

World Mineral Production



2000–04



British
Geological Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL

BRITISH GEOLOGICAL SURVEY

WORLD MINERAL PRODUCTION 2000–04

Authors: L E Taylor, T J Brown, A J Benham, P A J Lusty, D J Minchin
Technical support: A C MacKenzie

© NERC copyright 2006
First Published 2006

BRITISH GEOLOGICAL SURVEY

Keyworth, Nottingham NG12 5GG
☎ 0115-936 3100

Murchison House, West Mains Road, Edinburgh EH9 3LA
☎ 0131-667 1000

The full range of Survey publications is available from the BGS Sales Desk at the Survey headquarters, Keyworth, Nottingham. The more popular maps and books may be purchased from BGS-approved stockists and agents and over the counter at the Bookshop, Gallery 37, Natural History Museum, Cromwell Road, (Earth Galleries), London. Sales Desks are also located at the BGS London Information Office, and at Murchison House, Edinburgh. The London Information Office maintains a reference collection of BGS publications including maps for consultation. Some BGS books and reports may also be obtained from the Stationery Office Publications Centre or from Stationery Office bookshops and agents.

The British Geological Survey carries out the geological survey of Great Britain and Northern Ireland (the latter as an agency service for the government of Northern Ireland), and of the surrounding continental shelf, as well as its basic research projects. It also undertakes programmes of British technical aid in geology in developing countries as arranged by the Department for International Development.

The British Geological Survey is a component body of the Natural Environment Research Council.

*All communications regarding the content of this publication should be addressed to the Programme Manager, Economic Minerals and Geochemical Baseline Programme, British Geological Survey, Keyworth, Nottingham NG12 5GG
☎ 0115-936 3495 Fax 0115 936 3520
E-mail minerals@bgs.ac.uk*

The compilations presented in this book are copyright and may not be reproduced in any form without the permission of the Director, British Geological Survey.

Bibliographical reference

BRITISH GEOLOGICAL SURVEY. 2006. *World mineral production 2000-04*. (Keyworth, Nottingham: British Geological Survey.)

Cover photograph: © Corbis

Printed by Halstan & Co Ltd, Amersham, Buckinghamshire

ISBN 0 85272 531 0

CONTENTS

Commodity Index

Alumina 3	Manganese 47
Aluminium 4	Mercury 47
Antimony 5	Mica 48
Arsenic 5	Molybdenum 49
Asbestos 6	Natural gas 55
Barytes 7	Natural sodium carbonate 66
Bauxite 2	Nepheline syenite 49
Bentonite 8	Nickel 50
Beryl 10	Niobium 73
Bismuth 11	Perlite 52
Borates 11	Petroleum 53
Bromine 12	Phosphates 57
Cadmium 13	Platinum 58
Chromium 14	Potash 59
Coal 15	Pyrites 67
Cobalt 18	Rare earths 59
Copper 19	Salt 60
Diamond 22	Selenium 63
Diatomite 23	Silicon 37
Feldspar 24	Sillimanite 64
Ferro alloys 37	Silver 65
Fluorspar 25	Strontium 66
Fuller's earth 8	Sulphur 67
Germanium 25	Talc 71
Gold 26	Tantalum 73
Graphite 28	Tellurium 73
Gypsum 29	Tin 74
Iodine 31	Titanium 75
Iron ore 32	Tungsten 76
Iron and steel 33	Uranium 77
Kaolin 41	Vanadium 77
Lead 43	Vermiculite 78
Lithium 45	Wollastonite 78
Magnesite 46	Zinc 79
Magnesium 46	Zirconium 81

EXPLANATORY NOTES

Coverage

World Mineral Production covers the majority of economically important mineral commodities. For each commodity constant efforts are made to ensure that as many producing countries as possible are reported. For some commodities, where statistics on production are not publicly available, estimates are made. Users of this compilation are advised that more statistical information than can be included in a publication of this nature is held in the British Geological Survey files and is available for consultation. Historical data (1913-1970) can be obtained from the predecessors to this series entitled *World Mineral Statistics* and the *Statistical Summary of the Mineral Industry*.

Arrangement of countries

Countries are ordered alphabetically in geographical groupings as follows:

- Europe
- Africa
- North and Central America, including the Caribbean
- South America
- Asia
- Australasia, including the Pacific Islands

So far as possible the nomenclature follows the London Diplomatic List.

Metals

Mine production of many metals is expressed in terms of metal content. This is clearly indicated at the head of the table, adjacent to the unit used. For aluminium, cobalt, copper, iron, lead, nickel, tin and zinc, mine production and metal production are shown in separate tables. Unless otherwise specified, metal production statistics relate to metal recovered from both domestic or imported materials, whether primary or secondary, but exclude remelted material.

World totals

For certain minerals and metals no world total is shown due to the non-availability of certain individual country totals.

Exclusion of Warranty

Use by recipients of information provided by the BGS, is at the recipients' own risk. BGS has taken care to ensure that information provided is as free from error as is reasonably practical. In view of the disparate sources of information at BGS's disposal, including such material donated to BGS, that BGS accepts in good faith as being accurate, the Natural Environment Research Council (NERC) gives no warranty, expressed or implied, as to the quality, accuracy, performance, and merchantability of the information supplied, or to the information's suitability for any use whether made known to BGS or otherwise. NERC/BGS accepts no liability whatever in respect of loss, damage, injury or other occurrence however caused.

Acknowledgements

Compilation of this volume of mineral statistics has been possible only by obtaining information from a very large number of organisations throughout the world, chiefly home and overseas government departments and specialist national or international authorities concerned with particular sectors of the minerals or metals industries. To all these bodies the British Geological Survey expresses its grateful acknowledgement for the information made available, whether in published form or provided by direct correspondence.

Particular acknowledgement is made to the Mines Departments and other government agencies of many countries whose regular statements, yearbooks and other reports are worthy of direct consultations by readers in search of detail.

Specialist commodity organisations which have kindly allowed information to be reproduced include the International Copper Study Group, the International Lead and Zinc Study Group, the International Nickel Study Group and the International Fertilizer Industry Association Ltd. In a few instances, information on specific commodities has been obtained directly from company sources. The co-operation of other members of the International Consultative Group on Non-Ferrous Metal Statistics is also gratefully acknowledged.

Supplementary information is also obtained from publications dealing with a wider range of commodities such as *Société de l'Industrie Minérale*, *Annuaire Statistique Mondial des Minerais et Métaux*; Mining Journal, *Mining Annual Review*; World Bureau of Metal Statistics, *World Metal Statistics*; World Bureau of Metal Statistics, UBS Warburg and Enron Metals Limited, *Metallstatistik*; publications of the Interstate Statistical Committee of the CIS, the United States Geological Survey, and UN agencies.

In addition, information has been obtained from the websites of the following organisations, companies, statistical offices and government departments: United Nations; Kaolin & Plastic Clays Europe; International Iron and Steel Institute; Eurofer; World Nuclear Association; Eurostat; European Aggregates Association; South East Asia Iron and Steel Institute; Instituto Latinoamericano del Fierro y el Acero; RNC Gold; Glencairn Gold; Glamis Gold; Break Water Resources; Falconbridge Ltd; Inmet Mining; Stillwater Mining; Aluminium de Grece; New Boliden; Eurozinc Mining Corporation; Northern Territory Government, Australia; Department of Primary Industries Victoria, Australia; Mineral Resources Tasmania, Australia; Australian Bureau of Agricultural & Resource Economics; Vereinigung der Österreichischen Zementindustrie, Austria; Federation de l'Industrie Cimentiere Belge, Belgium; Statistics Belgium; Instituto Nacional de Estadística Bolivia; Departamento Nacional De Producao Mineral, Brazil; Grupo Paranapanema, Brazil; Agencia Nacional do Petroleo, Brazil; Natural Resources Canada; Statistics Canada; Canadian Association of Petroleum Producers; Mineral Resources of Quebec, Canada; Statistics Denmark; Banco Central del Ecuador; Geological Survey of Finland; Federation des Minerais, Mineraux Industrielles et Metaux non Ferreux, France; Comité Professionnel de Pétrole, France; Ministère de l'Economie, des Finances et de l'Industrie, France; Statistisches Bundesamt Deutschland, Germany; Federacciai, Italy; Unione Petrolifera, Italy; Istituto Nazionale di Statistica, Italy; Salt Industry Centre, Japan; Korea Institute of Geoscience and Mineral Resources, Republic of Korea; Statec, Luxembourg; Bank Negara Malaysia; Pemex, Mexico; Secretaría de Economía, Mexico; Servicio Geológico de México; Centraal Bureau voor de Statistiek, Netherlands; Staatstoezicht op de Mijnen, Netherlands; Ministry of Economic Development, New Zealand; Central Bank, Nicaragua; Statistisk Sentralbyrå, Norway; Chamber of Mines and Petroleum, Papua New Guinea; PeruPetro; Ministerio de Energía y Minas, Peru; Sociedad Nacional de Minería Petróleo y Energía, Peru; Mines and Geosciences Bureau, Philippines; Instituto Nacional de Estadística, Portugal; Unesid, Spain; Staatsolie Maatschappij, Suriname; Sveriges Geologiska Undersökning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyrån, Sweden; Bank of Thailand; Department of Trade and Industry, United Kingdom; Energy Information Administration, United States of America; Dirección Nacional de Minería y Geología, Uruguay; Central Statistical Organisation, Republic of Yemen.

Units

The Statistics shown in this volume are expressed in metric units. The following factors are given for converting to non-metric units:

tonnes $\times$ 0.9842 = long tons
 tonnes $\times$ 1.1023 = short tons
 kilograms $\times$ 2.2046 = pounds
 kilograms $\times$ 32.1507 = troy ounces
 cubic metres $\times$ 35.3147 = cubic feet
 1 tonne of crude petroleum equals on average 7 barrels of crude petroleum.
 1 flask mercury = 34.5 kilograms
 1 metric ton unit = 10 kilograms

Symbols

...	figures not available
0	quantity less than half unit shown
—	nil
*	estimated
BGS	British Geological Survey

STATISTICAL TABLES

Production of bauxite

tonnes

Country	2000	2001	2002	2003	2004
Bosnia & Herzegovina	254 700	90 000	71 300	573 000	480 000
France	185 000	174 000	170 000	168 000	168 000
Greece	1 818 525	1 903 280	2 492 000	2 418 000	2 444 000
Hungary	1 046 470	1 000 044	720 000	665 904	646 726
Russia	5 089 000	4 805 000	4 585 700	5 441 800	6 017 600
Serbia and Montenegro	630 000	630 000	611 500	540 051	610 000
Turkey	458 537	242 040	287 403	364 306	365 800
Ghana	503 824	692 620	683 654	494 716	498 060
Guinea	17 991 900	17 191 700	17 480 000	17 044 000	18 795 000
Mozambique	8 130	8 597	9 119	11 793	6 723
Jamaica	11 126 524	12 369 647	13 119 449	13 444 529	13 296 481
USA (b) (d)	*200 000	*200 000	*200 000	*200 000	*200 000
Brazil (c)	13 974 480	13 388 100	13 147 900	18 456 800	20 948 800
Guyana	2 689 451	2 011 301	1 639 266	1 715 705	1 503 416
Suriname	3 610 381	4 393 640	4 001 602	4 215 061	4 051 700
Venezuela	4 360 720	4 584 893	5 190 806	5 445 516	5 814 705
China	*7 900 000	*8 650 000	*10 000 000	*11 000 000	*12 000 000
India (f)	7 992 782	8 688 752	9 867 455	10 924 786	11 696 773
Indonesia	1 150 776	1 237 006	1 283 485	1 262 705	1 330 827
Iran (a)	485 130	283 877	323 600	391 388	*390 000
Kazakhstan	3 729 600	3 685 100	4 376 700	4 737 100	4 705 400
Malaysia	123 270	64 161	39 975	5 732	2 040
Pakistan (e)	10 377	3 728	12 233	4 098	4 847
Vietnam	16 000	20 000	*20 000	*20 000	*20 000
Australia	53 802 000	53 799 000	54 135 000	55 602 000	56 593 000
World Total	139 000 000	140 000 000	144 000 000	155 000 000	163 000 000

Note(s):-

(1) This table includes production of refractory bauxite

- (a) Years ended 20 March following that stated
- (b) Data for Alabama only
- (c) Including beneficiated and direct shipping ore
- (d) Years ended 30 September of that stated
- (e) Years ended 30 June of that stated
- (f) Years ended 31 March following that stated

Production of alumina

tonnes (Al₂O₃ content)

Country	2000	2001	2002	2003	2004
Azerbaijan	63 000	87 500	90 960	179 995	232 300
Bosnia & Herzegovina	208 400	30 900	—	35 011	*30 000
France	508 000	*510 000	*500 000	*510 000	*510 000
Germany	*730 000	*750 000	*825 000	*830 000	*835 000
Greece	451 000	463 000	490 000	496 000	514 000
Hungary	357 100	330 000	293 700	300 000	304 000
Irish Republic	1 410 674	1 448 730	1 400 000	1 500 000	*1 500 000
Italy	1 022 000	993 000	1 010 000	1 021 000	1 064 000
Romania	416 587	319 403	361 047	332 853	559 307
Russia	2 865 000	3 046 400	3 130 884	3 230 478	3 269 416
Serbia and Montenegro	186 135	200 660	237 396	239 739	245 000
Spain	1 123 000	1 199 000	1 350 000	1 380 000	*1 400 000
Turkey	155 448	145 993	152 869	160 675	169 991
Ukraine	1 365 000	1 343 400	1 350 900	1 434 050	1 562 970
United Kingdom	88 500	83 900	73 800	—	—
Guinea	540 922	674 300	669 835	723 026	778 000
Canada	1 023 000	1 036 000	1 125 400	1 108 500	1 169 836
Jamaica	3 600 125	3 542 385	3 630 587	3 843 610	4 022 722
USA	4 786 000	4 340 000	4 338 000	4 861 000	5 354 000
Brazil	3 754 100	3 519 700	3 855 400	4 713 800	5 126 500
Suriname	1 906 073	1 893 254	1 902 706	2 004 538	2 038 900
Venezuela	1 755 265	1 833 162	1 901 000	1 882 007	*1 900 000
China	4 328 100	4 746 500	5 450 000	6 114 000	6 994 000
India	2 107 000	2 120 000	2 556 000	2 856 000	*2 900 000
Iran (a)	—	—	101 339	102 785	137 002
Japan	781 700	739 000	723 900	725 000	*725 000
Kazakhstan	1 216 679	1 231 126	1 386 457	1 419 237	1 467 838
Australia	15 680 000	16 313 000	16 429 000	16 529 000	16 525 000
World Total	52 400 000	52 900 000	55 300 000	58 500 000	61 300 000

Note(s):-

(1) Where possible figures in this table show the alumina equivalent (Al₂O₃) of total hydrate produced, whether or not calcined

(a) Years ended 20 March following that stated

Production of primary aluminium

tonnes

Country	2000	2001	2002	2003	2004
Azerbaijan	2	57	58	18 565	29 537
Bosnia & Herzegovina	94 751	96 000	103 500	110 600	120 900
France	441 100	461 000	463 000	444 000	447 000
Germany	643 545	651 592	652 845	660 783	667 800
Greece	168 000	164 000	165 262	167 797	166 634
Hungary	33 850	34 600	35 294	34 000	34 300
Iceland	225 721	242 526	263 700	265 900	271 300
Italy	189 800	187 500	190 400	191 400	195 400
Netherlands	301 689	293 068	284 364	282 800	331 000
Norway (a)	1 031 000	1 034 000	1 044 000	1 180 200	1 370 438
Poland	55 473	54 606	58 777	57 145	58 931
Romania	179 039	181 830	187 052	196 844	218 534
Russia	3 247 000	3 302 000	3 348 247	3 478 057	3 594 747
Serbia and Montenegro	95 465	108 123	111 919	116 744	115 551
Slovakia	109 000	110 062	111 600	132 089	156 893
Slovenia	75 600	76 632	87 600	109 800	120 700
Spain	365 700	376 400	380 100	389 100	397 500
Sweden	100 788	101 420	100 125	100 707	100 591
Switzerland	35 539	36 288	40 224	43 865	44 879
Turkey	61 501	61 730	62 501	63 140	62 400
Ukraine	119 290	121 034	112 459	113 640	113 212
United Kingdom	305 099	340 778	344 318	342 748	359 631
Cameroon	86 384	80 900	67 000	77 200	85 900
Egypt	188 900	190 800	195 000	194 600	216 000
Ghana	155 500	161 670	131 858	15 909	—
Mozambique	53 800	266 000	273 200	407 400	547 100
South Africa	673 486	662 497	706 916	732 717	863 596
Canada	2 373 460	2 582 746	2 708 910	2 791 915	2 592 160
Mexico	61 200	51 500	39 000	17 600	—
USA	3 668 400	2 637 000	2 707 000	2 703 300	2 516 400
Argentina	263 870	243 840	267 776	279 594	275 388
Brazil	1 271 400	1 132 000	1 318 400	1 380 600	1 457 400
Venezuela	571 463	579 000	604 000	601 290	631 100
Bahrain	509 038	522 042	517 004	526 000	530 000
China	2 989 200	3 575 800	4 321 000	5 546 900	6 589 000
Dubai	536 000	536 000	538 000	560 000	683 000
India (b)	624 206	635 573	688 921	810 282	883 960
Indonesia	192 300	208 800	162 800	197 300	240 800
Iran (c)	141 494	148 844	169 491	182 477	212 602
Japan	6 536	6 632	6 413	6 463	6 433
Tajikistan	300 000	324 000	307 589	319 360	358 082
Australia	1 769 000	1 797 000	1 836 000	1 857 000	1 895 000
New Zealand	328 400	322 300	333 900	334 400	350 400
World Total	24 600 000	24 700 000	26 000 000	28 000 000	29 900 000

Note(s):-

(a) May include some super purity aluminium

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

Mine production of antimony

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Russia	4 500	4 152	*3 000	*3 000	*3 000
Turkey	*20	*20	*20	*20	*20
South Africa	5 064	5 476	5 746	5 291	*5 300
Canada	433	278	173	153	112
Guatemala	—	8 162	401	20	2 686
Mexico	52	81	155	434	503
USA	*340	—	—	—	—
Bolivia	1 907	2 072	2 343	2 432	3 119
Peru (a)	461	274	352	616	*600
China	99 300	97 000	121 547	126 000	126 000
Kyrgyzstan	1 505	*2 200	*1 500	*1 200	*1 500
Tajikistan	*2 000	*2 500	*3 000	*3 000	*3 000
Thailand	98	50	13	46	61
Australia (b)	*2 200	*1 800	*2 100	*2 000	*2 000
World Total	118 000	124 000	140 000	144 000	148 000

