	464	423
United States	1 512	1 310	1 310	1 260	1 250	1 310	1 280	1 185
Asia	5 051	5 326	5 741	6 432	7 153	7 777	7 899	8 081
China	1 632	1 836	2 199	2 600	3 003	3 499	3 795	4 110
India	374	391	419	518	627	719	669	721
Japan	1 401	1 430	1 380	1 395	1 532	1 577	1 540	1 440
Kazakhstan	453	432	446	419	430	406	398	368
Korea, Rep. of	499	510	496	527	575	585	536	535
Philippines	144	171	175	172	181	160	175	180
Uzbekistan	80	82	85	115	115	115	115	80
Australia	542	484	490	471	429	442	503	446
Europe	3 377	3 269	3 332	3 441	3 477	3 395	3 538	3 467
Belgium	427	423	383	383	379	394	396	367
Germany	696	598	653	638	662	666	690	673
Poland	509	530	550	560	557	533	527	503
Russian Federation	861	855	909	968	959	923	913	926
Spain	322	293	228	267	260	272	277	294
Total	15 336	15 221	15 828	16 610	17 343	18 029	18 498	18 597

a Metal content. **b** Metal produced in the form of blister and anodes from ores, concentrates, other primary materials and secondary blister produced from scrap.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

271

World refined copper consumption, by region and country

	2001 kt	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Africa									
South Africa	93	93	75	97	84	85	83	83	91
Total	142	148	142	162	195	222	231	331	218
Americas									
Argentina	40	20	26	33	34	30	31	30	27
Brazil	345	237	300	332	335	339	330	382	324
Canada	265	274	257	297	290	302	206	197	142
Chile	90	81	96	100	103	111	105	103	91
Mexico	437	383	353	394	402	348	345	318	337
United States	2 619	2 364	2 290	2 410	2 257	2 096	2 123	2 020	1 630
Peru	55	55	55	55	55	55	55	55	na
Total	3 862	3 428	3 392	3 642	3 498	3 308	3 218	3 133	2 626
Asia									
China	2 307	2 737	3 084	3 364	3 656	3 614	4 863	5 149	7 144
Chinese Taipei	540	656	619	689	638	643	603	582	494
India	293	295	307	335	397	407	516	515	558
Indonesia	104	109	121	188	180	185	205	205	205
Japan	1 145	1 164	1 202	1 279	1 229	1 282	1 252	1 184	875
Korea, Rep. of	849	936	901	940	868	828	856	815	936
Malaysia	160	165	134	191	222	224	224	224	224
Turkey	194	225	265	281	316	302	391	365	318
Thailand	167	186	204	247	241	251	206	256	215
Total	6 169	6 959	7 313	8 035	8 250	8 339	9 756	9 902	11 673
Europe									
Finland	101	89	101	105	93	83	80	61	66
France	538	561	551	536	472	460	365	379	215
Germany	1 120	1 067	1 010	1 100	1 115	1 398	1 392	1 398	1 138
Greece	130	126	106	118	89	104	104	75	55
Italy	676	673	665	715	680	801	764	635	523
Poland	272	247	253	274	271	275	301	242	215
Russian Federation	224	355	422	550	667	693	688	717	462
Spain	299	312	312	331	292	285	280	270	267
Sweden	195	169	185	189	164	184	180	179	151
United Kingdom	286	261	242	243	165	172	41	43	7
Total	4 342	4 312	4 284	4 664	4 540	4 962	4 757	4 574	3 613
Total	14 686	15 037	15 315	16 671	16 639	16 974	18 108	18 094	18 260

Sources: World Bureau of Metal Statistics, *World Metal Statistics*, London.

272

Volume of world copper exports, by country

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Concentrates (Cu content)								
Australia	317	371	328	449	433	400	447	466
Canada	283	170	165	256	231	215	352	258
Chile	1 553	1 798	2 166	2 190	2 171	2 258	2 014	1 845
Indonesia	719	595	452	596	583	432	407	583
Papua New Guinea	177	222	163	204	174	187	163	151
Peru	371	280	502	523	462	747	776	759
Portugal	49	72	87	94	82	100	94	93
United States	23	10	24	137	383	302	303	167
Other	508	520	599	618	600	856	835	931
World total	3 999	4 037	4 485	5 066	5 119	5 497	5 392	5 253
Blister and anode copper								
Chile	182	276	366	347	457	506	347	396
Finland	43	33	25	30	35	11	28	37
Mexico	18	16	21	18	20	24	14	9
Namibia	25	26	25	26	21	20	18	na
Peru	25	22	0	0	16	25	10	31
South Africa	26	12	1	6	7	8	4	6
Spain	21	37	51	62	46	37	42	39
Other	345	349	380	353	333	313	358	215
World total	685	771	869	841	935	944	820	733
Refined copper								
Australia	364	323	323	315	287	295	357	316
Belgium	201	337	170	241	237	201	260	249
Canada	241	222	289	297	280	298	290	222
Chile	2 767	2 614	2 954	2 799	2 606	2 910	3 004	3 191
Germany	91	118	137	149	146	117	125	194
Japan	378	290	195	248	320	428	424	627
Kazakhstan	391	376	391	401	357	349	344	309
Peru	415	459	318	514	449	365	419	401
Philippines	143	167	159	114	177	181	182	152
Poland	262	284	280	290	288	240	297	306
Russian Federation	505	397	359	301	268	275	207	466
Singapore	59	38	39	34	94	69	42	47
United States	29	123	127	51	124	52	38	86
Zambia	339	363	393	423	476	491	587	675
Other	918	925	895	1 271	1 366	1 317	1 264	1 383
World total	7 105	7 034	7 029	7 449	7 472	7 586	7 838	8 624

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

273

Volume of world copper imports, by country

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Ores and concentrates								
Brazil	116	103	135	101	134	121	118	106
Canada	128	72	67	84	106	59	74	53
China	516	671	721	1 009	908	1 132	1 299	1 536
Finland	125	136	132	126	136	111	134	88
Germany	259	220	285	287	287	325	272	313
Japan	1 261	1 246	1 274	1 320	1 327	1 408	1 321	1 270
Korea, Rep. of	320	331	327	348	365	351	371	400
Spain	264	263	194	260	275	250	281	296
United States	226	27	23	0	0	12	64	43
Other	422	506	688	771	1 077	1 007	1 037	927
Total	3 638	3 574	3 848	4 307	4 614	4 776	4 961	5 032
Blister and anode copper								
Belgium	209	291	291	238	268	227	208	213
Canada	58	127	149	159	93	102	94	82
China	105	123	114	129	89	173	198	228
Germany	38	17	12	37	42	32	25	44
Korea, Rep. of	69	51	53	33	87	100	58	40
Mexico	73	62	70	64	78	75	66	38
United States	145	159	149	133	172	155	124	69
Other	27	24	70	106	152	131	152	84
Total	726	854	908	899	980	995	925	798
Refined copper								
Belgium	37	58	17	10	22	28	54	80
Brazil	103	151	154	168	175	218	252	209
China	1 181	1 357	1 200	1 222	827	1 496	1 458	3 185
Chinese Taipei	657	621	692	640	647	615	585	498
France	576	579	590	517	507	432	434	265
Germany	459	517	585	625	881	844	833	659
Greece	126	107	120	91	106	106	76	57
Italy	643	651	700	652	774	746	617	544
Japan	114	79	88	74	75	102	90	42
Korea, Rep. of	446	441	488	428	380	420	406	488
Malaysia	187	134	186	246	186	201	167	171
Singapore	40	34	48	41	110	62	45	76
Thailand	186	204	224	235	268	6	6	216
Turkey	187	229	217	224	150	288	288	290
United Kingdom	316	246	214	182	184	47	48	45
United States	1 062	687	704	977	1 076	832	721	645
Other	570	572	573	572	522	686	687	508
Total	6 891	6 669	6 801	6 902	6 891	7 129	6 768	7 978

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

274

Summary of Australian statistics for gemstones

	Diamonds \$m	Exports		Imports Gem diamonds \$m
		Opals \$m	Sapphires ^a \$m	
1965	0.42	5.33	na	3.69
1966	0.43	7.65	na	3.94
1967	0.33	8.62	na	4.23
1968	0.37	10.65	na	4.23
1969	0.39	12.21	3.09	5.25
1970	0.51	11.97	3.21	5.45
1971	0.77	11.20	3.32	6.57
1972	0.81	13.80	2.80	7.44
1973	1.63	17.68	2.91	11.74
1974	4.86	12.70	2.63	15.01
1975	4.61	14.60	3.01	15.45
1976	4.58	22.62	3.61	20.04
1977	5.28	19.21	4.03	24.05
1978	11.99	26.69	10.31	34.25
1979	13.25	24.98	17.17	33.36
1980	12.90	25.55	10.81	50.38
1981	11.16	23.69	14.57	38.25
1982	9.86	16.73	14.46	32.59
1983	36.54	22.69	13.48	31.48
1984	25.90	22.76	9.89	36.14
1985	29.83	17.67	7.78	48.16
1986	180.00	24.41	12.86	55.38
1987	285.00	45.99	19.95	66.62
1988	349.42	67.54	23.13	77.96
1989	410.19	77.19	31.60	108.16
1990	433.13	84.87	17.49	106.68
1991	453.80	83.67	11.27	110.99
1992	574.60	77.13	11.46	105.71
1993	482.30	78.07	22.46	90.24
1994	485.40	96.24	18.27	96.40
1995	480.24	99.79	13.65	103.60
1996	442.99	101.85	10.97	112.41
1997	421.19	75.64	8.52	154.85
1998	621.78	63.20	7.70	150.88
1999	560.57	53.86	5.94	172.28
2000	714.96	75.96	8.35	223.34
2001	517.01	69.78	6.43	241.97
2002	724.10	61.75	1.37	269.90
2003	754.74	56.16	1.11	301.69
2004	507.77	47.28	1.08	320.02
2005	880.88	55.42	1.36	370.57
2006	782.52	49.85	0.45	386.01
2007	684.30	39.66	1.11	426.70
2008	618.07	40.50	0.95	432.06
2009	466.12	32.29	0.83	420.96

^a Excludes cut and polished sapphires from 1 July 1999, for which data are not available separately. na Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Minerals and Energy Western Australia, *Statistics Digest*; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra.

275 Australian supply and disposal of gemstones

	Unit	2002	2003	2004	2005	2006	2007	2008	2009
Diamonds									
Production	'000 ct	33 648	31 013	20 620	30 703	29 308	19 231	15 671	10 795
Exports									
Unsorted s	'000 ct	34 442	28 193	20 447	30 594	29 220	18 960	15 397	9 609
	\$m	621	623	385	749	641	552	448	293
Sorted									
Gem	'000 ct	43	74	89	108	87	271	273	52
	\$m	103	126	122	132	142	132	169	173
Industrial	'000 ct	0.19	2 761.25	84.99	0.37	1.32	0.79	0.26	0.26
	\$m	0.50	5.19	0.51	0.21	0.12	0.12	0.37	0.29
Total exports	\$m	724	755	508	881	783	684	618	466
Imports									
Gem diamonds	\$m	270	302	320	371	386	427	432	421
Other gemstones									
Exports									
Opals	\$m	62	56	47	55	50	40	40	32
Sapphires a	\$m	1	1	1	1	0	1	1	1
Others b	\$m	14	10	8	9	5	7	8	5

a Excludes cut and polished sapphires from 1 July 1999, for which data are not available separately. **b** Includes cut and polished sapphires from 1 July 1999. **s** ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Department of Minerals and Energy Western Australia, *Statistics Digest*, Perth; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

276 World production of natural gem and cheap gem diamonds

	2002	2003	2004	2005	2006	2007	2008	2009
	million ct	million ct	million ct	million ct	million ct	million ct	million ct	million ct
Angola	5.70	6.30	6.15	7.08	9.18	9.70	8.91	na
Australia	33.65	31.01	20.62	30.70	29.31	19.23	15.67	10.79
Botswana	28.37	30.40	31.13	31.89	34.29	33.64	32.60	na
Congo, Dem. Rep. of	21.99	29.00	30.04	33.05	28.99	28.45	33.40	na
Namibia	1.54	1.45	2.00	1.90	2.36	2.27	2.44	na
Russian Federation	20.00	33.02	38.87	38.00	38.36	38.29	36.93	na
South Africa	10.88	12.67	14.29	15.78	15.15	15.25	12.90	na
Other	9.28	15.13	18.11	17.59	19.26	23.07	22.36	na
Total	131.40	159.00	161.20	176.00	176.90	169.90	165.20	na

na Not available.

Sources: Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; British Geological Survey, *World Mineral Statistics*,

277

Summary of Australian statistics for gold

	Mine production	Exports ^a		Price ^d	
		Volume ^b	Value ^c	A\$/oz	US\$/oz
	t	t	\$m		
1966	29	29	23	31.40	35.00
1967	25	22	17	31.40	35.00
1968	24	16	13	34.71	38.68
1969	22	22	21	36.92	41.09
1970	19	12	6	32.22	35.95
1971	21	7	3	36.15	41.16
1972	23	14	13	49.02	58.44
1973	17	9	11	68.43	97.59
1974	16	12	23	111.39	159.62
1975	16	8	17	122.87	161.23
1976	16	15	40	102.30	124.94
1977	19	14	43	133.37	147.98
1978	20	8	42	168.88	193.44
1979	19	10	59	271.77	303.22
1980	17	7	90	537.37	612.52
1981	18	7	56	398.19	458.06
1982	27	13	136	371.97	375.76
1983	31	21	270	469.65	423.83
1984	40	32	418	409.94	360.29
1985	59	50	668	455.70	317.28
1986	75	56	972	554.15	367.76
1987	110	85	1 694	639.18	446.43
1988	157	139	2 642	557.34	433.45
1989	204	166	2 559	483.54	381.49
1990	244	238	3 424	493.94	384.35
1991	236	259	3 684	465.21	362.29
1992	244	298	4 458	467.74	343.67
1993	227	275	4 672	530.94	359.89
1994	237	277	4 664	527.92	384.09
1995	236	316	5 251	521.02	384.15
1996	277	325	5 223	497.98	387.72
1997	304	340	4 912	446.17	331.14
1998	300	504	7 621	469.17	294.23
1999	289	334	4 720	433.07	279.08
2000	291	296	4 634	480.37	279.28
2001	280	304	5 086	521.30	271.09
2002	266	269	4 908	570.30	310.20
2003	281	313	5 551	559.68	363.68
2004	258	311	5 551	557.15	409.28
2005	262	306	5 693	585.23	444.91
2006	247	349	8 863	804.30	604.71
2007	247	411	10 789	831.26	696.81
2008	215	415	13 332	1 034.31	872.54
2009	224	362	14 204	1 235.25	972.97

^a Prior to July 1999 includes exports of refined gold that was imported as unrefined bullion, thereafter includes Australian origin gold only. ^b Quantities refer to total metallic content of all ores, concentrates, intermediate products or refined metal of which gold is the predominant constituent. ^c Value of metal contained in host mine and smelter products (for example, gold in copper concentrates or lead bullion) is not separately available; this is included in the value of the mineral product or metal product in which it is exported. ^d Average London AM fix.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; London Bullion Market Association; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

278 Australian gold production, imports and exports

	Unit	2002	2003	2004	2005	2006	2007	2008	2009
Production									
Mine	t	266.2	281.4	258.1	262.2	246.9	247.4	215.2	223.5
Refined primary									
Australian origin	t	261.8	257.0	230.8	220.2	205.6	204.8	177.4	185.3
Overseas origin	t	40.5	74.1	81.7	71.1	60.8	54.0	66.3	70.9
Refined secondary									
Australian origin	t	7.2	4.3	4.3	6.3	5.7	4.6	5.8	3.8
Overseas origin	t	39.8	75.9	53.4	43.4	107.3	111.5	111.4	119.3
Exports									
Refined and unrefined bullion ^a									
Chinese Taipei	t	6.5	3.6	0.5	0.0	0.5	0.0	0.0	0.0
Hong Kong, China	t	29.6	11.7	1.2	1.2	0.0	0.0	1.9	1.1
India	t	13.8	66.1	161.0	164.4	140.4	160.5	159.8	178.1
Japan	t	24.5	8.5	9.4	16.5	12.6	7.0	0.5	0.0
Korea, Rep. of	t	50.3	41.7	30.6	5.3	4.8	2.3	1.4	0.1
Middle East	t	11.1	0.8	0.0	0.0	7.9	41.5	46.8	4.0
Switzerland	t	1.1	4.6	0.0	1.1	8.0	56.7	5.9	5.0
Thailand	t	22.5	11.5	27.2	55.7	21.9	21.5	36.6	31.7
United Kingdom	t	69.8	148.9	56.6	29.2	114.6	100.4	146.5	133.5
Other	t	40.0	15.1	24.8	32.6	38.5	21.1	15.7	8.2
Total	t	269.1	312.6	311.4	305.8	349.3	411.0	415.2	361.7
	\$m	4 907.9	5 551.2	5 550.8	5 693.5	8 863.2	10 788.6	13 332.3	14 204.5
Imports									
Refined and unrefined	\$m	2 503.8	2 910.4	2 448.5	2 792.0	5 786.4	6 121.7	9 731.7	9 195.6
Price ^b	\$/oz	570.30	559.68	557.15	585.23	804.30	831.26	1 034.31	1 235.25

^a Prior to July 1999 includes exports of refined gold that was imported as unrefined bullion, thereafter includes Australian origin gold only. ^b Average London AM fix price, expressed in Australian dollars.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; London Bullion Market Association; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

279 Australian gold production, by state

	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
	t	t	t	t	t	t	t	t
Mine production								
1987	4.25	1.21	15.43	0.00	78.08	2.23	8.71	109.90
1988	5.63	1.77	24.78	0.01	110.75	2.03	11.97	156.95
1989	8.75	1.84	27.72	0.28	146.61	1.76	17.06	204.02
1990	8.05	3.93	29.73	0.89	180.79	1.68	19.04	244.10
1991	6.33	3.76	27.06	0.76	179.44	1.62	17.30	236.28
1992	5.65	3.35	32.61	1.05	181.29	1.15	18.64	243.74
1993	8.11	4.36	27.40	1.68	167.36	1.30	17.09	227.31
1994	7.60	3.82	29.23	1.84	175.67	1.32	17.42	236.92
1995	9.74	4.30	27.84	1.72	173.72	0.62	18.45	236.40
1996	11.10	4.52	28.20	1.81	208.14	1.63	21.33	276.73
1997	11.72	4.82	28.83	1.64	228.49	4.15	24.33	303.98
1998	14.77	4.90	32.33	1.74	221.32	4.18	20.39	299.62
1999	21.04	4.63	33.65	1.77	201.12	4.95	22.30	289.47
2000	18.58	4.23	37.10	2.95	198.23	6.68	23.15	290.91
2001	17.10	3.50	31.89	4.31	196.59	6.18	20.51	280.08
2002	23.48	3.24	25.06	3.14	187.20	6.05	18.03	266.21
2003	27.49	3.11	26.24	5.33	187.07	9.32	22.85	281.40
2004	29.14	3.46	23.16	5.12	164.32	10.60	22.27	258.07
2005	28.05	5.24	24.62	6.24	173.13	8.34	16.55	262.16
2006	27.04	6.27	22.50	6.75	165.19	5.10	14.03	246.88
2007	34.86	6.42	22.91	6.92	155.56	4.19	16.54	247.40
2008	31.38	6.09	19.15	6.71	132.54	5.06	14.30	215.23
2009	25.25	7.60	15.65	8.90	152.06	5.01	9.08	223.54
Share of total								
	%	%	%	%	%	%	%	
1987	3.87	1.10	14.04	0.00	71.04	2.03	7.93	na
1988	3.59	1.13	15.79	0.01	70.57	1.29	7.63	na
1989	4.29	0.90	13.59	0.14	71.86	0.86	8.36	na
1990	3.30	1.61	12.18	0.36	74.06	0.69	7.80	na
1991	2.68	1.59	11.45	0.32	75.94	0.69	7.32	na
1992	2.32	1.38	13.38	0.43	74.38	0.47	7.65	na
1993	3.57	1.92	12.06	0.74	73.63	0.57	7.52	na
1994	3.21	1.61	12.34	0.78	74.15	0.56	7.35	na
1995	4.12	1.82	11.78	0.73	73.49	0.26	7.80	na
1996	4.01	1.63	10.19	0.65	75.21	0.59	7.71	na
1997	3.85	1.59	9.48	0.54	75.17	1.36	8.00	na
1998	4.93	1.63	10.79	0.58	73.87	1.39	6.81	na
1999	7.27	1.60	11.62	0.61	69.48	1.71	7.70	na
2000	6.39	1.45	12.75	1.01	68.14	2.30	7.96	na
2001	6.11	1.25	11.39	1.54	70.19	2.21	7.32	na
2002	8.82	1.22	9.42	1.18	70.32	2.27	6.77	na
2003	9.77	1.11	9.32	1.89	66.48	3.31	8.12	na
2004	11.29	1.34	8.98	1.98	63.67	4.11	8.63	na
2005	10.70	2.00	9.39	2.38	66.04	3.18	6.31	na
2006	10.95	2.54	9.11	2.73	66.91	2.06	5.68	na
2007	14.09	2.59	9.26	2.80	62.88	1.69	6.68	na
2008	14.58	2.83	8.90	3.12	61.58	2.35	6.64	na
2009	11.30	3.40	7.00	3.98	68.02	2.24	4.06	na

na Not available.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

280

World supply, demand and price of gold

	Unit	2001	2002	2003	2004	2005	2006	2007	2008	2009
Supply										
Mine production										
Australia	t	280	266	281	258	262	247	247	215	224
Asia	t	331	309	330	292	336	284	312	261	328
Canada	t	157	148	141	129	120	104	102	95	96
China	t	193	202	211	217	230	247	281	292	324
Europe	t	20	21	20	20	18	18	16	15	18
Latin America	t	375	392	406	413	462	495	476	489	518
Russian Federation	t	165	181	182	182	175	173	169	189	205
South Africa	t	417	419	398	363	315	296	270	234	220
Other Africa	t	221	238	231	215	234	245	242	251	282
United States	t	335	299	281	260	262	252	238	234	219
Other	t	146	138	138	144	131	126	121	135	139
Total mine production	t	2 640	2 613	2 619	2 492	2 546	2 486	2 474	2 409	2 572
Forward sales and option hedging	t	- 151	- 412	- 289	- 438	- 92	- 434	- 444	- 352	- 252
Net official sales	t	520	547	620	479	663	365	484	232	30
Net scrap sales	t	749	872	985	881	902	1 133	982	1 316	1 674
Net other sales	t	115	171	0	0	0	0	0	0	0
Total supply a	t	3 909	4 033	4 225	3 866	4 111	3 984	3 940	3 957	4 276
Demand										
Fabrication consumption										
Jewellery	t	3 008	2 660	2 483	2 617	2 718	2 297	2 417	2 193	1 759
Electronics	t	197	206	233	262	282	308	311	293	246
Dentistry	t	69	69	67	68	62	61	58	56	53
Official coins	t	83	97	107	115	111	129	135	187	229
Medals and unofficial coins	t	29	27	26	26	37	59	73	70	57
Other	t	97	83	82	84	90	93	96	91	74
Total fabrication	t	3 483	3 142	2 998	3 172	3 299	2 947	3 089	2 889	2 417
Net bullion purchases	t	275	481	938	257	719	602	407	716	1 607
Total demand a	t	3 909	4 033	4 225	3 866	4 111	3 984	3 940	3 957	4 276
Gold price b	\$/oz	271.09	310.20	363.68	409.28	444.91	604.71	696.81	872.54	972.97

a Total supply is defined as the flow of new mine output, and the net sale of above ground stocks, while total demand is equal to net gold purchases. This classification of annual gold flows is symmetric, so that total annual supply equals total annual demand. **b** Average London AM fix price, expressed in US dollars.

Sources: ABARE, Australian Commodities, Canberra; Gold Fields Mineral Services Ltd, Gold, Surrey, London; London Bullion Market Association.

281

Summary of Australian statistics for gypsum

	Production	Exports ^a		
		Volume	Value	Unit value
	kt	kt	\$'000	\$/t
1964-65	846.9	140.9	747	5.30
1965-66	814.4	235.2	1 100	4.68
1966-67	928.8	211.0	879	4.17
1967-68	857.3	251.9	1 135	4.51
1968-69	912.1	232.8	1 006	4.32
1969-70	845.4	218.4	1 051	4.81
1970-71	889.2	258.3	1 251	4.84
1971-72	959.1	282.3	1 444	5.12
1972-73	1 165.2	437.3	2 128	4.87
1973-74	1 068.9	303.2	1 778	5.86
1974-75	932.6	215.8	1 539	7.13
1975-76	941.9	187.7	1 527	8.13
1976-77	916.0	190.5	1 624	8.52
1977-78	939.9	181.0	1 640	9.06
1978-79	1 230.2	423.0	3 105	7.34
1979-80	1 309.3	389.3	3 814	9.80
1980-81	1 752.3	645.2	6 861	10.63
1981-82	1 863.7	604.5	7 982	13.20
1982-83	1 509.8	800.0	11 044	13.81
1983-84	1 931.2	726.0	9 653	13.30
1984-85	1 744.5	516.0	8 362	16.21
1985-86	1 671.0	423.2	7 702	18.20
1986-87	1 811.9	195.4	2 968	15.19
1987-88	1 655.9	116.2	1 391	11.97
1988-89	1 834.6	68.1	1 048	15.39
1989-90	1 885.5	na	na	na
1990-91	1 381.7	53.2	759	14.28
1991-92	1 347.5	160.7	1 775	11.04
1992-93	1 589.5	161.6	1 807	11.19
1993-94	1 691.6	151.7	2 036	13.42
1994-95	1 995.5	231.1	2 993	12.95
1995-96	1 916.3	85.6	1 476	17.24
1996-97	2 392.6	116.9	2 134	18.25
1997-98	3 052.3	570.9	12 070	21.14
1998-99	3 465.6	988.8	18 781	18.99
1999-00	3 796.5	1 121.2	21 059	18.78
2000-01	3 225.5	724.4	16 096	22.22
2001-02	4 267.7	1 010.0	21 835	21.62
2002-03	4 066.0	1 045.0	18 788	17.98
2003-04	4 325.1	1 083.0	16 570	15.30
2004-05	3 881.6	878.4	15 172	17.27
2005-06	4 264.9	1 525.8	26 449	17.33
2006-07	3 951.4	1 179.7	21 550	18.27
2007-08	3 733.9	1 032.2	18 584	18.00
2008-09	na	856.5	20 673	24.14
2009-10	na	770.1	15 060	19.56

^a Raw gypsum. Bulk only to 1978; bulk and bagged thereafter. **na** Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; state mines departments and their equivalents; ABARES.

282 Australian production of gypsum, by state

	New South Wales	Victoria	Queensland	South Australia	Western Australia	Australia
	kt	kt	kt	kt	kt	kt
1964-65	59.3	171.3	0.0	568.9	47.4	846.9
1965-66	45.7	113.1	0.0	613.1	42.6	814.4
1966-67	43.2	227.7	0.0	617.2	40.7	928.8
1967-68	32.8	78.7	0.0	640.1	105.6	857.3
1968-69	32.1	85.7	0.0	728.8	65.4	912.1
1969-70	39.0	47.6	0.0	667.4	91.4	845.4
1970-71	36.4	46.3	0.0	652.7	153.9	889.2
1971-72	39.1	42.1	0.0	721.5	156.5	959.1
1972-73	32.8	43.7	0.0	921.9	166.8	1 165.2
1973-74	42.6	43.0	0.0	769.8	213.5	1 068.9
1974-75	34.2	54.1	0.0	759.3	85.1	932.6
1975-76	36.2	69.0	0.0	721.0	115.8	941.9
1976-77	33.6	84.8	0.0	694.0	103.7	916.0
1977-78	18.0	107.4	0.0	648.1	166.3	939.9
1978-79	26.8	201.2	0.0	782.3	219.9	1 230.2
1979-80	25.0	269.4	0.0	768.6	246.3	1 309.3
1980-81	20.2	282.8	0.0	1 017.2	432.0	1 752.3
1981-82	17.4	235.9	0.0	1 159.3	451.2	1 863.7
1982-83	14.7	79.3	0.0	924.0	491.9	1 509.8
1983-84	38.9	236.4	0.0	1 018.2	637.7	1 931.2
1984-85	51.0	239.8	0.0	1 001.9	451.8	1 744.5
1985-86	47.3	173.4	0.0	1 135.8	314.5	1 671.0
1986-87	34.5	412.0	0.0	1 229.4	136.0	1 811.9
1987-88	33.7	233.0	0.0	1 277.2	112.0	1 655.9
1988-89	27.8	241.4	0.0	1 399.4	166.0	1 834.6
1989-90	29.0	301.5	0.0	1 400.0	155.0	1 885.5
1990-91	27.5	49.2	0.0	1 222.5	82.5	1 381.7
1991-92	18.7	53.1	0.0	1 173.9	101.8	1 347.5
1992-93	24.0	180.2	0.0	1 260.5	124.8	1 589.5
1993-94	0.0	176.8	3.8	1 315.8	195.2	1 691.6
1994-95	69.0	193.1	24.9	1 478.9	229.6	1 995.5
1995-96	37.3	198.7	25.6	1 401.8	252.9	1 916.3
1996-97	43.2	501.5	40.6	1 555.3	251.9	2 392.6
1997-98	105.2	479.8	36.4	1 596.0	834.9	3 052.3
1998-99	174.4	404.9	29.6	1 601.3	1 255.5	3 465.6
1999-00	161.7	462.8	11.0	1 824.1	1 336.9	3 796.5
2000-01	198.2	437.7	27.0	1 615.2	947.4	3 225.5
2001-02	284.8	781.2	78.7	1 776.6	1 346.3	4 267.7
2002-03	183.3	546.4	55.3	1 822.3	1 458.6	4 066.0
2003-04	230.4	571.9	69.2	1 919.5	1 534.1	4 325.1
2004-05	174.6	450.5	52.1	1 796.7	1 407.7	3 881.6
2005-06	168.1	541.2	48.6	1 913.2	1 593.9	4 264.9
2006-07	129.3	305.8	67.4	1 898.7	1 550.2	3 951.4
2007-08	140.4	514.5	41.6	2 110.1	927.4	3 733.9
2008-09	na	407.1	34.4	1 986.2	959.4	na

na Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; state mines departments and their equivalents; ABARES.