Note(s):-

- (1) This table includes antimony content of antimonial lead alloys
(2) In addition, Hungary is believed to produce antimony

- (a) Including Sb content of antimonial lead plus Sb content of ores for export
(b) Years ended 30 June of that stated

Production of white arsenic

tonnes

Country	2000	2001	2002	2003	2004
Belgium	*1 500	*1 000	*1 000	*1 000	*1 000
France	*1 000	*1 000	*1 000	*1 000	*1 000
Germany	*200	*200	*200	*200	*200
Portugal	*50	*50	*50	*50	*50
Russia	*1 500	*1 500	*1 500	*1 500	*1 500
Ghana	*3 000	—	—	—	—
Namibia (a)	—	738	852	389	1 264
Canada	*250	*250	*250	*250	*250
Mexico	3 329	3 143	2 569	2 283	2 415
Bolivia	318	846	237	276	168
Chile (c)	10 712	*10 000	*10 000	*10 000	*10 000
Peru	2 495	2 800	2 970	*3 000	*3 500
China	*40 000	*39 500	*40 000	*40 000	*30 000
Iran (b)	120	219	142	275	89
Japan	*40	*40	*40	*40	*40
Kazakhstan	*1 500	*1 500	*1 500	*1 500	*1 500

Note(s):-

- (1) This table includes calculated trioxide equivalent of arsenic metal produced except where this would involve double counting
(2) In addition to the countries listed, Austria, Finland, Hungary, Spain and the United Kingdom are believed to produce arsenic

- (a) Output of Tsumeb Corp. only, trioxide equivalent of reported black arsenic
(b) Orpiment and realgar concentrates
(c) Exports

Production of asbestos

tonnes

Country	2000	2001	2002	2003	2004
Bulgaria	66	—	—	—	—
Greece	*10 000	*1 000	—	*13 000	*4 000
Russia	752 000	735 000	785 142	883 888	923 000
Serbia and Montenegro	563	194	372	111	370
South Africa					
Chrysotile	18 782	13 393	13 311	—	—
Swaziland					
Chrysotile	12 690	—	—	—	—
Zimbabwe					
Chrysotile	151 954	118 969	167 954	143 087	104 457
Canada					
Chrysotile	307 000	262 000	242 241	200 500	*200 000
USA (a)	5 260	5 260	2 720	—	—
Argentina	254	203	155	166	267
Brazil	209 332	172 695	194 732	231 115	252 067
Colombia (c)	59 249	96 140	62 785	*60 000	60 000
China	276 000	257 581	*562 000	*500 000	*510 000
India					
Amphibole (e)	15 397	11 148	14 139	10 107	5 619
Iran (d)	3 460	3 500	2 400	1 470	1 300
Kazakhstan	233 200	271 200	291 200	353 000	346 500
Korea, Republic of	—	—	—	—	4 673
Pakistan (b)	...	...	100	60	380
World Total	2 100 000	1 900 000	2 300 000	2 400 000	2 400 000

Note(s):-

(1) In addition to the countries listed, Romania is believed to produce asbestos

(a) Sold or used by producers

(b) Years ended 30 June of that stated

(c) Crude

(d) Years ended 20 March following that stated

(e) Years ended 31 March following that stated

Production of barytes

tonnes

Country	2000	2001	2002	2003	2004
Bosnia & Herzegovina	*2 000	*2 500	*2 200	*1 900	*1 900
Bulgaria	*120 000	*120 000	*110 000	*90 000	*90 000
France	92 000	81 000	85 200	81 100	81 000
Georgia	416	1 093	1 042	—	—
Germany	111 790	108 111	100 993	109 506	93 624
Greece	*800	*800	*800	*800	*800
Italy	11 262	10 809	10 215	12 214	9 608
Poland	—	—	2 708	3 030	3 183
Romania	4 266	2 851	100	23	—
Russia	67 600	64 000	58 900	79 000	63 400
Slovakia	13 700	14 450	25 820	12 000	27 063
Spain	32 653	45 473	50 071	44 660	40 776
Turkey	120 893	102 323	106 943	119 648	134 504
United Kingdom	54 000	*66 000	*59 000	*57 000	*61 000
Algeria	51 925	43 020	51 773	47 340	47 900
Morocco	343 557	467 056	487 626	356 394	*340 000
Nigeria	*5 000	*5 000	*5 000	*15 000	*15 000
South Africa	1 628	—	—	—	—
Tunisia	3 702	2 208	5 539	5 000	1 813
Zimbabwe	5 032	7 464	5 233	4 676	3 486
Canada	15 000	27 000	15 000	28 000	20 000
Guatemala	113	700	...	—	70
Mexico	127 668	142 017	163 620	287 451	306 668
USA (b)	392 000	400 000	420 000	468 000	*532 000
Argentina	5 472	6 955	3 048	6 934	2 762
Bolivia	3 050	6 253	1 556	1 851	*2 000
Brazil (d)	54 100	54 790	53 098	57 452	59 612
Chile	1 026	584	384	229	31
Colombia	*900	*900	*600	*2 400	*2 000
Ecuador	1 476	1 181	...	2 139	2 353
Peru	11 403	11 031	3 806	2 906	3 606
Afghanistan	*2 000	*2 000	*2 000	*2 000	*2 000
China	3 024 030	3 985 200	2 700 000	3 100 000	3 400 000
India (a)	845 001	915 976	679 628	723 075	1 161 332
Iran (c)	200 015	238 257	193 579	196 169	207 466
Kazakhstan	15 200	44 600	51 700	78 000	119 900
Korea, Dem. P.R. of	*70 000	*70 000	*70 000	—	—
Laos	3 500	4 400	12 695	18 070	18 000
Malaysia	7 274	649	3 082	—	—
Myanmar	32 300	26 800	15 100	2 000	*1 000
Pakistan (e)	22 432	25 831	19 480	40 745	44 207
Saudi Arabia	8 000	9 000	9 000	10 800	10 000
Thailand	56 180	23 559	137 469	115 600	125 000
Vietnam	52 500	71 100	60 200	81 500	101 000
Australia	*14 000	*16 000	*19 000	*22 000	*29 000
World Total	6 000 000	7 200 000	5 800 000	6 300 000	7 200 000

Note(s):-

- (1) This table may include small quantities of witherite
- (2) In addition to the countries listed, Cuba is believed to produce barytes

- (a) Years ended 31 March following that stated
- (b) Sold or used by producers
- (c) Years ended 20 March following that stated
- (d) Including beneficiated and directly shipped material
- (e) Years ended 30 June of that stated

Production of bentonite and fuller's earth

tonnes

Country	2000	2001	2002	2003	2004
Armenia					
Bentonite	2 807	995	328	642	561
Azerbaijan					
Bentonite	—	—	1 500	19 900	...
Bosnia & Herzegovina					
Bentonite	*10 000	*10 000	9 829	13 050	16 500
Bulgaria					
Bentonite	173 534	171 092	211 500	145 500	224 900
Croatia					
Bentonite	10 013	10 580	12 102	13 568	16 000
Cyprus					
Bentonite	167 000	127 000	128 400	144 859	155 717
Czech Republic					
Bentonite	280 000	224 000	174 000	199 000	201 000
Denmark					
Bentonite	...	12 166	14 539	16 303	18 352
Georgia					
Bentonite	7 084	*7 000	*7 000	9 747	1 804
Germany					
Bentonite	464 616	447 913	495 310	478 796	404 549
Greece					
Bentonite	1 148 694	1 258 872	1 056 598	1 156 642	1 030 556
Hungary					
Bentonite	5 120	30 441	3 700	87 200	9 300
Italy					
Bentonite	636 589	579 029	463 231	474 475	437 659
Fuller's earth	25 384	19 815	24 595	250	300
Macedonia					
Bentonite	*30 000	*25 000	*25 000	*25 000	*25 000
Poland					
Fuller's earth	4 000	...	...	...	...
Romania					
Bentonite	37 587	24 779	15 389	17 637	18 161
Russia					
Bentonite	*500 000	*500 000	*500 000	*500 000	*500 000
Slovakia					
Bentonite	77 000	73 000	65 500	74 700	73 273
Spain					
Bentonite	90 152	*120 000	123 457	103 174	79 919
Attapulgit	28 307	24 477	22 918	18 975	18 000
Sepiolite	596 324	*600 000	564 610	548 728	550 000
Turkey					
Bentonite	636 273	674 178	559 224	831 146	*850 000
Sepiolite	18 295	10 253	...	...	...
Ukraine					
Bentonite	*25 000	*25 000	*25 000	*25 000	*25 000
United Kingdom					
Fuller's earth (a)	65 500	52 000	44 200	33 900	27 540
Algeria					
Bentonite	22 708	21 282	30 699	28 064	30 319
Fuller's earth	3 431	3 254	3 521	2 573	2 284
Morocco					
Bentonite	43 152	71 741	58 754	71 544	...
Fuller's earth (f)	30 665	40 664	43 243	14 944	*15 000
Mozambique					
Bentonite	16 418	1 611	580	684	578
Senegal					
Attapulgit	148 700	121 100	176 454	176 857	*180 000
South Africa					
Bentonite	90 129	108 306	98 313	145 060	55 859
Attapulgit	10 287	9 200	13 918	14 585	20 419

Production of bentonite and fuller's earth

tonnes

Country	2000	2001	2002	2003	2004
Guatemala					
Bentonite	3 317	18 469	12 415	6 438	...
Mexico					
Bentonite	269 730	415 133	488 215	464 056	564 015
Fuller's earth	51 685	148 194	147 064	152 917	129 502
Nicaragua					
Bentonite	6 490	*6 000	*6 000	*6 300	...
USA					
Bentonite (c)	3 760 000	3 970 000	*3 790 000	*3 940 000	*4 550 000
Fuller's earth (c)	2 910 000	2 890 000	*2 730 000	*3 600 000	*3 260 000
Argentina					
Bentonite	125 686	135 450	120 006	146 845	163 028
Fuller's earth	*1 500	*1 500	*1 500	*1 500	*1 500
Brazil					
Bentonite	317 621	260 282	304 782	392 422	428 183
Chile					
Bentonite	1 314	1 695	632	748	101
Colombia					
Bentonite	*8 500	*8 500	*8 500	*8 500	...
Peru					
Bentonite	21 059	18 217	20 760	14 980	18 471
China					
Bentonite	1 124 340	1 289 700	*1 400 000	*1 500 000	*1 500 000
India					
Bentonite (b)	*500 000	*280 000	*250 000	*240 000	*440 000
Fuller's earth (b)	*130 000	*150 000	*190 000	...	...
Indonesia					
Bentonite	*5 000	*5 000	*5 000	*5 000	*5 000
Iran					
Bentonite (d)	191 552	174 642	157 571	186 422	176 425
Japan					
Bentonite	415 115	405 738	437 772	425 945	455 282
Fuller's earth	124 671	120 522	117 099	123 545	109 657
Korea, Republic of					
Bentonite	67 652	116 098	89 905	40 095	99 173
Fuller's earth	28 400	38 378	18 757	32 685	26 487
Myanmar					
Bentonite (b)	978	*900	*900	*900	*900
Pakistan					
Bentonite (e)	14 354	16 441	17 799	*17 000	19 150
Fuller's earth (e)	17 978	13 668	15 951	14 723	13 986
Philippines					
Bentonite	1 500	5 128	2 550	3 222	...
Thailand					
Bentonite	2 100	200	1 700	1 100	...
Uzbekistan					
Bentonite	*15 000	*15 000	*15 000	*15 000	*15 000

Production of bentonite and fuller's earth

tonnes

Country	2000	2001	2002	2003	2004
Australia					
Bentonite (e)	99 272	95 429	113 047	*135 000	*249 000
Fuller's earth	11 860	13 194	11 926	11 187	10 142
New Zealand					
Bentonite	9 419	8 300	7 800	10 940	10 050
World Total Bentonite	11 400 000	11 800 000	11 300 000	12 100 000	13 000 000
World Total Fuller's Earth (g)	4 200 000	4 300 000	4 100 000	5 000 000	4 600 000

Note(s):-

- (1) Bentonites consist of montmorillonite (one of the smectite group of clay minerals) and occur in two main varieties, calcium bentonite, the most commonly occurring, and sodium bentonite, industrially the more important
- (2) Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process
- (3) In some countries, such as the United Kingdom, calcium bentonite is known as fuller's earth, a term which is also used to refer attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
- (4) In addition to the countries listed, Austria is believed to produce bentonite and France may produce fuller's earth
- (a) Saleable production based on data from producing companies
- (b) Years ended 31 March following that stated
- (c) Sold or used by producers
- (d) Years ended 20 March following that stated
- (e) Years ended 30 June of that stated
- (f) Smectite
- (g) Including attapulgite and sepiolite

Production of beryl

tonnes

Country	2000	2001	2002	2003	2004
Madagascar (a)	2	1	*1	*1	*1
Mozambique	—	1	54	78	27
Zambia	7	7	7	7	7
USA	4 510	2 480	1 970	2 100	2 210
Brazil	13	—	7	6	*6
China	*500	*500	*500	*500	*500
Kazakhstan (a)	431	737	—	—	—

Note(s):-

- (a) Includes ornamental and industrial products

Mine production of bismuth

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Bulgaria	*40	*40	*40	*40	*40
Romania	*40	*40	*40	*40	*40
Russia	*50	*50	*50	*50	*50
Canada	243	310	244	166	223
Mexico	1 112	1 390	1 126	1 064	1 014
Peru	744	640	568	832	529
China (a)	1 122	1 245	944	1 036	1 050
Japan (b)	520	551	474	513	522
Kazakhstan	241	252	161	*150	*150
Tajikistan	*5	*5	—	—	...
Australia	*100	*100	*100	*100	*100
World Total	4 200	4 600	3 700	4 000	3 700

Note(s):-

- (1) The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable in ores and concentrates exported
- (2) Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown
- (3) In addition to the countries listed, Brazil is believed to produce bismuth

(a) Exports of metal have always been higher than mine production in recent years

(b) Metal production

Production of borates

tonnes

Country	2000	2001	2002	2003	2004
Russia	*1 000 000	*1 000 000	*1 000 000	*1 000 000	*500 000
Turkey	1 402 000	1 399 000	1 328 000	1 324 000	1 727 000
USA (a)	1 070 000	1 050 000	1 050 000	1 150 000	1 210 000
Argentina	512 624	633 520	515 555	512 167	821 031
Bolivia	41 021	32 477	40 479	109 545	110 000
Chile	337 966	327 743	431 293	400 603	594 191
Peru	9 309	9 374	8 814	11 072	9 729
China	283 000	346 500	*283 000	*270 000	*275 000
Iran (b)	2 754	2 890	2 074	2 126	2 142
Kazakhstan	28 500	*30 000	27 100	*30 000	*30 000

Note(s):-

(a) Sold or used by producers

(b) Years ended 20 March following that stated

Production of bromine

kilograms

Country	2000	2001	2002	2003	2004
France	7 909 000	*8 000 000	*8 000 000	*8 000 000	*8 000 000
Germany	*500 000	*500 000	*500 000	*500 000	—
Italy	*300 000	*300 000	*300 000	*300 000	*300 000
Russia	*60 000	*60 000	*60 000	*60 000	*60 000
Spain	*100 000	*100 000	*100 000	*100 000	*100 000
Ukraine	1 420 000	1 878 000	846 000	1 324 000	1 878 000
United Kingdom	33 200 000	27 854 000	24 542 000	*25 000 000	—
USA (a)	228 000 000	212 000 000	222 000 000	216 000 000	*222 000 000
China	*42 000 000	*40 000 000	*42 000 000	*42 000 000	*43 000 000
India	1 062 200	927 660	1 579 000	1 560 000	1 730 000
Israel	209 000 000	177 000 000	185 000 000	176 000 000	202 000 000
Japan	*20 000 000	*20 000 000	*20 000 000	*20 000 000	*20 000 000
Jordan	—	—	5 000	*20 000	46 339
World Total	544 000 000	489 000 000	505 000 000	491 000 000	499 000 000

Note(s):-

(a) Elemental bromine sold as such or used in the preparation of bromine compounds by primary producers

Production of cadmium

tonnes

Country	2000	2001	2002	2003	2004
Belgium	1 148	1 236	117	—	—
Bulgaria	331	333	345	307	356
Finland	683	604	400	—	—
France	160	176	154	*120	*120
Germany	458	539	422	640	*640
Italy	287	352	362	22	—
Macedonia	335	73	111	75	—
Netherlands	655	455	485	495	572
Norway	302	371	215	323	141
Poland	6	330	440	375	356
Russia	*780	*620	*650	*650	650
United Kingdom	503	425	292	22	—
Canada (a)	1 941	1 493	1 706	1 759	1 888
Mexico	1 268	1 421	1 382	1 590	1 594
USA (a)	1 890	680	700	670	*550
Argentina	—	34	—	25	39
Brazil	*135	*140	*170	*180	*180
Peru	483	456	422	529	532
China	2 368	2 507	2 426	2 705	*2 900
India (b)	326	431	483	478	480
Japan	2 472	2 460	2 444	2 509	2 233
Kazakhstan	257	170	479	930	2 358
Korea, Dem. P.R. of	*200	*200	*200	*200	*200
Korea, Republic of	1 911	1 879	1 827	2 175	2 362
Australia	525	416	524	673	469
World Total	19 400	17 800	16 800	17 500	18 600

Note(s):-

(1) Data in this table excludes secondary metal unless otherwise stated

(a) Including cadmium sponge and/or secondary metal

(b) Years ended 31 March following that stated

Production of chromium ores and concentrates

tonnes

Country	2000	2001	2002	2003	2004
Albania	120 400	85 890	72 600	98 000	158 392
Finland	628 414	575 126	566 090	549 000	580 000
Russia	79 000	117 700	71 000	169 200	447 300
Turkey	545 725	454 549	326 390	229 294	436 639
Madagascar	131 293	23 637	11 000	45 040	77 386
South Africa	6 662 000	5 502 010	6 435 746	7 405 391	7 625 245
Sudan	28 500	20 500	14 000	37 000	26 000
Zimbabwe	668 043	722 625	725 822	572 558	668 391
Cuba	56 300	50 000	46 000	34 000	*34 000
Brazil	600 000	419 049	283 991	376 862	593 476
Afghanistan	5 345	5 682	6 136	6 364	—
China	208 000	181 900	164 200	197 800	*197 800
India (a)	1 971 806	1 548 900	3 068 631	2 904 809	3 639 848
Iran (b) (c)	145 007	178 120	232 068	150 316	134 872
Kazakhstan	2 606 600	2 045 700	2 369 500	2 927 900	3 287 100
Myanmar (a)	*3 000	*3 000	*3 000	*3 000	*3 000
Oman	15 100	30 100	27 400	13 800	18 585
Pakistan (d)	24 473	21 535	16 679	30 657	29 230
Philippines (b)	20 920	27 926	22 000	33 778	42 139
United Arab Emirates	30 000	10 000	—	—	7 089
Vietnam	76 300	80 000	*80 000	*120 000	*150 000
Australia	74 260	15 750	57 142	67 271	104 317
World Total	14 700 000	12 100 000	14 600 000	16 000 000	18 300 000