283

Australian exports of gypsum

	Raw ^a				Total		Calcined	
	Indonesia	New Zealand	Singapore	Other	Volume	Value	Volume	Value
	kt	kt	kt	kt	kt	\$'000	t	\$'000
1964-65	5.1	102.2	0.0	33.6	140.9	747	na	na
1965-66	5.6	109.7	0.0	119.9	235.2	1 100	na	na
1966-67	14.0	87.7	0.0	109.3	211.0	879	na	na
1967-68	10.6	85.8	0.0	155.6	251.9	1 135	na	na
1968-69	21.1	101.5	17.0	93.2	232.8	1 006	na	na
1969-70	11.7	104.8	18.8	83.2	218.4	1 051	na	na
1970-71	15.9	100.3	12.1	129.9	258.3	1 251	na	na
1971-72	23.6	107.7	26.3	124.6	282.3	1 444	na	na
1972-73	26.2	147.5	42.1	221.4	437.3	2 128	na	na
1973-74	30.6	173.1	14.9	84.6	303.2	1 778	na	na
1974-75	15.6	151.7	27.3	21.2	215.8	1 539	na	na
1975-76	34.5	122.9	27.5	2.8	187.7	1 527	na	na
1976-77	37.9	113.0	15.9	23.8	190.5	1 624	na	na
1977-78	29.7	84.5	16.2	50.6	181.0	1 640	na	na
1978-79	148.1	63.7	49.7	161.5	423.0	3 105	1 696	223
1979-80	197.9	98.3	42.9	50.2	389.3	3 814	2 003	172
1980-81	183.0	104.6	67.1	290.5	645.2	6 861	1 771	188
1981-82	173.6	124.5	88.0	218.5	604.5	7 982	2 350	263
1982-83	174.4	98.2	110.4	416.9	800.0	11 044	3 187	416
1983-84	251.4	128.2	96.9	249.5	726.0	9 653	6 196	901
1984-85	192.6	143.0	57.0	123.5	516.0	8 362	4 751	728
1985-86	148.1	118.1	38.4	118.7	423.2	7 702	5 348	893
1986-87	15.5	122.7	0.0	57.2	195.4	2 968	4 866	848
1987-88	0.0	116.2	0.0	0.0	116.2	1 391	4 704	845
1988-89	0.1	68.0	0.0	0.0	68.1	1 048	3 940	752
1989-90	0.1	0.0	0.0	na	na	na	10 437	1 032
1990-91	0.0	15.5	0.0	37.6	53.2	759	5 702	1 100
1991-92	0.0	97.2	0.0	63.5	160.7	1 775	6 128	1 318
1992-93	0.0	111.5	12.0	38.1	161.6	1 807	8 610	1 958
1993-94	0.0	101.6	0.0	50.1	151.7	2 036	9 986	2 408
1994-95	0.0	155.2	12.4	63.5	231.1	2 993	8 836	2 338
1995-96	0.2	32.3	0.0	53.1	85.6	1 476	11 477	3 212
1996-97	1.3	0.4	0.1	115.0	116.9	2 134	12 012	3 487
1997-98	48.2	0.8	0.2	521.7	570.9	12 070	17 538	5 656
1998-99	38.5	0.1	0.0	950.2	988.8	18 781	6 926	2 046
2000-01	0.0	0.4	0.0	724.0	724.4	16 096	2 576	916
2001-02	0.0	0.1	0.0	1 009.8	1 010.0	21 835	779	494
2002-03	0.0	0.1	0.1	1 044.8	1 045.0	18 788	36 986	941
2003-04	0.0	0.1	0.1	1 082.8	1 083.0	16 570	30 921	1 589
2004-05	0.0	0.1	0.0	878.3	878.4	15 172	1 717	1 149
2005-06	0.0	126.1	0.1	1 399.7	1 525.8	26 449	977	452
2006-07	0.0	93.7	0.1	1 085.9	1 179.7	21 550	676	299
2007-08	0.0	348.0	0.1	684.0	1 032.2	18 584	201	238
2008-09	0.0	196.0	0.0	660.5	856.5	20 673	139	142
2009-10	0.0	249.0	0.0	521.1	770.1	15 060	92	104

^a Bulk only to 1978; bulk and bagged thereafter. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

284

World mine production of gypsum, by country

	Australia	Canada	China ^a	France	Japan	Spain	United States	Other	Total
	kt	kt	kt	kt	kt	kt	kt	kt	kt
1965	847	5 720	na	5 013	649	2 855	9 104	20 518	44 706
1966	814	5 427	na	5 272	597	2 947	8 751	20 898	44 706
1967	929	4 471	na	5 190	584	2 947	8 522	22 064	44 706
1968	857	5 664	na	5 162	572	3 963	9 235	23 064	48 516
1969	912	6 334	na	6 055	569	4 064	9 108	23 557	50 599
1970	845	5 844	na	6 088	581	4 288	8 584	24 570	50 800
1971	889	6 169	na	5 111	536	4 200	9 451	26 644	53 000
1972	959	7 200	na	5 850	465	4 100	11 840	27 236	57 650
1973	1 165	7 540	na	6 160	460	4 100	12 330	29 105	60 860
1974	1 069	7 470	na	6 220	na	4 400	10 890	31 941	61 990
1975	933	5 700	na	5 800	na	4 200	8 800	31 567	57 000
1976	942	6 002	na	5 900	na	4 200	10 868	34 858	62 770
1977	916	7 234	na	6 032	na	5 482	12 147	39 894	71 705
1978	940	8 075	1 500	6 036	na	5 369	13 509	40 280	75 709
1979	1 230	8 098	3 630	6 240	na	5 275	13 272	43 615	81 360
1980	1 309	7 209	3 360	5 889	na	5 223	11 227	43 150	77 367
1981	1 752	7 025	3 450	6 147	na	5 223	10 430	42 129	76 156
1982	1 864	5 987	3 540	6 039	6 363	5 048	9 560	33 913	72 314
1983	1 510	7 507	4 260	5 544	5 845	5 620	11 688	36 695	78 669
1984	1 931	7 756	4 810	5 400	6 100	5 365	12 990	36 378	80 730
1985	1 744	8 400	5 700	5 400	6 300	5 500	13 360	38 706	85 110
1986	1 671	8 500	6 500	5 500	6 300	5 500	14 300	39 309	87 580
1987	1 812	8 600	6 800	5 400	6 300	5 500	14 300	39 680	88 160
1988	1 656	8 500	8 100	5 400	6 300	5 500	14 870	49 534	99 860
1989	1 835	8 700	8 100	5 700	6 300	5 500	16 000	46 385	98 520
1990	1 886	8 200	8 000	5 620	6 350	5 000	14 550	48 055	97 660
1991	1 382	8 000	8 100	5 600	6 350	5 000	14 022	45 481	93 935
1992	1 348	7 054	10 977	5 715	5 443	4 990	14 759	47 257	97 791
1993	1 590	7 345	9 616	4 536	4 990	6 804	14 344	44 504	93 623
1994	1 692	8 500	10 500	5 000	5 300	7 250	17 200	45 735	101 000
1995	1 995	7 960	11 000	5 000	3 900	7 500	16 600	44 297	98 100
1996	1 916	8 330	8 000	5 000	5 350	8 000	17 500	45 802	99 700
1997	2 393	8 500	7 800	5 000	5 500	7 400	18 600	49 309	104 000
1998	3 052	8 100	9 000	4 500	5 300	7 400	19 000	51 128	107 000
1999	3 466	9 470	9 000	4 500	5 500	7 500	22 400	50 940	107 000
2000	3 796	8 550	6 800	4 500	5 600	7 500	19 500	45 233	106 000
2001	3 225	8 560	6 800	4 500	5 900	7 500	16 300	51 249	104 000
2002	4 268	8 850	6 850	3 500	5 900	7 500	15 700	48 432	101 000
2003	4 066	9 000	6 900	3 500	5 700	7 500	16 000	51 334	104 000
2004	4 325	9 340	7 000	3 500	5 800	11 500	17 200	50 335	109 000
2005	3 882	9 400	7 300	3 500	5 890	11 500	21 100	55 428	118 000
2006	4 265	9 500	7 500	4 800	5 950	13 200	21 100	58 685	125 000
2007	3 951	7 700	37 000	4 800	5 900	11 500	17 900	65 304	154 000
2008	3 734	5 740	40 700	4 800	5 800	11 500	14 400	76 060	159 000
2009	na	5 500	42 000	4 800	5 800	11 500	9 400	73 000 ^b	152 000

^a Excludes Hong Kong. ^b Includes Australia. **na** Not available.

Sources: ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; US Department of the Interior, US Geological Survey, *Mineral Commodity Summaries*, Washington DC; ABARES.

285

Summary of Australian statistics for iron ore and steel

	Production ^a				Exports		
	Iron ore		Pig iron	Crude steel	Iron ore and pellets	Pig iron	Crude steel ^{bs}
	Pellets kt	Total kt					
1966	0	11 071	4 743	5 891	2 045	97	255
1967	0	17 314	5 058	6 268	9 164	152	344
1968	3 000	26 632	5 573	6 503	16 398	246	356
1969	5 871	38 576	6 107	7 016	26 858	375	545
1970	5 957	51 188	6 148	6 822	41 112	310	226
1971	6 800	62 063	6 128	6 737	52 796	519	122
1972	6 424	64 401	6 491	6 743	54 079	582	597
1973	10 153	84 828	7 658	7 682	74 181	853	771
1974	10 066	96 950	7 250	7 755	83 654	753	775
1975	9 469	97 651	7 475	7 843	80 363	520	1 636
1976	9 594	93 255	7 417	7 774	81 231	698	1 534
1977	10 226	95 932	6 753	7 313	78 908	647	1 280
1978	9 471	83 134	7 337	7 589	75 264	711	1 008
1979	9 303	91 717	7 811	8 125	78 447	643	611
1980	5 329	95 534	6 959	7 594	80 375	515	306
1981	3 887	84 661	6 830	7 635	71 729	158	378
1982	3 321	87 694	5 956	6 371	72 567	101	218
1983	3 043	71 485	5 045	5 657	74 088	469	384
1984	3 497	89 046	5 329	6 303	85 477	71	294
1985	3 725	97 447	5 607	6 578	84 746	26	583
1986	3 338	94 015	5 889	6 703	79 523	26	496
1987	3 309	101 748	5 569	6 125	78 257	165	523
1988	3 400	96 084	5 730	6 399	94 855	25	843
1989	3 600	105 810	6 094	6 735	101 681	24	948
1990	4 537	109 166	6 125	6 666	95 928	0	1 740
1991	3 475	117 134	5 647	6 017	111 557	0	1 934
1992	1 437	113 097	6 388	6 990	103 487	0	2 315
1993	1 512	121 429	7 284	7 837	111 527	0	2 621
1994	1 507	128 662	7 855	8 455	119 093	0	3 069
1995	1 596	139 067	7 861	8 481	130 367	0	2 950
1996	1 608	147 200	7 381	8 429	128 274	22	3 130
1997	168	157 767	7 685	8 837	146 757	0	3 188
1998	3 618	153 459	7 723	8 886	136 418	0	3 364
1999	1 932	154 979	7 047	8 481	139 278	3	3 253
2000	2 066	167 935	7 049	7 855	157 368	3	2 815
2001	2 024	181 174	6 017	8 299	156 718	0	3 187
2002	2 139	187 198	6 106	8 874	165 869	0	3 385
2003	2 256	212 981	6 116	9 661	187 708	1	3 955
2004	2 103	233 994	5 735	8 104	209 828	0	2 997
2005	2 165	261 855	6 203	7 789	239 313	0	2 265
2006	2 441	275 098	6 433	7 937	247 429	67	2 595
2007	3 623	298 974	6 369	8 057	266 884	96	2 501
2008	3 734	342 422	6 057	7 724	309 473	81	1 811
2009	3 626	394 403	4 370	5 135	362 921	99	1 605

^a Iron ore figures expressed in natural weight. ^b Series up to and including 1987 do not include flat rolled products, bars and rods, and wire and steel sections. Subsequent series include all items in ABS, *Australian Harmonized Export Commodity Classification*, chapter 72, 'Iron and steel', excluding ferrous waste, scrap and ferroalloys. ^s ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

286

Volume of Australian exports of iron and steel, by destination ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa	8	5	7	2	5	6	6	1
Americas								
North	270	254	259	251	492	308	486	199
Other	44	35	15	4	14	47	22	7
Total	314	289	274	255	506	355	508	206
Asia								
China	877	1 251	430	6	6	4	102	56
Chinese Taipei	39	65	155	50	8	22	3	149
Hong Kong, China	9	12	5	15	10	6	3	1
India	41	6	5	1	18	4	3	12
Indonesia	36	45	60	50	25	25	54	24
Japan	175	3	5	27	5	7	4	8
Korea, Rep. of	149	271	93	78	129	209	131	117
Malaysia	17	94	51	6	32	61	86	39
Philippines	2	3	3	3	2	7	2	1
Singapore	51	7	7	3	5	12	11	8
Thailand	51	70	81	64	102	219	294	152
Other	78	139	50	57	25	72	97	134
Total	1 525	1 965	946	360	366	650	790	701
Europe	224	77	6	4	187	154	60	132
New Zealand	137	111	117	67	90	88	87	65
Other	65	77	13	10	10	13	29	8
Total	3 385	3 955	2 997	2 265	2 595	2 501	1 811	1 605

^a Includes all items in ABS, *Australian Harmonized Export Commodity Classification*, chapter 72, 'Iron and steel', excluding ferrous waste, scrap and ferroalloys. Data for slab, hot rolled, cold rolled and coated steel products became confidential in 2000. Estimates or export volumes are included in 'other' category.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra.

287 Australian supply and disposal of iron ore and steel

	Unit	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Production								
Iron ore and concentrate	kt	222 797	251 935	263 853	287 693	324 693	352 996	423 391
Pig iron	kt	5 926	5 969	6 318	6 392	6 329	4 352	5 929
Raw steel	kt	9 430	7 395	7 866	8 010	8 151	5 568	6 886
Exports								
Iron ore and pellets	kt	194 773	228 456	239 380	257 365	294 293	323 524	389 875
	\$m	5 277	8 120	12 854	15 512	20 511	34 239	34 516
Iron and steel s	kt	3 818	2 338	2 428	2 648	2 131	1 741	1 568
	\$m	2 004	2 031	1 674	1 743	1 562	1 363	1 120
Scrap	kt	955	1 009	1 876	1 328	1 783	1 742	1 606
	\$m	298	402	467	607	833	748	624
Export unit value								
Iron ore and pellets	\$/t	27.09	35.54	53.70	60.27	69.70	105.83	88.53

s ABARES estimate.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

288 Volume of Australian iron ore exports, by destination a

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Asia								
China	44 018	59 971	80 109	117 537	128 568	142 436	183 304	266 779
Chinese Taipei	9 347	8 664	9 095	9 144	9 448	9 997	9 993	8 332
Japan b	70 492	75 353	80 314	76 200	73 834	77 310	76 847	59 071
Korea, Rep. of	25 120	26 000	26 472	24 978	26 261	30 503	33 296	27 869
Other	865	594	494	215	208	212	146	198
United States	628	67	0	0	0	0	0	0
Western Europe	14 450	16 051	12 563	10 914	8 575	6 218	5 886	671
Other c	949	1 008	782	325	536	209	0	0
Total	165 869	187 708	209 828	239 313	247 429	266 884	309 473	362 921

a Dry weight. b Includes exports to the Philippines which were subsequently re-exported to Japan. c Includes data for which details of export destinations are not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

289

Summary of world statistics for iron ore and steel

	Production					Iron ore exports a
	Iron ore a		Iron b	Crude steel	Mt	
	Pellets	Total				
	Mt	Mt	Mt	Mt		
1966	58.0	625.9	335.8	471.3	214.9	
1967	71.5	629.2	352.4	493.3	223.7	
1968	94.5	687.7	378.4	523.9	256.7	
1969	104.3	720.3	408.4	570.9	278.8	
1970	117.9	773.9	426.5	595.3	323.1	
1971	122.2	780.5	423.1	582.3	318.0	
1972	127.5	781.7	447.1	630.2	311.4	
1973	150.7	845.6	493.5	696.4	377.0	
1974	153.6	896.3	503.4	703.5	411.8	
1975	161.5	888.8	469.9	643.5	381.0	
1976	174.5	922.9	489.4	675.1	379.8	
1977	163.3	880.8	485.8	675.3	358.0	
1978	182.6	891.3	506.7	716.5	350.6	
1979	205.4	947.6	528.3	746.7	398.1	
1980	186.3	917.9	508.1	716.3	384.6	
1981	195.2	894.6	497.2	707.1	372.9	
1982	155.1	818.2	452.6	644.9	329.3	
1983	171.0	782.1	458.1	663.4	315.1	
1984	192.8	882.2	490.7	710.3	372.4	
1985	201.9	909.6	499.6	718.9	375.8	
1986	196.5	920.7	496.3	714.0	370.0	
1987	211.5	945.5	509.0	735.5	367.8	
1988	230.2	964.4	538.4	780.1	400.9	
1989	237.1	991.0	544.8	785.9	424.3	
1990	225.3	980.6	531.6	770.1	397.1	
1991	211.5	952.1	508.6	736.2	398.9	
1992	205.9	907.8	476.4	719.6	334.0	
1993	205.3	944.3	477.4	727.6	354.0	
1994	218.7	967.8	482.6	725.1	383.0	
1995	245.3	918.6	524.2	752.3	459.8	
1996	238.9	898.0	517.4	750.1	442.7	
1997	249.5	924.4	546.6	798.9	473.8	
1998	242.6	906.6	539.5	777.3	453.9	
1999	233.5	884.6	541.1	789.0	437.6	
2000	259.1	959.4	576.3	847.7	499.0	
2001	239.1	930.3	578.4	850.4	493.3	
2002	267.6	986.5	611.0	903.9	533.9	
2003	284.3	1 159.7	670.1	969.7	581.6	
2004	305.7	1 250.2	724.1	1 068.6	672.5	
2005	314.7	1 393.5	793.5	1 146.2	715.4	
2006	320.6	1 571.8	875.0	1 250.2	761.7	
2007	326.2	1 698.8	946.3	1 343.5	823.0	
2008	312.7	1 693.0	927.4	1 329.7	881.8	
2009	227.2	1 587.7	900.2	1 219.7	949.4	

a Natural weight. **b** Total production of primary iron less total production of directly reduced iron.

Sources: Association of Iron Ore Exporting Countries, *Iron Ore Statistics*, Geneva; International Iron and Steel Institute, *Steel Statistical Yearbook*, Brussels; United Nations Conference on Trade and Development, Trust Fund on Iron Ore, *Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, *Review of Iron Ore Statistics*, *Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, *Statistical Issues: Statistics on Iron Ore*, Geneva; United Nations Conference on Trade and Development, Trust Fund Project on Iron Ore Information, *The Iron Ore Market 2008-2010*, Geneva; World Steel Association, web tables.

290 World iron ore production, by country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	Mt	Mt	Mt	Mt	Mt	Mt	Mt	Mt
Australia	187.2	213.0	234.0	261.9	275.1	299.0	342.4	394.4
Brazil ^b	225.1	245.6	270.5	292.4	321.5	375.1	385.0	302.5
Canada	30.9	33.3	28.3	30.1	35.0	34.1	32.1	33.0
China ^c	108.8	207.7	213.7	284.5	356.1	399.7	321.1	233.7
India	86.4	99.1	120.6	142.7	180.9	206.9	214.0	257.4
Russian Federation	84.3	91.4	97.0	95.1	102.5	105.0	99.9	90.9
South Africa	36.5	38.1	39.3	39.5	41.3	41.6	49.0	55.4
Sweden	20.3	21.5	22.3	23.3	23.3	24.7	23.8	17.7
Ukraine	58.9	62.5	65.5	68.6	73.1	77.4	71.7	65.8
United States	51.5	48.5	54.7	54.3	52.9	52.4	53.0	26.5
Venezuela	20.9	19.2	20.0	21.2	22.1	20.7	21.5	14.9
Other	75.7	79.9	84.3	80.0	88.0	62.2	79.5	95.5
Total	986.5	1 159.7	1 250.2	1 393.5	1 571.8	1 698.8	1 693.0	1 587.7

^a Natural weight. ^b Pellets not included. ^c Converted to correspond with world average Fe content.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; United Nations Conference on Trade and Development, *Trust Fund on Iron Ore, Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, *Review of Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, *Trust Fund on Iron Ore, The Iron Ore Market, 2008-2010*, Geneva.

291 Volume of world iron ore exports, by country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	Mt	Mt	Mt	Mt	Mt	Mt	Mt	Mt
Australia	165.9	187.7	209.8	239.3	247.4	266.9	309.5	362.9
Brazil	170.0	184.4	200.9	223.4	247.5	269.4	274.0	265.8
Canada	25.6	27.1	23.1	27.9	27.7	28.3	28.2	31.2
India	46.6	57.3	62.7	80.9	89.3	93.7	106.0	115.5
Mauritania	10.5	9.6	11.0	10.6	10.7	11.8	11.0	10.3
Russian Federation	13.0	16.2	17.0	20.1	22.8	25.5	22.5	21.3
South Africa	24.3	24.1	24.7	26.6	26.2	30.3	32.8	44.6
Sweden	14.2	15.6	17.3	17.8	18.2	19.4	17.8	15.8
Ukraine	18.7	20.2	18.1	19.6	20.2	20.7	22.8	27.6
Venezuela	6.7	7.4	9.3	7.6	5.6	6.5	5.5	4.0
Other	38.3	31.9	78.6	41.5	46.0	50.5	51.8	50.3
Total	533.9	581.6	672.5	715.4	761.7	823.0	881.8	949.4

^a Natural weight.

Sources: Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; United Nations Conference on Trade and Development, *Trust Fund on Iron Ore Information, The Iron Ore Market 2008-2010*, Geneva; United Nations Conference on Trade and Development, *Review of Iron Ore Statistics*, Geneva.

292

Volume of world iron ore imports, by region and country ^a

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Mt	Mt	Mt	Mt	Mt	Mt	Mt	Mt	Mt
Africa and Middle East									
Qatar	1.2	1.2	1.2	1.3	1.3	1.4	1.8	2.1	1.7
Saudi Arabia	4.4	4.7	4.3	3.9	9.7	5.5	6.0	6.8	7.4
Other	9.5	10.1	10.5	9.6	8.7	8.6	8.0	7.2	6.6
Total	15.1	15.9	16.0	14.8	19.7	15.5	15.8	16.1	15.7
Americas									
Argentina	4.5	5.2	6.3	13.5	5.7	6.7	5.8	4.6	2.0
Canada	5.9	6.8	6.6	8.0	9.6	7.6	7.3	9.3	3.1
Mexico	2.3	2.7	3.6	4.4	4.2	3.9	3.1	3.9	0.7
United States	10.6	12.5	12.5	11.8	13.0	11.7	9.2	9.2	3.9
Other	3.5	3.3	3.4	3.9	3.9	4.3	5.3	4.4	2.6
Total	26.8	30.6	32.5	41.5	36.3	34.1	30.7	31.4	12.3
Asia and Oceania									
China	92.4	111.4	148.1	208.1	275.3	326.3	383.1	444.0	628.2
Chinese Taipei	15.6	15.2	15.6	15.7	14.6	15.5	16.0	15.6	11.9
Indonesia	1.3	1.3	1.6	1.6	1.5	1.8	1.7	2.3	1.9
Japan	126.3	129.1	132.1	134.9	132.3	134.4	138.9	140.4	105.5
Korea, Rep. of	45.9	43.3	43.1	44.2	43.5	43.9	46.2	49.5	42.1
Malaysia	1.6	1.3	2.4	2.2	1.9	2.1	2.7	5.0	2.3
Pakistan	1.5	1.5	1.0	1.0	2.1	0.9	0.9	0.6	0.7
Other	4.6	5.0	4.8	4.6	5.3	0.8	1.2	0.7	2.8
Total	289.1	308.1	348.7	412.3	476.4	525.7	590.7	658.1	795.4
Europe									
Austria	5.3	5.8	5.7	5.8	7.4	7.7	9.0	8.0	4.6
Belgium-Luxembourg	11.2	12.2	11.6	10.4	9.4	11.4	9.6	12.3	3.3
Bulgaria	1.3	1.5	1.6	1.7	1.4	1.3	1.2	0.2	0.0
Czech Republic	6.9	6.8	8.2	9.4	6.8	7.6	5.3	6.8	4.8
Finland	3.9	3.8	4.2	3.8	4.2	3.5	3.2	3.0	2.2
France	16.7	19.0	19.0	20.8	19.5	19.9	20.1	18.3	10.0
Germany	40.1	44.3	33.9	43.3	39.1	44.9	46.2	45.4	28.8
Hungary	1.7	1.7	1.8	1.9	1.9	2.0	2.3	1.9	0.7
Italy	15.8	14.9	15.2	16.7	17.6	17.8	17.0	16.3	8.1
Netherlands	7.7	7.4	14.7	30.3	12.3	11.3	12.1	10.8	5.6
Poland	7.7	6.9	8.7	5.2	6.8	8.6	8.7	8.7	3.5
Portugal	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Romania	3.9	6.2	7.0	6.6	6.6	6.2	6.1	5.0	1.6
Russian Federation	8.8	8.7	10.1	10.4	9.7	10.6	13.5	12.4	10.0
Slovakia	4.6	5.1	5.7	5.3	5.5	6.4	5.9	4.8	4.5
Spain	6.6	6.2	5.8	6.1	6.2	5.8	6.1	6.5	4.0
Turkey	3.6	5.8	5.5	5.4	4.6	5.6	6.2	6.8	5.3
Ukraine	6.3	5.0	7.6	3.3	3.0	2.0	3.5	2.9	3.3
United Kingdom	15.4	13.3	16.1	15.3	16.1	16.4	17.4	15.3	9.2
Other	0.3	0.5	2.1	2.7	3.6	3.1	2.9	3.3	3.1
Total	168.1	175.1	184.5	204.4	181.6	192.1	196.3	188.7	112.6
Total	499.1	529.6	581.7	673.1	714.1	771.7	837.7	898.5	940.2

^a Natural weight.

Sources: United Nations Conference on Trade and Development, Trust Fund on Iron Ore, *Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, *Review of Iron Ore Statistics*, Geneva; United Nations Conference on Trade and Development, Trust Fund on Iron Ore, *The Iron Ore Market*, 2008-2010, Geneva.

293 Iron ore prices

	Australian export unit value ^a		Negotiated ^b	
	A\$/t	US\$/t	Fines USc/dmtu	Lump USc/dmtu
1966	8.38	9.34	12.00	15.50
1967	8.36	9.32	12.00	15.50
1968	8.67	9.66	12.00	15.50
1969	8.69	9.67	12.00	15.50
1970	8.04	8.97	12.00	15.50
1971	7.69	8.75	11.90	15.10
1972	7.29	8.69	11.80	15.00
1973	6.19	8.81	11.70	14.90
1974	7.04	10.15	13.30	14.80
1975	9.32	12.21	15.40	17.30
1976	10.23	12.53	17.40	19.30
1977	12.06	13.38	17.70	21.20
1978	12.06	13.81	20.20	21.70
1979	12.87	14.39	21.20	24.70
1980	14.59	16.63	23.10	24.30
1981	15.79	18.15	27.60	26.10
1982	19.88	20.20	29.70	31.20
1983	21.23	19.14	34.80	34.20
1984	18.87	16.58	30.45	40.00
1985	22.98	16.07	26.67	34.85
1986	24.33	16.25	27.05	30.87
1987	21.54	15.05	25.97	31.55
1988	18.68	14.60	24.67	28.78
1989	20.53	16.21	23.68	28.78
1990	23.55	18.34	26.76	33.76
1991	25.92	20.12	31.03	39.15
1992	27.18	19.16	33.49	41.48
1993	25.93	17.59	31.85	38.84
1994	21.75	15.84	28.35	35.34
1995	22.49	16.59	27.15	35.89
1996	22.68	17.68	28.78	37.68
1997	24.29	18.01	29.10	37.68
1998	29.23	18.34	29.92	38.79
1999	25.63	16.53	26.63	34.83
2000	28.14	16.38	27.79	36.84
2001	33.38	17.31	28.98	38.03
2002	31.33	17.04	28.28	36.13
2003	27.15	17.69	30.83	39.35
2004	29.40	21.61	35.99	45.93
2005	46.26	35.21	61.72	78.77
2006	58.06	43.63	73.45	93.74
2007	60.92	51.04	80.43	102.64
2008	97.40	82.99	144.67	201.69
2009	82.80	65.77	97.00	112.00
2010	na	na	207.68 ^c	231.53 ^c

^a Australia commenced commercial exports of iron ore in 1964. ^b Negotiated Japanese fiscal year hematite ores, fob. USc/dmtu from 2004. ^c Average of first three quarters of year. **na** Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; International Monetary Fund, *International Financial Statistics*, Washington DC; TEX Report Co. Ltd, *Iron Ore Manual*, Tokyo.

294

Summary of Australian statistics for lead

	Production			Consumption	Exports d		Price e
	Mine a	Bullion b	Refined c		Volume	Value	
	kt	kt	kt	kt	kt	\$m	\$/t
1966	371	75	193	65	354	79	248.8
1967	382	103	191	66	335	80	217.5
1968	389	118	175	66	334	87	218.6
1969	453	156	186	71	342	97	259.2
1970	457	171	180	62	401	123	282.1
1971	404	162	163	63	338	87	239.1
1972	396	139	180	63	320	87	241.3
1973	403	150	190	74	329	107	275.2
1974	375	144	193	72	315	155	389.4
1975	408	152	158	72	298	126	324.2
1976	397	161	182	75	359	157	358.6
1977	432	156	182	77	339	226	531.8
1978	400	152	204	74	369	236	563.2
1979	422	169	215	72	351	437	1 031.2
1980	398	160	200	79	344	570	843.3
1981	388	163	208	66	329	315	662.5
1982	455	182	219	56	397	334	622.4
1983	481	183	196	56	409	383	592.2
1984	441	179	199	59	427	358	515.3
1985	498	183	200	59	430	358	568.1
1986	445	188	156	60	412	361	604.5
1987	489	197	202	62	388	512	867.6
1988	462	191	193	60	420	490	885.7
1989	495	183	212	61	338	382	892.8
1990	565	195	212	58	398	464	1 123.6
1991	579	182	220	56	425	331	801.6
1992	580	231	232	58	542	460	813.6
1993	510	221	221	62	496	334	670.7
1994	505	197	212	78	465	368	810.8
1995	455	164	215	77	479	429	912.6
1996	527	191	204	67	488	489	1 074.7
1997	526	179	203	63	517	431	919.2
1998	618	164	173	54	578	544	914.3
1999	677	162	239	56	696	571	860.2
2000	699	139	223	41	656	576	854.9
2001	759	195	237	41	717	709	1 017.8
2002	694	187	268	39	751	706	1 025.6
2003	688	169	270	38	723	638	950.2
2004	674	140	232	39	715	907	1 356.0
2005	766	159	230	28	815	1 205	1 597.8
2006	668	118	206	27	669	1 368	1 995.5
2007	641	125	202	25	620	2 051	3 282.5
2008	650	167	221	23	604	1 709	2 885.9
2009	567	146	205	20	646	1 651	2 376.0

a Total metallic content of minerals produced. **b** Metal content. **c** Primary lead production (excludes scrap). **d** Quantities refer to the total metallic content of all ores and concentrates, intermediate products and refined metal; the value of lead contained in other mine and smelter products (for example, in zinc concentrates) is included in the value of the metal in which it is exported. **e** BHAS, 99.97–99.99 per cent, fob/for Port Pirie.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

295 Australian supply and disposal of lead

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Production									
Mine a	kt	695	677	682	760	642	641	596	604
Bullion b	kt	181	143	153	141	114	152	155	148
Refined									
Primary	kt	267	247	234	234	191	203	213	189
Secondary	kt	36	40	39	39	33	39	38	33
Exports									
Ores and concentrates	kt	366	417	417	502	422	308	381	490
	\$m	288.7	387.2	490.4	710.8	854.5	757.2	644.8	977.9
Bullion	kt	150	113	164	140	112	169	147	151
	\$m	164.8	141.9	245.8	235.3	268.1	595.1	431.8	409.4
Refined metal	kt	269	231	243	244	215	193	261	186
	\$m	203.4	198.8	305.1	349.7	456.6	674.4	560.1	425.2
Consumption c	kt	38	38	33	28	32	32	32	32
Export unit value									
Ores and concentrates	A\$/t	788.9	927.6	1 176.6	1 415.0	2 025.5	2 462.1	1 692.5	1 994.8
Bullion	A\$/t	1 097.3	1 253.4	1 498.9	1 679.2	2 401.5	3 528.5	2 935.2	2 716.7
Refined	A\$/t	755.5	860.9	1 256.0	1 431.1	2 120.7	3 494.1	2 148.7	2 288.2

a Total metallic content of minerals produced. **b** Metal content. **c** Refined metal only.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra.