Note(s):-

(1) In addition to the countries listed, Bulgaria is believed to produce chromite

(a) Years ended 31 March following that stated

(b) Including foundry sand and/or lumpy ore

(c) Years ended 20 March following that stated

(d) Years ended 30 June of that stated

Production of coal

tonnes

Country	2000	2001	2002	2003	2004
Albania					
Lignite	20 666	15 700	15 000	—	—
Austria					
Brown coal & lignite	1 254 605	1 193 970	1 411 824	1 152 389	235 397
Bosnia & Herzegovina					
Brown coal & lignite	8 900 000	7 900 000	9 000 000	8 200 000	*8 000 000
Bulgaria					
Anthracite & bituminous	118 200	115 000	122 000	53 000	170 000
Brown coal & lignite	26 182 769	26 095 516	26 433 500	27 641 000	26 455 000
Czech Republic					
Bituminous	17 028 000	14 808 000	14 097 000	13 382 000	14 648 000
Lignite	453 000	507 000	501 000	470 000	450 000
Brown coal	50 610 000	51 036 000	48 834 000	49 920 000	47 840 000
France					
Anthracite & bituminous	3 166 000	1 972 000	1 483 000	1 728 000	708 000
Lignite	296 000	324 000	147 000	9 000	—
Georgia	7 300	5 000	6 100	7 900	8 000
Germany					
Anthracite & bituminous	34 251 019	27 361 079	26 363 084	25 873 043	25 871 882
Brown coal	167 723 889	175 364 780	181 778 432	179 086 923	181 926 060
Greece					
Lignite	63 947 813	66 621 437	71 087 609	69 410 756	71 237 228
Hungary					
Bituminous	744 000	635 200	660 000	667 126	670 000
Lignite	7 862 000	8 043 062	7 573 971	8 564 000	8 470 258
Brown coal	5 670 000	5 392 000	4 530 000	4 128 000	4 130 000
Italy					
Lignite	120 000	130 000	100 000	...	...
Macedonia					
Lignite	7 516 000	8 106 000	8 640 000	8 360 000	*8 000 000
Norway					
Bituminous (d)	631 926	1 787 784	2 131 691	2 944 000	3 100 000
Poland					
Bituminous	103 617 556	103 991 700	103 546 000	103 016 400	101 230 400
Lignite	59 505 486	59 557 400	58 209 600	60 919 100	61 197 500
Romania					
Anthracite & bituminous	4 042 000	4 033 000	3 976 000	3 309 000	*3 000 000
Brown coal & lignite	26 882 000	30 750 000	28 015 000	31 121 000	28 648 476
Russia	258 000 000	269 000 000	256 000 000	277 000 000	280 000 000
Serbia and Montenegro					
Bituminous	87 882	69 711	70 312	53 906	72 152
Lignite	33 638 291	31 789 143	32 936 248	34 542 677	35 267 074
Brown coal	398 438	375 620	422 661	377 187	352 474
Slovakia					
Brown coal	3 646 100	3 421 100	3 406 400	3 076 100	2 951 598
Slovenia					
Brown coal & lignite	4 479 300	4 133 000	4 684 710	4 828 786	4 809 058
Spain					
Anthracite	5 143 977	4 693 831	4 399 365	3 857 364	3 693 414
Bituminous	6 166 586	5 797 496	5 349 027	5 547 150	5 229 416
Sub-bituminous	3 630 805	3 456 000	3 537 710	3 182 572	3 426 085
Lignite	8 523 586	8 787 000	8 726 121	7 977 546	8 147 237
Turkey					
Anthracite	3 330 355	3 369 727	3 312 690	3 090 458	2 842 952
Bituminous	110 945	55 860	118 235	217 759	...
Lignite	61 314 974	58 172 982	49 626 612	43 749 420	43 754 159
Ukraine					
Bituminous	79 923 000	(i) 83 900 000	(i) 82 500 000	(i) 80 200 000	(i) *81 000 000
Lignite	1 067 000	...	...	...	...
United Kingdom					
Bituminous (g)	31 197 000	31 930 000	29 989 000	28 279 000	25 096 000

Production of coal

tonnes

Country	2000	2001	2002	2003	2004
Botswana	946 900	930 374	953 081	822 780	913 087
Congo, Democratic Republic					
Bituminous	48 000	40 000	37 000	*35 000	*33 000
Egypt	*39 000	*58 000	*37 000	*35 000	...
Malawi	34 250	34 410	43 372	47 037	40 891
Morocco					
Anthracite	30 810	1 908	302	214	...
Mozambique					
Bituminous	16 115	27 600	43 512	36 742	16 525
Niger	158 200	163 275	182 916	188 915	200 384
Nigeria					
Sub-bituminous	10 000	10 000	10 000	*10 000	*10 000
South Africa					
Anthracite	1 617 969	1 607 000	1 304 965	1 206 105	1 247 422
Bituminous	222 500 000	222 105 086	218 900 000	236 670 504	252 262 321
Swaziland					
Bituminous	378 043	*450 000	553 000	*550 000	*550 000
Tanzania					
Bituminous	79 184	77 789	79 210	54 610	65 041
Zambia					
Bituminous	168 000	*150 000	*150 000	*150 000	*150 000
Zimbabwe					
Bituminous	3 986 202	4 511 447	3 938 175	2 824 362	*3 000 000
Canada					
Bituminous	33 804 234	34 140 918	29 715 000	26 618 000	(f) 54 419 000
Sub-bituminous	24 168 751	24 939 381	25 528 000	24 880 000	...
Lignite	11 190 106	11 390 275	11 365 000	10 665 000	11 600 000
Mexico					
Bituminous	14 287 138	12 176 884	11 405 034	11 305 023	12 034 844
USA					
Anthracite	4 148 000	(b) 1 760 000	(b) 1 240 000	(b) 1 169 000	(b) *1 540 000
Bituminous	520 974 000	(b) 554 563 000	(b) 519 012 000	(b) 491 240 000	(b) *495 870 000
Sub-bituminous	371 223 000	394 101 000	397 674 000	401 520 000	*435 090 000
Lignite	77 620 000	72 615 000	74 807 000	78 380 000	*75 750 000
Argentina					
Bituminous	246 000	149 851	56 324	117 832	120 060
Brazil					
Bituminous & lignite (e)	6 797 294	5 645 578	5 143 488	4 643 319	5 408 278
Chile					
Bituminous	110 039	123 320	129 939	136 495	140 186
Lignite	393 311	444 767	321 687	210 783	98 121
Colombia					
Bituminous	38 142 000	43 440 700	39 484 000	50 028 000	53 693 000
Peru					
Anthracite	16 625	20 219	21 579	15 688	22 252
Bituminous	*45 000	*45 000	*45 000	*45 000	*45 000
Venezuela					
Bituminous	7 880 516	7 685 476	8 097 016	7 033 729	8 107 304
Afghanistan					
Bituminous	*2 000	*2 000	*2 000	*2 000	*2 000
Bangladesh (j)	...	...	...	22 322	64 605
Bhutan	65 818	84 596	88 567	66 324	29 631
China					
Anthracite	175 727 200	190 000 000	250 000 000	218 000 000	220 000 000
Bituminous	780 669 000	965 000 000	(g) 1 110 000 000	1 470 000 000	1 690 000 000
Lignite	42 773 600	47 800 000	53 000 000	52 000 000	50 000 000
India					
Bituminous (h)	313 696 000	327 787 000	341 272 000	361 156 000	382 137 000
Lignite (h)	22 947 000	24 813 000	26 018 000	27 958 000	30 341 000

Production of coal

tonnes

Country	2000	2001	2002	2003	2004
Indonesia					
Anthracite & bituminous	76 465 000	91 928 000	103 372 000	114 278 000	108 539 000
Iran					
Bituminous (c)	1 991 865	2 017 998	2 075 619	2 170 079	2 079 604
Japan					
Bituminous	3 147 000	3 208 000	1 315 655	1 353 379	1 339 447
Kazakhstan					
Bituminous	72 429 500	76 454 900	70 735 300	80 497 400	82 929 900
Lignite	2 442 900	2 680 300	2 995 800	4 219 500	3 945 200
Korea, Dem. P.R. of					
Anthracite	16 000 000	16 000 000	17 000 000	16 000 000	16 300 000
Lignite	6 500 000	7 000 000	7 000 000	6 300 000	6 500 000
Korea, Republic of					
Anthracite	4 150 000	3 817 000	3 318 000	3 298 000	3 248 000
Kyrgyzstan	424 900	475 000	459 000	415 300	456 300
Laos	184 169	122 942	233 823	212 819	*220 000
Malaysia	382 942	497 733	352 513	174 800	389 176
Mongolia					
Anthracite & bituminous	1 437 300	1 492 400	1 549 800	...	...
Brown coal & lignite	3 562 700	3 707 600	3 850 200	(i) 5 666 100	(i) 6 865 000
Myanmar (h)	52 811	41 736	*57 000	...	...
Nepal					
Sub-bituminous	17 530	16 589	9 612	11 848	10 459
Pakistan (a) (j)	3 372 871	3 309 244	3 314 712	3 609 338	3 325 408
Philippines					
Bituminous	1 353 453	1 229 822	1 645 659	2 029 303	...
Taiwan					
Bituminous	83 380	—	—	—	—
Tajikistan	20 700	27 500	23 600	46 500	92 200
Thailand					
Lignite	17 713 753	19 616 996	19 601 984	18 843 395	20 059 845
Uzbekistan					
Bituminous	91 500	91 700	80 000	61 600	*58 000
Lignite	2 410 000	2 619 300	2 660 000	1 850 000	*2 500 000
Vietnam					
Anthracite	11 600 000	13 000 000	16 347 000	19 590 000	26 820 000
Australia					
Bituminous (f)	244 840 000	266 710 000	272 560 000	280 700 000	298 000 000
Brown coal (j)	67 363 000	64 958 000	66 661 000	66 809 000	66 343 000
New Zealand					
Bituminous	1 792 784	1 896 771	2 268 906	2 351 021	2 526 613
Sub-bituminous	1 645 382	1 811 681	1 971 794	2 576 555	2 389 352
Lignite	147 469	202 944	218 239	252 336	239 429
World Total	4 310 000 000	4 639 000 000	4 816 000 000	5 209 000 000	5 535 000 000

Note(s):-

(1) There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term

(a) Including lignite

(b) Includes a small amount of refuse recovery

(c) Years ended 20 March following that stated

(d) Spitzbergen: not including production from mines controlled by the former Soviet Union

(e) Including beneficiated and directly shipped material

(f) Including sub-bituminous

(g) Including anthracite

(h) Years ended 31 March following that stated

(i) Coal; all forms

(j) Years ended 30 June of that stated

Mine production of cobalt

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Russia	*4 100	*4 600	*4 200	4 654	4 527
Botswana	308	325	269	294	223
Congo, Democratic Republic	*7 000	*8 000	*8 000	*8 500	*16 000
Morocco	1 001	1 337	1 335	1 391	*1 600
South Africa	397	373	366	271	329
Zambia	3 342	4 665	6 144	6 620	5 791
Zimbabwe	79	96	74	44	59
Canada	5 298	5 326	5 148	4 327	5 197
Cuba	2 900	3 417	3 384	3 465	3 580
Brazil	4 100	4 400	4 300	4 200	*4 300
China	411	679	*1 000	*1 000	*1 000
Indonesia	*650	*650	*650	*650	*650
Australia (a)	1 704	2 696	2 763	2 562	2 396
New Caledonia	2 620	3 540	2 780	2 602	2 721
World Total	34 000	40 000	40 000	41 000	48 000

Note(s):-

- (1) There is frequently a considerable disparity between the cobalt content of ore raised and cobalt actually recovered
(2) Figures in this table relate where possible to cobalt recovered. The principal exceptions to this are Brazil and New Caledonia, the figures for which relate to cobalt in ore raised

(a) Years ended 30 June of that stated

Production of cobalt metal

tonnes

Country	2000	2001	2002	2003	2004
Belgium	*1 110	*1 090	1 135	1 704	(d) 2 947
Finland	7 700	8 100	8 240	7 989	7 893
Norway	3 400	3 300	4 000	4 556	4 670
Russia	4 100	4 600	4 200	4 654	4 524
Congo, Democratic Republic (c)	4 320	3 199	2 149	1 200	735
Morocco	1 207	1 341	1 354	1 341	1 593
South Africa (b)	397	373	366	271	329
Uganda	411	512	*450	—	457
Zambia	3 342	4 665	6 144	6 620	5 791
Canada (a)	4 364	4 378	4 625	4 233	5 144
Brazil	792	889	960	1 097	1 155
China	*1 200	1 470	1 842	4 576	(d) *8 000
India	206	250	270	255	545
Japan	311	350	354	379	421
Australia	2 637	3 473	3 901	3 839	3 879
World Total	35 500	38 000	40 000	42 700	48 100

Note(s):-

- (1) In addition to the production listed above, several countries, including the United Kingdom, Finland and France, are known to produce substantial amounts of cobalt compounds

- (a) Including oxides
(b) Includes metal and metal contained in sulphate
(c) Excludes white alloy and matte which are believed to be further processed in Belgium and elsewhere
(d) Some metal production in China is recorded in Belgium

Mine production of copper

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Armenia	12 234	16 460	16 641	18 068	17 700
Bulgaria	93 200	97 100	84 400	80 240	79 600
Cyprus	5 200	4 600	3 700	2 500	—
Finland	11 500	11 600	14 400	14 900	15 500
Georgia	9 000	11 500	*13 000	14 700	*12 000
Macedonia	10 000	6 800	5 600	700	—
Poland	454 100	474 000	502 800	503 544	530 768
Portugal	76 300	82 965	77 227	77 581	95 700
Romania	16 099	19 185	19 323	23 389	18 767
Russia	*530 000	*540 000	662 100	630 000	*700 000
Serbia and Montenegro	46 000	31 000	34 600	25 200	23 900
Spain	24 804	9 800	1 248	635	1 308
Sweden	77 765	74 269	71 991	83 143	82 415
Turkey	76 053	56 820	48 217	43 245	49 900
Botswana	18 722	19 209	21 590	24 289	21 195
Congo, Democratic Republic	33 000	34 100	28 000	56 900	69 600
Morocco	6 528	5 357	4 994	4 818	4 400
Namibia	5 070	15 003	18 040	16 175	11 174
South Africa	147 600	141 900	90 000	89 338	85 710
Tanzania	—	3 600	4 200	3 700	4 300
Zambia	249 304	306 909	307 834	346 900	412 300
Zimbabwe	558	492	1 356	1 374	2 383
Canada	633 855	633 531	603 498	557 082	563 471
Cuba	1 346	*1 000	—	—	—
Mexico	364 566	371 123	329 574	355 653	405 540
USA	1 444 100	1 338 600	1 142 400	1 116 000	1 160 000
Argentina	145 197	191 667	204 027	199 020	177 143
Brazil	31 786	32 734	32 711	26 275	103 153
Chile	4 602 000	4 739 000	4 580 600	4 904 200	5 412 500
Colombia	2 018	2 000	1 700	1 500	1 600
Peru	553 924	722 035	842 783	842 578	1 035 574
China	592 600	587 000	568 100	604 400	*650 000
India (a)	37 511	38 177	32 780	29 523	32 500
Indonesia	1 012 000	1 048 700	1 171 726	1 005 837	840 318
Iran	147 200	146 300	140 700	146 100	141 000
Japan	1 211	744	1 519	1 000	1 000
Kazakhstan	430 200	469 500	473 700	484 500	461 800
Korea, Dem. P.R. of	*12 000	*12 000	*12 000	*12 000	*12 000
Mongolia	125 868	133 500	131 700	130 300	130 000
Myanmar	26 711	25 800	27 500	27 900	31 800
Pakistan	—	—	—	2 500	7 100
Philippines	31 900	20 321	18 365	20 414	15 984
Saudi Arabia	837	1 000	600	800	700
Uzbekistan	*70 000	*70 000	*80 000	*80 000	83 000
Vietnam	2 400	1 600	1 100	1 200	2 000
Australia	832 000	896 000	879 000	830 000	854 000
Papua New Guinea	203 061	203 762	211 315	205 500	177 200
World Total	13 200 000	13 600 000	13 500 000	13 600 000	14 500 000

Note(s):-

(a) Years ended 31 March following that stated

Smelter production of copper

tonnes

Country	2000	2001	2002	2003	2004
Armenia	6 000	7 056	6 502	6 259	9 470
Bulgaria	163 000	134 700	167 000	199 300	227 200
Finland	155 431	169 251	160 896	160 596	151 647
Germany	211 200	317 700	295 100	288 800	278 600
Norway	27 000	26 704	30 483	35 851	35 643
Poland	462 838	485 869	510 725	559 960	547 228
Romania	4 900	3 000	3 000	3 000	61
Russia	550 000	608 000	660 300	662 000	661 900
Serbia and Montenegro	33 800	24 000	36 100	10 500	30 000
Spain	289 957	280 015	298 057	290 282	224 249
Sweden	105 088	179 364	186 984	175 475	174 459
Turkey	25 886	23 751	19 375	14 426	10 300
Congo, Democratic Republic (a)	33 000	25 000	10 000	8 000	20 000
Namibia	13 488	27 718	26 670	26 306	24 704
South Africa	140 000	117 200	117 000	112 000	89 300
Zambia (a)	180 000	203 000	245 000	245 000	280 100
Zimbabwe	2 000	—	—	—	—
Canada	543 593	601 359	513 934	430 116	446 221
Mexico	308 225	319 151	284 220	260 754	298 702
USA	861 700	834 100	683 300	538 700	542 000
Brazil	184 257	212 243	187 605	173 378	208 020
Chile	1 460 400	1 503 200	1 438 700	1 542 400	1 517 600
Peru	340 447	384 912	380 834	314 228	320 135
China	1 013 900	1 145 100	1 187 000	1 307 400	1 322 600
India (c)	259 683	284 510	195 025	205 187	189 965
Indonesia	173 800	217 500	211 200	247 400	211 600
Iran (b)	155 856	152 704	143 439	145 670	152 463
Japan	1 331 352	1 304 717	1 283 173	1 278 380	1 220 448
Kazakhstan	413 859	433 561	446 198	431 930	444 500
Korea, Dem. P.R. of	*10 000	*10 000	*10 000	*10 000	*10 000
Korea, Republic of	370 900	386 200	380 000	410 000	380 000
Oman	28 000	25 000	25 000	25 000	25 000
Pakistan	—	—	—	2 500	7 100
Philippines	150 000	165 000	165 800	227 900	217 300
Uzbekistan	69 000	81 300	57 000	57 000	57 000
Australia	391 000	455 000	458 000	435 000	443 000
World Total	10 500 000	11 100 000	10 800 000	10 800 000	10 800 000

Note(s):-

(1) This table shows primary metal in the form of blister and anode produced from concentrates, and may include copper produced from scrap but this is excluded when it can be separately identified

(a) Including leach cathodes

(b) Years ended 20 March following that stated

(c) Years ended 31 March following that stated

Production of refined copper

tonnes

Country	2000	2001	2002	2003	2004
Austria	73 873	66 154	64 900	65 100	74 200
Belgium	423 000	424 000	422 500	423 000	402 300
Bulgaria	32 500	34 500	40 700	45 900	55 300
Cyprus	5 088	4 604	3 695	2 552	1 344
Finland	114 000	115 500	126 016	135 713	132 384
Germany	709 472	693 714	695 741	597 531	652 600
Italy	33 000	30 200	32 400	26 700	33 600
Norway	25 300	26 700	30 600	35 852	35 643
Poland	486 002	498 451	508 674	529 616	550 066
Romania	15 303	17 654	11 453	16 739	24 383
Russia	842 000	894 500	855 100	842 000	919 000
Serbia and Montenegro	45 632	32 365	35 897	14 029	36 000
Slovakia	—	10 584	6 989	600	—
Spain	315 734	290 630	312 145	293 495	228 466
Sweden	133 118	216 237	224 402	214 181	235 620
Turkey	64 100	58 400	41 000	36 900	63 000
Ukraine	—	—	10 000	20 000	5 500
Congo, Democratic Republic	29 000	—	—	—	20 000
Egypt	...	...	...	...	14 119
South Africa	106 400	107 000	92 000	89 300	*75 000
Zambia	226 169	307 904	347 235	360 100	407 900
Zimbabwe	14 400	5 300	5 400	5 000	*5 000
Canada	551 393	567 720	494 522	454 866	526 967
Mexico	343 200	354 200	319 200	295 800	333 700
USA	1 802 100	1 800 600	1 511 900	1 306 400	1 310 800
Argentina	*16 000	*16 000	*16 000	*16 000	*16 000
Brazil	184 257	212 243	187 605	173 378	208 020
Chile	2 668 300	2 882 200	2 850 100	2 901 900	2 836 700
Peru	451 728	471 875	502 749	517 046	505 306
China	1 371 100	1 523 300	1 632 500	1 836 000	2 170 000
India (b)	259 683	335 769	378 850	395 967	406 316
Indonesia	158 400	212 500	192 400	223 300	210 500
Iran (a)	181 238	181 526	171 592	168 613	182 814
Japan	1 437 351	1 425 691	1 401 079	1 430 365	1 380 144
Kazakhstan	394 723	425 670	452 989	432 401	445 300
Korea, Dem. P.R. of	*15 000	*15 000	*15 000	*15 000	*15 000
Korea, Republic of	470 956	476 094	499 116	509 970	495 952
Mongolia	641	1 476	1 500	1 341	2 376
Myanmar	26 711	25 800	27 500	27 900	31 800
Oman	24 400	24 760	23 975	17 040	17 000
Philippines	138 700	164 500	144 300	171 200	174 600
Thailand	—	—	—	—	8 000
Uzbekistan	*75 000	75 500	77 100	77 000	85 000
Australia	509 000	583 000	568 000	510 000	*515 000
World Total	14 800 000	15 600 000	15 300 000	15 200 000	15 900 000

Note(s):-

(1) Figures relate to both primary and secondary refined copper, whether electrolytic or fire refined. Metal recovered from secondary materials by remelting alone is excluded

(2) In addition to the countries listed, Albania and Colombia produce refined copper

(a) Years ended 20 March following that stated

(b) Years ended 31 March following that stated

Production of diamond

carats

Country	2000	2001	2002	2003	2004
Armenia	...	186 000	229 000	289 504	262 852
Russia	20 500 000	20 500 000	*20 000 000	33 020 000	*35 520 000
Angola	4 014 000	5 100 000	*5 700 000	*6 300 000	7 500 000
Botswana	24 635 000	26 190 000	28 368 000	30 412 155	31 125 000
Cameroon (b)	...	...	*12 000	*12 000	*12 000
Central African Republic	461 004	550 000	480 000	*500 000	*500 000
Congo, Democratic Republic	16 500 000	19 637 000	21 985 000	29 000 000	*29 000 000
Ghana	887 049	1 132 102	963 493	904 090	905 344
Guinea	368 599	364 000	491 160	645 000	*625 000
Ivory Coast	320 208	309 000	306 000	230 000	*230 000
Lesotho	*1 500	1 140	721	1 899	26 607
Liberia	*170 000	155 000	80 000	60 000	30 000
Namibia	1 541 647	1 487 316	1 537 505	1 454 756	2 003 868
Sierra Leone	*350 000	224 188	351 860	506 819	693 104
South Africa	10 789 976	11 162 630	10 882 614	12 673 379	14 461 772
Tanzania	354 388	254 271	239 761	236 382	303 920
Zimbabwe	23 028	—	—	—	44 454
Canada	2 533 750	3 685 173	4 975 021	10 755 654	12 618 080
Brazil	*1 000 000	*700 000	*500 000	*300 000	*400 000
Guyana	81 706	179 463	248 437	412 538	454 940
Venezuela	109 597	52 804	141 463	38 489	40 036
China	160 000	150 000	*150 000	*150 000	*150 000
India (a)	57 407	81 436	84 407	71 259	78 315
Indonesia	*30 000	*30 000	*30 000	*30 000	*30 000
Australia	26 647 000	26 176 000	33 648 000	31 013 000	20 620 000
World Total	111 500 000	118 300 000	131 400 000	159 000 000	157 600 000

Note(s):-

- (1) This table does not show production of synthetic diamond
 (2) So far as possible the amounts shown include estimates for illegal production

- (a) Years ended 31 March following that stated
 (b) Including artisanal production

Production of diatomite

tonnes

Country	2000	2001	2002	2003	2004
Commonwealth of Independent States (f)	*80 000	*80 000	*80 000	*80 000	*80 000
Czech Republic	6 800	6 000	5 600	3 800	3 800
Denmark					
Moler (d)	189 000	192 000	211 000	221 000	188 000
France	*75 000	*75 000	*75 000	*75 000	*75 000
Hungary	1 878	1 323	1 656	1 770	1 640
Iceland	27 614	30 434	26 494	27 693	20 625
Macedonia	*5 000	*5 000	*5 000	*5 000	*5 000
Poland	*1 270	*1 000	*1 000	*700	*700
Portugal	686	387	—	—	—
Romania	9 890	9 743	20 922	33 296	14 192
Spain (b)	66 770	70 000	53 558	57 934	24 799
Algeria	2 979	2 863	3 185	2 335	2 665
Kenya	448	441	1 333	353	330
Costa Rica	34 704	26 350	*26 400	26 450	*26 000
Mexico	96 448	69 474	62 322	53 395	59 818
USA (c)	677 000	644 000	624 000	599 000	620 000
Argentina	17 663	17 090	23 314	35 518	8 180
Brazil	10 164	10 010	8 030	9 981	8 847
Chile	13 384	22 705	30 274	25 594	30 015
Colombia	*4 000	*4 000	*4 000	*4 000	*4 000
Peru	*35 000	*35 000	*35 000	*35 000	*35 000
China	83 300	124 100	*135 000	*140 000	*145 000
Iran (a)	300	50	300	1 000	1 000
Japan	111 193	129 267	123 827	111 690	126 255
Korea, Republic of	34 143	27 530	20 666	15 636	2 441
Saudi Arabia	1 000	1 000	1 000	1 000	*1 000
Thailand	390	720	780	1 288	1 372
Australia (e)	28 810	28 407	31 122	*27 000	*26 000
World Total	1 610 000	1 610 000	1 611 000	1 660 000	1 510 000

Note(s):-

(1) In addition to the countries listed, Egypt and Turkey are believed to produce diatomite

(a) Years ended 20 March following that stated

(b) Including tripoli

(c) Sold or used by producers

(d) Moler is an impure diatomite containing a large proportion of clay

(e) Years ended 30 June of that stated

(f) Diatomite is produced in Armenia, Georgia and Russia but information is not available to provide estimates for individual countries

Production of feldspar

tonnes

Country	2000	2001	2002	2003	2004
Bulgaria	22 000	23 000	*34 000	*35 000	*35 000
Czech Republic	337 000	373 000	401 000	421 000	488 000
Finland	38 609	36 145	39 552	59 362	44 495
France	642 000	720 000	659 000	654 000	628 000
Germany	322 116	302 650	243 368	233 028	182 842
Greece	94 700	126 400	124 100	102 800	88 274
Italy	2 851 289	3 240 457	3 159 569	2 972 187	2 941 272
Macedonia	10 057	20 449	*21 000	*21 000	*20 000
Norway	72 000	79 510	75 184	70 000	51 000
Poland	95 588	145 980	209 226	276 264	373 459
Portugal	136 730	112 923	141 125	129 366	98 262
Romania	37 157	43 037	51 959	72 827	60 636
Russia	...	...	# 90 533	121 405	156 391
Serbia and Montenegro	4 254	4 451	7 813	3 045	180
Spain	478 260	*520 000	548 964	563 580	580 000
Sweden	35 000	40 000	37 000	44 000	38 000
Turkey	1 150 706	1 510 293	1 766 387	1 862 310	1 983 336
United Kingdom (c)	3 645	2 995	1 896	1 309	2 274
Algeria	707	—	—	—	—
Egypt (d)	*330 000	*300 000	*350 000	*350 000	*350 000
Morocco	16 052	12 015	19 402	*20 000	*20 000
South Africa	66 774	66 062	66 616	57 738	53 044
Zimbabwe	2 059	1 055	824	816	79
Cuba	6 700	*7 000	*7 000	*7 000	*7 000
Guatemala	17 804	6 809	13 044	9 320	4 473
Mexico	334 439	329 591	332 101	346 315	364 166
USA	790 000	800 000	790 000	800 000	*770 000
Argentina	59 466	48 522	82 642	90 857	104 631
Brazil	227 215	139 644	97 742	102 077	280 293
Chile	2 311	2 867	3 069	6 690	4 838
Colombia	*55 000	*55 000	93 450	*100 000	*100 000
Ecuador	47 041	60 688	31 254	44 268	48 695
Peru	5 642	3 062	6 018	7 349	6 005
Uruguay	2 493	3 522	1 550	2 450	1 950
Venezuela	129 529	142 425	146 619	149 450	175 864
China	*2 000 000	*2 000 000	*2 000 000	*2 000 000	*2 000 000
India (a)	179 046	228 735	239 093	332 220	373 212
Indonesia	*24 000	*24 000	*24 000	*24 000	*24 000
Iran (b)	223 229	157 243	228 848	293 370	248 710
Japan (e)	1 035 050	1 333 441	1 143 618	1 006 093	*889 000
Jordan	11 112	611	530	13 057	13 063
Korea, Republic of	378 817	467 161	519 125	477 012	541 788
Malaysia	29 895	40 509	30 819	42 662	79 220
Myanmar	*12 000	*10 000	*10 000	*10 000	*10 000
Pakistan (d)	34 252	45 145	35 071	37 344	30 373
Philippines	6 500	33 122	32 874	34 456	*34 000
Saudi Arabia	21 100	27 500	30 470	*33 700	*34 000
Sri Lanka	28 638	27 438	28 866	32 586	*33 000
Taiwan	409	147	—	510	900
Thailand	542 991	710 543	783 733	824 990	1 001 053
Uzbekistan	4 300	*4 300	*4 300	*4 300	*4 300
Australia (d)	94 096	113 917	100 560	*120 000	*111 000
World Total	13 000 000	14 500 000	15 000 000	15 000 000	15 500 000

Note(s):-

(1) In addition to the countries listed, Slovakia is believed to produce feldspar

(a) Years ended 31 March following that stated

(d) Years ended 30 June of that stated

(b) Years ended 20 March following that stated

(e) Including weathered granite feldspar

(c) China stone

Production of fluorspar

tonnes

Country	2000	2001	2002	2003	2004
Bulgaria	200	300	—	—	—
France	114 400	123 000	122 000	90 000	70 000
Germany	31 124	30 381	34 429	33 289	33 203
Italy	67 768	70 160	53 260	26 387	17 915
Romania	*15 000	*15 000	*15 000	*15 000	*15 000
Russia	187 600	*200 000	*169 000	*170 000	*170 000
Spain	140 466	134 039	141 434	139 266	143 824
Turkey	4 113	3 752	5 344	718	880
United Kingdom	*36 000	*50 000	*53 000	*56 000	*52 000
Egypt	*500	304	502	*500	*500
Kenya (d)	100 102	118 850	85 015	80 201	117 986
Morocco	76 991	96 500	94 910	81 225	*81 000
Namibia	66 129	81 245	81 084	79 281	104 785
South Africa	212 709	286 387	227 000	235 000	275 000
Mexico	635 230	619 468	622 477	756 258	842 698
Argentina	11 229	9 075	5 168	5 422	6 189
Brazil (a)	44 046	43 734	47 899	56 346	57 772
China	*2 240 000	*2 200 000	*2 150 000	*2 300 000	*2 400 000
India (e)	7 035	20 766	13 023	12 393	11 450
Iran (b)	34 672	34 688	55 187	41 094	41 220
Korea, Dem. P.R. of	*25 000	*25 000	*25 000	*25 000	*25 000
Kyrgyzstan	3 000	1 175	2 656	3 973	*4 000
Mongolia	198 541	199 105	185 100	198 400	148 200
Pakistan (c)	997	1 091	1 288	*1 000	1 026
Thailand	4 745	3 020	2 270	2 360	2 375
Vietnam	*3 000	*3 000	*3 000	*3 000	*3 000
World Total	4 300 000	4 400 000	4 200 000	4 400 000	4 600 000

Note(s):-

(1) In addition to the countries listed, Bulgaria is believed to produce fluorspar

(2) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 2000: 119; 2001: 104; 2002: 92; 2003: 94; 2004: 95

(a) Including beneficiated and directly shipped material

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

(d) Exports

(e) Years ended 31 March following that stated

Production of germanium metal

tonnes

Country	2000	2001	2002	2003	2004
USA (a)	23	20	15	12	*15
China	14	21	*20	*20	*20
Japan	2	2	1	1	1

Note(s):-

(1) Significant quantities of germanium are also believed to be recovered from imported or domestic material in France, Germany, Russia and to a lesser extent in Italy

(a) Including production of secondary metal

Mine production of gold

kilograms (metal content)

Country	2000	2001	2002	2003	2004
Armenia	900	1 900	3 200	1 800	1 881
Bulgaria	1 720	1 700	2 612	2 270	2 431
Finland	1 600	1 700	1 300	*1 000	*1 100
France	2 643	2 512	1 724	1 470	—
Georgia	2 110	1 880	2 876	2 386	1 377
Greenland	—	—	—	—	1 560
Italy	820	522	631	*100	—
Poland (d)	367	349	296	356	527
Romania	1 200	1 600	1 700	*1 700	*1 700
Russia	142 500	152 641	168 393	170 068	169 237
Serbia and Montenegro (d)	1 121	—	858	363	328
Slovakia	306	157	77	79	107
Spain	4 304	4 277	5 559	5 212	5 251
Sweden	3 570	4 986	5 757	5 900	6 564
Turkey	*500	*1 100	*4 500	5 370	3 260
Ukraine	135	69	*70	*70	*70
Algeria	...	—	369	365	597
Botswana	4	2	8	9	162
Burkina Faso	625	229	209	770	1 125
Burundi	—	415	483	2 855	2 900
Cameroon	*1 000	930	*1 000	1 500	1 500
Congo, Democratic Republic	52	*50	*50	*50	*50
Eritrea	264	107	—	9	33
Ethiopia (b)	3 206	3 862	3 670	3 875	3 443
Ghana	78 399	70 049	69 575	64 485	57 549
Guinea	15 748	16 256	16 665	16 630	15 593
Ivory Coast	3 444	3 672	3 570	1 313	1 219
Kenya (e)	1 243	1 545	1 477	1 543	567
Madagascar	...	...	...	10	*200
Mali	28 717	42 288	56 028	45 528	37 686
Morocco (d)	505	1 191	2 747	1 863	*1 200
Namibia	2 455	2 852	2 947	2 298	2 205
Niger	25	30	28	30	1 531
Senegal	*550	*550	*600	*600	*600
South Africa	430 778	394 757	398 258	372 766	337 299
Sudan	5 773	5 438	5 258	*5 500	*5 000
Tanzania	15 060	30 088	43 320	48 018	48 176
Uganda (e)	9 860	6 090	7 590	4 160	...
Zambia (c)	*100	*120	*140	*140	*160
Zimbabwe	22 007	18 478	15 669	11 514	21 330
Canada	155 538	160 200	152 059	141 549	130 307
Costa Rica	51	*100	*100	*110	*150
Cuba	*1 000	*1 000	*1 000	547	*500
Guatemala	4 500	*4 500	*4 500	4 550	*5 000
Honduras	878	3 553	4 026	3 167	3 177
Jamaica	44	214	159	146	20
Mexico	26 375	23 543	21 324	20 406	21 825
Nicaragua	3 672	3 840	3 494	3 096	4 064
Panama	—	—	—	—	*200
USA	353 437	335 000	298 000	276 897	257 905
Argentina	25 954	30 630	32 530	29 748	28 496
Bolivia	12 000	12 374	11 269	9 361	6 159
Brazil	50 393	42 884	41 662	40 416	47 596
Chile	54 143	42 673	38 688	38 954	39 986
Colombia	37 018	21 813	20 823	46 515	37 739
Ecuador	2 871	3 005	2 750	4 819	5 300
French Guiana	3 376	4 062	3 290	3 296	2 564
Guyana	13 525	14 179	14 104	12 172	11 462
Peru	132 585	138 022	157 298	172 619	173 219
Suriname	—	—	—	—	8 513
Uruguay	2 240	2 083	2 079	1 550	1 758
Venezuela	7 332	9 076	9 465	8 190	9 690

Mine production of gold

kilograms (metal content)