296

Volume of Australian exports of lead, by destination ^a

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Ores and concentrates ^b								
Belgium	57	50	30	24	34	34	23	18
China	42	64	83	138	127	67	60	111
Japan	31	43	22	43	40	37	45	48
Korea, Rep. of	130	98	98	110	69	80	63	80
United States	na	na	na	na	0	0	0	0
Other	4	8	31	16	8	18	32	10
Total	264	263	264	331	280	235	222	267
Bullion								
United Kingdom	151	133	150	164	120	103	148	143
Total ^c	151	133	150	164	120	103	148	143
Refined metal								
Chinese Taipei	30	34	12	6	8	5	6	18
Hong Kong, China	13	17	11	15	17	21	6	1
India	20	13	23	32	36	37	29	49
Indonesia	13	17	11	12	11	5	12	15
Japan	na	na	na	na	0	0	0	0
Korea, Rep. of	33	42	49	19	35	44	35	48
Malaysia	15	18	13	9	11	12	19	11
South Africa	12	11	13	12	9	11	12	11
Thailand	21	25	14	26	20	17	16	11
United States	53	20	na	21	9	0	0	0
Other	53	70	65	93	62	72	83	83
Total	263	267	211	245	218	222	218	246

^a Excludes slags and residues and scrap. ^b Lead content of lead ores and concentrates only. ^c Includes a substantial amount of contained silver, for which separate details are not available. **na** Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

297

World production, consumption, stocks and prices of lead

	Production				Consumption	Stocks ^b	Price ^c
	Mine ^a	Refined metal		Total			
		Primary	Secondary ^b				
	kt	kt	kt	kt	kt	kt	US\$/t
1965	2 784	2 756	958	3 714	3 670	365	312.5
1966	2 937	2 885	940	3 825	3 847	368	258.5
1967	2 961	2 925	959	3 884	3 861	459	224.7
1968	3 034	3 094	1 044	4 138	4 200	338	236.9
1969	3 295	3 894	1 148	4 542	4 431	414	285.6
1970	3 443	3 616	1 287	4 688	4 502	500	303.8
1971	3 476	3 388	1 261	4 614	4 671	479	252.9
1972	3 585	3 491	1 324	4 803	4 863	470	303.8
1973	3 673	3 580	1 426	4 991	5 218	375	428.2
1974	3 642	3 593	1 462	5 042	5 173	523	591.5
1975	3 570	3 442	1 410	4 828	4 742	576	412.4
1976	3 464	3 539	1 487	5 049	5 183	482	452.8
1977	3 646	3 662	1 707	5 372	5 486	466	618.1
1978	3 622	3 697	1 738	5 459	5 583	396	658.0
1979	3 589	3 716	1 903	5 622	5 683	458	1 204.4
1980	3 495	3 600	1 815	5 417	5 429	525	910.3
1981	3 342	3 560	1 798	5 309	5 345	518	736.9
1982	3 366	3 641	1 649	5 210	5 179	560	543.9
1983	3 265	3 637	1 561	5 198	5 189	560	425.1
1984	3 126	3 470	1 829	5 299	5 312	535	444.3
1985	3 248	3 539	1 835	5 374	5 315	427	394.2
1986	3 082	3 345	1 891	5 236	5 380	480	406.9
1987	3 152	3 386	2 047	5 433	5 464	400	596.1
1988	3 151	3 475	2 102	5 577	5 527	443	656.3
1989	3 110	3 362	2 348	5 710	5 558	356	677.4
1990	3 110	3 087	2 369	5 456	5 411	540	820.0
1991	3 097	3 071	2 262	5 325	5 226	583	559.0
1992	3 047	3 238	2 268	5 437	5 174	735	541.0
1993	2 700	3 176	2 303	5 479	5 225	788	406.0
1994	2 707	2 968	2 483	5 462	5 488	750	549.0
1995	2 750	3 091	2 649	5 740	5 849	611	631.0
1996	3 006	3 074	2 784	5 822	5 987	438	774.0
1997	3 030	3 127	2 905	6 033	6 040	440	624.0
1998	2 990	3 095	2 918	6 010	6 049	420	528.6
1999	2 966	3 291	2 990	6 280	6 246	467	502.6
2000	3 046	3 546	3 109	6 655	6 518	440	453.9
2001	3 008	3 521	3 072	6 594	6 510	436	475.9
2002	2 830	3 560	3 110	6 670	6 649	483	452.6
2003	3 111	3 647	3 117	6 762	6 848	407	515.1
2004	3 129	3 776	3 181	6 954	7 294	294	886.5
2005	3 422	4 376	3 247	7 623	7 786	287	967.3
2006	3 525	4 601	3 333	7 924	8 063	270	1 289.2
2007	3 626	4 687	3 434	8 117	8 177	265	2 580.4
2008	3 749	5 125	3 528	8 653	8 648	306	2 092.4
2009	3 851	5 354	3 355	8 709	8 628	388	1 719.3

^a Metal content. ^b Western world refined metal. ^c Average London Metal Exchange cash price, midday, standard grade, minimum 99.97 per cent.
 Sources: ABARE, *Australian Mineral Statistics*, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal; London Metal Exchange.

298

World lead production, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Mine								
Africa	130	102	117	112	116	94	106	107
Morocco	62	41	44	46	53	36	34	36
South Africa	50	40	37	42	48	42	46	49
Americas	1 024	1 029	985	1 020	1 013	1 053	1 126	1 059
Canada	97	81	77	79	83	75	99	67
Mexico	139	139	118	135	135	137	141	154
Peru	297	308	306	319	313	329	345	302
United States	449	458	439	436	429	444	410	403
Asia	772	1 104	1 154	1 320	1 529	1 605	1 628	1 843
China	641	955	997	1 142	1 331	1 402	1 403	1 610
India	32	44	51	60	69	78	84	92
Kazakhstan	43	44	44	31	48	40	39	40
Korea, Dem. Rep. of	10	20	20	20	25	35	33	28
Other	43	41	42	67	56	50	69	73
Australia	658	648	642	715	621	589	594	525
Europe	245	228	230	256	246	284	295	317
Bulgaria	24	17	13	13	10	15	15	18
Ireland	32	50	65	72	62	57	50	43
Poland	57	55	53	51	50	47	48	34
Sweden	44	51	55	60	56	63	64	69
Other	88	55	44	60	68	102	118	153
Total	2 830	3 111	3 129	3 422	3 525	3 626	3 749	3 851
Refined ^b								
Africa	144	138	100	130	121	121	116	93
Americas	2 092	2 092	2 005	2 049	2 080	2 066	2 073	1 896
Canada	252	223	241	230	250	237	259	259
Mexico	232	239	242	256	253	255	255	228
Peru	120	112	119	122	120	117	114	26
United States	1 364	1 392	1 262	1 293	1 303	1 303	1 280	1 214
Other	124	126	141	148	154	154	165	169
Asia	2 361	2 630	3 002	3 463	3 819	3 902	4 382	4 830
China	1 325	1 564	1 934	2 391	2 715	2 783	3 206	3 708
India	78	71	49	59	114	132	165	197
Japan	286	295	283	275	280	276	279	248
Kazakhstan	152	141	144	135	116	118	98	89
Korea, Rep. of	243	230	243	256	240	260	270	238
Other	277	323	349	347	353	333	362	273
Australia	302	307	273	268	241	238	261	246
Europe	1 761	1 589	1 569	1 704	1 661	1 779	1 812	1 630
France	203	101	104	90	88	88	82	62
Germany	378	357	411	418	379	405	415	391
Italy	196	214	202	211	191	212	200	149
Spain	116	102	105	110	129	128	145	138
United Kingdom	368	320	243	304	298	275	303	312
Other	500	495	504	571	576	671	667	578
Other countries	10	6	5	9	2	11	9	14
Total	6 670	6 762	6 954	7 623	7 924	8 117	8 653	8 709

^a Lead content by analysis of lead ores and concentrates plus the lead content of other ores and concentrates known to be intended for lead recovery.

^b Includes primary and secondary lead.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

299

Volume of world lead trade, by major countries

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Exports								
Ores and concentrates ^a								
Australia	264	263	264	331	280	235	222	267
Belgium	64	51	68	58	66	58	71	89
Canada	42	8	1	0	0	17	13	1
Ireland	31	49	64	65	57	56	53	61
Peru	179	178	186	227	209	187	252	277
South Africa	45	39	44	51	40	68	65	47
Sweden	36	34	34	35	29	32	38	41
United States	245	257	295	387	302	303	278	287
Refined lead								
Australia	263	267	211	245	218	222	218	246
Belgium	62	75	62	90	71	84	79	93
Bulgaria	58	60	54	69	65	66	80	76
Canada	163	149	150	161	184	168	113	130
China	399	438	448	455	538	244	35	24
France	56	11	5	5	23	12	16	12
Germany	133	100	79	114	122	119	139	163
Mexico	9	12	9	18	22	46	81	119
Morocco	70	58	21	50	41	40	34	17
Peru	109	109	113	118	117	117	116	35
Sweden	58	66	63	63	69	60	49	44
United Kingdom	100	62	38	51	87	68	80	128
United States	31	92	59	46	53	52	69	78
Imports								
Ores and concentrates ^a								
Belgium	69	48	72	78	72	65	58	117
Canada	68	70	93	60	38	48	65	54
China	216	374	454	567	660	697	795	884
France	88	0	0	0	0	0	0	0
Germany	122	108	121	122	109	127	128	140
Italy	63	52	59	65	39	67	51	18
Japan	117	109	94	102	94	93	110	99
Korea, Rep. of	138	151	143	156	145	154	141	187
United Kingdom	0	0	0	0	0	0	0	0
Refined lead								
Austria	42	38	30	12	15	12	20	21
Chinese Taipei	122	98	125	98	101	78	54	96
France	74	101	86	106	121	115	97	39
Germany	136	134	89	111	127	116	99	87
Italy	107	61	95	67	99	94	86	77
Korea, Rep. of	147	153	157	159	121	110	92	131
Malaysia	77	125	62	34	44	35	33	na
Singapore	86	17	41	50	115	64	71	na
Spain	171	119	150	171	149	138	113	118
Thailand	65	79	77	68	81	68	54	70
United Kingdom	29	20	35	27	51	29	19	15
United States	211	176	199	298	333	267	313	253

^a Metal content.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

300

Summary of Australian statistics for limestone

	Production	Exports		Imports	
		Volume	Value	Volume	Value
	kt	t	\$'000	kt	\$'000
1969-70	9 996	na	na	511	708
1970-71	10 335	na	na	713	1 018
1971-72	10 494	na	na	605	1 001
1972-73	11 224	na	na	1 130	1 890
1973-74	11 046	na	na	1 432	2 572
1974-75	10 854	na	na	1 490	3 775
1975-76	10 583	na	na	1 527	4 475
1976-77	10 552	na	na	1 100	4 433
1977-78	10 924	na	na	1 380	7 085
1978-79	11 450	na	na	1 317	6 522
1979-80	11 730	na	na	1 077	4 928
1980-81	11 983	na	na	1 323	6 345
1981-82	12 698	15	1	977	4 344
1982-83	10 131	80	6	833	4 393
1983-84	9 608	35	8	940	5 381
1984-85	8 570	76	8	1 022	7 292
1985-86	10 747	21	10	996	10 794
1986-87	10 803	63	7	859	10 065
1987-88	10 614	30	6	1 004	11 480
1988-89	12 915	24	8	1 038	10 656
1989-90	13 283	15	17	na	9 382
1990-91	12 566	65	16	971	10 194
1991-92	na	258	49	1 161	12 412
1992-93	15 895	1 729	165	819	11 859
1993-94	na	18 893	1 145	1 011	17 156
1994-95	na	463	206	1 038	14 618
1995-96	na	133 080	1 889	991	14 777
1996-97	na	178 758	2 241	1 027	12 712
1997-98	na	226 529	2 724	1 576	15 391
1998-99	na	170 795	2 500	1 066	15 881
1999-00	15 853	229 934	4 515	705	10 540
2000-01	14 743	213 469	4 101	665	10 835
2001-02	15 215	241 526	4 683	595	9 995
2002-03	18 333	242 446	5 132	582	9 170
2003-04	17 152	332 931	6 516	547	8 695
2004-05	18 366	331 515	6 568	473	7 218
2005-06	18 293	177 610	4 254	475	7 130
2006-07	19 143	171 945	4 242	567	7 575
2007-08	18 436	745	734	693	8 182
2008-09	na	15 608	2 136	451	7 841
2009-10	na	2 178	1 223	682	10 302

na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; state mines departments and their equivalents; ABARES.

301 Australian production of limestone, by state

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Australia
	kt	kt	kt	kt	kt	kt	kt
1964-65	2 850	1 483	818	555	1 587	343	7 637
1965-66	2 738	1 831	886	571	1 478	350	7 854
1966-67	2 749	2 024	1 038	710	1 617	351	8 489
1967-68	2 729	1 849	1 198	745	1 583	504	8 608
1968-69	2 955	2 058	1 240	996	1 801	559	9 608
1969-70	3 155	2 022	1 242	1 201	1 853	523	9 996
1970-71	3 224	2 200	1 470	1 175	1 782	486	10 335
1971-72	3 403	2 127	1 590	1 301	1 484	581	10 494
1972-73	3 656	2 248	1 740	1 227	1 719	634	11 224
1973-74	3 779	2 192	1 758	1 157	1 562	599	11 046
1974-75	3 295	2 255	1 872	1 378	1 508	545	10 854
1975-76	3 096	2 068	1 959	1 104	1 720	635	10 583
1976-77	2 787	2 105	1 952	1 221	1 827	659	10 552
1977-78	2 903	2 245	1 802	1 365	1 890	718	10 924
1978-79	3 315	1 653	2 224	1 369	2 136	754	11 450
1979-80	3 496	2 211	1 951	1 232	1 120	720	11 730
1980-81	3 620	2 249	1 842	1 382	2 119	771	11 983
1981-82	3 417	2 303	2 235	1 762	2 061	910	12 698 a
1982-83	2 881	2 143	1 478	1 203	1 826	581	10 131 b
1983-84	3 234	2 507	1 634	na	1 469	763	9 608 c
1984-85	3 222	2 749	na	na	1 798	800	8 570 d
1985-86	3 420	2 776	1 687	na	2 012	852	10 747 c
1986-87	3 429	2 463	2 160	na	1 942	809	10 803 c
1987-88	3 411	2 580	1 880	na	1 918	826	10 614 c
1988-89	3 667	2 684	1 987	1 739	1 918	920	12 915
1989-90	3 972	2 639	2 121	1 699	1 889	963	13 283
1990-91	3 318	2 346	2 309	1 738	1 903	951	12 566
1991-92	3 410	na	2 369	2 054	2 014	na	na
1992-93	3 529	4 566	2 432	2 104	2 429	835	15 895
1993-94	na	na	2 485	2 147	2 666	na	na
1994-95	na	na	2 596	2 195	2 456	na	na
1995-96	3 746	na	na	2 612	1 729	na	na
1996-97	3 953	na	2 127	2 353	2 760	na	na
1997-98	3 887	na	1 994	2 280	2 476	na	na
1998-99	4 194	na	2 407	3 046	2 272	na	na
1999-00	4 164	2 127	2 552	3 008	2 580	1 843	15 853
2000-01	4 031	1 776	689	3 835	2 478	1 894	14 743
2001-02	4 077	992	2 776	3 196	2 164	1 934	15 215
2002-03	4 534	1 228	2 791	4 884	2 852	1 961	18 333
2003-04	4 561	1 201	2 830	4 614	1 983	1 924	17 152
2004-05	4 813	1 133	3 101	4 001	3 475	1 764	18 366
2005-06	4 856	1 316	2 954	4 009	3 124	2 034	18 293
2006-07	4 489	1 565	3 954	3 805	3 411	1 918	19 143
2007-08	4 814	1 996	3 378	3 880	2 177	2 101	18 436
2008-09	na	1 760	3 048	3 573	1 755	2 121	na

a Includes 10 000 tonnes for the Northern Territory. **b** Includes 18 000 tonnes for the Northern Territory. **c** Excludes Western Australia. **d** Excludes Queensland and Western Australia. **na** Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; state mines departments and their equivalents; ABARES.

302 Australian imports of limestone and lime

	Limestone				Lime	
	Japan	Other	Total		Volume	Value
			Volume	Value		
	kt	kt	kt	\$'000	t	\$'000
1969-70	511	0	511	708	na	na
1970-71	713	0	713	1 018	na	na
1971-72	605	0	605	1 001	na	na
1972-73	1 130	0	1 130	1 890	na	na
1973-74	1 432	0	1 432	2 572	na	na
1974-75	1 449	41	1 490	3 775	na	na
1975-76	1 526	0	1 527	4 475	na	na
1976-77	1 099	0	1 100	4 433	na	na
1977-78	1 332	48	1 380	7 085	na	na
1978-79	1 269	48	1 317	6 522	na	na
1979-80	978	99	1 077	4 928	na	na
1980-81	1 275	48	1 323	6 345	3 445	355
1981-82	946	31	977	4 344	8 158	1 050
1982-83	833	0	833	4 393	1 999	273
1983-84	940	0	940	5 381	28 026	2 145
1984-85	1 022	0	1 022	7 292	16 927	1 556
1985-86	996	0	996	10 794	230	103
1986-87	859	0	859	10 065	511	322
1987-88	1 004	0	1 004	11 480	470	211
1988-89	1 038	0	1 038	10 656	467	275
1989-90	na	na	na	9 382	478	372
1990-91	969	3	971	10 194	189	105
1991-92	1 120	41	1 161	12 412	369	114
1992-93	777	42	819	11 859	449	182
1993-94	948	63	1 011	17 156	334	125
1994-95	916	122	1 038	14 618	1 659	374
1995-96	986	5	991	14 777	342	103
1996-97	1 010	17	1 027	12 712	3 444	431
1997-98	1 498	78	1 576	15 391	309	82
1998-99	943	123	1 066	15 881	426	102
1999-00	680	25	705	10 540	289	74
2000-01	615	50	665	10 835	2 786	397
2001-02	553	42	595	9 995	2 848	435
2002-03	525	56	582	9 170	307	106
2003-04	473	75	547	8 695	556	87
2004-05	415	58	473	7 218	1 176	191
2005-06	420	55	475	7 130	618	204
2006-07	503	64	567	7 575	2 605	291
2007-08	648	45	693	8 182	1 108	177
2008-09	399	52	451	7 841	7 587	1 640
2009-10	656	26	682	10 302	13 689	1 905

na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

303

Summary of Australian statistics for manganese

	Mine production	Exports		Prices ^b US\$/mtu
	(ore) kt	Ore kt	Ferromanganese ^a kt	
1965	102	67	0	78
1966	318	144	0	80
1967	558	320	0	73
1968	744	565	0	64
1969	903	664	0	53
1970	751	631	0	53
1971	1 051	794	0	64
1972	1 165	na	0	62
1973	1 522	1 513	na	76
1974	1 522	1 203	1	116
1975	1 555	1 132	na	139
1976	2 154	1 711	1	142
1977	1 389	811	13	148
1978	1 257	936	19	141
1979	1 724	1 157	32	135
1980	2 020	1 328	23	164
1981	1 449	900	16	172
1982	1 127	906	17	164
1983	1 370	1 004	29	137
1984	1 849	1 460	19	137
1985	2 003	1 403	20	139
1986	1 649	1 145	44	138
1987	1 854	1 306	47	128
1988	1 986	1 553	41	165
1989	2 119	1 620	27	285
1990	1 950	1 600	43	396
1991	1 390	1 075	20	400
1992	1 239	902	46	377
1993	1 887	1 720	59	267
1994	1 985	1 590	76	212
1995	1 905	1 630	73	204
1996	2 109	1 740	59	212
1997	2 136	1 541	41	206
1998	1 501	1 067	57	204
1999	1 899	1 213	na	191
2000	1 658	1 411	na	186
2001	1 961	1 591	na	199
2002	2 189	1 836	na	199
2003	2 564	2 308	na	199
2004	3 431	1 518	na	199
2005	3 830	2 929	na	327
2006	4 549	4 207	na	260
2007	5 265	4 840	na	357
2008	4 812	4 002	na	1 410
2009	4 445	3 288	na	546

^a Data became confidential in 1999. ^b Annual average of free market prices; Manganese ore: 48–50 % Mn. ^{na} Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade*, Australia, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; UNCTAD Commodity Price Bulletin.

304 Australian supply and disposal of manganese

		2002	2003	2004	2005	2006	2007	2008	2009
Production									
Manganese ore	kt	2 189	2 564	3 431	3 830	4 549	5 265	4 812	4 445
Exports									
Manganese ore ^s	kt	1 836	2 308	1 518	2 929	4 207	4 840	4 002	3 288
Imports									
Ferromanganese	kt	6.0	6.9	9.8	7.3	8.4	9.0	10.7	4.9
	\$m	5.4	5.8	12.5	11.4	9.8	10.1	33.8	11.2
Ferrosilicon and silicomanganese	kt	30.7	31.7	33.5	37.3	34.7	41.0	45.1	27.6
	\$m	34.5	31.6	35.3	42.2	43.2	49.8	80.0	50.1
Prices									
Japanese negotiated ^a	US\$/mtu	1.97	2.12	2.45	3.98	3.00	2.70	11.20	3.50

^a High grade ore (48 per cent Mn) to Japan for Japanese fiscal year commencing 1 April. ^s ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

305 World production of manganese ore, by country

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Australia	2 189	2 564	3 431	3 830	4 549	5 265	4 812	4 445
Brazil	2 529	2 544	3 143	3 200	3 128	1 866	2 400	2 200
China	5 300	5 300	5 300	7 500	8 000	8 000	8 500	10 000
Gabon	1 856	2 000	2 460	2 859	3 000	3 300	3 250	2 200
Georgia	103	174	219	252	329	368	370	370
Ghana	1 136	1 509	1 594	1 715	1 659	1 089	1 167	600
India	1 625	2 018	2 149	2 163	1 910	2 348	2 735	2 300
Kazakhstan	1 835	2 361	2 318	2 233	2 531	2 482	2 198	2 468
Mexico	172	294	357	350	336	401	421	304
South Africa	3 082	3 799	4 207	4 612	5 213	5 341	6 807	3 923
Ukraine	2 762	2 523	2 278	2 226	2 245	2 390	1 975	1 127
Others	690	254	331	419	384	510	906	1 001
Total	23 279	25 340	27 786	31 357	33 283	33 360	35 541	30 937

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; World Bureau of Metal Statistics, *World Metal Statistics Yearbook*, London.

306 Summary of Australian statistics for nickel

	Production a							
	Smelter and refinery b							
	Mine	Intermediate products c	Refined nickel class 2 d	Refined nickel class 1 e	Exports		Imports	Price g
					volume fs	value s		
	kt	kt	kt	kt	kt	\$m	\$m	A\$/t
1971	35.5	0.0	0.0	15.0	na	na	11.9	2 576.9
1972	35.5	0.0	0.0	16.5	na	na	8.3	2 583.7
1973	40.1	5.8	0.0	19.8	na	na	13.3	2 370.3
1974	45.9	14.6	0.0	20.5	na	96.0	12.8	2 653.7
1975	75.8	32.2	10.3	22.6	na	172.6	12.1	3 489.6
1976	82.5	32.0	18.0	21.8	na	260.9	18.5	4 059.6
1977	85.9	33.2	17.4	16.7	na	252.5	21.0	4 691.2
1978	82.4	32.7	18.7	18.6	na	222.1	25.1	4 026.4
1979	69.7	38.7	17.4	21.9	na	327.2	21.6	5 354.2
1980	74.3	32.5	17.9	17.4	na	427.0	30.4	5 728.3
1981	74.3	32.9	19.3	23.2	na	388.1	21.4	5 197.7
1982	87.6	49.4	20.6	25.3	na	393.7	19.7	4 771.7
1983	76.6	49.8	12.3	29.5	na	321.6	7.2	5 205.2
1984	76.9	51.1	13.1	25.6	na	386.0	15.2	5 420.7
1985	85.8	51.6	17.9	23.0	na	498.6	17.5	7 020.7
1986	76.7	49.1	20.4	21.6	na	440.3	22.3	5 813.7
1987	74.6	47.8	19.9	24.6	na	390.0	24.1	6 973.9
1988	58.0	40.0	21.3	20.3	62.1	633.5	13.7	18 164.3
1989	63.1	41.6	22.2	18.3	65.0	851.7	20.2	16 886.4
1990	67.8	49.2	22.5	25.2	73.7	666.5	30.2	11 422.9
1991	67.6	54.8	24.9	27.9	82.7	682.5	37.6	10 511.2
1992	57.9	47.7	25.9	29.7	75.4	768.7	48.5	9 823.6
1993	106.3	46.1	26.0	35.4	95.3	574.3	49.4	7 801.1
1994	193.2	68.4	23.0	43.5	111.4	765.0	57.3	8 702.9
1995	192.1	75.9	18.6	58.3	122.9	1 188.6	71.8	11 154.4
1996	183.2	76.8	12.6	61.4	132.0	1 081.0	70.0	9 628.5
1997	185.3	85.8	14.8	58.9	144.4	1 094.4	66.0	9 341.5
1998	192.1	100.1	15.3	64.3	171.6	985.7	66.0	7 376.6
1999	183.4	79.7	10.2	73.4	149.9	1 117.9	60.4	9 327.4
2000	169.2	100.9	10.2	98.7	187.8	2 366.8	80.8	14 851.6
2001	195.5	35.0	8.5	115.5	197.4	2 076.2	88.1	11 476.6
2002	188.2	32.5	9.5	120.8	200.3	2 199.4	89.8	12 448.7
2003	191.2	46.5	11.8	115.8	213.1	2 686.7	92.1	14 766.4
2004	186.8	42.9	10.2	112.4	204.0	2 673.2	104.5	18 826.6
2005	188.9	55.5	9.7	112.6	220.9	2 984.8	112.2	19 365.0
2006	185.0	48.0	11.4	105.1	199.8	4 242.1	180.2	32 290.0
2007	184.9	52.8	14.2	100.3	194.8	7 144.4	282.9	44 482.4
2008	199.2	31.1	19.4	89.5	209.8	4 172.7	223.0	24 782.9
2009	165.8	27.5	8.0	123.2	215.0	2 775.6	133.3	18 433.2

^a Total metallic content of minerals produced. ^b Includes imported ores for processing at the Yabulu refinery in Queensland. ^c Includes matte and speiss for further refining. Incomplete series from 2001. ^d Product with a nickel content of less than 99 per cent. Includes ferronickel, oxides and oxide sinter. Excludes nickel-cobalt sulphides. ^e Products with a nickel content of 99 per cent or more. ^f Total metallic content. ^g London Metal Exchange average cash settlement price for refined nickel, melting grade, in Australian dollar equivalent. ^s ABARES estimate. ^{na} Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, AGPS, Canberra; International Nickel Study Group, *World Nickel Statistics*, Lisbon, Portugal; World Bureau of Metal Statistics, *World Metal Statistics*, London; London Metal Exchange.

307

World production, consumption and prices of nickel

	Production		Stocks ^a	Consumption ^s	Price ^b
	Mine ^s kt	Smelter/refinery ^s kt			
1965	462	440	na	473	1 735.0
1966	443	429	na	512	1 739.0
1967	508	493	na	524	1 936.0
1968	580	524	na	537	2 075.0
1969	547	517	na	549	2 363.0
1970	702	645	na	625	2 846.0
1971	718	655	na	577	2 932.0
1972	662	624	na	618	3 080.0
1973	719	703	na	696	3 373.0
1974	792	765	na	751	3 825.0
1975	794	741	171	627	4 570.0
1976	814	790	179	728	4 973.0
1977	830	767	247	701	5 203.0
1978	684	651	149	755	4 609.0
1979	721	720	87	811	5 986.0
1980	786	788	204	774	6 530.3
1981	765	762	218	718	5 973.3
1982	687	695	202	722	4 848.5
1983	718	745	183	761	4 692.0
1984	815	822	126	852	4 761.5
1985	879	848	131	834	4 910.3
1986	844	821	126	838	3 883.0
1987	889	857	92	909	4 871.3
1988	928	900	85	930	14 191.8
1989	972	918	97	911	13 334.8
1990	983	931	88	926	8 895.0
1991	946	921	113	886	8 158.3
1992	897	886	176	809	6 923.5
1993	908	809	226	785	5 293.0
1994	877	825	236	871	6 339.2
1995	1 007	919	148	984	8 228.8
1996	1 051	953	144	943	7 506.0
1997	1 073	1 012	156	1 016	6 927.2
1998	1 117	1 034	157	1 009	4 629.1
1999	1 058	1 028	124	1 082	6 014.8
2000	1 177	1 082	93	1 123	8 645.6
2001	1 225	1 160	100	1 104	5 951.0
2002	1 248	1 180	97	1 175	6 769.9
2003	1 264	1 192	99	1 219	9 621.6
2004	1 327	1 252	98	1 246	13 835.9
2005	1 388	1 293	112	1 248	14 739.6
2006	1 486	1 352	87	1 392	24 262.3
2007	1 608	1 430	125	1 326	37 273.1
2008	1 549	1 396	155	1 278	21 115.8
2009	1 347	1 331	234	1 241	14 642.1

^a Commercial stocks excluding those held by the former Soviet Union. ^b London Metal Exchange cash settlement price for refined nickel, melting grade. Prior to 1980, US producer price for electrolytic cathodes. ^s ABARES estimates prior to 1989. **na** Not available.

Sources: International Nickel Study Group, *World Nickel Statistics*, Lisbon, Portugal; World Bureau of Metal Statistics, *World Metal Statistics*, London; London Metal Exchange; ABARES.

308

World nickel smelter/refinery production, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa	55.0	54.0	54.8	55.5	56.0	48.8	42.1	36.4
South Africa ^b	32.7	37.6	41.4	42.4	41.6	34.4	30.2	31.4
Zimbabwe	22.3	16.4	13.3	13.1	14.4	14.4	11.9	5.0
Americas	290.4	281.4	313.2	308.4	324.5	330.7	312.9	239.2
Brazil	23.7	24.6	26.2	30.3	31.2	31.5	30.2	28.1
Canada	144.5	124.4	151.5	139.7	153.7	162.6	175.8	116.9
Colombia	44.0	47.9	48.8	52.8	51.3	49.4	41.6	50.9
Cuba	39.2	40.1	39.6	39.6	42.0	41.5	35.6	33.0
Dominican Republic	23.5	27.2	29.5	28.7	29.7	29.1	18.8	0.0
United States	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Venezuela	15.5	17.2	17.5	17.4	16.6	16.6	10.9	10.3
Asia	220.3	238.9	249.4	269.8	303.0	379.3	376.1	410.7
China	53.5	64.7	72.6	98.0	136.0	199.3	200.3	253.8
Indonesia	8.9	8.9	7.3	6.4	14.5	18.5	17.6	12.5
Japan	157.9	165.3	169.5	165.5	152.5	161.5	158.2	144.3
Europe	433.7	451.4	468.5	485.6	500.1	515.3	515.8	453.8
Austria	1.0	1.0	1.3	0.6	0.7	0.9	0.8	0.7
Finland	55.3	51.0	49.6	40.8	47.3	55.0	56.7	40.8
France	11.4	11.1	9.6	12.7	13.3	13.2	13.2	14.0
Greece	19.2	18.0	18.1	19.2	17.7	18.7	16.7	8.3
Macedonia ^c	5.2	5.5	5.1	7.8	10.9	15.0	15.1	12.0
Norway	68.5	77.2	71.4	84.9	80.9	87.6	88.7	88.6
United Kingdom	33.8	24.2	38.6	37.1	38.0	34.1	41.0	17.8
Serbia	0.0	0.0	0.0	0.0	0.0	0.8	7.1	4.7
Russian Federation	239.3	263.4	262.8	270.0	273.3	272.0	257.7	254.0
Ukraine	0.0	0.0	12.0	12.5	18.0	18.0	18.8	12.9
Oceania	179.0	178.3	165.6	169.0	165.1	159.5	146.4	169.4
Australia	130.4	127.6	122.6	122.3	116.5	114.5	108.9	131.2
New Caledonia (Fr)	48.7	50.7	43.0	46.7	48.6	45.0	37.5	38.2
World total	1 180.1	1 192.2	1 252.1	1 293.2	1 351.8	1 430.3	1 395.8	1 331.1

^a Includes the metal content of smelter/refinery production of electrolytic nickel, nickel pellets, briquettes, steel making powder, nickel salts, chemical grade nickel oxide, ferronickel, nickel oxide sinter and utility nickel. ^b Includes Bophuthatswana production. ^c Former Yugoslavian Republic of Macedonia.
 Sources: International Nickel Study Group, *World Nickel Statistics*, Lisbon, Portugal; World Bureau of Metal Statistics, *World Metal Statistics*, London; ABARES.

309

World nickel mine production, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa	73.2	82.6	75.2	79.3	80.6	80.8	75.4	72.1
Botswana	26.7	31.0	25.2	27.7	30.0	35.0	34.9	32.4
South Africa ^b	38.8	42.1	40.5	42.4	41.8	37.2	31.7	34.6
Zimbabwe	7.8	9.5	9.5	9.2	8.8	8.6	7.9	4.8
Americas	398.8	393.7	424.8	446.8	494.5	517.8	475.2	317.1
Brazil ^c	36.8	37.8	37.8	36.0	42.6	38.4	38.4	38.1
Canada	189.3	162.8	186.5	198.4	233.5	254.8	259.6	136.6
Colombia	58.5	70.8	75.1	89.0	94.1	100.5	77.0	72.0
Cuba	75.2	78.0	78.0	77.4	78.0	78.4	70.5	60.0
Dominican Republic ^c	23.5	27.2	30.0	29.0	29.7	29.1	18.8	0.0
United States	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Venezuela	15.5	17.0	17.5	17.0	16.6	16.6	10.9	10.4
Asia	200.3	226.4	222.7	232.4	278.8	349.6	367.8	401.2
China	54.6	60.6	63.0	59.8	68.9	67.5	68.4	79.4
Indonesia	121.6	143.9	142.7	150.0	150.0	201.4	219.3	202.8
Kazakhstan	0.0	0.0	0.0	0.5	1.0	1.2	0.8	0.0
Philippines	24.1	22.0	17.0	22.2	58.9	79.5	79.3	119.0
Europe	267.5	270.7	300.8	328.9	344.8	354.3	328.1	298.2
Finland	2.5	3.4	3.4	3.4	3.0	3.6	3.3	1.4
Greece ^c	22.7	21.4	21.7	23.2	21.7	21.2	18.6	10.2
Macedonia ^d	5.2	5.5	5.3	7.8	10.9	15.0	15.1	12.0
Norway	2.1	0.3	0.4	0.3	0.4	0.4	0.4	0.4
Russian Federation	235.0	240.0	264.0	280.0	286.0	288.0	267.5	261.5
Serbia	0.0	0.0	0.0	0.0	0.0	0.8	7.1	4.7
Ukraine	0.0	0.0	6.0	6.0	12.0	12.0	8.0	0.0
Oceania	288.1	303.2	305.0	300.8	288.0	310.1	301.8	258.6
Australia	188.2	191.2	186.8	188.9	185.0	184.9	199.2	165.8
New Caledonia (Fr)	99.9	112.0	118.3	112.0	103.0	125.2	102.6	92.8
World total	1 248.2	1 263.8	1 326.8	1 388.2	1 486.3	1 608.1	1 549.3	1 347.2

^a Nickel content of all ores and concentrates. ^b Includes Bophuthatswana production. ^c Figures refer to nickel content of ferronickel. ^d Former Yugoslavian Republic of Macedonia.

Sources: International Nickel Study Group, *World Nickel Statistics*, Lisbon, Portugal; World Bureau of Metal Statistics, *World Metal Statistics*, London; ABARES.

310 World primary refined nickel consumption, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa	35.9	45.5	45.5	32.0	42.0	33.6	27.0	31.3
South Africa	34.7	44.0	44.0	30.5	40.5	31.5	24.9	29.7
Other	1.2	1.5	1.5	1.5	1.5	2.1	2.1	1.6
Americas	159.7	159.0	164.6	174.3	182.7	171.4	160.5	121.8
Brazil	23.6	25.3	23.3	23.5	24.6	23.0	20.7	21.9
Canada	10.5	10.0	8.0	9.3	7.8	7.6	7.0	4.8
Mexico	1.6	2.0	2.2	2.5	2.7	3.2	3.0	2.4
United States	120.6	117.6	128.6	136.1	144.8	134.6	126.6	90.3
Other	2.9	4.1	2.5	2.9	2.8	3.0	3.2	2.4
Asia	501.2	550.4	579.6	592.1	677.7	690.9	688.3	760.3
China	93.6	125.0	150.0	190.0	255.0	330.0	360.0	442.5
Chinese Taipei	91.0	90.9	85.0	76.0	88.0	69.5	55.0	70.8
Hong Kong, China	4.7	5.5	5.8	5.0	5.0	4.8	4.8	4.8
India	25.5	26.0	27.4	30.0	33.0	33.0	32.0	32.1
Japan	191.2	192.8	192.5	172.8	183.2	169.0	157.6	121.3
Korea, Rep. of	83.2	98.0	103.2	99.0	93.0	62.5	56.0	66.9
Thailand	2.2	2.0	2.4	2.6	2.6	2.8	2.8	3.1
Turkey	1.8	2.0	2.4	3.3	3.2	3.0	2.8	2.4
Other	8.0	8.2	10.9	13.4	14.7	16.3	17.3	16.4
Europe	476.0	461.0	454.3	447.2	485.8	414.3	399.6	325.0
Austria	4.8	5.0	5.5	6.5	7.0	8.1	8.4	6.0
Belgium-Luxembourg	32.5	39.0	40.7	46.0	54.0	41.1	43.2	28.6
Czech Republic	2.0	2.0	2.3	1.8	2.0	3.0	2.5	2.9
Finland	40.6	52.0	53.0	50.0	55.0	36.0	34.5	20.4
France	55.3	43.6	34.0	30.5	32.7	28.9	29.7	22.7
Germany	106.6	99.7	99.6	96.1	105.5	96.5	90.9	80.1
Italy	66.0	64.9	61.9	60.0	68.0	53.8	45.1	47.1
Norway	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Poland	2.4	2.0	1.9	1.8	2.1	2.3	2.4	1.8
Russian Federation	27.0	25.6	26.0	26.0	24.7	26.0	27.0	23.3
Spain	47.0	47.0	45.0	45.0	51.0	44.0	40.0	27.5
Sweden	37.9	34.8	36.0	34.5	38.0	36.5	31.5	25.4
Switzerland	0.5	0.7	0.7	0.7	0.7	0.8	0.8	0.6
Ukraine	4.8	4.5	4.1	4.7	5.5	5.4	5.0	5.0
United Kingdom	34.4	28.6	33.3	32.8	30.0	30.2	28.4	17.9
Other	12.5	10.2	8.5	9.1	7.9	9.6	8.5	8.0
Oceania	2.0	2.7	2.0	2.8	2.9	2.9	2.9	2.7
Australia	1.6	2.3	1.6	2.4	2.5	2.5	2.5	2.4
New Zealand	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
World total	1 174.8	1 218.6	1 245.9	1 248.4	1 392.3	1 326.0	1 278.3	1 241.1

^a Metal content. The consumption of primary unwrought nickel including refined nickel and nickel contained in other smelter/refinery products.

Sources: International Nickel Study Group, *World Nickel Statistics*, Lisbon, Portugal; World Bureau of Metal Statistics, *World Metal Statistics*, London; ABARES.

311

Summary of Australian statistics for primary petroleum ^a

	Production of crude oil condensate and LPG	Exports of crude oil and other refinery feedstocks ^b	Exports of liquefied petroleum gas	Imports of crude oil and other refinery feedstocks	Production of natural gas and ethane ^c	Exports of liquefied natural gas ^d	Imports of natural gas
	ML	ML	ML	ML	Gm ³	Mt	kt
1967-68	1 902	na	na	23 013	0.01	0	0
1968-69	2 236	na	na	23 897	0.06	0	0
1969-70	4 919	na	na	23 176	0.78	0	0
1970-71	15 688	241	661	13 913	1.96	0	0
1971-72	20 266	1 090	1 193	11 174	2.63	0	0
1972-73	22 464	330	1 672	10 004	3.74	0	0
1973-74	25 223	305	1 984	10 469	4.45	0	0
1974-75	25 306	234	2 000	10 171	4.88	0	0
1975-76	26 059	243	1 950	9 702	5.45	0	0
1976-77	27 128	206	2 253	10 116	6.50	0	0
1977-78	28 287	221	2 855	11 214	7.18	0	0
1978-79	28 067	371	3 031	10 407	8.01	0	0
1979-80	26 823	127	2 764	11 263	9.24	0	0
1980-81	26 077	86	2 569	11 450	10.66	0	0
1981-82	25 419	44	2 622	12 460	11.80	0	0
1982-83	24 978	61	2 334	11 780	11.92	0	0
1983-84	29 960	1 056	2 851	8 553	12.49	0	0
1984-85	34 820	5 819	2 620	7 294	13.37	0	0
1985-86	35 750	5 051	2 977	6 186	14.69	0	0
1986-87	35 431	5 702	2 675	7 724	15.08	0	0
1987-88	35 187	6 453	2 402	9 577	15.68	0	0
1988-89	32 080	4 789	2 177	12 058	16.15	0	0
1989-90	36 003	7 202	1 983	11 603	19.84	2.01	0
1990-91	35 755	8 830	1 507	13 389	20.79	3.40	0
1991-92	35 171	8 967	1 568	15 332	22.21	4.66	0
1992-93	34 776	10 098	1 483	19 421	23.57	4.98	0
1993-94	32 960	9 538	1 290	20 296	25.67	6.03	0
1994-95	35 158	11 445	1 189	20 639	28.57	7.02	0
1995-96	34 365	10 899	1 469	23 703	29.27	7.48	0
1996-97	35 302	12 401	2 421	24 768	28.85	7.49	0
1997-98	38 862	14 785	2 824	25 017	30.02	7.65	0
1998-99	32 265	14 291	2 486	29 729	30.43	7.82	0
1999-00	42 279	20 877	2 857	26 936	31.02	7.92	0
2000-01	44 398	24 044	2 785	26 489	31.48	7.53	0
2001-02	42 467	23 936	3 211	27 308	32.09	7.60	0
2002-03	39 704 ^s	20 950	3 194	27 959	33.57 ^s	7.83	0
2003-04	35 352 ^s	17 526	2 916	23 499	35.34 ^s	7.91	0
2004-05	31 939 ^s	15 731	2 844	26 056	39.17 ^s	10.59	0
2005-06	29 038 ^s	13 026	2 800	24 418	39.32 ^s	12.03	953
2006-07	32 916 ^s	15 965	2 824	25 345	40.54 ^s	14.33	4 268
2007-08	29 163 ^s	15 975	2 589	26 223	39.93 ^s	13.68	4 032
2008-09	30 880 ^s	16 588	2 500	24 302	41.50 ^s	15.41	4 752
2009-10	29 668 ^s	18 064	2 776	27 284	43.77 ^s	17.87	4 149

^a Export volumes for primary petroleum up to June 1977 are direct from ABS overseas trade reports. As a result of changes in ABS classifications from July 1977, other statistics are taken from Department of Resources, Energy and Tourism and ABARE publications. ^b Before 1983 exports were principally semiprocessed and re-export feedstocks. ^c Includes ethane, methane, non-commercial natural gas and coal seam gas. ^d 1 million tonnes (Mt) of ING is approximately equal to 1.31 billion cubic metres (Gm³) of gas; production began in 1989-90. ^s ABARES estimate. **na** Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Overseas Trade, Part 1 - Exports and Imports*, cat. no. 5409.0, Canberra; DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

312 Summary of Australian statistics for refined petroleum products ^a

	Production	Domestic consumption	Imports		Exports ^b		Bunkers ^c
			Volume	Value	Volume	Value	
	ML	ML	ML	\$m	ML	\$m	
1966-67	23 110	na	1 227	na	1 365	na	na
1967-68	25 229	na	1 123	na	1 374	na	na
1968-69	26 651	na	1 741	na	970	na	na
1969-70	27 884	na	2 860	na	1 440	na	na
1970-71	28 846	na	3 256	63	1 740	23	43
1971-72	29 524	na	3 978	78	2 321	46	44
1972-73	30 575	na	4 126	75	1 846	42	42
1973-74	33 853	na	4 422	133	2 488	96	70
1974-75	34 066	na	4 083	247	1 954	146	136
1975-76	34 106	na	4 009	290	2 192	144	137
1976-77	35 744	na	4 193	347	1 904	190	190
1977-78	36 992	na	4 104	360	1 956	224	na
1978-79	36 671	15 806	4 215	450	2 344	306	na
1979-80	36 654	15 384	4 540	710	1 882	427	na
1980-81	35 292	15 506	3 748	770	1 990	577	na
1981-82	35 877	16 140	2 939	629	1 955	539	na
1982-83	34 692	31 847	2 666	608	2 427	707	438
1983-84	35 586	32 880	2 526	559	2 925	803	394
1984-85	35 924	33 177	2 823	683	2 207	641	460
1985-86	35 171	33 390	2 761	712	2 383	673	437
1986-87	34 826	33 729	4 078	732	2 270	459	338
1987-88	37 579	35 324	3 319	629	2 738	563	406
1988-89	38 210	37 003	3 342	664	2 769	520	371
1989-90	39 424	38 688	3 621	930	2 422	520	416
1990-91	40 487	38 057	1 819	727	2 952	787	631
1991-92	41 440	37 823	2 146	455	3 819	769	522
1992-93	42 933	39 055	3 940	634	3 711	830	568
1993-94	43 104	40 208	3 057	606	3 507	747	512
1994-95	44 421	42 295	3 479	676	3 289	719	511
1995-96	46 343	43 060	3 522	765	4 101	933	586
1996-97	46 872	43 184	4 286	955	5 041	1 147	547
1997-98	47 400	43 482	3 263	766	4 941	1 097	505
1998-99	47 030	43 560	4 129	868	4 236	866	397
1999-00	47 630	45 055	4 632	1 375	4 116	1 202	666
2000-01	47 690	44 581	4 781	1 845	4 564	1 844	899
2001-02	46 677	45 313	4 655	1 625	3 409	1 234	760
2002-03	46 723	44 718	5 497	2 050	3 140	1 198	775
2003-04	43 486	46 276	10 542	3 594	2 474	918	696
2004-05	44 555	47 145	11 188	5 121	1 846	844	951
2005-06	40 679	48 234	14 172	8 608	2 082	1 195	1 322
2006-07	43 652	49 746	14 018	7 784	1 752	1 098	1 295
2007-08	44 086	50 788	17 982	12 730	1 807	1 323	1 457
2008-09	44 111	50 614	19 697	13 129	1 164	788	1 537
2009-10	41 892	50 929	19 970	11 299	858	566	1 315

^a Export and import values up to June 1977 are direct from ABS overseas trade reports. As a result of changes in ABS classifications from July 1977, other statistics are taken from Department of Resources, Energy and Tourism and ABARE publications, with ABARE estimates of import values used from 1977-78 to 1980-81. ^b Excludes LPG. ^c Ship and aircraft stores. na Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *Overseas Trade, Part 1 - Exports and Imports*, cat. no. 5409.0, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; DRET, *Australian Petroleum Statistics* [previously *Major Energy Statistics*].

313 Australian production of primary petroleum

	Crude oil ^a	Condensate ^b	Crude oil and condensate	Liquefied petroleum gas	Natural gas ^c	Ethane
	ML	ML	ML	ML	Gm ³	Gm ³
1969-70	4 882	na	4 882	37	0.78	0.00
1970-71	14 936	0	14 936	752	1.96	0.00
1971-72	19 038	0	19 038	1 228	2.63	0.00
1972-73	20 668	0	20 668	1 796	3.71	0.03
1973-74	23 193	0	23 193	2 030	4.40	0.05
1974-75	23 134	0	23 134	2 172	4.82	0.06
1975-76	23 827	0	23 827	2 232	5.38	0.07
1976-77	24 598	0	24 598	2 530	6.40	0.10
1977-78	25 369	0	25 369	2 918	7.05	0.13
1978-79	24 896	0	24 896	3 171	7.86	0.14
1979-80	23 711	0	23 711	3 112	9.09	0.15
1980-81	23 093	0	23 093	2 984	10.52	0.14
1981-82	22 386	0	22 386	3 033	11.65	0.15
1982-83	21 085	984	22 069	2 909	11.75	0.17
1983-84	25 731	1 096	26 828	3 132	12.31	0.18
1984-85	29 238	1 715	30 956	3 864	13.17	0.20
1985-86	29 776	1 952	31 734	4 016	14.50	0.20
1986-87	29 454	2 047	31 504	3 927	14.90	0.18
1987-88	28 554	2 713	31 264	3 923	15.48	0.20
1988-89	25 573	2 681	28 255	3 825	15.96	0.19
1989-90	28 744	3 250	31 994	4 009	19.65	0.19
1990-91	28 661	3 294	31 955	3 800	20.61	0.18
1991-92	27 780	3 529	31 309	3 862	22.02	0.19
1992-93	27 039	3 666	30 703	4 073	23.37	0.19
1993-94	25 196	3 730	28 945	4 015	25.48	0.19
1994-95	26 777	4 395	31 190	3 969	28.37	0.20
1995-96	24 058	6 193	30 251	4 113	29.06	0.20
1996-97	24 163	6 885	31 049	4 253	28.42	0.43
1997-98	25 779	8 183	33 961	4 901	29.45	0.57
1998-99	19 938	7 960	27 897	4 368	29.87	0.56
1999-00	29 604	7 861	37 447	4 832	30.41	0.61
2000-01	32 671	7 169	39 839	4 558	31.00	0.48
2001-02	29 945 ^s	7 875 ^s	37 820 ^s	4 647	31.68 ^s	0.41
2002-03	26 492 ^s	8 532 ^s	35 023 ^s	4 681	32.98 ^s	0.41
2003-04	23 198 ^s	7 515 ^s	30 713 ^s	4 639	33.11 ^s	0.38
2004-05	20 259 ^s	7 052 ^s	27 311 ^s	4 628	37.34 ^s	0.41
2005-06	17 247 ^s	7 069 ^s	24 316 ^s	4 722	38.85 ^s	0.46
2006-07	20 963 ^s	7 403 ^s	28 366 ^s	4 550	40.77 ^s	0.47
2007-08	18 262 ^s	6 930 ^s	25 192 ^s	3 971	41.65 ^s	0.50
2008-09	19 303 ^s	7 647 ^s	26 950 ^s	3 930	44.50 ^s	0.56
2009-10	17 238 ^s	8 334 ^s	25 572 ^s	4 096	48.98 ^s	0.56

^a 58 030 million litres equals 1 million barrels a day. ^b Before 1982-83, condensate production is included in crude oil. ^c Includes methane, non-commercial natural gas and coal seam gas. ^s ABARES estimate. ^{na} Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; Bureau of Resource Economics, *Australian Energy Statistics, Australia: 1961-62 to 1998-99*, AGPS, Canberra; DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

314 Australian production of refined petroleum products

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
	ML	ML	ML	ML	ML	ML	ML	ML	ML
Automotive gasoline	17 999	17 984	17 375	17 913	16 528	17 732	17 079	17 159	16 771
Automotive diesel oil	13 064	13 335	12 544	12 822	10 154	11 055	12 177	12 231	11 720
Aviation turbine fuel	5 390	5 149	4 964	5 325	5 216	5 332	5 182	5 494	5 341
Fuel oil	1 684	1 441	1 105	1 092	1 048	942	979	872	846
Liquefied petroleum gas ^a	1 718	1 657	1 062	995	1 125	1 387	1 515	1 477	1 204
Industrial and marine diesel fuel	105	117	84	22	31	21	3	13	3
Bitumen	725	751	678	1 091	831	1 356	1 452	1 294	690
Lubricants	564	521	259	202	163	146	121	114	74
Aviation gasoline	147	134	114	144	119	119	119	105	104
Heating oil	192	195	118	106	102	86	102	69	35
Other ^a	5 088	5 439	5 183	4 844	5 363	5 475	5 356	5 283	5 105
Total products	46 677	46 723	43 486	44 555	40 679	43 652	44 086	44 111	41 892

^a Includes by-products of petrochemical and downstream processing. ^{na} Not available

Sources: ABARE, *Australian Energy Projections 1961-62 to 1998-99*, Canberra; DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

315 Australian consumption of petroleum

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Crude oil and other refinery feedstock									
Stock	days ^a	26	26	23	23	23	23	na	na
Refinery input	ML	44 548	39 949	40 334	36 895	39 465	38 346	38 808	37 642
Refined products									
Automotive gasoline	ML	18 874	19 962	19 876	19 048	19 251	19 234	18 734	18 644
Automotive diesel oil	ML	13 888	14 461	15 185	15 804	17 028	18 245	18 587	19 044
Aviation turbine fuel	ML	4 250	4 329	4 730	5 359	5 837	6 070	6 173	6 675
Fuel oil	ML	1 423	1 466	1 595	1 586	1 513	1 583	1 423	982
Liquefied petroleum gas	ML	3 851	3 569	3 386	4 050	4 038	4 024	3 996	3 795
Industrial and marine diesel fuel	ML	18	17	15	19	15	11	16	26
Bitumen	ML	671	742	812	805	808	785	809	814
Lubricants	ML	569	618	470	451	421	435	437	458
Aviation gasoline	ML	90	90	91	86	90	88	96	80
Heating oil	ML	48	46	34	25	15	12	7	7
Kerosene	ML	24	22	12	27	32	43	25	29
Other	ML	1 012	953	939	973	699	258	311	376
Total products	ML	44 718	46 276	47 145	48 234	49 746	50 788	50 614	50 929

^a Days of forward consumption. ^{na} Not available.

Sources: DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

316 Australian production of primary petroleum, by basin

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
	ML	ML	ML	ML	ML	ML	ML	ML
Crude oil								
Adavale	2	0	0	0	0	0	0	0
Amadeus	59	136	132	53	55	50	55	55
Bonaparte	4 806	3 037	1 868	1 403	1 470	826	812	1 026
Bowen-Surat	27	28	24	23	21	16	19	17
Canning	4	3	2	2	2	4	7	7
Carnarvon								
Barrow Island	547	502	448	390	394 s	364 s	325 s	321 s
North West Shelf	8 842	8 564	7 859	4 524	5 177 s	3 799 s	2 716 s	2 126 s
Other	4 284	3 688	3 831	5 854	7 999 s	7 817 s	9 578 s	9 075 s
Cooper-Eromanga								
Queensland	450	387	529	432	437 s	512 s	379 s	313 s
South Australia	413	445	401	489	742 s	814 s	1 072 s	745 s
Gippsland	6 937	6 019	4 647	3 681	3 850	3 392	3 922	3 233 s
Otway	0	0	0	0	0	0	0	0
Perth	119	387	517	395	816	668	418	320
Total	26 492	23 198	20 259	17 247	20 963 s	18 262 s	19 303 s	17 238 s
Condensate								
Adavale	1	0	0	0	0	0	0	0
Amadeus	0	0	0	0	0	0	0	0
Bonaparte	0	46	307	394	394	33	0	0
Bowen-Surat	12	15	23	20	21	19	21	16
Canning	0	0	0	0	0	0	0	0
Carnarvon								
Barrow Island	349	203	120	0	8	0	0	0
North West Shelf	6 686	5 840	5 041	5 265	5 692	5 572	6 436	7 235
Other	101	142	250	202	134	143	44	89
Cooper-Eromanga								
Queensland	239	242	270	205	158 s	81 s	90 s	77 s
South Australia	349	176	221	208	247 s	247 s	216 s	183 s
Gippsland	769	836	813	770	744	804	738	647 s
Otway	23	13	7	3	2	28	99	86
Perth	2	1	1	2	3	2	2	2
Total	8 532	7 515	7 052	7 069	7 403 s	6 930 s	7 647 s	8 334 s
Liquefied petroleum gas								
Adavale	0	0	0	0	0	0	0	0
Amadeus	0	0	0	0	0	0	0	0
Bonaparte	0	0	0	0	0	0	0	0
Bowen-Surat	18	20	24	23	24	24	24	18
Canning	0	0	0	0	0	0	0	0
Carnarvon								
Barrow Island	0	0	0	0	0	0	0	0
North West Shelf	1 911	1 817	1 963	2 160	2 067	1 500	1 582	1 780
Other	0	0	0	0	0	0	0	0
Cooper-Eromanga								
Queensland	0	0	0	0	0	0	0	0
South Australia	783	827	663	597	551	557	560	560
Gippsland	1 970	1 976	1 977	1 942	1 908	1 883	1 628	1 616
Otway	0	0	0	0	0	6	136	122
Perth	0	0	0	0	0	0	0	0
Total	4 682	4 639	4 628	4 722	4 550	3 971	3 929	4 097

Continued

316 Australian production of primary petroleum, by basin continued

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
	GL	GL	GL	GL	GL	GL	GL	GL
Naturally occurring ethane and natural gas ^a								
Adavale	9	8	10	12	12	12	2	0
Amadeus	452	424	479	494	532	541	537	526
Bonaparte	0	0	0	0	0	0	0	0
Bowen-Surat	641	613	696	641	552	438	211	177
Canning	0	0	0	0	0	0	0	0
Carnarvon								
Barrow Island	1 116	1 023	545	1 172	1 937	1 804	1 694	2 580
North West Shelf	17 753	17 827	21 437	22 947	23 803	24 460	27 326	29 221
Other	1 113	1 533	2 364	1 430	1 145	956	467	986
Cooper-Eromanga								
Total ^s	5 753	5 988	5 649	4 804	4 391	3 227	3 721	2 900
Gippsland	6 432	7 487	7 477	7 274	7 606	8 005	7 017	6 918
Otway	100	260	281	208 ^s	248 ^s	208 ^s	300 ^s	261 ^s
Perth	197	178	236	338	313	279	224	198
Total ^s	33 568	35 339	39 174	39 319	40 538	39 928	41 499	43 767

^a Does not include methane or ethane produced from other than natural gas fields or non-commercial production. ^s ABARES estimate.

Sources: DRET, *Australian Petroleum Statistics*, Canberra; APPEA; Energy Quest; ABARES.

317

Volume of Australian trade in petroleum

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Exports									
Automotive gasoline	ML	1 058	774	774	714	771	628	244	222
Diesel fuel	ML	1 052	872	367	419	288	462	357	187
Aviation turbine fuel	ML	645	528	240	127	120	149	106	72
Fuel oil	ML	95	81	201	490	209	257	188	109
Aviation gasoline	ML	52	36	38	85	81	96	56	32
Kerosene	ML	0	0	0	0	0	0	0	0
Lubricants	ML	182	136	174	199	231	178	183	222
Other	ML	56	45	52	48	52	35	29	15
Total refined products	ML	3 140	2 474	1 846	2 082	1 752	1 807	1 164	858
Liquefied petroleum gas ^a	ML	3 194	2 916	2 844	2 800	2 824	2 589	2 500	2 776
Bunkers ^b	ML	2 238	2 216	2 207	2 163	2 156	2 169	2 217	2 285
Crude oil and other refinery feedstock	ML	20 950	17 526	15 731	13 026	15 965	15 975	16 588	18 064
Liquefied natural gas ^{cs}	MT	7.826	7.914	10.589	12.029	14.332	13.678	15.410	17.866
Imports									
Automotive gasoline	ML	1 673	3 242	3 131	3 687	2 912	3 533	4 087	3 887
Diesel fuel	ML	1 627	3 374	3 944	6 122	5 439	7 470	8 246	8 668
Aviation turbine fuel	ML	429	681	983	817	1 045	1 846	2 026	2 168
Fuel oil	ML	611	1 285	1 281	1 418	1 363	1 625	1 682	1 797
Lubricants	ML	216	195	327	371	365	396	369	415
Liquefied petroleum gas	ML	299	785	540	599	748	965	1 002	1 067
Other	ML	642	979	981	1 158	2 146	2 147	2 285	1 966
Total refined products	ML	5 497	10 542	11 188	14 172	14 018	17 982	19 697	19 970
Crude oil and other refinery feedstock	ML	27 959	23 499	26 056	24 418	25 345	26 223	24 302	27 284
Natural gas	kt	0	0	0	953	4 268	4 032	4 752	4 149

^a Mostly naturally occurring. ^b Ship and aircraft stores. ^c 1 tonne of LNG is approximately equal to 2174 litres of LNG. ^s ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

318 Value of Australian trade in petroleum

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Exports								
Automotive gasoline	367	280	339	419	468	444	171	138
Diesel fuel	366	292	166	238	188	363	225	131
Aviation turbine fuel	228	172	108	80	74	120	69	41
Fuel oil	29	21	51	215	84	130	96	54
Aviation gasoline	29	20	26	54	69	73	45	30
Kerosene	0	0	0	0	0	0	0	0
Lubricants	141	100	112	139	157	152	148	151
Other products	39	33	41	52	57	41	34	22
Total refined products	1 198	918	844	1 195	1 098	1 323	788	566
Liquefied petroleum gas	855	647	804	1 002	1 038	1 182	1 044	1 105
Bunkers ^a	775	696	951	1 322	1 295	1 457	1 537	1 315
Crude oil and other refinery feedstock	6 402	5 055	6 330	6 638	8 317	10 484	8 757	9 534
Liquefied natural gas	2 607	2 174	3 199	4 416	5 222	5 854	10 079	7 789
Imports								
Automotive gasoline	569	1 168	1 463	2 342	1 872	2 719	2 784	2 449
Diesel fuel	561	1 134	1 933	4 071	3 466	6 155	6 314	5 270
Aviation turbine fuel	146	220	483	527	668	1 505	1 393	1 283
Fuel oil	180	313	364	569	536	831	867	910
Lubricants	190	206	288	418	495	477	629	519
Liquefied petroleum gas	76	166	143	198	261	436	382	405
Other products	327	387	447	635	1 285	1 331	2 927	1 683
Total refined products	2 050	3 594	5 121	8 608	7 784	12 730	13 129	11 299
Crude oil and other refinery feedstock	8 611	6 595	9 996	12 822	13 360	17 149	14 727	15 031
Natural gas	0	0	0	152	800	724	2 166	1 219

^a Ship and aircraft stores.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra.

319 Australian exports of petroleum, by destination ^a

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Quantity									
Crude oil and other refinery feedstock									
China	ML	1 699	2 389	732	404	518	972	1 009	2 185
Chinese Taipei	ML	580	125	916	346	446	343	403	261
Japan	ML	3 402	2 079	1 927	2 201	1 957	2 280	2 485	1 931
Korea, Rep. of	ML	4 012	3 778	2 787	2 725	3 873	3 701	4 395	3 710
New Zealand	ML	784	722	1 425	465	1 045	600	321	235
Singapore	ML	6 567	3 948	2 861	3 110	3 752	3 089	3 543	3 838
United States	ML	2 944	1 808	1 154	297	190	1 157	1 421	622
Other	ML	962	2 677	3 929	3 478	4 183	3 833	3 011	5 283
Total	ML	20 950	17 526	15 731	13 026	15 965	15 975	16 588	18 064
Liquefied petroleum gas									
China	ML	154	696	598	393	308	465	354	383
Japan	ML	2 783	2 109	2 081	2 142	1 821	1 587	1 474	1 965
Korea, Rep. of	ML	234	0	81	0	384	178	292	80
Other	ML	23	111	84	264	311	359	380	348
Total b	ML	3 194	2 916	2 844	2 800	2 824	2 589	2 500	2 776
Refined products									
Fiji	ML	384	122	7	62	4	3	2	2
Japan	ML	26	29	53	74	84	71	56	31
New Zealand	ML	1 250	828	1 113	716	872	837	400	317
Singapore	ML	246	127	471	771	576	505	426	371
Other Pacific	ML	861	776	156	274	131	275	256	73
United States	ML	99	123	0	37	6	3	0	19
Other	ML	273	468	45	148	81	113	25	45
Total	ML	3 140	2 474	1 846	2 082	1 752	1 807	1 164	858
Value ^c									
Crude oil and other refinery feedstock									
China	\$m	528	671	309	219	266	654	469	1 165
Chinese Taipei	\$m	179	33	372	172	237	223	190	137
Japan	\$m	1 058	582	782	1 111	1 033	1 474	1 400	1 035
Korea, Rep. of	\$m	1 217	1 057	1 091	1 366	1 968	2 398	2 302	1 927
New Zealand	\$m	256	238	602	256	583	421	212	138
Singapore	\$m	1 956	1 118	1 080	1 481	1 864	1 972	1 682	1 951
United States	\$m	883	527	473	149	100	843	725	331
Other	\$m	324	828	1 620	1 884	2 266	2 500	1 777	2 850
Total	\$m	6 402	5 055	6 330	6 638	8 317	10 484	8 757	9 534
Liquefied petroleum gas									
China	\$m	36	159	169	129	107	204	145	153
Japan	\$m	755	466	595	766	668	726	590	786
Korea, Rep. of	\$m	59	0	18	0	150	89	154	34
Other	\$m	6	22	21	107	113	162	154	132
Total b	\$m	855	647	804	1 002	1 038	1 182	1 044	1 105
Refined products									
Fiji	\$m	140	43	8	43	5	5	3	2
Japan	\$m	14	13	22	40	43	41	40	18
New Zealand	\$m	460	310	516	463	557	639	302	228
Singapore	\$m	95	41	170	375	311	309	227	201
Other Pacific	\$m	349	294	103	177	119	237	203	78
United States	\$m	39	47	0	20	3	1	1	12
Other	\$m	101	170	24	78	60	92	14	27
Total	\$m	1 198	918	844	1 195	1 098	1 323	788	566

^a Does not include LNG exports or ship and aircraft stores. ^b Includes confidential exports. ^c Actual values are used and aggregated for each category. Sources: DRET, Australian Petroleum Statistics (previously Major Energy Statistics), Canberra; ABS, International Trade, Australia, cat. no. 5465.0, Canberra; ABARES.