Country	2000	2001	2002	2003	2004
China (d)	176 910	181 870	202 000	210 100	212 350
India (a)	2 615	2 810	3 153	3 457	3 526
Indonesia	127 192	166 090	142 238	141 019	192 936
Iran (d)	765	770	650	*500	*800
Japan	8 473	8 162	8 563	8 122	7 936
Kazakhstan (d)	11 529	15 226	10 959	9 906	9 576
Korea, Republic of	13	10	188	528	1 371
Kyrgyzstan	22 000	24 670	17 000	22 476	21 395
Laos	—	—	—	5 300	4 392
Malaysia	4 026	3 965	4 289	4 739	4 221
Mongolia	11 485	12 092	10 884	11 119	19 418
Myanmar (d)	100	*100	*100	*100	*100
Oman	551	603	188	4	—
Philippines	36 541	33 841	36 005	37 844	35 464
Saudi Arabia	3 637	2 500	4 600	8 500	8 268
Tajikistan	*2 700	*2 700	*2 700	*2 700	*3 000
Thailand	—	313	4 950	4 351	4 547
Uzbekistan	87 500	85 400	85 636	84 610	88 350
Vietnam	*2 000	*3 000	*2 000	*2 000	*2 000
Australia	296 420	280 080	266 140	282 000	259 000
Fiji	3 842	4 907	3 829	3 517	4 158
New Zealand	9 880	9 850	9 770	9 305	10 151
Papua New Guinea	74 540	67 043	61 379	67 832	69 027
Solomon Islands	1 615	32	23	43	60
World Total	2 560 000	2 530 000	2 530 000	2 520 000	2 490 000

Note(s):-

- (1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics used when compiling this table
 - (2) In addition to the countries listed, Central African Republic, Gabon, Liberia, Mozambique, Nigeria, Rwanda, Sierra Leone and Taiwan produce less than 100 kg gold per year
 - (3) Greece and Norway are believed to produce gold
- (a) Years ended 31 March following that stated
 (b) Years ended 7 July of that stated
 (c) Contained in blister copper, refinery muds and electrolytic copper
 (d) Metal production
 (e) Exports

Production of graphite

tonnes

Country	2000	2001	2002	2003	2004
Austria (a)	669	116	—	—	—
Czech Republic	23 000	17 000	16 000	9 000	5 000
Germany	3 414	3 190	3 312	2 840	3 155
Norway	8 392	9 070	8 600	1 000	6 000
Romania	1 251	1 176	1 001	1 014	395
Russia	20 125	16 563	14 241	12 780	13 550
Sweden	5 602	1 035	—	—	—
Turkey	...	...	1 393	942	*1 000
Ukraine	7 431	*7 500	*7 500	*7 500	*7 500
Madagascar	40 328	2 013	*1 300	*2 000	*2 000
Zimbabwe	11 838	12 117	9 700	6 280	10 267
Canada	22 610	20 984	15 039	12 500	*15 000
Mexico	30 330	21 442	14 065	8 730	14 769
Brazil (b)	71 208	60 666	60 922	70 739	76 332
China (d)	1 650 000	1 700 000	1 400 000	*1 400 000	*1 400 000
India (a) (c)	124 790	105 814	106 060	87 207	100 363
Korea, Dem. P.R. of	*30 000	*25 000	*25 000	*25 000	*30 000
Korea, Republic of	65	238	94	58	247
Sri Lanka	5 902	6 585	3 619	3 387	*3 400
World Total	2 100 000	2 000 000	1 700 000	1 700 000	1 700 000

Note(s):-

- (1) This table includes all forms of amorphous and crystalline graphite but excludes synthetic material
- (2) In addition to the countries listed, Egypt, Namibia and the USA are believed to produce graphite

- (a) Crude
- (b) Including beneficiated and directly shipped material
- (c) Years ended 31 March following that stated
- (d) Including 350 000 tonnes of flake graphite in 2002

Production of gypsum

tonnes

Country	2000	2001	2002	2003	2004
Armenia	9 630	12 811	44 943	57 835	...
Austria					
Gypsum	825 077	790 478	847 117	889 727	920 809
Anhydrite	120 967	138 745	122 085	113 823	117 318
Azerbaijan	...	1 750	1 039	3 848	884
Bosnia & Herzegovina	49 492	59 728	*60 000	*60 000	*60 000
Bulgaria	169 571	166 838	156 400	165 500	176 000
Croatia	150 765	130 861	145 000	166 340	148 000
Cyprus	260 000	250 000	295 000	300 000	255 000
Czech Republic	82 000	24 000	108 000	104 000	71 000
France	*4 500 000	*4 500 000	*3 500 000	*3 500 000	*3 500 000
Georgia	4 082	15 408	8 127	8 507	1 742
Germany (a)	2 344 000	1 966 000	1 761 000	1 748 000	1 600 000
Greece	801 025	808 890	890 148	731 785	856 606
Hungary (a)	251 000	231 000	108 000	62 000	55 000
Irish Republic	*500 000	*500 000	*500 000	*600 000	*650 000
Italy	1 511 650	1 558 882	1 531 477	1 783 903	1 615 287
Latvia	100 000	*100 000	(a) 220 000	(a) 160 000	(a) 230 000
Macedonia	*25 000	*20 000	*20 000	*20 000	*20 000
Moldova	31 400	55 200	91 300	116 100	491 000
Poland					
Gypsum	998 628	793 684	866 674	1 030 693	970 786
Anhydrite	284 683	300 356	280 031	297 088	301 161
Portugal	698 673	787 646	579 143	419 799	...
Romania	218 338	282 985	421 235	409 516	485 704
Russia	1 013 000	1 189 000	1 389 800	1 766 600	2 076 800
Serbia and Montenegro	46 651	58 045	54 937	42 261	42 471
Slovakia (a)	108 000	168 800	121 680	93 800	127 100
Spain	9 929 478	*10 920 000	11 218 410	11 366 375	11 500 000
Switzerland	*300 000	*300 000	*300 000	*300 000	*300 000
Turkey	302 552	328 656	264 038	196 668	250 099
Ukraine	119 000	...	...	321 400	336 900
United Kingdom	*1 500 000	*1 700 000	*1 700 000	*1 700 000	*1 700 000
Algeria	...	646 000	741 000	*800 000	*660 000
Egypt	...	126 615	119 453	...	...
Eritrea	...	2 077	1 062	2 705	1 054
Ethiopia (d)	46 798	50 500	22 500	48 058	51 200
Kenya	8 416	8 200	*9 000	*10 000	*11 000
Libya	*150 000	*175 000	*150 000	*150 000	*175 000
Mauritania	*100 000	*100 000	*100 000	*100 000	*100 000
Morocco	*475 000	*550 000	*600 000	*600 000	*600 000
Niger	1 474	3 205	17 652	17 851	34 944
Somalia	*1 500	*1 500	*1 500	*1 500	*1 500
South Africa	413 105	382 830	415 387	394 069	452 271
Sudan	13 808	2 422	*5 000	*5 000	*5 000
Tanzania	60 000	72 000	78 650	33 232	59 231
Tunisia	*100 000	*100 000	*100 000	*100 000	*100 000
Canada					
Gypsum	9 054 000	8 331 000	9 006 000	(a) 8 925 000	(a) 9 952 000
Anhydrite	178 145	75 753	93 239	...	...
Cuba	*110 000	*110 000	*110 000	*110 000	*110 000
Dominican Republic	110 044	175 553	178 941	219 311	435 723
El Salvador	*6 000	*6 000	*6 000	*6 000	*6 000
Guatemala	212 109	96 817	94 411	66 981	106 140
Honduras	59 211	59 500	*60 000	*60 000	*60 000
Jamaica	330 441	320 323	164 880	248 558	283 352
Mexico	5 653 901	6 237 057	6 703 109	6 986 491	9 221 458
Nicaragua	28 170	34 369	28 153	30 642	36 466
USA	19 500 000	16 300 000	15 700 000	16 700 000	(a) *17 200 000

Production of gypsum

tonnes

Country	2000	2001	2002	2003	2004
Argentina	559 277	371 527	362 556	387 936	673 430
Brazil	1 497 790	1 506 619	1 633 311	1 529 015	1 471 946
Chile	375 847	516 876	609 550	662 259	630 444
Colombia	*560 000	*560 000	*560 000	*560 000	*560 000
Ecuador	1 043	834	4 730	5 203	*5 000
Paraguay	4 400	4 300	*4 300	*4 300	*4 300
Peru	52 346	20 966	75 306	71 114	149 735
Venezuela	25 000	5 000	*10 000	*10 000	*10 000
Afghanistan	*3 000	*3 000	*3 000	*3 000	*3 000
Bhutan	98 671	100 907	105 658	122 829	131 236
China	*6 800 000	*6 800 000	*6 850 000	*6 850 000	*7 000 000
India (e) (f)	2 644 415	2 879 344	2 672 244	2 793 553	3 561 929
Indonesia	5 000	6 000	6 000	6 000	6 000
Iran (c)	8 968 425	8 347 471	8 338 725	11 979 513	14 394 537
Israel	130 000	133 000	123 119	141 000	124 678
Jordan	157 868	187 154	11 252	63 895	135 331
Laos	142 197	121 220	119 514	101 727	*102 000
Mongolia	*25 000	*25 000	*25 000	*25 000	*25 000
Myanmar (e)	52 573	65 000	90 000	66 000	*66 000
Oman	131 909	44 323	55 722	*50 000	*60 000
Pakistan (b)	334 441	391 728	402 600	424 107	467 065
Saudi Arabia	518 087	467 177	497 155	491 132	*450 000
Syria	332 219	474 004	350 088	376 715	431 561
Taiwan	1 884	1 006	—	—	—
Tajikistan	...	...	...	50 100	57 200
Thailand					
Gypsum	5 830 326	6 190 815	6 325 591	7 291 167	7 619 205
Anhydrite	255 472	310 720	290 885	448 071	...
Turkmenistan	2 100	2 500	...	...	...
Uzbekistan	*80 000	*80 000	*80 000	*80 000	*80 000
Yemen, Republic of	42 000	44 000	41 000	42 000	*44 000
Australia (b)	3 796 500	3 225 500	4 087 500	3 664 400	*4 110 000
World Total	98 100 000	95 200 000	96 000 000	102 700 000	111 600 000

Note(s):-

(1) Some countries produce large quantities of synthetic gypsum. Where possible, this output is excluded from the table.

(a) Including anhydrite

(b) Years ended 30 June of that stated

(c) Years ended 20 March following that stated

(d) Years ended 7 July of that stated

(e) Years ended 31 March following that stated

(f) Including selenite

Production of iodine

kilograms

Country	2000	2001	2002	2003	2004
Azerbaijan (a)	2 000	...	...	...	...
Russia	24 000	46 000	58 000	58 000	105 000
USA	1 470 000	1 290 000	1 420 000	1 090 000	1 130 000
Chile	10 474 000	11 355 000	11 648 000	13 916 000	14 931 000
China	*500 000	*500 000	*500 000	*500 000	*550 000
Indonesia	*75 000	*75 000	*75 000	*75 000	*75 000
Japan	6 157 000	6 643 000	6 548 000	6 524 000	*6 500 000
Turkmenistan	*200 000	*200 000	*200 000	*200 000	*250 000
Uzbekistan	*2 000	*2 000	*2 000	*2 000	*2 000
World Total	18 900 000	20 100 000	20 500 000	22 400 000	23 500 000

Note(s):-

(a) Exports

Production of iron ore

tonnes

Country	2000	2001	2002	2003	2004
Austria (a)	1 859 449	1 843 275	1 941 759	2 124 787	1 889 419
Azerbaijan	...	...	4 000	3 100	19 100
Bosnia & Herzegovina	363 000	264 000	212 000	127 000	*130 000
Bulgaria	588 800	324 800	373 000	466 100	83 000
France	31 319	36 587	21 367	—	—
Germany (f) (i)	461 525	407 002	419 371	429 170	412 238
Macedonia	*15 000	*15 000	*15 000	*15 000	*15 000
Norway	470 000	395 000	490 000	410 000	590 000
Portugal (f)	11 800	—	—	—	—
Romania	116 000	221 000	248 000	244 000	*202 500
Russia	87 100 000	82 800 000	85 964 300	92 604 600	94 894 600
Serbia and Montenegro	1 115	—	—	...	...
Slovakia	447 055	435 492	326 300	287 000	305 072
Spain	75 054	55 058	24 489	571	10 879
Sweden	20 557 000	19 486 000	20 281 000	21 498 000	22 272 000
Turkey	4 076 257	4 434 621	3 432 775	3 429 070	3 856 536
Ukraine	55 883 200	54 700 000	58 900 000	62 500 000	66 000 000
United Kingdom	1 033	510	464	*500	*500
Algeria	1 645 000	1 291 000	1 162 000	1 426 200	1 886 100
Egypt (d)	*2 500 000	1 843 027	2 618 065	*2 900 000	2 237 475
Mauritania	11 069 000	10 300 000	9 600 000	10 100 000	10 700 000
Morocco	6 462	7 976	8 736	4 019	...
Nigeria	...	...	7 850	8 635	8 479
South Africa (c)	33 707 364	34 757 159	36 484 015	38 085 855	39 332 787
Tunisia	183 300	206 500	179 200	160 300	256 000
Zimbabwe	438 495	361 362	271 812	411 044	228 731
Canada (g)	36 740 000	29 152 000	28 704 000	33 013 000	28 630 000
Cuba (b)	101 500	...	...	...	...
Mexico	11 300 000	8 660 000	9 966 000	12 398 000	13 369 000
USA	63 089 000	46 192 000	51 570 000	48 554 000	54 724 000
Brazil	210 000 000	201 400 000	214 560 000	234 478 000	262 029 000
Chile	8 728 927	8 834 152	7 268 803	8 011 023	8 003 491
Colombia	660 109	636 837	688 650	625 002	642 546
Peru	4 143 299	4 563 551	4 566 000	5 228 804	5 228 800
Venezuela	17 352 963	16 902 437	16 595 634	17 954 495	19 196 231
China	223 947 600	217 014 700	232 619 000	262 719 000	310 105 000
India (h)	80 762 000	86 226 000	99 072 000	122 838 000	142 711 000
Indonesia	489 126	469 400	378 500	245 400	89 700
Iran (e)	12 208 437	14 835 692	16 906 035	18 287 228	18 204 658
Kazakhstan	16 156 800	15 886 300	17 675 100	19 364 600	20 302 500
Korea, Dem. P.R. of	*1 000 000	*1 000 000	...	...	...
Korea, Republic of	163 192	22 693	156 774	174 009	226 287
Malaysia (g)	258 573	376 476	404 350	596 612	663 732
Thailand	100	50	570 110	9 675	135 580
Australia	171 508 000	181 435 000	188 760 000	212 881 000	230 955 000
New Zealand	2 691 780	1 636 400	1 739 950	1 946 913	2 329 417
World Total	1 083 000 000	1 050 000 000	1 115 000 000	1 237 000 000	1 363 000 000

Note(s):-

- (a) Including micaceous iron oxide
- (b) From nickel plant waste
- (c) Including by-product magnetite
- (d) Years ended 30 June of that stated
- (e) Years ended 20 March following that stated
- (f) Including manganiferous iron ore
- (g) Including by-product iron ore
- (h) Years ended 31 March following that stated
- (i) Used as aggregate in the construction industry

Production of pig iron

tonnes

Country	2000	2001	2002	2003	2004
Austria	4 332 786	4 392 878	4 607 000	4 676 742	4 846 740
Belgium	8 471 214	7 732 111	7 988 396	7 812 593	8 224 000
Bosnia & Herzegovina	*100 000	*100 000	*100 000	*100 000	*100 000
Bulgaria	1 220 000	1 211 000	1 072 000	1 386 000	1 200 000
Czech Republic	4 621 500	4 670 700	4 839 880	5 207 000	5 385 000
Finland	2 982 787	2 851 821	2 828 275	3 092 051	3 036 566
France	13 506 955	11 884 224	13 093 042	12 615 893	13 087 705
Germany	31 300 000	29 394 000	29 967 000	30 071 000	30 628 000
Hungary	1 340 353	1 225 714	1 334 000	1 332 000	1 350 000
Italy	11 195 000	10 581 000	9 746 000	10 123 000	10 566 000
Netherlands	4 970 000	5 305 000	5 367 000	5 846 000	6 011 000
Norway	70 000	70 000	108 000	*110 000	*100 000
Poland	6 491 867	5 440 047	5 296 410	5 585 094	6 292 341
Portugal	382 000	82 000	—	—	—
Romania	3 065 788	3 242 994	3 979 346	4 101 409	4 243 999
Russia	46 456 000	47 457 000	49 161 000	51 235 000	53 461 000
Serbia and Montenegro	562 808	460 884	485 391	635 182	959 019
Slovakia	3 166 400	3 254 600	3 533 150	3 892 000	3 765 000
Spain	4 059 000	4 094 000	3 973 000	3 645 000	4 036 000
Sweden	3 270 000	3 725 000	3 815 000	3 819 000	3 992 000
Switzerland	*80 000	*80 000	*80 000	*80 000	*80 000
Turkey	5 333 000	5 289 000	5 003 000	5 706 000	5 836 000
Ukraine	25 698 700	26 364 000	27 634 000	29 574 000	31 000 000
United Kingdom	10 890 500	9 870 400	8 560 600	10 277 800	10 179 600
Algeria	750 384	794 715	959 000	1 026 200	...
Egypt	3 100 000	3 530 000	3 630 000	3 950 000	*4 000 000
Libya	1 490 000	1 060 000	1 161 000	1 336 000	1 586 000
Morocco	*15 000	*15 000	*15 000	*15 000	*15 000
South Africa	7 818 000	7 376 000	7 525 000	7 776 000	7 644 000
Tunisia	195 400	191 600	151 900	35 800	—
Zimbabwe	277 000	156 000	122 000	182 000	145 000
Canada	10 030 000	8 302 141	8 849 000	9 058 000	9 919 000
Mexico	10 444 728	8 037 183	8 570 500	9 656 000	10 623 000
Trinidad & Tobago	1 524 800	2 187 400	2 316 300	2 275 000	2 336 500
USA	49 450 000	42 250 000	40 700 000	40 854 000	42 480 000
Argentina	3 602 566	3 192 800	3 649 700	4 138 600	4 147 500
Brazil	28 135 000	27 731 000	30 055 000	32 449 000	34 558 000
Chile	1 023 695	897 000	963 900	987 800	1 137 000
Colombia	272 254	318 953	309 300	283 300	312 000
Paraguay	82 018	71 763	87 400	98 000	119 000
Peru	409 185	383 285	267 200	310 400	353 000
Venezuela	6 401 348	5 903 298	6 844 370	6 645 700	7 825 000
China	131 034 200	155 542 500	170 850 000	213 670 000	251 850 000
India	26 761 000	27 595 000	30 046 000	33 601 000	34 238 000
Indonesia	1 736 000	1 487 000	1 446 000	1 171 000	1 436 000
Iran (a)	6 679 088	7 142 340	7 182 000	8 328 619	8 545 732
Japan	81 070 748	78 835 836	80 979 161	82 090 744	82 974 493
Kazakhstan	4 010 300	3 906 500	4 008 947	4 136 820	4 283 100
Korea, Dem. P.R. of	*250 000	*250 000	*250 000	*250 000	*250 000
Korea, Republic of	24 937 000	25 898 000	26 570 000	27 314 000	27 555 998
Malaysia	1 240 000	1 020 000	1 060 000	1 600 000	1 710 000
Myanmar	*40 000	*40 000	*40 000	*40 000	*40 000
Pakistan	1 132 000	1 384 000	*1 000 000	*1 000 000	*1 500 000
Qatar	620 962	733 549	752 000	776 000	830 000
Saudi Arabia	3 060 000	2 877 000	3 280 000	3 280 000	3 406 000
Taiwan	9 618 000	10 001 000	10 169 000	10 260 000	10 354 000
Vietnam	47 000	48 000	146 000	200 000	187 000