320 Australian imports of petroleum, by source

	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Quantity									
Crude oil and other refinery feedstock									
Indonesia	ML	5 380	4 012	3 328	3 929	3 391	3 289	3 666	4 178
Malaysia	ML	2 299	4 073	4 761	3 976	3 730	4 103	4 461	5 319
New Zealand	ML	990	708	663	638	635	1 974	2 313	2 569
Other Middle East	ML	334	42	158	199	118	43	40	43
Papua New Guinea	ML	1 683	1 189	1 717	2 386	2 059	2 190	1 349	1 580
Qatar	ML	191	0	77	0	106	0	0	0
Saudi Arabia	ML	3 680	1 517	3 101	1 602	1 151	573	775	478
Singapore	ML	720	597	652	830	841	713	555	605
United Arab Emirates	ML	2 294	2 207	1 917	863	2 971	3 660	2 918	3 846
Vietnam	ML	6 699	5 778	6 560	6 708	6 677	6 318	5 277	3 904
Other	ML	3 691	3 376	3 122	3 287	3 665	3 360	2 947	4 762
Total	ML	27 959	23 499	26 056	24 418	25 345	26 223	24 302	27 284
Natural gas a	kt	0	0	0	953	4 268	4 032	4 752	4 149
Refined products									
Indonesia	ML	57	281	162	98	17	11	45	95
Korea, Rep. of	ML	144	279	237	961	821	785	1 704	1 960
Malaysia	ML	45	97	93	220	8	316	184	249
Middle East	ML	140	1 036	588	691	642	1 044	1 050	1 070
New Zealand	ML	17	3	4	84	96	40	215	4
Singapore	ML	2 832	5 905	7 339	8 452	7 681	10 215	10 217	10 252
United States	ML	407	434	423	456	378	421	473	301
Other b	ML	1 855	2 507	2 343	3 210	4 375	5 149	5 808	6 039
Total	ML	5 497	10 542	11 188	14 172	14 018	17 982	19 697	19 970
Value									
Crude oil and other refinery feedstock									
Indonesia	\$m	1 671	1 141	1 335	2 108	1 779	2 215	2 121	2 294
Malaysia	\$m	735	1 199	1 924	2 180	2 042	2 711	2 718	2 939
New Zealand	\$m	316	212	275	349	351	1 332	1 340	1 387
Other Middle East	\$m	101	12	59	103	55	23	31	21
Papua New Guinea	\$m	527	347	711	1 283	1 113	1 460	846	867
Qatar	\$m	58	0	24	0	46	0	0	0
Saudi Arabia	\$m	1 074	408	1 114	775	535	322	412	259
Singapore	\$m	225	152	202	368	381	396	318	330
United Arab Emirates	\$m	664	584	659	446	1 551	2 294	1 671	2 075
Vietnam	\$m	2 095	1 584	2 517	3 493	3 566	4 188	3 349	2 211
Other	\$m	1 146	956	1 174	1 716	1 942	2 208	1 921	2 647
Total	\$m	8 611	6 595	9 996	12 822	13 360	17 149	14 727	15 031
Natural gas a	\$m	0	0	0	152	800	724	2 166	1 219
Refined products									
Indonesia	\$m	17	92	75	59	6	6	34	59
Korea, Rep. of	\$m	56	108	126	642	543	649	1 205	1 220
Malaysia	\$m	18	36	49	134	10	271	125	164
Middle East	\$m	39	260	165	260	224	496	429	412
New Zealand	\$m	6	3	4	37	47	26	119	3
Singapore	\$m	1 000	2 061	3 532	5 534	4 957	8 183	7 788	6 401
United States	\$m	277	236	250	299	285	339	519	240
Other b	\$m	636	798	921	1 643	1 710	2 761	2 910	2 800
Total	\$m	2 050	3 594	5 121	8 608	7 784	12 730	13 129	11 299

a International waters. b Includes confidential imports of refined products.

Sources: DRET, *Australian Petroleum Statistics* (previously *Major Energy Statistics*), Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABARES.

321 World crude oil supply, demand and prices ^a

	Unit	2002	2003	2004	2005	2006	2007	2008	2009
Supply									
OPEC ^b	mbd	28.6	30.7	32.8	34.2	34.3	34.9	35.8	33.4
Non-OPEC									
Asia Pacific	mbd	3.3	3.3	3.4	3.3	3.3	4.3	4.3	4.3
China	mbd	3.4	3.4	3.5	3.6	3.7	3.7	3.8	3.9
Europe	mbd	8.5	8.3	8.3	7.9	7.7	7.8	7.7	7.7
Mexico	mbd	3.6	3.8	3.8	3.8	3.7	3.5	3.2	3.0
Middle East and Africa	mbd	5.1	5.0	5.3	5.6	5.7	4.2	4.2	4.3
North America	mbd	11.0	10.8	10.8	10.4	10.6	10.8	10.7	10.7
Russian Federation	mbd	7.7	8.5	9.2	9.5	9.7	10.1	10.0	10.2
South America	mbd	3.9	4.0	4.1	4.3	4.4	4.3	4.1	3.9
Total ^c	mbd	76.6	79.7	83.0	84.5	85.4	85.7	86.5	85.1
Demand									
Africa	mbd	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.2
China	mbd	5.0	5.6	6.4	6.7	7.3	7.6	7.9	8.4
Japan and Korea, Rep. of	mbd	7.6	7.8	7.5	7.5	7.4	7.3	6.9	6.6
Latin America	mbd	4.8	4.7	5.0	5.1	5.3	5.7	5.9	6.0
Middle East	mbd	5.4	5.4	5.8	6.0	6.3	6.5	7.1	7.2
North America	mbd	24.1	24.5	25.4	25.5	25.4	25.5	24.2	23.3
Russian Federation	mbd	2.5	2.5	2.6	2.7	2.8	2.9	3.0	2.8
Western Europe ^d	mbd	8.3	8.3	8.3	8.2	8.2	8.0	7.9	7.5
Other Asia Pacific	mbd	8.9	9.1	9.7	9.9	10.2	10.6	10.8	11.1
Other Europe	mbd	8.7	8.7	8.9	9.3	9.4	9.5	9.4	9.0
Total	mbd	78.0	79.3	82.4	83.8	85.2	86.5	86.2	85.0
OECD stocks ^e	days	50	50	51	52	54	53	58	58
Prices									
West Texas Intermediate	US\$/bbl	26.14	31.08	41.51	56.66	66.05	72.35	99.67	61.95
Brent	US\$/bbl	24.95	28.88	38.30	54.58	65.16	72.41	96.99	61.74
Dubai	US\$/bbl	23.75	26.81	34.16	50.08	61.89	68.31	94.45	62.10
World trade weighted average	US\$/bbl	23.67	27.25	34.41	49.57	60.21	68.30	94.60	59.09

^a Includes crude oil, marine bunkers, refinery fuel, non-conventional oil and natural gas liquids. ^b Includes natural gas liquids produced by OPEC (around 4.5 million barrels a day). ^c Includes around 1.8 million barrels a day net gain in the processing of primary fuels other than crude oil. ^d France, Germany, Italy and United Kingdom. ^e Industry stocks measured in days of forward consumption at 31 December.

Sources: BP Statistical Review of World Energy; International Energy Agency, Monthly Oil Market Report, OECD, Paris; Energy Information Administration, US Department of Energy, Washington DC.

322 Prices for crude oil, by origin ^a

	World trade weighted ^b US\$/bbl	Dubai ^c US\$/bbl	Brent ^d US\$/bbl	WTI ^e US\$/bbl	Gippsland ^f US\$/bbl	Tapis ^g US\$/bbl
1992 quarter						
March	16.37	15.61	17.95	18.90	na	na
June	18.49	17.80	20.03	21.21	na	na
September	19.04	18.44	20.30	21.90	na	na
December	18.08	17.20	19.28	20.53	na	na
1993 quarter						
March	16.87	15.91	18.33	19.86	na	na
June	16.95	16.09	18.43	19.78	na	na
September	15.16	14.37	16.60	17.83	na	na
December	14.02	13.60	15.25	16.43	na	na
1994 quarter						
March	13.34	12.67	13.93	14.83	na	na
June	15.28	14.86	16.28	17.86	na	na
September	16.45	15.89	17.12	18.49	na	na
December	16.15	15.62	16.76	17.67	na	na
1995 quarter						
March	16.90	16.31	17.09	18.41	na	na
June	17.80	16.98	18.28	19.35	na	na
September	15.98	15.37	16.37	17.88	na	na
December	16.55	15.89	17.06	18.14	na	na
1996 quarter						
March	18.13	16.60	18.62	19.78	na	na
June	19.09	17.32	19.64	21.73	na	na
September	na	18.89	21.10	22.36	na	na
December	23.18	21.42	23.84	24.66	na	25.70
1997 quarter						
March	20.54	19.57	21.52	22.85	22.56	24.64
June	17.33	17.53	18.35	19.99	19.45	20.99
September	17.37	17.67	18.62	19.82	18.35	20.08
December	17.65	17.94	18.98	19.91	19.43	20.95
1998 quarter						
March	12.67	12.51	14.46	15.92	14.35	16.71
June	11.83	12.29	13.84	14.71	13.96	14.43
September	11.63	12.42	12.83	14.23	12.99	12.73
December	10.90	11.72	11.90	13.04	12.20	13.45
1999 quarter						
March	10.75	11.02	11.47	13.03	11.98	11.59
June	15.04	15.30	15.84	17.67	16.15	14.49
September	19.79	19.72	20.91	21.71	21.19	19.69
December	23.14	22.80	25.00	24.62	24.29	23.92
2000 quarter						
March	25.90	24.17	27.06	28.31	26.75	26.58
June	26.08	25.17	27.30	28.74	27.79	27.14
September	28.50	27.63	31.37	31.57	31.82	31.36
December	27.81	28.56	30.77	32.28	31.10	29.74
2001 quarter						
March	23.93	23.63	26.14	28.60	26.81	27.91
June	25.18	25.18	27.30	27.95	28.18	27.91
September	23.79	24.16	25.40	26.78	25.26	26.45
December	18.03	18.52	19.38	20.50	20.26	23.32

Continued

322

Prices for crude oil, by origin ^a continued

	World trade weighted ^b US\$/bbl	Dubai ^c US\$/bbl	Brent ^d US\$/bbl	WTI ^e US\$/bbl	Gippsland ^f US\$/bbl	Tapis ^g US\$/bbl
2002 quarter						
March	19.48	20.11	21.12	21.64	21.04	21.21
June	23.65	24.33	25.12	26.27	25.49	25.64
September	25.55	25.49	26.73	28.24	26.98	27.21
December	25.32	25.03	26.73	28.18	27.99	28.29
2003 quarter						
March	29.64	28.62	31.50	34.04	32.34	32.43
June	24.33	24.47	26.17	28.98	27.04	27.23
September	26.83	26.64	28.43	30.22	29.19	29.50
December	27.64	27.80	29.41	31.17	30.92	31.25
2004 quarter						
March	29.46	29.93	31.99	35.34	34.38	34.52
June	32.88	33.49	35.41	38.32	37.45	37.52
September	37.02	36.52	41.54	43.90	44.51	44.63
December	39.01	36.38	44.01	48.30	45.52	46.94
2005 quarter						
March	42.13	41.96	47.80	49.90	50.17	49.95
June	47.56	48.36	51.62	53.11	53.23	55.19
September	56.60	55.94	61.57	63.31	62.19	64.83
December	52.36	53.47	56.85	60.03	58.90	60.82
2006 quarter						
March	56.82	58.47	61.79	63.27	65.42	67.48
June	64.30	65.40	69.49	70.46	71.90	73.77
September	65.07	66.30	69.73	70.48	73.04	75.53
December	55.08	57.60	59.55	59.94	61.43	63.28
2007 quarter						
March	54.71	56.16	57.90	58.08	62.19	63.49
June	64.98	65.01	68.59	64.97	73.45	75.00
September	72.28	70.28	74.73	75.20	77.39	79.49
December	85.03	82.80	88.29	90.58	89.35	93.20
2008 quarter						
March	93.58	91.80	96.86	97.86	100.73	102.15
June	118.04	116.81	121.20	123.78	126.34	128.64
September	114.24	114.00	114.57	118.29	121.34	126.11
December	54.21	52.44	55.03	58.68	56.73	60.96
2009 quarter						
March	42.64	44.53	44.52	43.14	45.81	48.11
June	57.76	59.34	58.88	59.61	60.38	61.36
September	67.56	67.98	68.13	68.14	71.46	71.78
December	73.82	75.10	74.57	76.00	75.85	77.42
2010 quarter						
March	75.71	75.91	76.72	78.84	79.08	79.60
June	76.48	77.93	78.68	77.89	79.74	81.04

^a Based on daily prices unweighted and averaged over the period using posted or official selling prices with Rotterdam spot prices for Middle East and North Sea crudes after 1980. ^b Quarterly averages of weekly rates; average contract selling prices fob of internationally traded crude oils only, weighted by estimated export volume. ^c Middle East crude, 32 API gravity. ^d North Sea crude, 38 API gravity. ^e North American crude, 40 API gravity. ^f Australian crude, 42 API gravity. Price series discontinued in 1988. ^g Malaysia tapis blend 44 API. ^{na} Not available.

Sources: ABARE averaging of daily prices using: Middle East Petroleum and Economic Publications, *International Crude Oil and Product Prices*, London; Department of Resources, Energy and Tourism, *Australian Energy Statistics*, AGPS, Canberra; Energy Information Administration, US Department of Energy, Washington DC; *Platts Oilgram Price Reports*, London; Reuterslink; Tokyo Commodity Exchange.

323

Summary of Australian statistics for salt

	Production	Exports		
		Volume	Value	Unit value ^a
	kt	kt	\$m	\$/t
1965	665	115	0.6	5.22
1966	655	95	0.5	5.26
1967	714	89	0.5	5.62
1968	914	228	0.9	3.95
1969	1 680	775	2.1	2.71
1970	3 071 ^b	2 331	8.2	3.52
1971	3 788 ^b	2 815	9.0	3.20
1972	3 340 ^b	2 417	7.0	2.90
1973	4 204	3 475	10.6	3.05
1974	5 009	4 211	15.4	3.66
1975	4 660	3 652	17.5	4.79
1976	5 489	4 258	26.9	6.32
1977	4 716	4 057	29.5	7.27
1978	5 873	4 654	32.9	7.07
1979	5 215	4 513	33.3	7.38
1980	5 665	4 515	44.3	9.81
1981	6 716	3 964	44.0	11.10
1982	4 811	4 144	55.2	13.32
1983	5 170	4 535	69.4	15.30
1984	5 695	4 783	74.7	15.62
1985	5 835	5 166	97.4	18.85
1986	6 029	5 213	102.0	19.57
1987	6 336	2 745 ^c	56.0 ^c	20.40
1988	6 958 ^b	6 206	117.2	18.89
1989	7 070 ^d	6 194	121.5	19.61
1990	7 229 ^d	6 466	136.3	21.08
1991	7 768 ^d	7 061	165.6	23.46
1992	7 693 ^d	7 028	174.9	24.89
1993	7 553 ^d	6 982	185.5	26.56
1994	7 792 ^d	7 259	174.1	23.99
1995	8 298 ^d	7 649	176.5	23.08
1996	7 993 ^d	7 651	166.6	21.77
1997	8 883 ^d	8 187	190.9	23.32
1998	9 033 ^d	8 701	233.4	26.82
1999	9 888 ^d	8 418	213.7	25.38
2000	8 847 ^d	8 257	221.7	26.85
2001	9 254 ^d	8 817	267.1	30.29
2002	9 961 ^d	9 504	259.6	27.32
2003	10 526 ^d	10 114	200.6	19.83
2004	11 088 ^d	11 181	194.6	17.40
2005	12 219 ^d	11 488	228.3	19.87
2006	11 478 ^d	10 911	240.2	22.01
2007	10 855 ^d	10 613	233.6	22.01
2008	12 249 ^d	10 937	237.9	21.75
2009	10 317 ^d	11 074	241.7	21.83

^a Average export unit value of all salt, bulk, bagged and table. ^b Excludes Victoria. ^c Excludes salt, common, in bulk from 1 January to 30 June.

^d Excludes Victoria and the Northern Territory.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade*, Australia, cat. no. 5465.0, Canberra; ABS, *Mining Operations*, Australia, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

324 Australian supply and disposal of salt

	Unit	2003	2004	2005	2006	2007	2008	2009
Production								
Queensland	kt	230	143	50	115	195	160	162
South Australia	kt	560	556	620	647	560	600	608
Western Australia ^a	kt	9 736	10 388	11 549	10 716	10 101	11 489	9 547
Total	kt	10 526	11 088	12 219	11 478	10 855	12 249	10 317
Exports (all types)								
Total	kt	10 114	11 181	11 488	10 911	10 613	10 937	11 074
	\$m	201	195	228	240	234	238	242
Imports								
Common salt	t	15 157	16 578	15 369	18 033	14 582	15 522	19 397
	\$'000	4 540	5 280	5 762	5 906	6 632	6 894	8 627

^a Sales.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

325 World production of salt, by country

	2002	2003	2004	2005	2006	2007	2008	2009
	Mt	Mt	Mt	Mt	Mt	Mt	Mt	Mt
Argentina	1.1	1.7	1.4	1.8	1.9	2.0	na	na
Australia	10.0	10.5	11.1	12.2	11.5	10.9	12.2	10.3
Brazil	6.1	6.6	6.6	6.7	7.3	6.9	6.9	7.0
Canada	12.3	14.0	14.1	14.5	15.0	11.8	14.4	14.0
Chile	3.5	6.2	4.9	4.9	6.0	4.4	6.4	6.5
China ^a	36.0	34.4	37.1	44.5	54.0	59.8	59.5	60.0
Egypt	2.4	2.4	2.4	2.4	2.4	2.4	2.4	na
France	6.8	7.4	7.6	7.0	7.0	6.1	6.1	6.0
Germany	13.7	14.0	15.5	18.7	17.5	19.8	16.4	16.5
India	17.9	14.9	14.8	15.5	15.5	16.0	16.0	15.8
Iran	1.5	1.6	1.8	2.0	2.0	2.0	2.0	na
Italy	3.6	3.6	3.6	3.6	3.0	2.2	2.2	na
Japan	1.3	1.3	1.2	1.2	1.2	1.1	na	na
Mexico	7.8	7.5	8.6	9.2	8.2	8.4	8.8	8.8
Netherlands ^b	5.8	6.0	5.9	5.0	5.0	5.0	5.0	5.0
Poland	3.6	3.6	4.0	5.0	5.0	4.4	4.4	4.4
Romania	2.3	2.4	2.4	2.4	2.4	2.5	2.5	na
Russian Federation	2.8	2.8	2.8	2.8	2.8	2.2	2.2	na
Spain	3.9	4.0	3.9	3.2	3.9	4.6	4.6	4.6
Turkey	2.2	2.2	2.3	2.2	2.2	2.7	2.7	na
Ukraine	2.3	2.9	3.3	2.3	3.5	5.5	5.5	5.5
United Kingdom	5.7	5.9	6.2	5.8	5.8	5.8	5.8	5.8
United States ^c	40.3	43.7	46.4	45.1	44.3	44.5	47.3	46.0
Other	20.6	21.3	22.3	31.8	26.4	26.0	24.6	43.8
Total	213.3	220.8	230.3	250.0	256.0	257.0	258.0	260.0

^a Marketable salt. ^b Includes the Antilles. ^c Includes Puerto Rico. na Not available.

Sources: Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; British Geological Survey, *World Mineral Statistics*, Nottingham, England; US Department of the Interior, US Geological Survey, *Mineral Yearbook*, Washington DC; ABARES.

326 Summary of Australian statistics for silica

	Production	Exports ^a		Imports	
	Volume kt	Volume kt	Value \$'000	Volume t	Value \$'000
1965-66	354	0	0	533	33
1966-67	446	0	0	478	na
1967-68	550	0	0	438	31
1968-69	652	0	0	624	37
1969-70	879	178 b	575 b	785 b	53 b
1970-71	1 112	211 b	736 b	1 126 b	85 b
1971-72	1 058	219 b	658 b	1 000 b	86 b
1972-73	1 259	557 b	1 836 b	696	259
1973-74	1 443 c	555 b	1 838 b	846	74
1974-75	1 219	513 b	2 193 b	1 121	119
1975-76	1 381	389 b	1 867 b	343	52
1976-77	1 224	495 b	3 030 b	441	77
1977-78	1 290	467 b	3 112 b	283	45
1978-79	1 768	647	4 896	368	77
1979-80	1 828	649	5 762	199	49
1980-81	1 743	383	4 075	569	169
1981-82	1 813	519	5 399	3 678	589
1982-83	1 928	670	6 879	2 464	647
1983-84	2 242	686	7 430	3 087	550
1984-85	2 091	895	9 972	1 267	648
1985-86	2 091	1 137	13 590	852	567
1986-87	2 361	1 094	13 249	535	397
1987-88	2 667	1 577	20 973	3 633	609
1988-89	2 795 d	1 660	23 319	3 473	523
1989-90	3 116 d	2 226	34 848	2 029	282
1990-91	3 835 d	2 398	37 685	6 835	667
1991-92	3 347 e	2 547	40 175	9 025	1 205
1992-93	3 570 e	2 488	41 825	2 231	906
1993-94	na	2 600	43 083	1 130	631
1994-95	4 576	3 007	49 163	2 431	989
1995-96	na	3 227	49 538	1 731	1 153
1996-97	na	3 074	52 062	4 237	2 681
1997-98	na	3 280	61 616	3 495	2 306
1998-99	na	2 986	58 401	2 704	975
1999-00	4 266	3 232	64 567	2 427	1 159
2000-01	3 997	3 213	75 376	2 658	1 455
2001-02	4 472	2 629	57 598	4 084	1 933
2002-03	4 046	2 794	59 900	4 330	2 004
2003-04	4 404	2 687	62 290	3 477	1 572
2004-05	4 145	1 844	52 643	2 708	1 375
2005-06	4 393	1 839	59 009	2 325	1 360
2006-07	5 314	2 313	71 290	3 114	1 779
2007-08	5 500	2 281	64 413	2 577	1 462
2008-09	na	2 028	69 502	2 157	1 516
2009-10	na	2 262	64 865	2 474	1 475

^a Includes quartz sand from July 1999, data not available separately. ^b Year ended 30 June. ^c Excludes Western Australia. ^d Excludes Victoria.

^e Excludes Tasmania and Victoria. **na** Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

327 Australian production of silica, by state

	New South Wales kt	Victoria kt	Queensland kt	Western Australia kt	South Australia kt	Tasmania kt	Australia kt
1965	234.9	na	46.2	9.4	36.4	10.1	337.0 a
1966	234.1	na	39.4	28.7	46.2	5.5	353.9 a
1967	289.1	na	70.2	42.4	35.1	8.7	445.6 a
1968	283.6	na	164.5	20.9	67.1	14.3	550.4 a
1969	315.4	na	208.9	49.7	49.4	28.3	651.7 a
1970	335.2	114.5	295.0	39.3	43.2	51.8	879.1
1971	430.2	108.1	405.7	57.8	74.0	36.7	1 112.4
1972	464.2	98.8	395.4	20.9	60.5	18.1	1 058.0
1973	459.7	109.0	568.1	27.4	66.2	28.1	1 258.5
1974	474.9	141.8	712.4	na	75.2	38.4	1 442.8 b
1975	392.9	142.6	544.1	28.3	77.6	33.3	1 218.8
1976	511.7	166.3	516.5	40.6	118.7	27.7	1 381.4
1977	410.3	199.4	458.7	78.1	104.4	51.5	1 224.3
1978	417.3	184.3	520.2	91.2	114.8	53.1	1 289.7
1979	544.9	196.2	627.3	217.7	91.7	89.9	1 767.6
1980	588.1	255.3	670.7	148.1	99.9	65.5	1 827.6
1981	548.5	288.2	581.4	168.1	120.4	36.5	1 743.1
1982	557.5	361.0	563.7	144.0	146.8	40.1	1 813.2
1983	471.5	348.5	627.4	322.8	114.5	43.3	1 927.8
1984	448.4	406.9	866.7	352.6	124.4	43.1	2 242.1
1985	338.5	273.7	924.6	373.1	143.4	37.1	2 090.5
1986	412.3	267.0	839.4	390.4	141.3	40.9	2 091.3
1987	464.8	224.0	1 079.2	386.0	147.2	59.5	2 360.7
1988	457.6	218.7	1 467.0	348.9	96.8	78.0	2 667.0
1988-89	480.2	na	1 682.6	364.5	109.7	158.0	2 794.9 a
1989-90	574.0	na	1 802.0	478.0	112.0	150.0	3 116.0 a
1990-91	551.1	na	2 145.1	861.7	104.4	172.3	3 834.6 a
1991-92	552.5	na	2 019.8	654.6	119.8	na	3 346.7 c
1992-93	495.0	na	2 421.0	518.0	136.0	na	3 570.0 c
1993-94	0.0	0.0	2 494.2	568.4	na	na	na
1994-95	565.0	220.0	2 828.7	614.5	174.0	174.0	4 576.0
1995-96	636.2	na	0.0	741.9	132.0	na	na
1996-97	699.1	na	2 680.5	700.2	157.0	na	na
1997-98	489.4	na	2 851.1	821.5	131.0	na	na
1998-99	438.4	na	2 087.2	583.0	126.1	na	na
1999-00	442.2	443.0	2 637.0	599.6	114.8	139.9	4 265.8
2000-01	433.5	78.0	2 619.0	557.3	145.3	163.4	3 996.5
2001-02	452.0	530.9	2 488.0	653.0	185.0	163.3	4 472.2
2002-03	491.7	20.1	2 406.3	752.5	246.4	128.9	4 046.0
2003-04	398.1	476.6	2 510.4	644.2	239.1	135.2	4 403.6
2004-05	504.5	564.1	1 902.7	700.2	320.1	153.0	4 144.8
2005-06	661.1	338.3	2 087.0	778.1	337.9	190.8	4 393.2
2006-07	1 215.9	371.6	2 583.4	630.5	328.0	185.0	5 314.5
2007-08	1 363.5	446.6	2 463.4	675.1	346.4	205.2	5 500.2
2008-09	na	123.0	2 245.2	470.3	337.8	138.4	na

a Excludes Victoria. **b** Excludes Western Australia. **c** Excludes Tasmania and Victoria. **na** Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

328 Australian imports of silica based products

	Silicon		Ferrosilicon		Ferrosilicomanganese		Piezoelectric
	Volume	Value	Volume	Value	Volume	Value	crystals
	t	\$'000	t	\$'000	t	\$'000	\$'000
1965	638	194	13 211	1 747	na	na	na
1966	na	142	7 620	1 061	na	na	na
1967	na	422	9 440	1 379	na	na	na
1968	na	na	6 327	923	na	na	na
1969	na	625	7 722	1 180	na	na	na
1970	na	621	13 603	2 272	na	na	na
1971	3 403	1 192	12 281	2 073	na	na	112
1972	1 950	688	9 771	1 794	na	na	259
1973	2 366	777	9 202	1 526	na	na	159
1974	2 496	1 047	14 286	3 048	na	na	330
1975	2 602	2 723	21 578	8 528	na	na	558
1976	1 845	1 229	14 258	5 249	na	na	467
1977	3 896 ^a	2 982 ^a	6 437	3 114	390 ^a	200 ^a	738 ^a
1978	2 006 ^a	1 492 ^a	6 363	2 893	414	271	536 ^a
1979	2 573 ^a	2 950 ^a	7 149	3 640	488	392	819 ^a
1980	4 888 ^a	5 749 ^a	14 598	8 856	532	376	971 ^a
1981	3 093 ^a	3 553 ^a	9 716	4 675	217	180	1 040 ^a
1982	2 961	3 685	10 761	6 222	193	127	1 886
1983	2 695	4 064	7 174	4 280	336	300	1 859
1984	4 572	7 422	9 461	5 273	774	709	2 402
1985	4 914	9 447	13 890	7 153	940	1 183	3 782
1986	5 852	10 461	11 469	6 873	392	558	3 407
1987	5 083	11 853	12 897	8 894	656	913	4 106
1988	3 759	6 592	9 095	7 533	433	571	3 444
1988-89	3 714	8 062	14 100	12 065	293	401	4 347
1989-90	2 908	10 160	21 507	18 566	205	308	4 470
1990-91	2 443	10 545	19 330	13 929	231	316	3 475
1991-92	2 301	11 469	13 229	11 460	913	922	8 486
1992-93	3 611	11 910	24 738	21 091	932	832	4 423
1993-94	3 025	11 393	35 732	31 342	510	548	6 114
1994-95	2 863	15 083	32 593	25 699	377	375	6 607
1995-96	4 899	14 862	34 506	38 060	288	482	7 951
1996-97	3 226	10 408	52 952	38 258	279	468	6 305
1997-98	3 054	11 369	36 016	39 544	199	304	6 485
1998-99	4 110	15 289	32 044	33 968	451	752	9 431
1999-00	4 887	14 683	29 189	27 749	329	474	12 066
2000-01	5 966	23 530	29 004	33 006	468	723	20 325
2001-02	3 857	13 719	28 965	34 115	259	439	8 509
2002-03	6 437	21 935	29 692	30 695	240	368	8 863
2003-04	6 134	19 553	35 474	35 501	540	817	9 716
2004-05	6 284	21 039	34 877	38 631	398	714	13 092
2005-06	9 518	26 979	32 653	37 898	297	570	7 307
2006-07	13 256	31 324	36 775	46 249	444	837	7 312
2007-08	18 258	42 111	46 025	60 583	377	826	6 947
2008-09	9 814	36 427	31 671	69 467	324	730	6 975
2009-10	9 047	28 074	36 136	54 677	591	1 063	5 546

^a Year ended 30 June. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra.

329

Summary of Australian statistics for silver

	Production		Exports ^a		Price ^b \$/kg
	Mine	Refinery	Volume	Value	
	t	t	t	\$m	
1970	808	374	304	na	59.39
1971	678	328	203	na	47.92
1972	681	313	219	na	49.75
1973	707	261	115	na	60.08
1974	670	256	112	na	104.75
1975	726	283	134	na	109.17
1976	779	255	100	na	115.17
1977	856	280	136	na	135.00
1978	813	299	76	na	153.00
1979	832	320	85	na	319.25
1980	777	355	85	na	598.00
1981	744	376	90	na	297.17
1982	907	357	234	na	253.67
1983	1 033	329	222	na	411.33
1984	972	302	164	na	299.75
1985	1 086	329	167	na	285.33
1986	1 023	336	192	na	264.58
1987	1 119	362	178	na	325.83
1988	1 134	359	26 ^c	26 ^d	275.75
1989	1 075	376	23 ^c	28 ^d	229.67
1990	1 173 ^s	419	16 ^c	43 ^d	205.92
1991	1 180 ^s	387	106 ^c	38 ^d	175.58
1992	1 218 ^s	369	200 ^c	49 ^d	181.25
1993	1 152 ^s	357	257 ^c	60 ^d	212.25
1994	1 045 ^s	363	190 ^c	53 ^d	240.92
1995	939 ^s	346	192 ^c	52 ^d	234.06
1996	974 ^s	220	316 ^c	73 ^d	222.42
1997	1 107 ^s	174	215 ^c	54 ^d	220.70
1998	1 473 ^s	292	365 ^c	123 ^d	291.56
1999	1 715 ^s	437	428 ^c	117 ^d	268.62
2000	2 059	404	427	138	285.31
2001	1 970	584	524	159	287.72
2002	2 070	644	540	154	290.78
2003	1 868	649	432	109	258.89
2004	2 224	650	477	150	308.13
2005	2 417	701	528	170	308.28
2006	1 728	634	421	209	492.71
2007	1 879	625	413	214	512.81
2008	1 926	664	347	212	558.67
2009	1 633	755	456	252	588.68

^a Refined silver only. ^b Pasmenco Metals, fob/tot Port Pirie. ^c Refined bullion only. ^d Includes refined bullion, powder, unwrought silver and semi-manufactured forms. ^s ABARES estimate. **na** Not available.

Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Australian Associated Press Financial News Wire; Factiva.

330 Australian supply and disposal of silver

	Unit	2002	2003	2004	2005	2006	2007	2008	2009
Production									
Mine									
New South Wales	t	88	82	92	101	94	69	73	75
Queensland	t	1 760	1 582	1 914	2 065	1 385	1 527	1 584	1 343
Western Australia	t	68	70	51	88	96	112	100	43
South Australia	t	26	20	34	38	30	27	30	30
Tasmania	t	78	67	89	82	88	105	99	96
Northern Territory	t	50	46	45	43	35	37	40	45
Total s	t	2 070	1 868	2 224	2 417	1 728	1 879	1 926	1 633
Refinery	t	644	649	650	701	634	625	664	755
Exports									
Refined silver									
India	t	192	124	92	66	47	83	1	18
Japan	t	143	204	267	216	191	180	179	210
Korea, Rep. of	t	34	34	37	60	80	60	66	52
Singapore	t	5	9	20	20	3	4	3	5
United Kingdom	t	42	0	0	50	1	1	0	0
Other	t	125	62	59	116	99	86	99	170
Total	t a	540	432	477	528	421	413	347	456
	\$m b	154	109	150	170	209	214	212	252
Silver content of lead bullion	t	455	402	453	498	298	230	263	252
Prices									
World	US\$/troy oz	459.90	487.49	665.38	731.18	1 156.14	1 338.13	1 501.67	1 465.54
Australia c	A\$/kg	290.78	258.89	308.13	308.28	492.71	512.81	558.67	588.68

a Refined bullion only. **b** Includes refined bullion, powder, unwrought silver and semi-manufactured forms. **c** Pasmenco Metals, fob/for Port Pirie. **s** ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Australian Associated Press Financial News Wire; Factiva; London Bullion Market Association.

331 World mine production of silver

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	t	t	t	t	t	t	t	t	t
Australia ^s	1 970	2 070	1 868	2 224	2 417	1 728	1 879	1 926	1 633
Bolivia	408	450	466	407	420	472	414	1 114	1 326
Brazil	130	130	130	130	130	130	130	130	130
Canada	1 320	1 408	1 309	1 337	1 124	995	861	755	631
Chile	1 349	1 205	1 313	1 360	1 400	1 607	1 936	1 404	1 283
China	1 908	2 000	2 000	2 000	2 000	2 600	2 700	2 800	2 800
Indonesia	348	289	377	377	283	271	269	189	267
Japan	80	81	79	76	54	11	4	4	4
Kazakhstan	943	856	805	773	883	806	722	682	678
Korea, Dem. Rep. of	50	50	22	22	22	50	50	50	50
Mexico	2 760	2 749	2 551	2 569	2 894	2 970	3 135	3 241	3 256
Morocco	240	277	200	181	210	202	178	201	202
Peru	2 571	2 870	2 921	3 060	3 193	3 471	3 502	3 686	3 854
Poland	1 231	1 342	1 332	1 373	1 262	1 265	1 240	1 216	1 232
Russian Federation	400	400	400	400	400	400	400	400	400
South Africa	112	111	87	71	88	87	70	75	78
Spain	66	13	2	4	5	2	0	0	2
Sweden	285	294	341	320	310	292	323	291	289
United States	1 606	1 419	1 240	1 250	1 230	1 160	1 280	1 250	1 245
Uzbekistan	218	157	150	150	150	150	150	150	150
Other	819	876	882	827	1 035	1 086	1 173	1 199	1 314
Total ^a	18 815	19 047	18 475	18 910	19 510	19 723	204 823	20 765	20 824

^a Excludes countries for which data are not available. ^s ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

332 Summary of Australian statistics for talc

	Production b	Exports a			Imports a	
		Volume	Value	Unit value	Volume	Value
	†	†	\$'000	\$/t	†	\$'000
1965	19 695	6 887	234	33.98	2 404	68
1966	21 616	7 758	231	29.78	2 903	62
1967	20 431	8 787	277	31.52	2 199	74
1968	37 860	24 875	661	26.57	3 590	117
1969	52 259	34 134	863	25.28	1 823	77
1970	47 517	31 037	791	25.49	3 441	164
1971	41 280	32 662	861	26.36	4 091	197
1972	43 849	32 051	897	27.99	1 186	69
1973	50 850	36 179	996	27.53	1 109	66
1974	63 992	51 325	1 428	27.82	1 606	10
1975	67 242	45 457	1 527	33.59	947	72
1976	77 447	62 306	2 425	38.92	370	62
1977	112 920	87 271	4 052	46.43	335	65
1978	137 553	107 177	5 338	49.81	527	103
1979	138 266	107 849	6 330	58.69	420	86
1980	159 962	83 059	5 286	63.64	382	82
1981	74 840	82 641	5 529	66.90	329	105
1982	143 325	80 512	5 428	67.42	93	30
1983	167 009	131 914	8 401	63.69	147	68
1984	179 709	163 370	10 810	66.17	215	111
1985	132 074	122 306	9 577	78.30	352	196
1986	179 467	183 357	15 028	81.96	151	85
1987	206 865	129 656	11 012	84.93	266	189
1988	201 740	168 758	13 073	77.47	509	223
1988-89	208 998	126 597	9 447	74.62	578	216
1989-90	234 579	200 870	18 158	90.39	631	297
1990-91	173 803	137 260	12 770	93.03	528	237
1991-92	179 678	152 009	13 717	90.24	563	298
1992-93	172 273	119 830	14 184	118.36	629	372
1993-94	154 073	152 297	15 440	101.38	534	328
1994-95	125 701	133 060	12 672	95.23	1 053	353
1995-96	176 163	182 600	17 388	95.22	1 066	423
1996-97	185 601	143 227 c	12 861 c	89.80	1 262	451
1997-98	199 315	1 614 c	572 c	354.23	1 341	578
1998-99	190 037	3 333 c	1 053 c	315.82	886	695
1999-00	178 545	184 559	20 391	110.48	1 115	893
2000-01	173 446	135 771	24 298	178.96	1 234	707
2001-02	160 741	144 216	21 768	150.94	1 058	630
2002-03	165 980	148 281	22 040	148.63	1 742	856
2003-04	123 080	132 782	18 884	142.22	1 992	750
2004-05	150 923	129 756	19 104	147.23	1 853	827
2005-06	na d	125 730	17 247	137.17	3 538	1 556
2006-07	na d	100 098	13 769	137.55	6 326	3 255
2007-08	na d	109 440	15 142	138.36	7 952	3 413
2008-09	na d	70 778	10 346	146.18	7 761	4 021
2009-10	na d	59 413	10 729	180.59	7 374	3 498

a Includes pyrophyllite. **b** Excludes pyrophyllite. **c** Excludes uncrushed product from 1 June 1997 to 31 May 1999. **d** Data for Western Australia are in confidential. **na** Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, IM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

333 Australian production of talc and pyrophyllite, by state

	Talc				Pyrophyllite
	New	South	Western	Australia	New
	South Wales	Australia	Australia		South Wales
	†	†	†	†	†
1965	1 710	10 783	7 202	19 695	0
1966	1 426	6 611	13 580	21 616	266
1967	2 169	7 303	10 958	20 431	564
1968	2 153	10 586	25 121	37 860	985
1969	2 925	12 459	36 876	52 259	3 165
1970	1 162	14 559	31 796	47 517	7 707
1971	698	11 506	29 076	41 280	6 596
1972	650	11 336	31 863	43 849	12 299
1973	765	14 088	35 997	50 850	12 820
1974	430	12 773	50 789	63 992	15 845
1975	280	12 975	53 987	67 242	15 145
1976	305	16 892	60 250	77 447	14 650
1977	90	16 391	96 439	112 920	16 039
1978	105	14 070	123 378	137 553	9 401
1979	150	15 565	122 551	138 266	19 209
1980	77	16 414	143 471	159 962	11 002
1981	76	21 046	53 718	74 840	8 146
1982	0	20 497	122 828	143 325	9 467
1983	63	14 913	152 033	167 009	9 569
1984	145	18 588	160 976	179 709	7 051
1985	239	16 804	115 031	132 074	7 317
1986	38	18 061	161 368	179 467	8 588
1987	120	17 471	189 274	206 865	6 036
1988	126	18 840	182 774	201 740	3 932
1988-89	155	13 536	195 307	208 998	3 436
1989-90	88	14 228	220 263	234 579	2 965
1990-91	136	12 107	161 560	173 803	1 032
1991-92	0	10 787	168 891	179 678	1 260
1992-93	0	13 484	158 789	172 273	1 175
1993-94	0	13 016	141 057	154 073	na
1994-95	27	12 950	112 724	125 701	777
1995-96	0	14 751	161 412	176 163	595
1996-97	0	8 061	177 540	185 601	337
1997-98	0	8 018	191 297	199 315	702
1998-99	0	8 428	181 609	190 037	347
1999-00	0	9 410	169 135	178 545	1 727
2000-01	0	9 126	164 320	173 446	na
2001-02	0	8 372	152 369	160 741	868
2002-03	0	8 616	157 364	165 980	na
2003-04	0	6 440	116 640	123 080	na
2004-05	0	7 919	143 004	150 923	na
2005-06	0	5 109	na	na	na
2006-07	0	4 697	na	na	na
2007-08	0	1 090	na	na	na
2008-09	na	na	na	na	na

na Not available.

Sources: ABS, *Australian Industry*, cat. no. 8155.0, Canberra; ABS, *Mineral Production, Australia*, cat. no. 8405.0, Canberra; ABS, *The Australian Mining Industry*, cat. no. 8414.0, Canberra; ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Kalix, Z, Fraser, LM and Rawson, RI, *Australian Mineral Industry: Production and Trade, 1842-1964*, Bureau of Mineral Resources, Canberra; state mines departments and their equivalents; ABARES.

334 Australian exports of talc, by destination ^a

	Belgium	Japan	Nether- lands	New Zealand	Korea, Rep. of	United States	Other	Total	
								Volume	Value
	†	†	†	†	†	†	†	†	\$'000
1965	0	0	1 852	1 421	na	0	na	6 887	234
1966	0	0	4 864	1 198	na	0	na	7 758	231
1967	0	78	6 971	1 235	0	0	503	8 787	277
1968	0	190	19 026	1 285	0	0	4 374	24 875	661
1969	0	9 976	22 236	1 474	0	0	448	34 134	863
1970	0	16 445	12 786	1 567	0	0	239	31 037	791
1971	0	20 754	10 048	1 740	0	0	120	32 662	861
1972	0	14 953	14 991	2 029	0	0	78	32 051	897
1973	0	20 061	14 346	1 661	0	0	111	36 179	996
1974	0	30 889	18 703	1 644	0	0	89	51 325	1 428
1975	0	28 329	12 163	2 060	0	0	2 905	45 457	1 527
1976	0	39 050	15 107	2 802	0	0	5 347	62 306	2 425
1977	0	66 557	13 422	2 461	0	0	4 831	87 271	4 052
1978	0	90 577	11 291	1 860	0	0	3 449	107 177	5 338
1979	0	85 511	12 868	3 099	0	0	6 371	107 849	6 330
1980	3 150	64 152	13 500	1 868	0	0	389	83 059	5 286
1981	6 096	60 406	6 215	2 917	0	0	7 007	82 641	5 529
1982	12 597	51 096	10 063	2 419	0	0	4 337	80 512	5 428
1983	5 004	93 988	14 655	1 325	5 023	9 990	1 929	131 914	8 401
1984	11 213	119 678	14 327	1 988	14 167	0	1 997	163 370	10 810
1985	20 051	66 765	14 980	1 848	15 420	0	3 242	122 306	9 577
1986	15 007	120 312	15 252	1 069	15 745	14 003	1 969	183 357	15 028
1987	8 084	84 701	5 001	1 079	9 311	15 472	6 008	129 656	11 012
1988	12 112	124 843	11 960	669	0	18 030	1 144	168 758	13 073
1988-89	5 000	107 482	5 507	548	0	7 019	1 041	126 597	9 447
1989-90	21 754	137 648	13 565	366	4 648	18 510	4 379	200 870	18 158
1990-91	6 000	87 984	35 167	476	0	6 003	1 630	137 260	12 770
1991-92	5 255	103 279	30 200	421	0	4 728	8 126	152 009	13 717
1992-93	17 002	70 331	14 630	686	0	8 166	9 015	119 830	14 184
1993-94	6 317	94 451	37 356	689	0	10 911	2 573	152 297	15 440
1994-95	6 300	68 657	46 800	679	0	9 300	1 324	133 060	12 672
1995-96	12 803	85 375	48 300	797	680	30 100	4 545	182 600	17 388
1996-97 ^b	6 300	69 029	45 625	669	4 815	5 262	11 527	143 227	12 861
1997-98 ^b	0	0	0	910	3	0	701	1 614	572
1998-99 ^b	0	1 200	0	944	99	0	1 090	3 333	1 053
1999-00	2 501	65 101	78 939	1 013	43	12 400	24 562	184 559	20 391
2000-01	0	62 567	57 550	1 138	129	0	14 387	135 771	24 298
2001-02	0	55 436	61 767	2 574	178	4 200	20 061	144 216	21 768
2002-03	0	42 547	78 318	1 625	21	6 300	19 470	148 281	22 040
2003-04	0	28 261	77 958	3 928	0	20	22 615	132 782	18 884
2004-05	0	15 811	87 257	3 146	38	6 010	17 494	129 756	19 104
2005-06	9 100	25 300	73 080	2 405	38	21	15 786	125 730	17 247
2006-07	0	33 815	44 550	2 345	25	3 721	15 642	100 098	13 769
2007-08	10 679	30 065	58 650	1 066	0	0	8 980	109 440	15 142
2008-09	29 194	30 414	9 602	471	0	0	1 097	70 778	10 346
2009-10	40 821	16 897	0	453	0	0	1 242	59 413	10 729

^a Includes pyrophyllite. ^b Excludes uncrushed product from 1 June 1997 to 31 May 1999. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

335 Australian imports of talc, by source ^a

	Norway	United Kingdom	United States	Other	Total Volume	Value \$'000
	t	t	t	t	t	
1965	82	na	139	na	2 404	68
1966	19	na	256	na	2 903	62
1967	13	na	381	na	2 199	74
1968	40	na	469	na	3 590	117
1969	9	na	442	na	1 823	77
1970	23	0	560	2 858	3 441	164
1971	31	0	732	3 328	4 091	197
1972	65	0	765	356	1 186	69
1973	86	0	647	376	1 109	66
1974	97	0	355	1 154	1 606	10
1975	2	0	244	701	947	72
1976	62	0	188	120	370	62
1977	26	0	186	123	335	65
1978	51	0	236	240	527	103
1979	41	0	168	211	420	86
1980	23	0	187	172	382	82
1981	60	0	228	41	329	105
1982	22	0	49	22	93	30
1983	27	29	82	9	147	68
1984	39	61	111	4	215	111
1985	46	47	248	11	352	196
1986	43	61	36	11	151	85
1987	66	47	107	46	266	189
1988	31	17	431	30	509	223
1988-89	45	34	338	161	578	216
1989-90	25	23	571	13	631	297
1990-91	58	75	368	28	528	237
1991-92	17	65	451	29	563	298
1992-93	30	99	354	146	629	372
1993-94	35	50	297	152	534	328
1994-95	20	46	287	700	1 053	353
1995-96	4	24	305	733	1 066	423
1996-97	11	44	185	1 022	1 262	451
1997-98	14	42	218	1 068	1 341	578
1998-99	6	24	224	632	886	695
1999-00	8	5	280	822	1 115	893
2000-01	39	0	250	945	1 234	707
2001-02	59	0	168	830	1 058	630
2002-03	16	4	185	1 537	1 742	856
2003-04	0	1	412	1 578	1 992	750
2004-05	1	2	344	1 506	1 853	827
2005-06	16	1	771	2 750	3 538	1 556
2006-07	16	4	717	5 590	6 326	3 255
2007-08	0	5	1 094	6 853	7 952	3 413
2008-09	19	5	507	7 231	7 761	4 021
2009-10	16	9	257	7 092	7 374	3 498

^a Includes pyrophyllite. na Not available.

Sources: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

336 World mine production of talc, by country ^a

	Australia kt	Brazil kt	China ^b kt	Japan kt	Korea, Rep. of kt	United States kt	Other kt	Total kt
1965	20	na	150	1 008	na	783	1 038	3 444
1966	22	na	150	1 109	na	812	1 003	3 526
1967	21	na	150	1 370	na	819	1 003	3 831
1968	39	na	150	1 689	na	869	1 058	4 298
1969	55	112	150	1 705	180	934	1 280	4 490
1970	55	130	150	1 676	204	932	1 413	4 940
1971	48	130	150	1 895	212	932	1 203	4 950
1972	56	130	150	1 507	236	1 005	1 290	4 764
1973	64	90	150	1 564	417	1 131	1 457	5 272
1974	80	201	150	1 542	443	1 170	1 276	5 272
1975	82	221	270	1 192	416	841	1 430	4 872
1976	92	247	300	1 345	496	963	1 532	5 415
1977	129	254	150	1 359	605	1 093	1 601	5 641
1978	147	240	150	1 272	665	1 202	1 577	5 723
1979	157	366	150	1 709	778	1 318	1 889	6 847
1980	171	413	916	1 749	719	1 125	1 946	7 529
1981	83	503	898	1 545	565	1 218	1 912	7 224
1982	153	384	898	1 492	591	1 030	1 780	6 838
1983	177	396	950	1 466	632	967	1 982	7 070
1984	187	413	952	1 498	848	1 023	2 177	7 615
1985	139	425	1 000	1 434	932	1 151	2 257	7 855
1986	188	425	1 000	1 334	900	1 181	2 190	7 735
1987	213	600	na	1 260	900	1 120	3 763	7 856
1988	206	400	na	1 266	850	1 249	3 678	7 649
1989	212	620	1 000	1 286	800	1 253	2 279	7 980
1990	238	720	1 000	1 293	910	1 267	2 823	8 251
1991	175	570	2 300	1 295	840	1 037	2 715	8 932
1992	181	480	2 650	1 123	760	997	2 673	8 864
1993	173	440	2 700	1 090	750	968	2 579	8 700
1994	na	440	2 400	999	710	935	2 396	7 880
1995	126	460	2 400	994	730	1 060	1 380	7 150
1996	177	510	2 400	965	820	994	2 324	8 190
1997	186	625	2 350	1 010	810	1 050	2 439	8 470
1998	200	452	2 300	965	822	971	2 340	8 050
1999	190	452	3 900	800	875	925	2 328	9 470
2000	180	452	3 500	743	776	851	3 138	9 640
2001	173	450	3 500	668	1 100	853	2 176	8 920
2002	162	450	3 600	665	1 100	775	2 118	8 870
2003	166	400	3 600	640	940	869	2 305	8 920
2004	123	570	3 000	585	958	857	2 336	8 320
2005	151	608	3 000	375	1 010	895	3 032	8 920
2006	na	769	2 400	275	744	769	2 663 ^c	7 620
2007	na	645	2 400	375	740	645	2 775 ^c	7 580
2008	na	405	2 200	355	825	706	3 019 ^c	7 510
2009	na	405	2 200	350	800	527	2 928 ^c	7 210

^a Includes pyrophyllite. ^b Excludes Hong Kong. ^c Includes Australia. ^{na} Not available.

Sources: ABS, *Mining Operations, Australia*, cat. no. 8415.0, Canberra; BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; US Department of the Interior, US Geological Survey, *Mineral Commodity Summaries*, Washington DC; ABARES.

337

Summary of Australian statistics for tin

	Production		Exports		Price ^c A\$/t
	Mine ^a t	Refinery t	Volume ^b t	Value \$m	
1965	3 849	3 179	633	2	3 892.0
1966	4 807	3 640	1 327	4	3 570.0
1967	5 586	3 594	1 690	5	3 339.0
1968	6 537	3 692	3 238	8	3 125.0
1969	8 177	4 156	4 075	10	3 427.0
1970	8 828	5 211	4 681	14	3 669.0
1971	10 035	6 333	5 249	14	3 497.0
1972	11 997	7 027	8 129	23	3 761.0
1973	10 801	6 904	7 414	21	4 802.0
1974	10 481	6 714	6 755	30	8 167.0
1975	9 577	5 254	6 977	32	6 841.0
1976	10 611	5 603	5 670	30	7 650.0
1977	10 634	5 561	7 405	60	10 788.0
1978	11 864	5 129	9 071	89	12 867.0
1979	12 571	5 423	8 450	103	15 419.0
1980	11 588	4 819	8 919	118	16 795.0
1981	12 233	4 286	8 622	98	14 244.0
1982	12 093	3 105	7 779	92	12 764.0
1983	9 252 ^d	2 913	6 692	120	12 995.0
1984	7 923 ^d	2 899	6 577	83	12 217.0
1985	6 363 ^d	2 683	5 667	85	12 161.0
1986	8 508 ^d	1 399	7 512	58	11 581.0
1987	7 691	563	7 163	60	12 004.0
1988	7 009	439	7 376	60	11 299.0
1989	7 709	424	7 511	85	13 352.0
1990	7 425	312	6 187	55	9 913.0
1991	5 380	268	5 770	35	9 054.0
1992	6 609	240	6 569	45	8 549.1
1993	8 057	222	8 161	53	7 589.8
1994	7 400	320	7 234	44	7 502.4
1995	8 656	570	8 574	59	8 432.0
1996	8 733	481	8 779	56	7 892.3
1997	10 326	646	10 160	63	7 611.5
1998	10 174	655	10 066	73	8 831.9
1999	10 011	586	10 556	70	8 373.8
2000	9 115	735	9 057	67	9 335.9
2001	9 840	1 094	9 325	66	8 646.7
2002	7 017	791	6 995	43	7 469.4
2003	3 864	597	2 885	18	7 514.4
2004	1 196	467	218	0	11 583.3
2005	2 308	594	2 573	16	9 687.4
2006	1 477	572	1 022	8	11 647.9
2007	2 071	118	2 533	31	17 344.3
2008	1 914	na	2 783	45	21 707.5
2009	13 268	na	6 086	96	17 108.9

^a Metallic content. ^b Tin content of all ores, concentrates, slags, residues and refined tin. ^c London Metal Exchange cash settlement price for refined tin, 99.75 per cent purity, expressed in Australian dollars; between 1 January 1986 and 31 May 1989, Kuala Lumpur Tin Market. ^d Excludes content of copper-tin concentrate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; London Metal Exchange.

338 Australian supply and disposal of tin

	Unit	2002	2003	2004	2005	2006	2007	2008	2009
Production									
Mine ^a									
New South Wales	t	750	1 031	429	0	0	0	0	0
Queensland	t	0	0	0	282	2 396	2 031	704	0
Tasmania	t	5 609	2 282	396	1 832	0	0	1 079	5 631
Western Australia	t	659	552	371	476	387	40	170	7 637
Total	t	7 017	3 864	1 196	2 308	1 477	2 071	1 914	13 268
Refinery	t	791	597	467	594	572	118	na	na
Exports									
Tin ore and concentrate									
Malaysia	t	1 199	605	41	3 696	1 180	3 301	2 715	7 537
Thailand	t	10 342	4 123	0	0	6	729	4 169	4 811
Other	t	0	0	0	40	0	0	1 021	78
Total	t	11 541	4 728	41	3 736	1 186	4 030	7 905	12 426
	\$m	43.36	18.41	0.25	16.29	7.69	30.81	45.29	96.10
Refined									
Malaysia	t	0	65	180	539	302	181	0	0
Thailand	t	0	0	0	0	0	0	0	0
United States	t	0	0	0	0	0	0	0	0
Other	t	12	4	15	21	13	36	1	95
Total	t	12	69	195	560	315	217	1	95
	\$m	0.17	0.25	1.06	0.70	2.29	2.78	0.14	0.54
Tin content of primary materials exported ^b	t	6 995	2 885	218	2 573	1 022	2 533	2 783	6 086
Prices ^c									
World	US\$/t	4 062.0	4 896.3	8 512.0	7 382.0	8 780.0	14 533.3	18 495.5	13 590.1

^a Metallic content. ^b Tin content of all ores, concentrates, slags, residues and refined tin. ^c London Metal Exchange cash settlement price for refined tin, 99.75 per cent purity. **na** Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade*, Australia, cat. no. 5465.0, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London; London Metal Exchange.

339

World mine production of tin in concentrates, by country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Australia	7.0	3.9	1.2	2.3	1.5	2.1	1.9	13.3
Bolivia	13.2	16.4	18.1	18.6	17.7	16.0	17.3	19.6
Brazil	12.0	12.2	12.2	11.7	9.5	12.6	13.0	13.0
China	81.0	101.8	118.2	121.6	126.3	145.9	121.2	128.0
Indonesia	78.6	64.0	78.4	120.0	117.5	102.0	96.0	84.0
Kazakhstan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Laos	1.1	0.4	0.4	0.6	0.6	0.7	0.7	0.3
Malaysia	4.2	3.4	2.7	2.9	2.4	2.3	3.4	2.4
Myanmar	0.3	0.6	0.4	0.7	0.6	0.6	0.6	0.6
Nigeria	0.9	0.9	0.9	0.9	0.9	2.4	1.8	2.4
Peru	38.8	40.2	41.6	42.1	38.5	39.0	39.0	37.5
Portugal	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0
Rwanda	0.2	1.5	3.6	4.5	3.8	4.6	3.6	3.6
Russian Federation	4.3	3.7	3.0	2.8	2.8	2.4	1.1	0.6
Thailand	1.1	0.9	0.7	0.2	0.2	0.2	0.2	0.2
Vietnam	1.7	2.1	3.5	5.4	5.4	5.4	5.4	5.4
Other ^s	1.3	2.5	5.9	8.1	7.4	12.0	10.9	9.0
Total ^s	246.1	254.6	291.0	340.9	335.0	348.1	316.0	312.1

^a Recoverable tin content of ores and concentrates produced. ^s ABARES estimate; excludes some small producer countries.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; World Bureau of Metal Statistics, *World Metal Statistics*, London.

340

Summary of Australian statistics for titanium

	Ilmenite concentrate				Rutile concentrate			
	Production ^a	Exports			Production ^a	Exports		
	Volume kt	Volume kt	Value \$m	Unit value \$/t	Volume kt	Volume kt	Value \$m	Unit value \$/t
1965	448 ^b	367	3.5	9.5	221	243	17.1	70.4
1966	522	362	3.7	10.2	251	235	17.8	75.7
1967	554	391	3.9	10.0	270	263	19.7	74.9
1968	562	402	4.1	10.2	293	290	21.9	75.5
1969	721	576	6.0	10.4	326	304	25.5	83.9
1970	886	648	6.6	10.2	371	374	34.8	93.0
1971	814	657	6.7	10.2	375	325	35.8	110.2
1972	707	410	4.4	10.7	313	354	41.1	116.1
1973	720	650	7.2	11.1	335	336	40.5	120.5
1974	817	739	8.8	11.9	319	345	48.2	139.7
1975	991	534	6.8	12.7	348	319	60.0	188.1
1976	959	951	13.5	14.2	390	347	72.5	208.9
1977	1 033	1 083	17.5	16.2	325	247	53.5	216.6
1978	1 255	994	16.1	16.2	257	371	69.2	186.5
1979	1 181	907	15.2	16.8	275	318	69.3	217.9
1980	1 385	1 059	20.1	19.0	312	315	88.8	281.9
1981	1 321	908	21.4	23.6	231	216	64.1	296.8
1982	1 149	879	22.3	25.4	221	199	50.9	255.8
1983	893	817	23.0	28.2	163	218	54.0	247.7
1984	1 493	1 173	33.9	28.9	170	192	58.0	302.1
1985	1 419	1 152	39.7	34.5	212	212	83.5	393.9
1986	1 238	1 034	48.5	46.9	216	230	116.4	506.1
1987	1 349	1 046	61.0	58.3	249	257	149.9	583.7
1988	1 610	1 046	68.3	65.3	231	238	137.5	576.9
1989	1 690	1 001	72.6	72.5	243	252	165.0	655.0
1990	1 616	1 041	82.8	79.5	244	186	143.9	775.3
1991	1 466	977	82.0	84.0	192	175	124.1	708.8
1992	1 787	945	76.6	81.1	183	196	111.6	568.5
1993	1 795	962	79.4	82.6	187	182	98.9	543.3
1994	1 777	1 084	89.7	82.8	233	209	113.4	541.3
1995	1 980	1 075	98.0	91.1	204	221	132.1	598.0
1996	2 030	1 062	103.4	97.4	192	169	128.5	761.3
1997	2 233	1 350	137.2	101.6	245	208	150.3	724.1
1998	2 413	1 286	141.4	110.0	233	218	176.1	807.9
1999	1 976	1 051	135.0	128.4	182	157	117.7	747.2 ^s
2000	2 146	1 148	159.8	139.2	207	189	146.4	776.4 ^s
2001	2 019	915	144.2	157.6	207	188	165.8	880.2 ^s
2002	1 954	969	138.6	143.1	219	204	171.7	840.4 ^s
2003	2 006	868	104.6	120.4	173	164	112.2	685.9 ^s
2004	1 920	756	76.6	101.4	163	147	98.2	666.4 ^s
2005	2 030	714	71.4	100.0	177	168	130.6	775.6 ^s
2006	2 358	905	99.5	110.0	232	231	191.5	827.9 ^s
2007	2 340	874	100.1	114.5	312	346	276.0	797.4 ^s
2008	2 066	1 019	119.7	117.5	325	438	271.3	618.8 ^s
2009	1 896	1 778	194.5	109.4	281	586	368.5	628.4 ^s

^a Ex mine. ^b Despatches. ^s ABARES estimate.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

341 World ilmenite production, by country

	Australia ^a	India	Malaysia	Norway	Ukraine ^s	United States	Other ^s	Total ^s
	kt	kt	kt	kt	kt	kt	kt	kt
1965	448	30	124 b	284	174	879	1 591	3 530
1966	522	34	118 b	370	185	876	1 635	3 740
1967	554	42	91 b	427	197	874	1 565	3 750
1968	562	59	126 b	402	210	888	1 723	3 970
1969	721	48	133 b	491	224	845	1 728	4 190
1970	886	79	223 b	579	238	787	2 537	5 340
1971	814	140 c	156 b	595	254	618	2 559	5 150
1972	707	165 c	153 b	610	270	659	2 195	4 770
1973	720	185 c	154 b	750	288	735	2 247	5 090
1974	817	132 c	154 b	844	307	685 c	2 246	5 200
1975	991	140 c	112 b	516 c	327	632	1 990	4 725
1976	959	150 c	180 b	759	381	590	2 249	5 280
1977	1 033	185 c	185 b	823	399	576	1 988	5 200
1978	1 255	185 c	187 b	763	408	535	2 141	5 490
1979	1 181	160	187 b	820	408	580	2 162	5 520
1980	1 385	160	189 b	828	417	498	2 439	5 940
1981	1 321	189	173 b	656	426	462	2 954	6 200
1982	1 149	190	77 b	552	431	239	2 642	5 300
1983	893	180	223 b	544	435	235	1 777	4 300
1984	1 493	150	177 b	661	440	240	2 906	6 100
1985	1 419	143	247 b	736	445	240	3 756	7 000
1986	1 238	140	415	804	450	240	3 599	6 900
1987	1 349	140	509	852	454	240	4 496	8 200
1988	1 610	140 d	506 d	898 d	460	240 d	4 164	8 030
1989	1 690	160 d	520 d	930 d	460	240 d	5 116	9 140
1990	1 616	305 d	250 d	814 d	350	255 d	4 109	7 699
1991	1 466	270 d	200 d	625 d	350	220 d	3 641	6 773
1992	1 787	215 d	338 d	708 d	200	240 d	4 296	7 784
1993	1 795	260	279	713	180	240	4 030	7 497
1994	1 777	290	155	826	150	315	4 139	7 652
1995	1 980	290	179	833	180	330	4 201	7 993
1996	2 030	330	101	747	270	300	4 653	8 431
1997	2 233	305	167	558	162	270	4 815	8 510
1998	2 413	368	67	590	192	360	5 247	9 237
1999	1 976	395	100	590	230	389	5 091	8 764
2000	2 146	416	110	750	260	418	5 488	9 593
2001	2 019	457	170	750	319	437	5 908	10 063
2002	1 954	522	185	790	356	410	5 883	10 103
2003	2 006	632	142	850	420	474	5 622	10 180
2004	1 920	691	114	870	448	506	5 761	10 386
2005	2 030	619	148	816	470	511	6 405	10 999
2006	2 358	685	90	850	470	461	6 860	11 774
2007	2 340	695	50	870	585	330	7 125	11 995
2008	2 066	620	50	890	470	329	6 905	11 330
2009	1 896	749	50	800	470	273	5 617	9 855

^a Includes leucosene. ^b Exports to 1985. ^c Bureau of Mineral Resources estimate. ^d DEMA Pty Ltd estimates. ^s ABARES estimate.