Production of pig iron

tonnes

Country	2000	2001	2002	2003	2004
Australia	*6 660 000	*7 300 000	*7 100 000	*8 000 000	6 426 000
New Zealand	603 000	646 000	617 000	700 000	719 000
World Total	618 100 000	625 900 000	654 200 000	718 400 000	772 900 000

Note(s):-

(1) The data in this table include sponge iron and direct reduced iron (DRI) , where these have been separately identified

(a) Years ended 20 March following that stated

Production of crude steel

tonnes

Country	2000	2001	2002	2003	2004
Albania	64 700	71 952	80 924	86 117	98 026
Austria	5 722 000	5 870 000	6 189 000	6 261 000	6 530 000
Belarus	1 623 000	1 611 000	1 607 000	1 572 868	1 775 969
Belgium	11 614 731	10 741 493	11 322 008	11 114 775	11 697 000
Bosnia & Herzegovina	77 000	84 000	70 000	80 000	*90 000
Bulgaria	2 022 000	1 972 000	1 860 000	1 950 000	2 106 000
Croatia	70 999	57 993	33 851	43 380	78 000
Czech Republic	6 215 800	6 315 900	6 511 970	6 783 000	7 033 000
Denmark	803 000	746 000	392 000	—	—
Finland	4 096 389	3 938 122	4 002 914	4 766 203	4 832 427
France	20 742 738	19 190 552	20 258 473	19 757 864	20 770 252
Georgia	50	—	—	—	—
Germany	46 376 000	44 803 000	45 015 000	44 809 000	46 374 000
Greece	1 088 000	1 281 000	1 835 000	1 701 000	1 967 000
Hungary	1 969 821	2 064 507	2 138 146	2 044 526	1 944 017
Irish Republic	360 000	150 000	—	—	—
Italy	26 759 000	26 544 000	26 302 000	26 832 000	28 479 000
Latvia	500 292	515 000	507 000	546 000	550 000
Luxembourg	2 571 243	2 724 679	2 736 000	2 675 000	2 684 000
Macedonia	161 000	218 000	225 000	291 000	300 000
Moldova	908 000	967 000	514 000	850 000	1 011 000
Netherlands	5 492 000	5 902 000	6 117 000	6 561 000	6 848 000
Norway	679 000	635 000	694 000	703 000	725 000
Poland	10 498 262	8 809 211	8 367 434	9 107 384	10 578 482
Portugal	1 089 000	727 000	799 000	722 000	720 000
Romania	4 671 967	4 935 623	5 490 434	5 692 496	6 041 903
Russia	59 136 000	58 970 000	59 882 574	62 839 334	65 582 851
Serbia and Montenegro	682 362	510 675	595 547	722 376	1 167 000
Slovakia	3 733 200	3 988 600	4 275 470	4 588 000	4 454 000
Slovenia	519 000	462 000	481 000	541 000	566 000
Spain	15 874 000	16 504 000	16 408 000	16 407 000	17 700 000
Sweden	5 228 700	5 518 100	5 753 300	5 707 300	5 976 900
Switzerland	*1 000 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Turkey	13 571 563	14 382 257	16 045 522	17 644 020	19 868 118
Ukraine	31 782 000	33 108 000	34 050 000	36 922 000	38 738 000
United Kingdom	15 154 600	13 542 700	11 667 100	13 268 000	13 765 700
Algeria	771 614	947 040	1 091 000	1 051 000	1 014 000
Egypt	2 838 000	3 799 000	4 316 000	4 398 000	4 810 000
Libya	1 055 000	846 000	886 000	1 007 000	1 026 000
South Africa	8 481 000	8 821 000	9 095 000	9 481 000	9 500 000
Tunisia	229 000	238 400	200 500	86 000	70 000
Zimbabwe	258 000	149 000	105 000	152 000	150 000
Canada	16 496 339	15 178 896	15 906 747	15 831 473	16 428 000
Cuba	327 300	269 600	264 100	210 000	190 000
Dominican Republic	35 801	32 521	60 956	*61 000	...
El Salvador	40 506	38 502	48 832	56 900	60 000
Guatemala	167 000	202 000	216 000	226 000	245 000
Mexico	15 631 312	13 300 007	14 010 000	15 178 000	17 100 000
Trinidad & Tobago	743 700	668 300	816 900	896 000	789 800
USA	101 824 000	90 103 000	91 588 000	93 677 000	99 681 000
Argentina	4 479 204	4 112 501	4 363 367	5 033 200	5 125 200
Brazil	27 865 000	26 717 000	29 604 000	31 147 000	32 909 000
Chile	1 351 986	1 246 863	1 279 549	1 377 400	1 620 000
Colombia	659 882	638 259	662 859	668 400	730 000
Ecuador	58 483	59 732	67 233	79 800	80 000
Paraguay	76 784	70 664	79 984	91 000	100 000
Peru	750 682	689 790	611 363	668 400	790 000
Uruguay	38 102	30 890	34 400	40 500	55 000
Venezuela	3 834 575	3 812 664	4 163 855	3 930 300	4 800 000

Production of crude steel

tonnes

Country	2000	2001	2002	2003	2004
China	127 236 100	151 634 400	182 370 000	222 340 000	272 800 000
Hong Kong	*100 000	*100 000	*100 000	*100 000	*100 000
India	26 924 000	27 291 000	28 814 000	31 779 000	32 626 000
Indonesia	2 848 099	2 780 607	2 459 928	2 042 233	2 412 000
Iran (a)	6 614 519	6 927 108	7 477 086	7 990 971	8 989 640
Israel	*280 000	*280 000	*150 000	*150 000	*280 000
Japan	106 444 468	102 865 950	107 745 000	110 510 520	112 717 664
Jordan	144 447	164 376	134 000	*135 000	*135 000
Kazakhstan	4 799 000	4 691 000	4 866 000	5 069 400	5 371 700
Korea, Dem. P.R. of	*300 000	*300 000	*300 000	*300 000	*300 000
Korea, Republic of	43 107 123	43 852 192	45 389 834	46 309 629	47 520 871
Malaysia	3 650 000	4 100 000	4 721 800	3 960 000	4 000 000
Pakistan	*500 000	*500 000	*500 000	*500 000	*500 000
Philippines	426 000	500 000	550 000	500 000	400 000
Qatar	729 000	891 000	1 027 000	1 055 000	1 089 000
Saudi Arabia	2 981 000	3 413 000	3 570 000	3 944 000	3 902 000
Singapore	603 000	456 000	545 000	561 000	610 000
Syria	*70 000	*70 000	*70 000	*70 000	*70 000
Taiwan	16 895 545	17 261 119	18 226 044	18 828 323	19 592 755
Thailand	2 099 633	2 127 000	2 538 000	3 551 000	4 533 000
United Arab Emirates	*90 000	*90 000	*90 000	*90 000	*90 000
Uzbekistan	407 000	433 000	450 000	499 000	602 000
Vietnam	305 881	318 780	408 196	543 006	658 467
Australia	7 297 000	7 076 000	7 550 000	7 543 900	7 414 000
New Zealand	702 000	826 000	765 000	853 000	885 000
World Total	846 000 000	850 000 000	904 000 000	969 000 000	1 057 000 000

Note(s):-

(1) Unless otherwise indicated, these figures include production from scrap

(2) Small amounts of steel are believed to be produced in Azerbaijan, Bangladesh, D R Congo, Estonia, Ghana, Kenya, Mauritania, Mongolia, Morocco, Myanmar, Nigeria, Sri Lanka and Uganda

(a) Years ended 20 March following that stated

Production of ferro-alloys

tonnes

Country	2000	2001	2002	2003	2004
Albania					
Ferro-chrome	53 084	19 500	22 800	37 800	34 650
Austria					
Ferro-molybdenum	4 700	4 900	4 930	4 400	4 700
Ferro-nickel	3 300	2 600	2 150	2 000	1 900
Ferro-vanadium	5 900	5 800	5 500	5 300	5 800
Belgium					
Ferro-vanadium	2 194	926	1 492	...	...
Bulgaria					
Ferro-silicon	*8 000	*8 000	*8 000	*8 000	*8 000
Croatia					
Ferro-chrome	15 753	361	—	—	—
Czech Republic					
Ferro-vanadium	*2 500	*2 500	*3 000	*3 000	*3 500
Finland					
Ferro-chrome	260 605	236 000	248 000	250 000	264 492
France					
Ferro-manganese & spiegeleisen	409 169	414 200	416 569	*300 000	*106 000
Ferro-silico-manganese	32 773	65 248	66 215	*107 000	*64 000
Ferro-silicon	*110 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	94 127	89 896	84 768	*85 000	*85 000
Georgia					
Ferro-manganese	6 088	7 820	4 211	12 425	12 821
Ferro-silico-manganese	20 458	32 779	30 432	50 932	91 874
Other ferro-alloys	582	105	—	—	—
Germany					
Ferro-chrome	21 600	19 308	20 018	18 318	24 857
Other ferro-alloys	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	27 119	28 379	26 049	28 663	28 773
Greece					
Ferro-nickel	81 662	88 755	96 000	90 000	91 000
Iceland					
Ferro-silicon	108 288	112 935	118 810	117 171	*118 000
Italy					
Ferro-manganese	*40 000	*40 000	*40 000	*40 000	*40 000
Ferro-silico-manganese	*100 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	9 590	—	—	—	—
Macedonia					
Ferro-alloys	57 842	27 287	...	...	...
Norway					
Ferro-chrome	153 500	82 600	61 100	—	—
Ferro-manganese	150 585	111 823	126 960	*130 000	*130 000
Ferro-silico-manganese	198 671	277 938	252 723	*250 000	*260 000
Ferro-silicon	450 364	427 590	359 944	...	389 599
Other ferro-alloys	54 639	47 600	48 500	*50 000	*50 000
Silicon metal	138 139	134 958	152 981	...	193 566
Poland					
Ferro-chrome	—	—	106	188	—
Ferro-manganese	0	497	602	979	46 898
Ferro-silico-manganese	18 997	20 007	7 338	*7 000	...
Ferro-silicon	55 969	48 608	41 759	92 687	83 552
Other ferro-alloys	4 174	4 039	4 200	—	—
Romania					
Ferro-manganese	1 989	384	—	—	—
Ferro-silico-manganese	62 320	71 921	84 720	141 899	194 945
Ferro-silicon	8 309	5 823	—	—	—
Russia					
Spiegeleisen	*7 000	*7 000	*7 000	*7 000	*7 000
Ferro-chrome	274 000	211 000	231 790	351 729	453 639
Ferro-silico-chrome	91 013	79 115	55 134	63 558	83 372
Ferro-manganese	*88 000	*55 000	*105 000	*101 000	*108 000
Ferro-nickel	*35 000	*30 000	*45 000	*51 000	*53 000
Ferro-phosphorus	100	...	...	...	...
Ferro-silicon	652 000	707 000	707 000	702 000	720 000
Other ferro-alloys	*40 000	*35 000	*30 000	*30 000	*32 000
Silicon metal	*40 000	*40 000	*40 000	*45 000	*45 000

Production of ferro-alloys

tonnes

Country	2000	2001	2002	2003	2004
Slovakia					
Ferro-chrome	17 658	5 968	5 695	1 924	1 784
Ferro-silico-manganese	52 141	46 288	62 084	52 733	64 842
Ferro-silicon	59 443	55 577	35 920	41 539	34 600
Other ferro-alloys	50 508	46 357	24 657	44 589	68 096
Slovenia					
Ferro-silicon	*9 000	*9 000	*9 000	*12 000	*18 000
Spain					
Ferro-chrome	905	—	—	—	—
Ferro-manganese	26 815	24 804	33 218	*35 000	*35 000
Ferro-silico-manganese	128 197	102 110	103 494	*100 000	*100 000
Ferro-silicon	50 071	53 427	56 994	*60 000	*60 000
Silicon metal	28 215	29 114	26 071	*25 000	*25 000
Sweden					
Ferro-chrome	106 399	107 036	118 800	106 100	127 300
Ferro-silicon	18 948	21 197	21 500	17 100	18 500
Turkey					
Ferro-chrome	97 240	50 735	11 200	35 393	28 701
Ferro-silico-chrome	7 170	5 895	7 245	6 805	5 560
Ukraine					
Spiegeleisen	5 400	*5 000	*5 000	*5 000	*5 000
Ferro-manganese	338 100	*335 000	*350 000	383 200	498 800
Ferro-silico-manganese	684 040	702 389	732 592	991 600	1 087 500
Ferro-nickel	10 800	41 000	31 000	52 000	78 000
Ferro-silicon	323 417	231 000	250 617	286 200	312 200
Egypt					
Ferro-silicon (a)	*55 000	*55 000	*55 000	*55 000	*55 000
Other ferro-alloys (a)	...	7 912	16 679	*20 000	*20 000
South Africa					
Ferro-chrome	2 574 264	2 141 008	2 351 122	2 813 000	3 070 773
Ferro-manganese	527 106	523 844	618 954	607 362	*640 000
Ferro-silico-manganese	310 400	259 176	315 802	313 152	*320 000
Ferro-silicon	108 513	107 557	141 700	135 300	*150 000
Ferro-vanadium	*11 000	*11 000	*11 000	*18 000	*23 000
Silicon metal	40 264	39 440	42 500	*48 900	*49 000
Zimbabwe					
Ferro-chrome	246 324	249 841	258 164	261 095	218 065
Ferro-silico-chrome	19 631	16 848	...	...	...
Canada					
Ferro-niobium	3 300	4 600	5 100	5 000	*5 300
Ferro-silicon	*70 000	*70 000	*70 000	*70 000	*70 000
Silicon metal	*30 000	*30 000	*30 000	*30 000	*30 000
Dominican Republic					
Ferro-nickel	72 488	54 784	59 629	69 545	75 764
Mexico					
Ferro-manganese	90 501	60 014	38 532	55 903	72 471
Ferro-silico-manganese	107 922	74 290	73 263	81 223	103 206
USA					
Ferro-silicon	*250 000	190 827	181 832	147 964	170 592
Silicon metal	*175 000	131 047	108 494	133 680	144 489
Argentina					
Ferro-silico-manganese	4 900	5 150	*5 000	*5 000	*5 000
Ferro-silicon	2 500	2 740	1 072	1 100	...
Other ferro-alloys	16 900	9 925	17 289	*15 000	*15 000
Silicon metal	*8 000	*8 000	*8 000	*8 000	*8 000

Production of ferro-alloys

tonnes

Country	2000	2001	2002	2003	2004
Brazil					
Ferro-chrome	134 562	84 428	123 175	171 257	177 276
Ferro-silico-chrome	7 790	5 899	10 522	8 151	11 560
Ferro-silico-magnesium	9 658	11 032	14 552	14 040	37 031
Ferro-manganese	121 277	96 016	156 435	176 735	179 971
Ferro-silico-manganese	171 304	180 235	182 731	261 658	285 629
Ferro-nickel	19 315	17 966	19 874	19 378	20 338
Ferro-niobium	27 359	37 411	36 450	37 303	35 863
Ferro-silicon	189 935	159 345	145 910	156 824	177 245
Other ferro-alloys	35 190	16 623	25 300	38 559	45 868
Silicon metal	166 344	112 123	133 390	180 937	219 813
Chile					
Ferro-manganese	4 011	1 975	—	—	—
Ferro-silico-manganese	1 802	153	—	—	—
Ferro-molybdenum	1 454	1 784	1 784	4 423	5 762
Ferro-silicon	*1 000	*1 100	*1 100	...	...
Colombia					
Ferro-nickel	64 500	89 400	102 300	111 300	113 500
Venezuela					
Ferro-manganese	15 655	12 715	*12 000	*12 000	*15 000
Ferro-silico-manganese	69 735	56 640	36 974	30 632	*35 000
Ferro-nickel	3 200	27 033	*57 200	75 278	67 796
Ferro-silicon	86 188	85 708	87 528	90 534	*92 000
Bhutan					
Ferro-silicon	*15 000	*16 000	*21 000	*21 000	*20 000
China					
Ferro-chrome	395 000	340 637	332 011	534 842	599 650
Ferro-silico-chrome	50 000	59 859	43 492	97 552	97 552
Ferro-manganese	940 000	947 300	(c) ...	(c) ...	(c) ...
Ferro-molybdenum	167	(c) ...	(c) ...	(c) ...	(c) ...
Ferro-rare earth	2 951	(c) ...	(c) ...	(c) ...	(c) ...
Ferro-silicon	1 390 000	1 384 900	(c) ...	(c) ...	(c) ...
Ferro-titanium	34	(c) ...	(c) ...	(c) ...	(c) ...
Ferro-tungsten	8 253	(c) ...	(c) ...	(c) ...	(c) ...
Ferro-vanadium	9 940	(c) ...	(c) ...	(c) ...	(c) ...
Other ferro-alloys	1 233 000	1 799 000	4 465 000	5 708 000	7 973 000
Silicon metal	*400 000	*400 000	*500 000	*600 000	*660 000
India					
Ferro-aluminium (b)	1 510	1 743	2 000	5 169	5 917
Ferro-chrome (b)	382 339	302 109	380 528	525 824	594 994
Ferro-silico-magnesium (b)	2 460	2 385	6 369	6 289	7 092
Ferro-manganese (b)	170 362	206 624	236 676	248 388	270 234
Ferro-silico-manganese (b)	276 008	235 730	304 212	380 316	498 047
Ferro-molybdenum (b)	1 881	2 152	3 114	2 949	2 864
Ferro-silicon (b)	67 349	76 209	81 955	68 844	99 296
Ferro-vanadium (b)	674	644	914	769	826
Indonesia					
Ferro-manganese	*12 000	*12 000	*12 000	*12 000	*12 000
Ferro-silico-manganese	*7 000	*7 000	*7 000	*7 000	*7 000
Ferro-nickel	50 500	51 510	42 306	43 894	39 538
Iran					
Ferro-chrome (d)	10 900	9 400	2 300	8 000	7 750
Ferro-silicon (d)	49 529	37 000	41 663	40 297	50 140
Japan					
Ferro-chrome	130 074	111 167	91 937	19 427	13 472
Ferro-manganese	337 694	368 293	356 717	371 831	437 389
Ferro-silico-manganese	72 092	66 257	74 171	61 618	73 041
Ferro-molybdenum	3 699	3 485	2 375	2 691	3 323
Ferro-nickel	367 181	367 739	370 973	369 099	374 213
Ferro-tungsten	42	109	9	12	—
Ferro-vanadium	4 108	3 613	3 592	3 491	2 178
Other ferro-alloys	7 171	5 733	6 376	3 813	7 321