Sources: British Geological Survey, *World Mineral Statistics*, Keyworth, Nottingham, United Kingdom; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; Metal Bulletin, *Prices and Data*, Surrey, England; Mining Journal, *Mining Annual Review*, London; TZ Minerals International, *Mineral Sands Annual Review*, Surrey, England; TZ Minerals International, *Mineral Sands Report*, Surrey, England; US Department of the Interior, Bureau of Mines, *Mineral Commodity Summaries*, Washington DC; ABARES.

342 World rutile concentrate and titaniferous slag production, by country

	Rutile concentrate						Titaniferous slag ^a	
	Australia	Sierra Leone	South Africa	United States	Other ^s	Total ^s	Canada	South Africa
	kt	kt	kt	kt	kt	kt	kt	kt
1965	221	0	0	5	22	248	495	0
1966	251	0	0	5	22	278	476	0
1967	270	24 b	0	5	23	322	547	0
1968	293	14 b	0	2	24	333	610	0
1969	326	28 b	0	0	26	380	680	0
1970	371	44 b	0	0	25	440	766	0
1971	375	12	0	0	25	412	774	0
1972	313	0	0	0	28	341	835	0
1973	335	0	0	8 b	27	370	855	0
1974	319	0	0	6 b	26	351	845	0
1975	348	0	0	10 b	28	386	748	0
1976	390	0	0	8 b	26	424	812	0
1977	325	0	0	7	30	362	691	0
1978	257	0	20	4	35	316	848	100
1979	275	7	42	0	40	364	476	316
1980	312	47	48	10	38	456	875	379
1981	231	51	50	15	40	387	762	408
1982	221	48	47	15	33	364	653	420
1983	163	72	56	18	34	343	612	420
1984	170	91	56	20	33	371	726	417
1985	212	81	55	30 b	35	413	844	435
1986	216	97	60	30 b	37	440	850	435
1987	249	113	56	30 b	35	480	915	632
1988	231	126	55	25 s	38	475	1 025	700
1989	243	128	61	25 s	42	499	1 035	692
1990	244	144	60	29 s	39	516	1 046	672
1991	192	155	90	27 s	79	543	701	808
1992	183	149	95	29 s	65	521	753	884
1993	187	150	100	21	64	522	653	892
1994	233	144	90	24	56	547	765	772
1995	204	0	92	19	50	365	816	988
1996	192	0	108	32	55	387	954	1 065
1997	245	0	108	35	32	420	914	1 075
1998	233	0	108	35	45	421	1 033	1 083
1999	182	0	118	37	46	383	928	1 100
2000	207	0	123	38	78	442	893	1 090
2001	207	0	122	30	83	438	990	1 030
2002	219	0	134	22	82	455	864	975
2003	173	0	102	25	73	373	677	790
2004	163	0	104	22	90	377	690	867
2005	177	0	123	28	111	439	731	1 020
2006	232	74	132	11	106	555	800	1 050
2007	312	74	126	0	124	636	978	1 287
2008	325	74	133	0	112	644	1 034	1 251
2009	281	74	136	0	81	572	715	1 162

^a Source changed to TZ Minerals International from 1991. **b** Bureau of Mineral Resources estimate. **s** ABARES estimate.

Sources: British Geological Survey, *World Mineral Statistics*, Keyworth, Nottingham, United Kingdom; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; TZ Minerals International, *Mineral Sands Annual Review*, Surrey, England; TZ Minerals International, *Mineral Sands Report*, Surrey, England; US Department of the Interior, Bureau of Mines, *Mineral Commodity Summaries*, Washington DC; ABARES.

343

Summary of Australian statistics for uranium

	Production ^a	Exports		Unit value
		Volume ^b	Value	
	t	t	\$m	\$/kg ^{U3O8}
1964-65	na	na	na	na
1965-66	na	na	na	na
1966-67	na	na	na	na
1967-68	na	na	na	na
1968-69	na	na	na	na
1969-70	na	na	na	na
1970-71	na	na	na	na
1971-72	na	na	na	na
1972-73	na	na	na	na
1973-74	na	na	na	na
1974-75	na	na	na	na
1975-76	484	na	na	na
1976-77	480	750	26.9	35.87
1977-78	696	1 452	87.0	59.92
1978-79	951	1 317	102.3	77.68
1979-80	1 837	1 210	98.4	81.32
1980-81	3 944	1 625	120.0	73.85
1981-82	5 968	5 460	415.0	76.01
1982-83	4 334	3 233	296.0	91.56
1983-84	5 836	3 259	312.1	95.77
1984-85	4 327	3 441	317.0	92.12
1985-86	4 450	3 210	296.0	92.21
1986-87	4 505	4 364	389.0	89.14
1987-88	4 193	4 552	411.0	90.29
1988-89	4 507	5 061	402.6	79.54
1989-90	4 089	4 812	314.8	65.42
1990-91	4 367	6 129	331.7	54.12
1991-92	4 329	4 729	244.8	51.76
1992-93	2 686	2 289	122.6	53.55
1993-94	2 733	3 992	193.3	48.42
1994-95	2 622	4 069	187.9	46.18
1995-96	5 088	5 286	241.8	45.75
1996-97	5 975	5 701	245.2	43.01
1997-98	5 788	6 415	288.2	44.93
1998-99	6 387	5 989	287.8	48.05
1999-00	8 217	8 025	366.6	45.68
2000-01	9 549	9 722	497.3	51.15
2001-02	7 823	7 367	360.7	48.96
2002-03	9 172	9 593	427.0	44.52
2003-04	9 569	9 099	364.5	40.05
2004-05	10 964	11 249	475.1	42.24
2005-06	9 974	10 253	545.8	53.24
2006-07	9 594	9 519	659.5	69.28
2007-08	10 114	10 139	886.6	87.45
2008-09	10 311	10 114	990.4	97.92
2009-10 ^s	7 156	7 156	751.1	104.96

^a Tonnes of uranium oxide (U₃O₈). ^b Before 1983-84, exports are tonnes of concentrate; from 1983-84, exports are tonnes of U₃O₈. ^s Estimate.

na Not available.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra.

344 World uranium production, by country ^a

	Australia	Canada	Russian Federation	Kazakhstan	Namibia	Niger	South Africa	United States	Total ^b
	kt	kt	kt	kt	kt	kt	kt	kt	kt
1970	0.25	3.52	na	na	0.00	0.00	3.17	9.90	18.90
1971	0.00	3.83	na	na	0.00	0.43	3.22	9.40	19.10
1972	0.00	4.00	na	na	0.00	0.87	3.20	9.90	20.11
1973	0.00	3.71	na	na	0.00	0.95	2.74	10.20	20.00
1974	0.00	3.42	na	na	0.00	1.12	2.71	8.90	18.70
1975	0.00	3.56	na	na	0.00	1.31	2.49	8.90	19.35
1976	0.36	4.85	na	na	0.65	1.46	2.76	9.80	23.17
1977	0.36	5.79	na	na	2.34	1.61	3.36	11.50	28.58
1978	0.52	6.80	na	na	2.70	2.06	3.96	14.20	34.12
1979	0.71	6.82	na	na	3.84	3.62	4.80	14.40	38.34
1980	1.56	7.15	na	na	4.04	4.13	6.15	16.80	44.24
1981	2.92	7.72	na	na	3.97	4.36	6.13	14.80	44.20
1982	4.42	8.08	na	na	3.78	4.26	5.82	10.30	41.46
1983	3.21	7.14	na	na	3.72	3.43	6.06	8.20	36.99
1984	4.32	11.17	na	na	3.70	3.28	5.73	5.70	38.85
1985	3.21	10.88	na	na	3.40	3.18	4.88	4.30	34.87
1986	4.15	11.72	na	na	3.30	3.11	4.60	5.20	37.21
1987	3.78	12.44	na	na	3.50	2.97	3.96	5.00	36.96
1988	3.53	12.29	na	na	3.51	2.97	3.80	5.04	36.43
1989	3.66	11.32	na	na	3.08	2.96	2.94	5.32	34.09
1990	3.53	8.73	2.64	na	3.21	2.83	2.49	3.42	28.36
1991	3.78	8.16	2.70	na	2.45	2.96	1.71	3.06	26.99
1992	2.33	9.30	2.54	2.80	1.68	2.96	1.67	2.20	23.88
1993	2.24	9.12	2.16	2.70	1.65	2.92	1.69	1.23	23.48
1994	2.20	9.69	2.61	2.24	1.90	2.98	1.69	1.40	23.64
1995	3.70	10.52	2.58	1.63	2.01	2.97	1.42	1.36	26.22
1996	4.96	11.40	2.53	1.21	2.45	3.16	1.44	1.81	29.32
1997	5.48	11.17	2.61	1.09	2.91	3.50	1.10	1.81	29.72
1998	4.89	10.92	2.76	1.27	2.78	3.71	0.97	1.81	27.57
1999	5.98	8.21	3.09	1.56	2.69	2.91	0.93	1.77	24.15
2000	7.58	10.68	2.85	1.87	2.72	2.91	0.80	1.52	27.65
2001	7.72	12.52	3.07	2.11	2.24	2.92	0.87	1.01	28.42
2002	6.85	11.60	2.85	2.83	2.33	3.08	0.83	0.90	36.05
2003	7.57	10.46	3.07	3.33	2.04	3.16	0.77	0.77	35.49
2004	8.98	11.60	3.29	3.71	3.04	3.19	0.75	0.88	40.19
2005	8.98	11.63	3.29	4.36	3.15	3.32	0.67	1.17	41.94
2006	7.60	9.86	3.19	5.28	3.07	3.44	0.53	1.81	39.60
2007	8.60	9.85	3.41	6.63	3.80	3.63	0.75	2.00	43.33
2008	8.43	9.00	3.52	8.51	4.40	3.03	0.56	1.49	43.88
2009 ^s	8.50	9.90	3.61	13.90	4.62	3.21	0.60	1.40	51.02

^a Uranium (U); excludes current and former centrally planned economies. ^b Includes other Western producers not listed. ^s Estimate. na Not available.

Note: Uranium: Resources, Production and Demand publication is only released every two years.

Sources: International Atomic Energy Agency, *Uranium: Resources, Production and Demand*, Vienna; Nuexco, *Annual Review*, Denver, Colorado; World Nuclear Association.

345

World uranium consumption, by country ^a

	Canada	France	Germany ^b	Japan	United Kingdom	United States	Other	Total
	kt	kt	kt	kt	kt	kt	kt	kt
1980	1.00	3.70	2.76	4.00	1.90	7.40	3.59	24.35
1981	1.10	4.40	1.95	4.70	1.30	8.30	4.84	26.59
1982	1.30	6.00	3.20	4.70	2.20	11.80	6.90	36.10
1983	1.40	6.50	2.70	3.50	1.50	8.90	5.85	30.35
1984	1.30	6.00	3.40	5.00	1.50	10.50	6.50	34.20
1985	1.30	6.00	3.20	4.70	2.20	11.80	6.90	36.10
1986	1.40	6.20	3.30	4.80	1.50	11.85	7.22	36.27
1987	1.60	6.20	3.30	6.00	1.55	11.15	7.70	37.50
1988	1.70	6.50	3.30	6.40	1.70	14.19	6.77	40.56
1989	1.80	7.20	3.30	6.60	1.90	14.50	7.39	42.69
1990	1.90	7.20	3.30	6.90	2.00	11.40	7.64	40.34
1991	1.90	7.30	3.30	7.10	2.00	16.00	8.30	45.90
1992	1.90	7.80	3.20	7.60	2.33	17.30	7.31	47.44
1993	1.90	7.90	3.20	8.10	2.04	17.30	9.34	49.77
1994	1.90	8.90	3.00	7.70	2.43	15.60	9.90	49.43
1995	1.90	8.90	3.30	7.70	2.51	18.40	9.74	52.45
1996	1.80	8.90	3.20	8.70	2.62	17.40	9.81	52.43
1997	1.80	8.60	2.90	7.50	2.62	21.30	8.41	53.13
1998	1.20	8.20	3.10	7.81	2.36	17.70	12.33	52.69
1999	1.30	8.20	3.10	9.29	2.36	18.10	12.19	54.54
2000	1.80	8.88	3.35	7.50	2.25	20.57	12.84	57.19
2001	1.80	8.57	3.20	11.10	2.25	18.42	12.32	57.66
2002	1.40	8.57	3.20	7.84	1.93	22.70	13.23	58.87
2003	1.70	8.57	3.20	8.38	1.76	22.80	13.32	59.73
2004	1.70	7.19	3.00	7.14	1.91	24.15	22.24	67.32
2005	1.70	7.19	2.90	8.67	1.50	22.88	22.01	66.84
2006	1.80	7.19	3.71	7.94	2.17	22.89	20.81	66.50
2007	1.90	9.00	3.49	8.79	1.90	22.83	21.21	69.11
2008	1.60	9.00	2.30	6.91	1.07	16.42	21.76	59.07
2009 ^s	1.60	9.00	2.60	na	na	16.16	32.37	61.73

^a Annual reactor related requirements; excludes current and former centrally planned economies. ^b West Germany until 1991; unified Germany from 1992. ^s Estimate.

Note: Uranium: Resources, Production and Demand publication is only released every two years.

Source: International Atomic Energy Agency, *Uranium: Resources, Production and Demand*, Vienna.

Uranium

346 Uranium prices ^a

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av.
1974	7.70	7.90	8.00	9.00	9.50	10.50	11.50	12.00	12.50	14.00	14.75	15.00	11.03
1975	16.00	16.00	18.00	20.00	21.00	23.00	24.70	26.00	26.00	28.50	30.00	35.00	23.68
1976	35.20	37.00	39.25	40.00	40.00	40.00	40.00	40.40	41.00	41.00	41.50	41.00	39.70
1977	41.35	41.50	41.60	41.60	42.00	42.25	42.25	42.25	42.40	42.75	43.20	43.20	42.20
1978	42.90	43.25	43.25	43.25	43.40	43.40	43.40	43.10	43.25	43.00	43.25	43.25	43.23
1979	43.25	43.25	43.25	43.25	43.25	43.00	42.70	42.70	42.20	42.20	41.00	40.75	42.57
1980	40.00	38.00	35.00	32.00	32.00	31.50	31.50	30.00	28.50	28.00	28.00	27.00	31.79
1981	25.00	25.00	25.00	25.00	25.00	24.25	23.50	23.50	23.50	23.50	23.50	23.50	24.19
1982	23.00	23.00	22.50	20.75	20.50	19.25	18.25	17.00	17.00	17.50	19.75	20.25	19.90
1983	21.50	21.75	22.25	23.25	23.50	23.50	24.00	24.00	24.00	23.50	22.50	22.00	22.98
1984	20.50	17.50	17.00	17.75	17.75	17.50	17.50	17.50	17.50	16.00	15.50	15.25	17.27
1985	15.00	15.00	15.00	14.25	15.00	15.00	15.75	16.00	16.00	16.50	16.75	17.00	15.60
1986	17.00	17.00	17.25	17.25	17.00	17.00	17.00	17.00	17.00	17.00	16.75	16.75	17.00
1987	16.65	16.75	17.00	17.00	17.00	17.20	17.20	17.00	16.75	16.75	16.75	16.50	16.88
1988	16.50	16.25	16.00	16.00	15.50	15.25	14.55	14.10	13.85	13.20	12.30	12.00	14.63
1989	11.50	11.25	10.75	10.20	9.75	9.65	9.65	9.60	9.60	9.40	9.30	9.00	9.97
1990	8.90	8.80	8.80	8.90	9.35	11.00	11.75	11.50	10.50	8.50	9.50	9.65	9.76
1991	9.20	9.40	9.40	9.00	9.25	9.10	8.75	9.00	8.25	7.50	7.40	8.75	8.75
1992	7.90	8.00	7.90	7.90	7.70	7.90	7.90	8.10	8.60	10.25	10.50	10.00	8.55
1993	9.80	10.10	10.20	10.35	10.10	10.30	9.90	10.10	10.30	10.30	10.00	9.90	10.11
1994	9.50	9.50	9.50	9.40	9.25	9.25	9.40	9.20	9.10	9.20	9.50	9.60	9.37
1995	9.70	10.35	11.00	11.50	11.75	11.75	11.90	11.90	11.80	11.80	11.80	12.25	11.46
1996	12.90	15.25	15.90	16.15	16.50	16.60	16.50	16.40	15.90	15.50	15.00	14.70	15.61
1997	14.25	13.75	13.00	12.25	11.50	10.70	10.60	10.30	10.85	12.50	12.75	12.15	12.05
1998	12.00	11.00	10.70	10.80	10.90	10.90	10.50	10.25	9.90	9.25	8.75	8.75	10.31
1999	10.50	10.50	10.85	10.85	10.65	10.40	10.30	10.10	9.90	9.70	9.70	9.60	10.25
2000	9.50	9.40	9.20	9.00	8.45	8.15	8.05	7.80	7.45	7.25	7.10	7.10	8.20
2001	7.25	7.90	8.20	8.60	8.90	8.90	8.90	9.10	9.30	9.45	9.50	9.60	8.80
2002	9.70	9.90	9.90	9.90	9.90	9.90	9.85	9.85	9.75	9.90	9.90	10.20	9.89
2003	10.20	10.20	10.10	10.75	11.00	10.90	10.90	11.30	12.20	12.75	13.75	14.50	11.55
2004	15.50	16.50	17.50	17.60	17.85	18.50	18.50	19.25	20.00	20.25	20.50	20.70	18.55
2005	21.00	21.75	22.50	24.00	29.00	29.00	29.50	30.20	31.25	33.25	34.50	36.25	28.52
2006	37.50	38.50	40.50	41.50	43.00	45.50	47.50	48.50	54.00	60.00	63.00	72.00	49.29
2007	75.00	85.00	95.00	113.00	125.00	136.00	120.00	90.00	85.00	85.00	93.00	90.00	99.33
2008	78.00	73.00	71.00	65.00	60.00	59.00	64.50	64.50	53.00	45.00	55.00	53.00	61.75
2009	48.00	45.00	42.00	44.00	49.00	52.00	47.00	46.00	42.75	49.50	45.50	44.50	46.27
2010	42.50	41.75	42.00	41.75	40.75	41.75	46.00	45.00	46.50	45.00	na	na	na

^a Restricted exchange value after 1993, using Nuexco's exchange value up to 1996 and an average of four prices after 1996, US\$/lb U₃O₈.

Sources: TradeTech, *The Nuclear Review*, Denver, Colorado (previously Nuexco, *Monthly Report*); Ux Consulting.

347 Nuclear power reactors in operation

	2006 Reactors in operation a		2007 Reactors in operation a		2008 Reactors in operation a		2009 Reactors in operation a	
	No. of units	Capacity MW(e) b	No. of units	Capacity MW(e) b	No. of units	Capacity MW(e) b	No. of units	Capacity MW(e) b
Argentina	2	935	2	935	2	935	2	935
Armenia	1	376	1	376	1	376	1	375
Belgium	7	5 728	7	5 728	7	5 728	7	5 902
Brazil	2	1 901	2	1 901	2	1 901	2	1 884
Bulgaria	4	2 722	2	1 906	2	1 906	2	1 906
Canada	18	12 595	18	12 595	18	12 652	18	12 569
China	10	7 587	11	8 587	11	8 587	11	8 438
Czech Republic	6	3 472	6	3 472	6	3 472	6	3 678
Finland	4	2 676	4	2 969	4	2 696	4	2 696
France	59	63 473	59	63 363	59	63 473	59	63 260
Germany	17	20 303	17	20 339	17	20 339	17	20 480
Hungary	4	1 755	4	1 826	4	1 826	4	1 889
India	16	3 483	17	3 779	17	3 779	18	3 987
Japan	55	47 700	55	47 577	53	46 236	54	46 823
Korea, Rep. of	20	16 840	20	17 533	20	17 716	20	17 705
Lithuania	1	1 185	1	1 185	1	1 185	1	1 185
Mexico	2	1 310	2	1 310	2	1 310	2	1 300
Netherlands	1	452	1	485	1	485	1	487
Pakistan	2	425	2	400	2	400	2	425
Romania	1	655	2	1 310	2	1 310	2	1 300
Russian Federation	31	21 743	31	21 743	31	21 743	31	21 743
South Africa	2	1 842	2	1 842	4	1 686	2	1 800
Slovakia	6	2 472	5	2 064	1	696	4	1 762
Slovenia	1	696	1	696	2	1 842	1	666
Spain	8	7 442	8	7 442	8	7 448	8	7 450
Sweden	10	8 938	10	9 016	10	9 016	10	9 036
Switzerland	5	3 220	5	3 220	5	3 220	5	3 238
United Kingdom	19	10 982	19	11 035	6	4 916	19	10 137
Ukraine	15	13 168	15	13 168	15	13 168	15	13 107
United States	103	98 054	104	99 049	19	11 035	104	100 747
Total	438	369 014	439	371 462	436	371 927	437	370 705

a At end of year. **b** Annual electricity generating capacity in megawatts.

Source: International Atomic Energy Agency, annual press release: IAEA releases nuclear power statistics, Vienna; World Nuclear Association.

348 Summary of Australian statistics for zinc

	Production			Exports d		Price e \$/t
	Mine a kt	Refined b kt	Consumption c kt	Volume kt	Value \$m	
1966	375	198	90	241	47	270.5
1967	407	198	104	254	43	260.7
1968	416	198	102	267	44	262.0
1969	510	253	117	331	59	277.8
1970	487	268	115	390	71	295.0
1971	453	266	109	359	68	314.8
1972	507	304	114	346	80	339.8
1973	480	306	121	418	102	385.9
1974	464	284	120	374	139	543.2
1975	510	200	82	295	117	627.0
1976	462	249	86	388	159	655.7
1977	492	256	81	327	148	657.7
1978	473	295	92	465	157	533.6
1979	529	310	102	382	165	712.5
1980	495	306	100	481 f	251 f	713.1
1981	518	300	97	406	235	798.5
1982	665	296	81	521	323	849.0
1983	699	298	83	645	392	952.3
1984	677	302	77	661	469	1 187.7
1985	759	289	87	633	515	1 255.2
1986	712	303	81	662	489	1 242.3
1987	778	310	82	663	526	1 249.3
1988	760	302	90	674	631	1 560.7
1989	803	294	88	670	962	2 298.9
1990	933	303	82	825	1 159	2 094.7
1991	1 023	324	71	915	900	1 569.8
1992	1 019	332	71	995	1 135	1 816.9
1993	990	316	75	987	851	1 568.3
1994	955	323	79	978	785	1 499.9
1995	937	320	77	907	797	1 559.7
1996	1 070	326	73	983	808	1 478.4
1997	1 011	307	81	965	953	1 889.8
1998	1 063	311	93	1 002	1 025	1 806.6
1999	1 162	344	96	1 109	1 105	1 752.6
2000	1 419	493	85	1 333	1 718	2 046.7
2001	1 517	556	83	1 484	1 669	1 921.2
2002	1 469	566	87	1 544	1 485	1 614.4
2003	1 479	553	85	1 466	1 316	1 431.5
2004	1 335	470	82	1 324	1 232	1 609.3
2005	1 366	457	76	1 444	1 765	1 993.3
2006	1 362	463	86	1 283	3 792	4 342.4
2007	1 514	454	81	1 460	4 191	4 381.5
2008	1 519	499	85	1 497	2 314	2 168.8
2009	1 289	526	67	1 422	1 804	1 988.3

a Metal content. b Excludes secondary (scrap) and zinc dust production. c Refined metal only. d Quantities refer to the total metallic content of all ores and concentrates, intermediate products and refined metal. The value of zinc contained in other mine and smelter products (for example, zinc in lead concentrates) is included in the value of the product in which it is exported. e EZ Industries, Prime Western, 98.5 per cent purity. Before 1968, Prime Western grade zinc at Cockle Creek. f Zinc export code classifications changed substantially between 1979 and 1980, creating a break in the continuity of the series.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

349 Australian supply and disposal of zinc

	Unit	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Production								
Mine a	kt	1 355	1 352	1 380	1 375	1 571	1 411	1 362
Refined								
Primary	kt	499	464	446	496	507	506	515
Secondary b	kt	6	6	6	6	6	6	6
Exports								
Ores and concentrates	kt	1 844	1 953	1 821	1 948	2 323	2 101	2 282
	\$m	677	852	1 542	2 590	2 031	935	1 240
Refined metal	kt	396	397	388	374	411	451	425
	\$m	557	614	998	1 707	1 319	923	977
Consumption c	kt	84	79	160	253	189	175	80
Export unit value								
Ores and concentrates	A\$/t	366.9	436.2	846.7	1 329.7	874.3	445.0	543.6
Refined metal	A\$/t	1 408.6	1 549.1	2 573.2	4 561.9	3 211.4	2 045.7	2 297.7

a Metal content. **b** Includes remelted zinc and direct use of secondary materials. **c** Refined metal only.

Sources: ABARE, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra.

350 Volume of Australian exports of zinc, by destination **a**

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Ores and concentrates b								
Belgium	89	64	45	15	9	29	30	6
China	63	116	131	103	104	300	352	615
Germany	28	27	32	6	22	2	na	0
India	18	19	34	18	28	16	14	21
Italy	67	21	5	na	na	na	na	0
Japan	185	202	181	184	171	133	166	143
Korea, Rep. of	173	186	234	278	205	158	156	128
Netherlands	219	225	230	207	216	162	122	71
Thailand	25	24	na	19	24	52	48	39
United Kingdom	65	5	0	0	0	0	0	0
Other	84	118	103	101	107	150	108	9
Total	1 016	1 007	995	931	886	1 002	996	1 032
Metal								
Bangladesh	22	16	2	2	2	2	2	1
Chinese Taipei	61	42	39	74	79	76	84	63
Hong Kong, China	92	105	119	147	118	85	67	61
India	12	14	5	11	13	6	5	4
Indonesia	33	31	18	17	15	14	14	12
Malaysia	30	19	36	90	15	18	64	37
Netherlands	21	33	na	na	10	2	na	0
Saudi Arabia	21	24	17	8	3	16	17	7
Thailand	15	7	6	5	5	5	9	6
United States	58	8	8	0	15	0	na	0
Other	118	162	75	109	82	180	153	260
Total	483	461	325	463	357	404	415	454

a Excluding slags, residues and scrap. **b** Metal content. **na** Not available.

Source: ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

351

World production, consumption, stocks and prices of zinc

	Production				Consumption c	Stocks b	Price d
	Mine a	Refined metal		Total			
		Primary	Secondary b				
	kt	kt	kt	kt	kt	kt	US\$/t
1965	4 352	3 848	215	4 063	4 099	433	310.6
1966	4 550	4 045	242	4 287	4 292	461	280.4
1967	4 958	4 142	222	4 364	4 323	479	271.9
1968	5 113	4 613	224	4 837	4 701	452	261.7
1969	5 472	5 073	205	5 278	5 092	519	285.2
1970	5 590	4 975	259	5 234	5 013	682	294.5
1971	5 675	4 862	248	5 110	5 164	614	310.0
1972	5 866	5 247	269	5 516	5 679	586	378.4
1973	6 070	5 543	283	5 826	6 195	457	846.8
1974	6 129	5 720	274	5 994	6 000	759	1 237.5
1975	6 176	5 219	264	5 483	5 062	1 185	746.0
1976	6 249	5 545	266	5 811	5 779	1 140	711.7
1977	6 567	5 710	279	5 989	5 857	1 194	590.0
1978	6 401	5 801	237	6 038	6 329	833	593.3
1979	6 299	6 169	287	6 456	6 444	868	741.2
1980	6 108	5 958	285	6 243	6 289	787	761.3
1981	6 004	5 969	318	6 287	6 199	875	859.6
1982	6 275	5 701	355	6 056	6 043	800	745.7
1983	6 289	6 016	368	6 384	6 370	668	765.5
1984	6 523	6 327	351	6 678	6 539	626	891.0
1985	6 651	6 545	325	6 870	6 532	606	763.9
1986	6 534	6 085	295	6 380	6 747	615	753.1
1987	6 885	6 330	293	6 623	6 959	568	816.2
1988	6 714	6 579	299	6 878	6 848	496	1 240.5
1989	6 785	6 426	368	6 794	6 726	572	1 719.6
1990	7 309	6 296	395	7 061	6 819	534	1 520.0
1991	7 220	6 427	428	7 249	6 870	650	1 116.0
1992	7 260	6 605	425	7 028	6 532	989	1 240.0
1993	6 765	6 755	455	7 195	6 588	1 474	961.0
1994	6 810	6 700	467	7 130	6 954	1 669	998.0
1995	6 955	6 850	497	7 330	7 499	1 170	1 031.0
1996	7 287	6 919	524	7 443	7 528	913	1 025.0
1997	7 338	7 283	500	7 782	7 760	901	1 313.0
1998	7 565	7 503	518	8 021	7 883	762	1 023.0
1999	8 068	7 816	552	8 374	8 495	734	1 076.3
2000	8 839	8 382	599	8 981	9 003	662	1 128.4
2001	8 934	8 599	622	9 268	8 924	946	885.5
2002	8 892	9 082	628	9 710	9 375	1 095	778.9
2003	9 520	9 281	593	9 874	9 843	1 158	828.0
2004	9 736	9 801	552	10 353	10 639	1 039	1 047.4
2005	10 146	9 699	523	10 221	10 611	828	1 381.9
2006	10 447	10 456	557	10 655	11 015	548	3 276.0
2007	11 119	10 719	582	11 360	11 307	580	3 243.0
2008	11 654	10 889	559	11 655	11 436	764	1 878.4
2009	11 296	10 443	413	11 306	10 873	923	1 595.0

a Metal content. **b** Excludes Former Soviet Union, Eastern Europe and China. **c** Refined primary metal only. **d** Average London Metal Exchange cash settlement price, registered brands, minimum 98 per cent purity.

Sources: BMR, *Australian Mineral Industry Annual Review*, AGPS, Canberra; International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal; Metallgesellschaft AG, *Metallstatistik*, Frankfurt; London Metal Exchange.

352

World zinc mine production, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa								
Algeria	5	2	0	0	0	0	0	0
Morocco	91	69	87	128	95	51	48	46
Namibia	41	108	202	232	208	196	204	208
South Africa	64	41	32	32	34	31	29	28
Tunisia	37	38	31	19	3	3	3	3
Total	237	258	352	412	340	281	284	285
Americas								
Argentina	37	30	27	30	30	27	31	32
Bolivia	142	145	147	160	173	214	384	434
Brazil	136	153	159	171	185	194	173	173
Canada	916	788	791	667	638	630	716	692
Chile	36	33	28	29	36	37	41	28
Honduras	46	44	41	43	38	29	28	36
Mexico	446	414	426	476	479	452	442	494
Peru	1 219	1 369	1 209	1 202	1 202	1 444	1 603	1 509
United States	784	768	739	748	727	803	779	736
Total	3 762	3 744	3 568	3 525	3 513	3 851	4 210	4 134
Asia								
China	1 624	2 029	2 391	2 547	2 844	3 048	3 186	3 092
India	234	305	340	472	503	539	616	695
Iran	121	111	135	156	166	75	86	115
Japan	43	45	48	41	7	0	0	0
Kazakhstan	376	392	404	364	410	446	448	442
Korea, Dem. Rep. of	32	52	62	65	75	78	48	29
Korea, Rep. of	0	0	0	0	na	0	0	0
Thailand	25	31	40	43	42	42	35	30
Turkey	43	40	39	56	59	71	74	78
Vietnam	42	45	40	48	45	45	42	38
Total	2 546	3 057	3 507	3 825	4 225	4 445	4 623	4 615
Australia	1 444	1 447	1 298	1 329	1 338	1 498	1 479	1 267
Europe								
Bulgaria	14	12	11	11	8	10	10	10
Finland	35	39	37	41	36	39	28	30
Greece	35	3	0	4	16	21	23	18
Ireland	253	419	438	445	426	401	398	386
Macedonia	10	4	0	0	11	24	29	35
Poland	152	152	140	136	127	130	132	90
Romania	22	22	19	14	8	1	0	5
Russian Federation	162	159	162	186	178	177	204	214
Spain	70	15	0	na	na	na	0	6
Sweden	149	188	199	216	210	214	188	193
Total	903	1 013	1 007	1 056	1 030	1 044	1 058	995
Total	8 892	9 520	9 736	10 146	10 447	11 119	11 654	11 296

^a Recovered metal zinc content by analysis of zinc ores and concentrates, plus the zinc content of other ores and concentrates known to be intended for zinc recovery. **na** Not available.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

353

World zinc metal production, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa								
Algeria	34	35	33	37	33	27	31	28
South Africa	111	112	105	104	90	101	82	86
Total	147	197	260	273	257	279	260	264
Americas								
Argentina	39	39	35	37	43	43	31	33
Brazil	255	258	266	267	272	265	249	242
Canada	793	761	805	724	824	802	764	689
Mexico	306	320	337	336	285	320	321	336
Peru	170	202	196	164	175	162	190	149
United States	339	350	354	351	269	279	286	204
Total	1 903	1 930	1 993	1 878	1 868	1 871	1 841	1 653
Asia								
China	2 155	2 319	2 720	2 776	3 163	3 743	3 913	4 357
India	248	280	272	302	415	459	606	658
Iran	82	84	96	140	139	125	110	115
Japan	640	651	635	638	614	598	616	541
Kazakhstan	286	279	317	357	365	358	366	328
Korea, Dem. Rep. of	34	55	65	57	51	36	41	26
Korea, Rep. of	608	645	669	647	667	691	739	623
Thailand	105	107	103	93	84	99	102	105
Uzbekistan	30	30	30	35	47	72	70	19
Total	4 189	4 450	4 906	5 052	5 555	6 191	6 579	6 789
Australia	567	553	474	457	466	454	499	519
Europe								
Belgium	239	244	257	222	238	240	239	14
Bulgaria	82	86	102	95	95	100	102	92
Finland	235	266	285	282	282	306	298	294
France	334	253	260	209	120	125	118	161
Germany	378	388	358	335	317	295	292	153
Italy	176	123	118	121	109	102	107	103
Macedonia	56	28	na	na	na	na	na	na
Netherlands	203	223	225	225	238	219	241	227
Norway	145	142	140	148	161	157	145	139
Poland	159	154	156	137	134	142	143	152
Romania	38	51	52	57	44	58	62	4
Russian Federation	257	253	241	211	248	263	263	227
Spain	503	519	523	500	507	509	466	515
United Kingdom	98	14	na	na	na	na	na	na
Other	1	0	3	18	15	0	0	0
Total	2 904	2 744	2 720	2 561	2 508	2 516	2 476	2 081
Total	9 710	9 874	10 353	10 221	10 655	11 360	11 655	11 306

^a Total production by smelters and refineries of zinc in marketable form or used directly for alloying, including production on toll in the reporting country, regardless of the type of source material. Remelted zinc and zinc dust are excluded. **na** Not available.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

354

Volume of world zinc trade, by country ^a

	2002 kt	2003 kt	2004 kt	2005 kt	2006 kt	2007 kt	2008 kt	2009 kt
Exports								
Ores and concentrates ^b								
Australia	1 016	1 007	955	931	886	1 002	996	1 032
Canada	409	258	228	178	109	129	281	216
China	2	na	na	na	na	na	na	na
Ireland	249	417	445	410	426	393	393	478
Mexico	131	105	62	155	139	107	88	151
Peru	906	900	879	933	920	1 125	1 274	1 191
Sweden	140	150	188	185	205	201	193	194
United States	827	822	746	788	827	820	726	790
Metal								
Australia	483	461	325	463	357	404	415	454
Belgium	107	110	138	11	13	22	9	14
Canada	598	591	614	527	631	614	599	592
China	472	451	224	123	325	276	71	29
Finland	189	212	236	235	233	260	257	269
CIS	226	147	na	na	na	na	na	na
France	143	110	115	80	32	29	29	65
Korea, Rep. of	261	317	320	261	215	257	311	330
Mexico	161	181	189	194	148	197	203	249
Netherlands	197	421	285	325	369	323	311	335
Norway	133	126	127	135	138	131	130	128
Peru	127	137	113	103	106	90	118	98
Spain	79	246	295	334	272	220	192	217
Imports								
Ores and concentrates ^b								
Belgium	409	571	704	596	577	550	na	na
Canada	276	397	273	195	278	282	296	293
China	393	373	297	257	379	816	1 048	1 720
Finland	218	218	240	250	279	326	292	266
CIS	70	60	na	na	na	na	na	na
France	279	241	229	222	125	129	119	121
Germany	176	186	240	208	166	179	199	136
Italy	141	96	125	110	88	98	81	78
Japan	559	544	563	530	595	559	620	471
Korea, Rep. of	582	616	627	642	654	667	744	671
Netherlands	38	214	204	242	265	180	206	207
Spain	451	537	459	556	593	629	554	455
United Kingdom	115	8	0	0	0	0	0	0
Metal								
Belgium	237	222	269	48	73	209	161	242
Chinese Taipei	304	332	344	309	286	229	222	190
France	98	115	103	143	172	165	163	129
Germany	231	253	249	261	330	328	305	286
Italy	202	226	273	261	229	315	180	118
Japan	17	41	42	46	41	53	45	28
Korea, Rep. of	115	108	72	59	60	81	86	73
Netherlands	138	182	220	202	287	311	225	226
Singapore	142	68	18	12	63	54	95	na
United Kingdom	106	174	142	139	123	135	118	89
United States	878	792	868	700	895	758	725	686

^a Metal content. ^b Metal content of zinc ores and concentrates only. na Not available.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

355

World zinc consumption, by region and country ^a

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Africa								
Algeria	11	9	9	12	14	13	12	11
Egypt	17	16	16	16	16	17	18	16
Kenya	11	14	14	14	14	14	12	11
Morocco	12	5	14	13	12	15	13	11
Nigeria	9	12	12	12	12	12	11	12
South Africa	95	86	96	103	99	108	100	93
Tunisia	2	3	5	5	4	4	4	5
Other Africa	28	28	28	28	28	27	27	23
Total	185	173	194	204	199	210	197	182
Americas								
Argentina	37	32	46	49	50	52	50	44
Brazil	216	215	239	222	238	248	248	194
Canada	192	185	189	175	181	173	164	143
Chile	9	10	11	10	12	10	10	9
Colombia	21	20	23	23	25	23	21	18
Mexico	225	236	240	244	245	245	247	200
Peru	71	61	80	61	69	74	73	52
United States	1 217	1 152	1 251	1 078	1 153	1 016	1 003	891
Venezuela	12	12	16	11	18	10	19	15
Other America	23	26	28	28	26	26	25	21
Total	2 023	1 949	2 123	1 899	2 017	1 877	1 859	1 587
Asia								
Bangladesh	51	52	50	49	50	48	45	44
China	1 750	2 155	2 690	3 041	3 156	3 563	4 015	4 730
Hong Kong, China	5	5	5	5	5	5	5	4
India	310	339	362	388	430	455	485	515
Indonesia	85	79	87	83	74	81	97	85
Iran	69	70	72	76	80	85	84	80
Israel	13	10	7	11	12	9	9	9
Japan	603	619	623	602	594	588	564	433
Kazakhstan	35	35	35	35	35	35	35	32
Korea Dem. Rep. of	10	6	5	5	5	5	4	4
Korea, Rep. of	476	482	445	476	534	512	504	398
Malaysia	62	65	68	67	68	70	70	54
Pakistan	24	25	24	24	25	23	23	19
Philippines	32	19	20	12	13	12	10	8
Saudi Arabia	14	23	17	33	39	68	44	50
Singapore	16	16	16	16	17	17	16	14
Chinese Taipei	302	330	342	306	282	226	220	189
Thailand	107	116	129	116	104	105	111	92
Turkey	99	122	144	142	136	137	128	136
Uzbekistan	8	8	8	7	7	7	8	7
Vietnam	40	45	45	47	44	56	50	52
Other Asia East	1	1	2	2	2	3	3	3
Other Asia West	32	35	36	25	33	34	33	26
Total	4 147	4 660	5 235	5 572	5 746	6 148	6 566	6 988

Continued

355

World zinc consumption, by region and country ^a continued

	2002	2003	2004	2005	2006	2007	2008	2009
	kt	kt	kt	kt	kt	kt	kt	kt
Europe								
Austria	48	49	48	48	50	50	50	39
Belgium	352	350	365	345	360	387	382	288
Bosnia and Herzegovina	7	5	5	5	5	4	4	2
Bulgaria	14	28	11	12	13	8	6	7
Croatia	9	8	8	8	8	7	6	3
Czech Republic	20	21	21	20	24	18	20	5
Denmark	11	11	11	10	11	10	12	6
Finland	53	57	52	47	53	46	45	34
France	290	291	298	275	285	275	252	235
Germany	526	539	514	511	564	543	527	376
Greece	22	20	29	17	14	27	25	22
Hungary	16	16	15	9	12	10	9	6
Ireland	5	3	3	3	8	7	5	2
Italy	374	348	389	395	313	398	318	216
Macedonia	9	8	8	7	7	6	6	5
Netherlands	114	114	115	115	116	117	105	78
Norway	29	18	14	12	25	28	17	15
Poland	88	102	103	79	100	103	85	79
Portugal	13	18	13	12	18	16	16	12
Romania	18	16	25	26	19	20	9	8
Russian Federation	153	189	163	171	199	207	195	167
Serbia	10	11	8	8	8	6	6	5
Slovak Republic	30	30	30	32	37	26	22	13
Slovenia	12	13	14	14	17	16	13	15
Spain	220	226	248	216	225	225	210	148
Sweden	33	31	42	42	54	51	45	36
Switzerland	20	11	14	12	11	14	13	9
Ukraine	65	65	65	44	44	45	44	35
United Kingdom	185	188	185	175	172	174	158	112
Yugoslavia	0	0	0	0	0	0	0	0
Other	8	8	8	8	7	10	10	9
Total	2 754	2 794	2 824	2 684	2 786	2 858	2 623	1 988
Oceania								
Australia	249	254	250	239	255	202	182	118
New Zealand	17	13	13	14	12	12	11	10
Total	266	267	263	253	268	214	193	128
World Total	9 377	9 843	10 639	10 611	11 015	11 307	11 436	10 873
Western World	7 118	7 115	7 417	7 062	7 302	7 183	6 910	5 639

^a Total consumption of refined zinc including zinc used directly for the production of zinc alloys, regardless of the type of source material from which produced, i.e. ores, concentrates, residues, slags or scrap. Remelted zinc and zinc dust are excluded.

Source: International Lead-Zinc Study Group, *Lead and Zinc Statistics*, Lisbon, Portugal.

356

Summary of Australian statistics for zircon and monazite

	Zircon concentrate				Monazite concentrate			
	Production ^a	Exports ^b			Production ^a	Exports		
	Volume kt	Volume kt	Value \$m	Unit value \$/t	Volume kt	Volume kt	Value \$m	Unit value \$/t
1965	223	213	6.8	31.9	2.3	2.3	0.2	95.7
1966	232	207	9.0	43.5	2.0	2.1	0.2	114.3
1967	290	243	10.7	44.0	2.4	1.9	0.2	126.3
1968	292	262	11.0	42.0	2.1	2.6	0.4	134.6
1969	363	306	12.4	40.5	3.9	2.7	0.3	125.9
1970	389	380	13.9	36.6	4.4	4.8	0.6	129.2
1971	406	366	13.3	36.3	4.4	4.6	0.7	145.7
1972	357	386	13.8	35.8	5.1	4.6	0.6	121.7
1973	375	431	15.9	36.9	4.2	5.1	0.7	127.5
1974	368	384	32.2	83.9	3.6	3.8	0.5	142.1
1975	382	299	58.2	194.6	4.5	2.5	0.4	172.0
1976	420	345	54.5	158.0	5.3	3.2	0.5	165.6
1977	398	323	36.2	112.1	9.4	7.5	1.2	161.3
1978	392	390	29.4	75.4	15.0	11.6	2.4	205.2
1979	445	479	33.1	69.1	16.3	13.2	3.1	233.3
1980	492	502	35.1	69.9	14.1	10.3	3.4	329.1
1981	434	444	37.0	83.3	13.3	14.0	5.4	382.1
1982	462	405	43.1	106.4	9.6	15.3	6.1	400.0
1983	382	380	44.7	117.6	15.1	17.7	7.2	406.8
1984	458	438	51.8	118.3	16.3	18.1	7.6	421.5
1985	501	496	63.9	128.8	18.7	18.0	9.2	512.2
1986	452	446	74.5	167.0	14.8	14.1	9.2	651.1
1987	466	465	108.4	233.1	12.8	10.5	7.7	735.2
1988	480	464	189.6	409.0	12.2	9.7	7.6	787.5
1989	479	474	303.7	641.2	12.8	15.9	13.6	855.3
1990	443	332	205.0	616.7	11.1	11.1	9.9	894.0
1991	288	324	136.0	419.4	6.6	8.7	3.3	383.2
1992	355	310	71.6	230.8	5.6	5.7	1.7	300.0
1993	413	348	62.9	180.7	6.5	6.5	1.9	296.5
1994	511	504	124.1	246.2	2.3	2.7	0.8	290.3
1995	505	514	190.1	370.2	0.2	0.0	0.0	0.0
1996	460	424	248.3	585.8	0.0	0.0	0.0	0.0
1997	416	342	204.9	599.4	0.0	0.0	0.0	0.0
1998	401	399	225.9	566.6	0.0	0.0	0.0	0.0
1999	359	370 ^s	174.4 ^s	471.6 ^s	0.0	0.0	0.0	0.0
2000	374	372 ^s	198.0 ^s	532.2 ^s	0.0	0.0	0.0	0.0
2001	393	391 ^s	262.5 ^s	671.2 ^s	0.0	0.0	0.0	0.0
2002	412	407 ^s	279.8 ^s	687.6 ^s	0.0	1.6	0.4	249.8
2003	462	452 ^s	261.3 ^s	578.1 ^s	0.0	0.0	0.0	0.0
2004	441	437 ^s	285.0 ^s	652.4 ^s	0.0	0.0	0.0	0.0
2005	427	422 ^s	355.8 ^s	842.4 ^s	0.0	0.0	0.0	0.0
2006	491	485 ^s	446.3 ^s	919.7 ^s	0.0	0.0	0.0	0.0
2007	601	610 ^s	452.6 ^s	742.0 ^s	0.0	0.0	0.0	0.0
2008	550	655 ^s	476.1 ^s	726.3 ^s	0.0	0.0	0.0	0.0
2009	474	744 ^s	490.4 ^s	659.0 ^s	0.0	0.0	0.0	0.0

^a Ex mine. ^b All grades, bulk and bagged, before January 1992; standard grade only until June 1993; all grades until August 1999. ^s ABARES estimate. Sources: ABARES, *Australian Mineral Statistics*, Canberra; ABS, *International Trade, Australia*, cat. no. 5465.0, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra.

357

World zircon production, by major producing country

	Australia	South Africa ^a	Ukraine	United States ^a	Other ^a	Total ^a
	kt	kt	kt	kt	kt	kt
1965	223	0	0	54	8	286 b
1966	232	0	0	70	18	320 b
1967	290	0	0	60	6	356 b
1968	292	0	0	60	8	360 b
1969	363	0	0	63	9	435 b
1970	389	0	0	56	7	452 b
1971	406	1	0	60	12	479 b
1972	357	1	0	75	52	485 b
1973	375	2	0	90	33	500 b
1974	368	12	0	110	30	520 b
1975	382	12	0	100	16	510 b
1976	420	11	0	80	9	520 b
1977	398	17	0	90	15	520 b
1978	392	50	0	75	33	550 b
1979	445	50	0	70	45	610 b
1980	492	80	na	60	28	660 b
1981	434	100	73	70	36	713
1982	462	125	82	78	33	780
1983	382	127	82	64	48	703
1984	458	153	82	67	44	804
1985	501	161	86	70	67	885
1986	452	140	86	85	60	823
1987	466	140	86	90	64	837
1988	480	130	86	115	103	918
1989	479	150	85	118	111	975
1990	443	150	50	102	111	856
1991	288	200	50	103	60	701
1992	355	220	50	108	56	789
1993	413	220	50	105	47	835
1994	511	205	50	114	51	931
1995	505	245	50	115	56	971
1996	460	302	53	117	57	989
1997	416	297	55	123	64	955
1998	401	279	57	152	69	958
1999	359	310	60	188	79	996
2000	374	317	na	181	109	975
2001	393	377	na	173	102	1 050
2002	412	420	na	132	124	1 093
2003	462	370	na	144	121	1 088
2004	441	379	na	172	156	1 148
2005	427	399	na	164	199	1 189
2006	491	407	na	143	236	1 277
2007	601	375	na	121	229	1 326
2008	550	398	na	124	170	1 242
2009	474	352	na	57	174	1 057

^a Bureau of Mineral Resources estimates until 1987; other sources thereafter. ^b Excludes former centrally planned economies. ^{na} Not available.

Sources: Bureau of Mineral Resources, *Australian Mineral Industry Annual Review*, AGPS, Canberra; Bureau of Mineral Resources, *Australian Mineral Industry, Quarterly Summary Statistics*, Canberra; TZ Minerals International, *Mineral Sands Report*, Surrey, England; TZ Minerals International, *Mineral Sands Annual Review*, Surrey, England; US Department of the Interior, Bureau of Mines, *Mineral Commodity Summaries*, Washington DC; ABARES.



Environment

358 Agriculture water use, Australia

		New South Wales ^a		Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
Agricultural businesses										
2005-06	no.	48 937	37 146	32 212	16 455	14 526	4 745	659	154 680	
2006-07	no.	47 869	37 429	30 650	15 835	13 608	4 783	643	150 817	
2007-08	no.	44 521	34 177	29 121	14 996	13 084	4 200	605	140 704	
2008-09	no.	43 212	32 973	28 142	14 454	12 658	4 000	558	135 997	
Water use										
Irrigation										
2005-06	ML	4 534 108	2 448 485	2 325 003	897 197	306 284	203 931	22 356	10 737 364	
2006-07	ML	2 605 019	1 648 914	1 840 252	966 057	293 186	263 029	19 737	7 636 194	
2007-08	ML	1 677 083	1 332 045	1 842 729	880 268	284 878	252 113	15 683 ^b	6 284 799	
2008-09	ML	1 910 033	1 194 501	2 058 471	827 230	226 085	262 296	21 962	6 500 578	
Other agricultural uses										
2005-06	ML	262 364	192 653	255 633	78 378	121 241	25 789	15 369	951 427	
2006-07	ML	240 062	174 371	243 980	68 723	118 806	24 816	14 477	885 235	
2007-08	ML	178 691	138 822	196 442	53 685	85 026	18 795	32 994 ^b	704 455	
2008-09	ML	198 070	139 351	237 211	74 419	92 310	22 634	21 062	785 057	
Total water use										
2005-06	ML	4 796 472	2 641 138	2 580 636	975 575	427 525	229 720	37 725	11 688 791	
2006-07	ML	2 845 081	1 823 285	2 084 232	1 034 780	411 992	287 845	34 214	8 521 429	
2007-08	ML	1 855 774	1 470 867	2 039 171	933 953	369 904	270 908	48 677 ^b	6 989 254	
2008-09	ML	2 108 103	1 333 852	2 295 682	901 649	318 395	284 930	43 024	7 285 635	
Murray-Darling Basin										
Non Murray-Darling Basin										
		New South Wales ^a	Victoria	Queensland	South Australia	Total		Total		
Agricultural businesses										
2005-06	no.	29 902	18 496	7 881	4 753	61 032		93 648		
2006-07	no.	28 967	18 934	7 535	4 429	59 865		90 952		
2007-08	no.	27 438	17 408	7 472	4 269	56 587		84 117		
2008-09	no.	26 488	16 729	6 924	3 957	54 098		81 899		
Water use										
Irrigation										
2005-06	ML	4 294 229	2 055 487	611 817	408 273	7 369 806		3 367 558		
2006-07	ML	2 384 595	1 381 116	301 937	390 631	4 458 279		3 177 915		
2007-08	ML	1 483 874	937 927	405 615	314 243	3 141 659		3 143 140		
2008-09	ML	1 734 698	797 172	665 290	295 247	3 492 407		3 008 171		
Other agricultural uses										
2005-06	ML	na	na	na	na	na		na		
2006-07	ML	na	na	na	na	na		na		
2007-08	ML	na	na	na	na	na		na		
2008-09	ML	143 114	53 549	45 680	17 785	260 128		524 929		
Total water use										
2005-06	ML	na	na	na	na	na		na		
2006-07	ML	na	na	na	na	na		na		
2007-08	ML	na	na	na	na	na		na		
2008-09	ML	1 877 812	850 721	710 970	313 032	3 752 535		3 533 100		

a Includes ACT. **b** Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

Source: ABS, *Water Use on Australian Farms, Australia*, cat. no. 4618.0, Canberra.

359 Irrigation activity, Australia

	Unit	New South Wales ^a	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
Agricultural businesses irrigating									
2005-06	no.	11 604	11 621	9 861	6 298	3 173	1 919	351	44 827
2006-07	no.	10 689	10 557	8 757	6 447	2 935	2 060	342	41 787
2007-08	no.	8 974	10 309	9 047	6 114	2 720	2 185	288	39 637
2008-09	no.	10 128	10 080	8 805	5 821	2 865	1 962	278	39 939
Area under pasture or crop									
2005-06	ha	62 164 155	12 313 994	145 519 376	55 408 492	98 652 515	1 739 161	59 127 141	434 924 834
2006-07	ha	58 660 611	13 250 203	143 870 532	50 064 634	96 741 958	1 659 163	61 202 240	425 449 341
2007-08	ha	58 154 425	12 535 698	141 057 855	47 075 615	93 034 706	1 541 487	63 887 775	417 287 561
2008-09 ^d	ha	57 309 461	12 090 736	141 209 793	49 126 060	93 645 885	1 630 432	54 016 380	409 028 747
Area irrigated									
2005-06	ha	994 199	647 729	539 157	216 749	60 336	80 912	7 235	2 546 317
2006-07	ha	680 011	437 654	457 822	200 594	53 268	87 472	6 161	1 922 982
2007-08	ha	525 021	427 584	512 774	225 716	63 364	91 538	4 940 ^b	1 850 937
2008-09	ha	503 630	370 957	547 949	196 215	47 804	88 028	6 176	1 760 759
Volume applied									
2005-06	ML	4 534 109	2 448 485	2 325 003	897 197	306 284	203 931	22 356	10 737 365
2006-07	ML	2 605 019	1 648 914	1 840 252	966 057	293 186	263 029	19 737	7 636 194
2007-08	ML	1 677 083	1 332 045	1 842 729	880 268	284 878	252 113	15 683 ^b	6 284 799
2008-09	ML	1 910 033	1 194 501	2 058 471	827 230	226 085	262 296	21 962	6 500 578
Average application rate									
2005-06	ML/ha	4.6	3.8	4.3	4.1	5.1	2.5	3.1	4.2
2006-07	ML/ha	3.8	3.8	4.0	4.8	5.5	3.0	3.2	4.0
2007-08	ML/ha	3.2	3.1	3.6	3.9	4.5	2.8	3.2	3.4
2008-09	ML/ha	3.8	3.2	3.8	4.2	4.7	3.0	3.6	3.7
Murray-Darling Basin ^c									
Agricultural businesses irrigating									
2005-06	no.	18 634		26 192					
2006-07	no.	17 062		24 725					
2007-08	no.	15 479		24 158					
2008-09	no.	15 077		24 863					
Area under pasture or crop									
2005-06	ha	88 827 650		346 097 164					
2006-07	ha	97 160 318		328 289 023					
2007-08	ha	95 561 754		321 725 808					
2008-09	ha	96 041 055 ^d		312 987 692 ^d					
Area irrigated									
2005-06	ha	1 653 788		892 530					
2006-07	ha	1 101 410		821 572					
2007-08	ha	957 752		893 185					
2008-09	ha	929 074		831 684					
Volume applied									
2005-06	ML	7 369 807		3 367 557					
2006-07	ML	4 458 279		3 177 915					
2007-08	ML	3 141 659		3 143 140					
2008-09	ML	3 492 407		3 008 170					
Average application rate									
2005-06	ML/ha	4.5		3.8					
2006-07	ML/ha	4.0		3.9					
2007-08	ML/ha	3.3		3.5					
2008-09	ML/ha	3.8		3.6					

^a Includes ACT. ^b Estimate has a relative standard error of 10% to less than 25% and should be used with caution. ^c Based on Natural Resource Management (NRM) regions. ^d Total includes area of agricultural land.

Source: ABS, *Water Use on Australian Farms, Australia*, cat. no. 4618.0, Canberra.

360 Sources of agricultural water, Australia

		New Unit South Wales ^a	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
Water supplied by irrigation schemes									
2005-06	ML	na	na	na	na	na	na	na	na
2006-07	ML	1 073 085	1 051 603	757 416	221 849	133 459	na	na	3 237 412
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	588 312	755 489	949 194	182 396	90 159 b	39 088 b	284 c	2 604 922
Surface water									
2005-06	ML	na	na	na	na	na	na	na	na
2006-07	ML	677 388	338 530	682 232	183 805	138 754	225 393	10 825	2 256 927
2007-08	ML	na	na	na	na	na	na	na	na
2008-09 ^d	ML	602 465	231 790	713 958	129 765 b	83 173	207 030	7 901	1 976 082
Groundwater									
2005-06	ML	810 117	297 090	673 633	459 253	111 964	14 838	24 949	2 391 844
2006-07	ML	1 027 323	337 065 b	607 595	592 652	130 969	22 452 b	21 954	2 740 010
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	851 296	297 040	577 167	559 437	137 722	32 907 b	34 776	2 490 345
Town or country reticulated mains supply									
2005-06	ML	23 699	29 954	8 094	45 150	15 009	3 540	221 b	125 667
2006-07	ML	10 897 b	9 821 b	2 418 b	18 789 c	2 916 b	na	na	44 841
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	16 669 b	16 374 b	2 251 b	15 906 b	4 826	2 492 b	41 b	58 559
Recycled / re-used water from off-farm sources									
2005-06	ML	23 470	40 849	36 789	11 713	436	na	na	113 257
2006-07	ML	13 255 b	58 068 b	21 098 b	9 487 b	1 003 c	1 424 c	185	104 520
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	33 605 b	26 560 c	34 189 b	12 074 c	366	2 877 b	na	109 671
Other									
2005-06	ML	17 367	18 986	8 734	11 233	2 473	na	na	58 793
2006-07	ML	43 134 b	28 198 b	13 473 b	8 198 c	4 891	185	na	98 079
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	15 755 b	6 599 c	18 922 c	2 071 b	2 149 c	536 b	20	46 052
Total all sources									
2005-06	ML	na	na	na	na	na	na	na	na
2006-07	ML	2 845 082	1 823 285	2 084 232	1 034 780	411 992	249 454	32 964	8 481 789
2007-08	ML	na	na	na	na	na	na	na	na
2008-09	ML	2 108 102	1 333 852	2 295 681	901 649	318 395	284 930	43 022	7 285 631

Continued

360 Sources of agricultural water, Australia continued

	Unit	Murray-Darling Basin ^d	Non Murray-Darling Basin ^d
Water supplied by irrigation schemes			
2005-06	ML	na	na
2006-07	ML	2 329 474	946 469
2007-08	ML	na	na
2008-09	ML	1 572 750	1 032 172
Surface water			
2005-06	ML	na	na
2006-07	ML	994 042	1 262 886
2007-08	ML	na	na
2008-09 ^d	ML	1 032 187	943 895
Groundwater			
2005-06	ML	1 068 889	1 322 956
2006-07	ML	1 337 539	1 402 472
2007-08	ML	na	na
2008-09	ML	1 068 906	1 421 440
Town or country reticulated mains supply			
2005-06	ML	59 163	66 505
2006-07	ML	9 498	36 635
2007-08	ML	na	na
2008-09	ML	16 816	41 744
Recycled / re-used water from off-farm sources			
2005-06	ML	55 638	59 064
2006-07	ML	41 349	62 986
2007-08	ML	na	na
2008-09	ML	40 888	68 783
Other			
2005-06	ML	37 339	22 693
2006-07	ML	60 308	37 771
2007-08	ML	na	na
2008-09	ML	20 989	25 064
Total all sources			
2005-06	ML	na	na
2006-07	ML	4 772 210	3 749 219
2007-08	ML	na	na
2008-09	ML	3 752 536	3 533 098

^a Includes ACT. ^b Estimate has a relative standard error of 10% to less than 25% and should be used with caution. ^c Estimate has a relative standard error of 25% to less than 50% and should be used with caution. ^d Based on Natural Resource Management (NRM) regions.

Source: ABS, *Water Use on Australian Farms, Australia*, cat. no. 4618.0, Canberra.

361

Irrigation expenditure, Australia

	New South				South	Western		Northern	
	Unit	Wales ^a	Victoria	Queensland	Australia	Australia	Tasmania	Territory	Australia
Water license and annual irrigation charges									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	74.9	79.9	36.1	25.4	6.9 ^b	2.1	0.6 ^b	225.9
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	91.6	88.4	60.8	45.6 ^b	9.0 ^b	3.6	0.1 ^c	299.2
Purchase of extra water on a temporary basis									
2005-06	\$m	na	na	na	na	na	na	na	0
2006-07	\$m	45.4	51.7 ^b	8.5 ^c	14.9 ^b	na	0.8 ^b	na	121.2
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09 ^d	\$m	29.7 ^b	71.7	3.3 ^b	41.0	0.1	0.9	0.0	146.7
Purchase of extra water on a permanent basis									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	20.3 ^b	40.7	na	20.7 ^c	na	na	na	81.8
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	35.7 ^b	49.6	10.6	4.7 ^c	0.6	6.0 ^b	0.0	107.2
Other irrigation operating expenses									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	165.0	78.6	103.6	80.5	26.0	21.1	2.8	477.7
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	137.1	74.8	111.4	69.0	23.3	22.1	2.6	440.4
Purchase of irrigation equipment									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	71.0 ^b	56.0 ^b	59.9	50.6 ^b	26.5 ^c	19.5	2.8 ^c	286.4
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	70.7 ^b	65.0 ^b	64.1 ^b	43.2 ^b	10.6 ^b	32.9 ^b	2.1	288.6
Capital construction of earthworks and structures									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	78.2 ^c	27.9 ^b	50.5 ^b	6.6 ^b	8.1 ^b	10.8 ^b	0.5 ^b	182.6
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	20.0 ^b	55.6 ^c	16.7	5.5 ^b	2.4 ^c	10.9 ^b	0.0	110.9
Total irrigation expenditure									
2005-06	\$m	na	na	na	na	na	na	na	na
2006-07	\$m	454.9	334.8	258.5	198.9	67.5 ^b	54.4	6.6 ^b	1 375.7
2007-08	\$m	na	na	na	na	na	na	na	na
2008-09	\$m	384.7	405.2	266.8	209.0	46.0	76.4	4.8	1 393.0

^a Includes ACT. ^b Estimate has a relative standard error of 10% to less than 25% and should be used with caution. ^c Estimate has a relative standard error of 25% to less than 50% and should be used with caution.

Source: ABS, *Water Use on Australian Farms, Australia*, cat. no. 4618.0, Canberra.

This list is designed to help you locate some commonly used or difficult to find general items.

Item	Table no./s
Balance of payments	10
Capital expenditure, private, new	31
Consumer price index	9, 17, 110
Employment	2, 3, 24, 109
Exchange rates	11, 12
Exports, by sector	4
Exports, contribution by sector	5, 6
Export price indexes	8
Farm chemical, sales and prices of	107
Farm costs and components	17, 91
Farm exports, summary	25
Farm indebtedness	94
Farm irrigation	358–361
Farm land use	23
Farms, number of	24
Fertilisers	97–106
Foreign debt	10
Gross product, by sector	1
Gross value of farm production	17, 19
Gross value of mineral production	33, 34
Indexes of prices received by farmers	17, 22
Indexes of prices paid by farmers	17, 92
Inflation rates	9, 15
Interest rates	9, 15, 93
Livestock numbers, summary	23
Mineral commodity imports, summary	41, 42
Mineral exploration	29
Mineral exports, summary	38, 39
Mineral exports summary, by country of destination	40
Mineral prices, summary	36
Mineral royalties	29
Net value of farm production	17
Oil prices	320
Population, by selected countries and regions	16
Terms of trade, Australia	10
Terms of trade, farmers	17
Wine, domestic sales and exports	145–148