Production of ferro-alloys

tonnes

Country	2000	2001	2002	2003	2004
Kazakhstan					
Ferro-chrome	799 762	761 901	835 743	993 007	1 081 000
Ferro-silico-chrome	55 634	79 746	108 028	98 134	104 800
Ferro-silico-manganese	102 719	141 776	163 725	178 924	155 300
Ferro-silicon	133 269	145 780	126 968	127 161	103 600
Other ferro-alloys	630	1 730	986	...	...
Korea, Dem. P.R. of					
Ferro-alloys	*10 000	*10 000	*10 000	*10 000	*10 000
Korea, Republic of					
Ferro-manganese	146 373	143 525	137 000	141 000	165 500
Ferro-silico-manganese	103 522	101 877	94 000	90 942	82 917
Other ferro-alloys	4 676	4 452	—	—	—
Taiwan					
Ferro-silicon	2 975	1 181	—	—	—
Australia					
Ferro-manganese (a)	98 421	124 586	73 523	104 022	133 985
Ferro-silico-manganese (a)	115 585	120 758	138 938	130 568	116 630
Silicon metal	*30 000	*30 000	*30 000	*30 000	*30 000
New Caledonia					
Ferro-nickel	151 049	153 012	162 973	167 208	151 296

Note(s):-

- (a) Years ended 30 June of that stated
- (b) Years ended 31 March following that stated
- (c) Included with 'other ferro-alloys'
- (d) Years ended 20 March following that stated

Production of kaolin

tonnes

Country	2000	2001	2002	2003	2004
Austria	25 066	20 047	21 212	15 034	16 345
Belgium	*300 000	*300 000	*300 000	*300 000	*300 000
Bosnia & Herzegovina	—	13 000	6 500	—	—
Bulgaria	*150 000	*140 000	*150 000	*120 000	*190 000
Czech Republic (h)	564 000	562 000	562 000	582 000	639 000
France	385 000	377 000	339 000	335 000	316 000
Germany (g)	714 936	696 832	740 821	738 123	...
Greece	54 226	60 075	57 885	59 680	53 438
Italy	284 148	295 263	174 990	224 755	246 608
Poland (k)	90 139	103 220	89 372	106 761	130 596
Portugal	162 674	148 706	147 448	169 669	*170 000
Romania	18 942	21 867	22 517	25 741	22 337
Russia	45 000	*45 000	*45 000	*45 000	*45 000
Serbia and Montenegro	39 475	60 900	95 622	99 460	14 122
Slovakia	21 000	34 730	24 600	24 800	89 424
Spain (k)	353 355	*400 000	419 483	427 193	402 347
Turkey	390 830	505 773	372 344	370 455	536 008
Ukraine	172 800	*170 000	*170 000	169 900	202 300
United Kingdom (a) (l)	2 376 057	2 204 156	2 162 815	2 097 137	1 944 955
Algeria	11 616	13 356	9 505	19 258	24 299
Burundi	1 500	—	—	—	—
Egypt	290 000	260 000	260 000	*260 000	249 761
Eritrea	943	...	120	140	50
Ethiopia (b)	1 654	1 790	3 534	3 088	4 250
Kenya	793	700	*700	*700	*700
Nigeria	165 765	32 090	52 352	57 587	...
South Africa	89 242	83 500	91 456	86 365	81 901
Cuba	9 700	...	...	...	...
Mexico	532 268	681 709	745 498	798 407	654 711
USA (e)	8 800 000	8 110 000	8 010 000	7 680 000	7 760 000
Argentina	34 023	13 584	13 865	19 219	27 883
Brazil (h)	1 639 673	1 817 419	1 757 488	2 081 039	2 197 920
Chile	6 445	5 300	6 164	11 500	51 769
Ecuador	11 022	8 818	8 483	11 884	13 072
Paraguay	*66 500	*66 500	*66 700	...	...
Peru	6 165	5 478	1 934	2 653	2 720
Venezuela	*10 000	*10 000	*10 000	*10 000	*10 000
Bangladesh (d)	*8 000	*8 000	*8 000	9 630	13 113
China	1 450 000	*1 500 000	*1 500 000	*1 600 000	*1 800 000
India (i) (j)	179 274	187 232	204 694	209 920	220 558
Indonesia	*15 000	*15 000	*15 000	*15 000	*15 000
Iran (c)	635 693	760 615	592 803	556 003	596 886
Israel	13 000	—	—	—	—
Japan	25 912	17 240	11 602	12 223	11 553
Jordan	36 794	24 124	39 745	36 528	51 836
Kazakhstan	*20 000	*20 000	*20 000	*20 000	*20 000
Korea, Republic of	705 145	850 360	1 054 543	1 042 018	936 537
Malaysia	233 885	364 458	323 916	425 942	326 928
Pakistan (d)	63 494	12 980	55 584	39 575	25 204
Philippines	1 510	5 111	*5 000	...	...
Saudi Arabia	7 500	7 740	7 920	8 100	*8 000
Sri Lanka	12 230	9 403	8 613	9 073	*9 000
Taiwan	38 606	28 921	18 403	22 448	35 001
Thailand (h)	221 062	181 583	130 282	185 512	200 671
Uzbekistan (i)	*150 000	*150 000	*150 000	*150 000	*150 000
Vietnam	*520 000	*600 000	*600 000	*650 000	*650 000

Production of kaolin

tonnes

Country	2000	2001	2002	2003	2004
Australia (d) (f)	223 000	232 000	228 000	280 000	285 543
New Zealand	16 310	15 620	17 250	14 770	15 240
World Total	22 400 000	22 300 000	21 900 000	22 300 000	22 600 000

Note(s):-

(1) In addition to the countries listed Denmark is believed to produce kaolin

(a) Sales

(b) Years ended 7 July of that stated

(c) Years ended 20 March following that stated

(d) Years ended 30 June of that stated

(e) Sold or used by producers

(f) Excluding New South Wales

(g) Washed and dried

(h) Beneficiated

(i) Beneficiated; excludes directly used natural kaolin

(j) Years ended 31 March following that stated

(k) Washed

(l) Dry weight

Mine production of lead

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Bulgaria	13 700	18 500	19 800	19 950	18 970
Finland	380	—	—	—	—
Greece	15 554	26 588	29 300	2 000	—
Irish Republic	57 500	44 500	41 700	50 300	63 800
Italy	3 300	2 700	3 200	2 700	800
Macedonia	24 000	20 000	15 000	2 600	—
Poland	51 200	52 600	56 600	54 700	52 700
Romania	18 750	19 676	17 500	15 747	14 952
Russia	14 000	14 000	19 000	24 000	22 000
Serbia and Montenegro	3 790	4 291	4 355	4 567	*5 300
Spain	51 793	35 573	6 171	1 765	—
Sweden	106 584	85 975	42 954	50 962	54 347
Turkey	15 888	17 884	17 277	17 446	18 700
United Kingdom	*1 000	*800	*700	*700	*500
Algeria	510	560	690	—	—
Morocco	82 147	76 748	62 417	39 387	44 200
Namibia	9 797	12 827	12 088	16 112	14 338
South Africa	75 262	50 771	49 444	39 941	37 485
Tunisia	6 200	6 942	5 081	*5 000	5 332
Canada	148 769	153 932	97 178	81 264	76 726
Honduras	4 805	6 750	8 128	9 014	8 877
Mexico	137 975	118 247	138 707	139 348	118 484
USA	464 700	466 400	450 600	460 200	445 000
Argentina	14 115	12 334	12 011	12 079	9 551
Bolivia	9 523	9 090	9 268	9 353	10 870
Brazil	8 832	10 725	9 253	10 652	14 734
Chile	785	1 193	2 895	1 697	2 286
Peru	270 576	289 546	298 487	308 874	306 211
China	659 500	676 000	640 700	954 600	*951 000
India (a)	34 600	32 600	37 800	46 700	52 100
Iran	17 200	11 800	8 100	*8 000	*8 000
Japan	8 669	5 516	5 758	5 700	5 500
Kazakhstan	39 300	37 500	45 500	38 200	33 000
Korea, Dem. P.R. of	*22 000	*17 000	*15 000	*20 000	*20 000
Korea, Republic of	2 700	1 000	28	—	40
Myanmar	1 200	900	*500	*600	400
Tajikistan	*2 000	*2 000	—	—	—
Thailand	9 900	300	2 600	—	—
Australia	651 000	759 000	694 000	688 000	678 000
World Total	3 100 000	3 100 000	2 900 000	3 100 000	3 100 000

Note(s):-

(a) Years ended 31 March following that stated

Production of refined lead

tonnes

Country	2000	2001	2002	2003	2004
Austria	23 773	23 666	*23 000	*20 000	*26 000
Belgium	119 000	100 000	88 000	65 000	62 000
Bulgaria	84 100	83 000	71 000	74 000	69 000
Czech Republic	28 700	30 500	*30 500	*30 000	*30 000
Estonia	—	—	—	—	3 000
France	263 200	231 400	203 400	91 000	89 000
Germany	386 658	373 397	379 905	356 900	359 200
Greece	*6 000	*6 000	*6 000	*6 000	*6 000
Irish Republic	8 500	9 800	6 600	7 800	19 600
Italy	233 900	226 500	196 000	214 100	201 600
Macedonia	22 939	19 737	*19 700	6 400	—
Netherlands	21 000	20 000	18 000	17 000	17 000
Poland	55 900	66 000	65 800	74 300	73 900
Portugal	*6 000	*6 000	*6 000	*6 000	*6 000
Romania	23 555	22 000	23 000	28 000	32 000
Russia	51 501	60 000	63 000	66 000	66 000
Serbia and Montenegro	1 242	—	200	493	800
Slovenia	15 300	15 400	15 400	15 000	*15 000
Spain	120 000	121 600	115 552	99 100	105 600
Sweden	78 068	75 608	63 451	73 340	73 548
Switzerland	10 007	10 250	8 700	9 600	9 300
Turkey	*9 000	*9 000	*9 000	*9 000	*9 000
Ukraine	15 034	12 800	12 000	13 000	*15 000
United Kingdom	327 904	366 305	374 646	364 574	245 938
Algeria	5 700	6 100	6 000	*6 000	*6 000
Kenya	*1 000	*1 000	*1 000	*1 000	*1 000
Morocco	66 812	58 178	71 840	61 473	*35 000
Nigeria	*5 000	*5 000	*5 000	*5 000	*5 000
South Africa	46 000	55 000	61 000	65 000	64 000
Zimbabwe	*1 000	*1 000	—	—	—
Canada	284 333	230 928	251 560	223 434	241 397
Mexico	232 900	233 300	218 200	227 500	227 100
Trinidad & Tobago	*1 000	*1 000	*1 000	*1 000	*1 000
USA (b)	1 457 000	1 376 000	1 364 000	1 392 000	1 269 000
Argentina	35 700	35 433	43 600	41 311	49 111
Brazil (a)	50 000	47 000	50 000	50 000	52 000
Colombia	*10 000	*9 000	*9 000	*9 000	*9 000
Peru	116 412	121 181	119 588	112 289	118 970
Venezuela	*21 000	*28 000	*28 000	*32 000	*35 000
China	1 099 900	1 195 400	1 324 700	1 564 100	1 811 900
India	57 400	74 400	74 200	77 500	51 000
Indonesia	18 000	18 000	17 000	18 000	20 000
Iran	42 000	44 000	39 000	54 000	54 000
Israel	13 000	20 000	22 000	*25 000	27 000
Japan	311 562	302 387	280 341	295 148	280 000
Kazakhstan	205 501	158 700	162 200	140 700	157 000
Korea, Dem. P.R. of	10 000	7 000	6 000	7 000	9 000
Korea, Republic of	219 123	211 010	230 000	220 000	173 609
Malaysia	32 000	38 000	40 000	57 000	54 000
Myanmar	1 000	1 100	400	900	300
Pakistan	*3 000	*3 000	*2 000	*2 000	2 000
Philippines	25 000	26 000	*26 000	*27 000	*29 000
Saudi Arabia	18 000	16 000	17 000	25 000	32 000
Taiwan	41 800	40 000	40 000	40 000	40 000
Thailand	27 193	30 000	43 000	45 000	57 500
United Arab Emirates	2 000	2 000	2 000	2 000	2 000

Production of refined lead

tonnes

Country	2000	2001	2002	2003	2004
Australia	251 000	270 000	302 000	309 000	273 000
New Zealand	10 000	10 000	10 000	10 000	10 000
World Total	6 600 000	6 600 000	6 700 000	6 800 000	6 700 000

Note(s):-

(1) Figures relate to both primary and secondary refined lead and include the lead content of antimonial lead. Metal recovered from materials by remelting alone is excluded

(a) Including scrap for direct use

(b) Excluding Pb content of primary antimonial lead

Production of lithium minerals

tonnes

Country	2000	2001	2002	2003	2004
Portugal					
Lepidolite	9 352	11 571	16 325	24 606	28 696
Zimbabwe	37 914	36 103	29 320	12 131	13 710
Canada	*22 500	*22 500	*22 500	*22 500	*22 500
USA (a)	*1 500	*1 500	*1 500	*1 500	*1 500
Argentina (c) (d)	7 343	4 512	5 635	7 550	11 273
Brazil					
Petalite	1 077	187	—	—	—
Spodumene	9 796	8 897	12 046	9 755	9 064
Chile (c)	35 869	31 320	35 242	41 667	43 971
China	31 967	34 276	*34 000	*35 000	*36 000
Australia					
Spodumene (b)	64 983	56 370	101 212	124 410	*125 000
World Total (Li content)	*12 700	*11 200	*12 800	*14 300	*15 500

Note(s):-

(1) In addition to the countries listed, Russia also produces lithium minerals

(a) Li content

(b) Years ended 30 June of that stated

(c) Carbonate

(d) Chloride

Production of magnesite

tonnes

Country	2000	2001	2002	2003	2004
Austria	725 832	680 534	728 235	766 525	715 459
Greece	414 400	442 800	553 700	542 800	552 300
Netherlands (c)	233 000	250 000	226 000	261 194	245 495
Poland	26 140	22 200	22 100	27 200	*52 000
Russia	2 500 000	2 600 000	2 600 000	2 600 000	*2 600 000
Serbia and Montenegro	40 925	36 173	25 247	17 488	—
Slovakia	1 000 211	961 212	929 630	1 640 900	1 668 900
Spain	534 234	598 000	637 024	517 030	556 500
Turkey	2 673 525	2 738 086	3 044 440	3 224 278	3 732 952
South Africa	63 000	36 500	87 200	86 100	*85 000
Zimbabwe	4 029	2 466	2 546	822	749
Canada (b)	*165 000	*165 000	*165 000	*165 000	*165 000
Argentina	37 773	35 242	29 956	...	...
Brazil	279 876	308 809	302 230	306 444	366 174
Colombia	*10 500	*10 500	*10 500	*10 500	*10 500
China	*10 000 000	*10 000 000	*10 000 000	*10 000 000	*10 000 000
India (e)	317 765	282 943	278 267	323 977	381 327
Iran (a)	113 040	113 434	69 683	87 795	88 194
Korea, Dem. P.R. of	*650 000	*650 000	*450 000	...	...
Pakistan (d)	2 697	5 795	5 936	3 435	6 074
Philippines	410	4 094	3 604	3 798	...
Australia	349 538	599 994	483 838	472 668	586 393
World Total	20 100 000	20 500 000	20 700 000	21 500 000	22 300 000

Note(s):-

(1) In addition to the countries listed, Bulgaria is believed to produce magnesite

(a) Years ended 20 March following that stated

(b) Officially described as magnesitic dolomite and brucite

(c) Chloride produced from solution mining

(d) Years ended 30 June of that stated

(e) Years ended 31 March following that stated

Production of primary magnesium metal

tonnes

Country	2000	2001	2002	2003	2004
France	16 500	4 800	2 000	—	—
Norway	41 400	40 700	3 100	—	—
Russia	35 500	*35 000	*35 000	*30 000	*35 000
Serbia and Montenegro	1 270	203	—	*500	500
Canada	(a) *64 000	*65 000	*70 000	*50 000	*40 000
USA	94 000	50 000	20 000	10 000	*30 000
Brazil	5 723	5 500	4 500	4 000	3 000
China	142 100	199 700	231 700	354 000	454 000
India	*500	*500	*500	*200	200
Israel	32 000	31 000	30 000	26 000	28 000
Kazakhstan (b)	10 380	16 455	17 858	14 164	*18 000

Note(s):-

(a) Capacity

(b) Not marketed as metal but used in titanium production

Production of manganese ore

tonnes

Country	2000	2001	2002	2003	2004
Bulgaria	—	1 515	4	4 200	27 800
Georgia (b)	63 100	98 300	103 400	173 500	218 700
Hungary	41 000	43 000	43 000	48 000	49 000
Italy	1 038	803	867	763	714
Romania	27 080	73 276	59 148	72 931	*77 500
Russia	...	...	...	44 400	44 400
Turkey	23 300	20 000	20 000	18 000	13 751
Ukraine (b)	2 740 600	2 710 000	2 740 000	2 533 000	2 273 100
Gabon	1 743 000	1 791 000	1 856 000	2 000 000	2 459 766
Ghana	895 669	1 076 666	1 135 828	1 509 432	1 597 085
Morocco	25 830	13 757	18 064	*16 500	...
South Africa					
Metallurgical	3 613 154	3 239 903	3 302 129	3 484 801	4 189 552
Chemical	22 273	26 241	19 516	15 837	17 194
Mexico	418 300	261 284	233 025	*290 000	*320 000
Brazil	2 192 000	1 970 000	2 529 000	2 544 000	3 143 000
Chile	41 716	31 320	12 195	19 641	25 801
China	3 514 000	4 306 800	*4 500 000	*4 600 000	*4 500 000
India (c)	1 595 458	1 587 305	1 678 372	1 776 153	2 378 543
Iran (a)	110 917	140 418	123 148	115 680	128 924
Kazakhstan	1 201 900	1 386 500	1 834 500	2 361 000	2 318 100
Thailand	225	45	—	—	4 550
Australia	1 613 000	1 977 000	2 190 000	2 555 000	3 381 000
World Total	19 900 000	20 800 000	22 400 000	24 200 000	27 200 000

Note(s):-

(1) In addition to the countries listed, Colombia, Cuba and Vietnam are believed to produce manganese ore

(a) Years ended 20 March following that stated

(b) Marketable

(c) Years ended 31 March following that stated

Production of mercury

kilograms

Country	2000	2001	2002	2003	2004
Finland	76 100	71 200	50 600	25 000	23 500
Russia	*50 000	*50 000	*50 000	*50 000	*50 000
Spain	236 600	524 000	726 139	745 260	—
Algeria	215 625	320 091	307 119	175 570	89 700
Morocco	*10 000	*10 000	*10 000	*10 000	*10 000
Mexico	*15 000	*15 000	*15 000	*15 000	*15 000
USA	*15 000	*15 000	*15 000	*15 000	*15 000
Chile (a)	*25 000	*37 400	*50 000	*50 000	*50 000
China	203 000	193 000	*495 000	*610 000	425 000
Kyrgyzstan	550 000	574 400	478 000	370 000	488 100
Tajikistan	*40 000	*40 000	*20 000	*30 000	*30 000
World Total	1 400 000	1 900 000	2 200 000	2 100 000	1 200 000

Note(s):-

(1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes and by recovery from effluents

(a) From copper solvent extraction and electrowinning processes

Production of mica

tonnes

Country	2000	2001	2002	2003	2004
Austria	...	...	...	5 646	5 832
Finland	10 035	8 983	7 170	9 337	9 225
France (e)	21 000	15 000	17 000	18 000	19 000
Russia	*10 000	*10 000	9 159	10 063	8 474
Serbia and Montenegro	1 727	303	426	185	140
Spain (e)	10 086	9 874	11 783	11 800	7 000
Madagascar	67	90	60	*70	*70
Morocco	1 897	—	—	—	—
South Africa	676	937	821	980	901
Zimbabwe	273	—	—	—	—
Canada	*30 000	*30 000	*30 000	*30 000	*30 000
Mexico	1 658	648	456	506	424
USA (d) (e)	101 000	97 800	81 100	78 600	*76 000
Argentina	4 665	2 110	1 770	1 894	2 178
Brazil	*4 000	*4 000	*4 000	*5 000	*5 000
China (c)	*43 300	*52 200	*54 000	*66 200	*84 000
India (b)	4 117	6 095	3 575	4 002	4 167
Iran (f)	4 562	4 615	2 406	5 500	7 032
Korea, Republic of (a)	65 295	109 339	29 870	33 645	59 238
Malaysia (g)	3 835	4 107	3 669	3 609	3 544
Sri Lanka	1 491	1 161	1 161	1 674	*1 200
Taiwan	6 862	9 733	6 595	3 237	2 978
Australia	749	959	605	636	383
World Total	330 000	370 000	270 000	290 000	330 000

Note(s):-

(1) In addition to the countries listed, Romania is believed to produce mica

(a) Mainly sericite

(b) Years ended 31 March following that stated

(c) Conservative BGS estimates, based on exports

(d) Sold or used by producers

(e) Including mica recovered from mica schists and/or kaolin beneficiation

(f) Years ended 20 March following that stated

(g) Sericite

Mine production of molybdenum

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Armenia	3 082	2 943	2 883	2 763	2 950
Russia	3 700	4 800	4 800	4 800	4 800
Canada	7 457	8 233	8 043	9 092	9 544
Mexico	6 886	5 518	3 428	3 524	3 731
USA	40 900	37 600	32 300	33 500	*41 500
Chile	33 639	33 492	29 467	33 375	41 883
Peru	7 193	9 499	8 613	9 561	14 246
China	28 755	28 201	39 089	32 000	31 000
Iran (a)	2 000	2 600	2 370	2 290	1 890
Kazakhstan	215	94	46	53	...
Kyrgyzstan	*250	*250	*250	*250	*250
Mongolia	1 336	1 423	1 590	1 803	1 141
Uzbekistan	348	580	*500	*500	*500
World Total	136 000	135 000	133 000	134 000	153 000

Note(s):-

(1) In addition to the countries listed, Australia, Georgia, India, Democratic P.R. of Korea, Romania and Tajikistan are believed to produce molybdenum

(a) Years ended 20 March following that stated

Production of nepheline syenite

tonnes

Country	2000	2001	2002	2003	2004
Norway	330 000	330 362	330 461	332 000	333 000
Russia (a)	814 000	960 000	1 021 576	1 014 279	1 023 257
Canada	721 000	708 000	715 000	705 000	699 000

Note(s):-

(a) Nepheline concentrates

Mine production of nickel

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Finland	*4 300	*3 000	*3 500	*3 700	*4 000
Greece	23 365	20 742	22 700	19 100	19 000
Macedonia	—	3 100	5 100	5 600	5 300
Norway	2 536	2 800	2 052	—	—
Russia	266 000	272 800	267 300	291 000	290 000
Ukraine	—	1 500	2 000	2 000	2 000
Botswana	21 446	22 454	23 896	27 400	22 292
South Africa (a)	36 614	36 443	38 546	40 842	40 844
Zimbabwe	5 968	8 009	7 835	6 678	9 776
Canada	190 793	194 058	189 297	163 244	186 546
Cuba	68 100	72 600	71 300	74 000	71 900
Dominican Republic	39 943	33 419	37 521	45 253	46 000
Brazil	45 317	45 456	44 928	45 160	47 446
Colombia	58 927	53 000	58 500	70 800	75 000
Venezuela	2 472	10 600	17 000	18 800	19 000
China	50 300	51 000	53 700	61 100	63 287
Indonesia	98 200	102 100	123 000	143 000	133 000
Kazakhstan	284	—	—	—	—
Philippines	20 200	27 176	24 234	19 537	16 973
Australia	165 700	205 000	207 800	191 000	187 000
New Caledonia	126 041	117 734	99 841	112 013	118 227
World Total	1 227 000	1 283 000	1 300 000	1 340 000	1 358 000

Note(s):-

(a) Includes metal and metal content of sulphate and concentrates

Smelter/refinery production of nickel

tonnes

Country	2000	2001	2002	2003	2004
Austria	1 300	1 300	*1 000	*1 500	*1 300
Finland	54 429	54 600	55 348	50 989	49 580
France	12 300	13 036	11 444	11 370	12 103
Greece	17 126	17 675	19 230	18 000	18 116
Macedonia	—	3 000	5 100	5 600	5 300
Norway	58 700	68 200	68 500	77 183	71 410
Russia	221 000	252 200	339 300	260 000	260 400
Ukraine	700	2 500	*3 000	*4 000	4 800
United Kingdom	37 980	33 800	33 800	24 200	38 600
South Africa	36 600	36 500	38 500	40 800	39 900
Zimbabwe	19 600	19 500	18 900	12 700	13 300
Canada	134 225	140 591	144 476	124 418	151 518
Cuba	39 511	40 700	39 500	42 300	38 800
Dominican Republic	27 829	21 662	23 303	27 227	29 477
Brazil	23 253	22 431	23 687	24 564	26 235
Colombia	27 737	38 446	43 987	47 870	48 831
Venezuela	—	10 600	17 000	18 800	19 000
China	50 900	49 700	52 400	64 700	71 500
Indonesia	10 111	10 300	8 800	8 900	7 900
Japan	160 700	153 600	157 900	165 100	169 500
Australia	112 200	129 000	132 200	129 000	124 000
New Caledonia	43 914	45 912	48 650	50 666	43 016
World Total	1 090 000	1 165 000	1 286 000	1 210 000	1 245 000

Note(s):-

(1) Data relate to refined nickel plus the nickel content of ferro-nickel, nickel oxide and nickel salts

Production of perlite

tonnes

Country	2000	2001	2002	2003	2004
Armenia	140 000	16 618	147 242	106 623	29 996
Bulgaria	16 700	12 300	10 500	16 800	8 500
Georgia	*5 000	*5 000	*5 000	*5 000	*5 000
Greece	817 825	840 660	838 997	1 079 036	1 053 388
Hungary	151 069	89 900	72 196	95 100	65 000
Italy	*60 000	*60 000	*60 000	*60 000	*60 000
Russia	*45 000	*45 000	*45 000	*45 000	*45 000
Slovakia	17 022	14 910	18 635	15 000	16 000
Turkey	149 426	154 515	151 902	136 683	133 829
Ukraine	*25 000	*25 000	*25 000	*25 000	*25 000
South Africa	*1 200	*1 200	*1 200	*1 200	*1 200
Mexico	68 702	80 297	85 703	194 463	188 027
USA	672 000	588 000	521 000	493 000	508 000
Argentina	17 521	17 916	17 152	21 480	21 193
China	*500 000	*550 000	*600 000	*650 000	*700 000
India (a)	274	176	283	279	334
Iran (b)	28 000	18 130	20 000	26 495	31 259
Japan	*250 000	*250 000	*250 000	*240 000	*240 000
Philippines	4 600	61 300	8 500	15 200	...
Thailand	6 000	9 915	7 600	5 700	*6 000
Australia (c)	6 675	6 214	8 300	9 440	9 952
New Zealand	*2 000	*3 000	*3 000	*5 000	5 600

Note(s):-

(1) In addition to the countries listed, Algeria, Canada, Iceland, Mozambique and former Yugoslavia are believed to produce perlite

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

Production of crude petroleum

tonnes

Country	2000	2001	2002	2003	2004
Albania	314 000	308 000	355 817	359 253	385 872
Austria	1 056 183	1 050 355	1 032 204	1 014 716	981 588
Azerbaijan	14 000 000	14 909 100	15 333 500	15 251 300	15 348 800
Belarus	1 851 000	1 852 000	1 846 000	1 820 400	1 804 100
Bulgaria	42 456	33 888	33 000	27 900	30 000
Croatia	907 154	1 120 797	1 108 434	1 052 121	1 005 000
Czech Republic	168 000	178 000	253 000	310 000	299 000
Denmark	18 175 000	17 378 000	18 494 000	18 341 000	19 448 000
France	1 417 568	1 382 646	1 316 890	1 219 000	1 138 000
Georgia	109 500	98 800	73 900	139 700	97 600
Germany	3 119 592	3 569 290	3 768 054	3 799 864	3 515 537
Greece	256 000	293 000	207 000	162 000	...
Hungary	1 130 850	1 058 060	1 049 770	1 134 245	1 076 844
Italy	4 586 000	4 097 000	5 531 000	5 570 000	5 445 000
Lithuania	316 000	470 000	433 700	382 400	301 900
Netherlands	2 350 758	2 263 590	3 073 924	3 076 398	2 890 979
Norway	160 804 000	162 099 000	157 847 000	153 508 000	151 221 000
Poland	652 696	767 004	727 973	764 806	886 188
Romania	6 042 000	6 011 000	5 810 000	5 651 000	5 465 000
Russia	323 000 000	348 000 000	380 000 000	421 000 000	459 000 000
Serbia and Montenegro	804 768	746 056	681 544	670 745	652 270
Slovakia	56 940	54 115	51 921	47 953	42 140
Spain	226 422	344 074	326 197	329 171	262 802
Turkey	2 747 630	2 551 647	2 440 202	2 375 082	2 275 529
Ukraine	3 692 900	3 700 000	3 700 000	3 966 900	4 314 200
United Kingdom	118 064 000	109 491 000	108 023 000	98 998 000	88 708 000
Algeria	58 585 000	57 147 000	61 487 000	*68 450 000	*71 870 000
Angola	36 825 000	36 469 000	44 600 000	43 600 000	49 000 000
Cameroon	4 500 000	4 100 000	3 700 000	3 500 000	3 200 000
Chad	—	—	—	1 300 000	8 800 000
Congo	12 667 606	12 108 033	*11 500 000	*10 800 000	*10 690 000
Congo, Democratic Republic	13 370 000	13 180 000	12 550 000	11 670 000	*11 100 000
Egypt	37 000 000	32 552 000	34 925 000	*35 000 000	*33 250 000
Equatorial Guinea	5 600 000	9 000 000	11 700 000	12 300 000	17 400 000
Gabon	16 400 000	15 000 000	14 700 000	12 000 000	11 800 000
Ghana	350 000	450 000	350 000	410 000	370 000
Ivory Coast	353 878	288 126	754 289	928 895	1 020 452
Libya	64 919 000	63 777 000	*61 550 000	69 000 000	75 800 000
Morocco	13 000	10 100	12 800	*12 500	*12 500
Nigeria	101 299 000	99 523 000	88 874 000	106 859 000	123 600 000
South Africa	1 128 000	1 025 000	1 025 000	*780 000	1 042 000
Sudan	8 600 000	10 400 000	11 500 000	12 600 000	14 900 000
Tunisia	3 700 000	3 343 900	3 475 600	3 100 000	3 343 100
Barbados	76 895	63 642	53 612	50 899	51 696
Canada	111 600 000	112 500 000	120 100 000	125 200 000	130 500 000
Cuba	2 620 800	2 773 400	3 533 400	3 664 000	4 014 000
Guatemala	1 050 092	1 067 317	1 248 953	1 252 104	1 024 000
Mexico	178 360 000	184 050 000	185 340 000	195 890 000	197 750 000
Trinidad & Tobago	6 153 729	5 840 504	6 731 294	6 914 300	6 332 472
USA	357 500 000	354 900 000	352 600 000	343 700 000	333 800 000
Argentina	40 994 335	41 445 316	40 242 083	39 307 638	37 900 000
Bolivia	1 282 403	1 449 570	1 438 604	1 551 000	1 801 000
Brazil	65 720 000	68 950 000	77 600 000	80 300 000	79 820 000
Chile	297 247	351 688	306 839	191 271	176 125
Colombia	35 527 000	31 158 988	29 806 000	27 907 653	27 200 000
Ecuador	20 390 618	20 570 265	20 053 000	21 414 000	26 826 000
Peru	4 902 588	4 784 726	4 773 299	4 501 500	4 637 000
Suriname	720 000	764 000	733 000	690 000	661 000
Venezuela	165 156 000	159 941 000	158 609 000	*128 000 000	*147 000 000

Production of crude petroleum

tonnes

Country	2000	2001	2002	2003	2004
Bahrain	1 870 000	1 860 000	1 870 000	1 870 000	1 867 000
Brunei	10 300 000	10 100 000	10 096 000	10 306 000	10 300 000
China (a)	162 620 300	164 931 400	166 900 000	169 600 000	174 500 000
India (d)	32 426 000	32 032 000	33 044 000	33 373 000	34 015 000
Indonesia	71 500 000	68 000 000	63 277 000	57 839 000	54 495 000
Iran	189 400 000	184 400 000	168 600 000	197 900 000	202 600 000
Iraq	127 300 000	116 700 000	99 900 000	66 100 000	99 700 000
Israel	4 300	4 100	4 560	3 736	3 155
Japan	675 000	678 000	653 000	757 000	783 000
Jordan	13 083	1 600	1 500	1 400	1 182
Kazakhstan	35 316 800	40 090 600	47 270 700	45 376 300	50 671 500
Kuwait (c)	103 900 000	102 600 000	91 500 000	110 200 000	119 800 000
Kyrgyzstan	77 100	75 500	75 500	69 500	73 800
Malaysia	32 500 000	31 800 000	33 300 000	35 200 000	36 400 000
Mongolia	9 000	10 000	19 000	25 000	29 700
Myanmar	580 000	734 000	858 000	1 051 000	1 044 000
Oman	47 675 000	47 600 000	44 700 000	40 800 000	38 900 000
Pakistan (b)	2 719 000	2 811 000	3 093 000	3 128 000	3 016 654
Philippines	57 000	65 000	277 000	690 000	624 000
Qatar	38 700 000	38 400 000	35 100 000	41 200 000	44 900 000
Saudi Arabia (c)	457 600 000	442 900 000	427 300 000	487 900 000	505 900 000
Syria	27 400 000	29 000 000	27 100 000	28 000 000	26 700 000
Taiwan	33 900	40 500	46 600	41 700	40 700
Tajikistan	20 000	20 000	20 000	17 700	18 600
Thailand	5 800 000	6 100 000	6 900 000	8 600 000	8 300 000
Turkmenistan	7 181 000	8 000 000	9 000 000	10 000 000	10 100 000
United Arab Emirates	117 300 000	113 500 000	99 200 000	119 600 000	125 800 000
Uzbekistan	7 500 000	7 256 000	7 200 000	7 100 000	6 600 000
Vietnam	16 300 000	16 700 000	16 900 000	*17 600 000	20 800 000
Yemen, Republic of	20 720 000	20 974 000	20 958 000	20 609 000	20 300 000
Australia	37 000 000	34 000 000	33 000 000	27 000 000	20 702 000
New Zealand	1 608 000	1 508 800	1 363 600	1 052 400	913 500
Papua New Guinea	3 257 077	2 693 749	2 120 985	2 235 000	*2 500 000
World Total	3 583 000 000	3 558 000 000	3 531 000 000	3 659 000 000	3 826 000 000

Note(s):-

(1) The figures shown in this table include natural gas liquids

(a) Including oil from shale and coal

(b) Years ended 30 June of that stated

(c) Including shares of production from the Neutral Zone

(d) Years ended 31 March following that stated

Production of natural gas

million m³

Country	2000	2001	2002	2003	2004
Albania	11	11	10	12	12
Austria	1 805	1 954	2 015	2 029	2 011
Azerbaijan	5 643	5 535	5 144	5 128	4 995
Belarus	257	255	246	254	245
Bulgaria	12	21	11	11	333
Croatia	1 768	2 009	2 122	2 190	2 201
Czech Republic	118	101	91	131	175
Denmark	7 751	7 930	7 947	7 555	8 946
France	1 883	1 809	1 751	1 523	1 325
Georgia	80	40	17	18	11
Germany	21 576	21 545	21 422	22 092	20 270
Greece	36	32	36	27	23
Hungary	3 349	3 286	3 130	3 145	3 200
Irish Republic	1 187	816	839	640	1 127
Italy	16 633	15 242	14 623	13 885	12 921
Netherlands	69 158	74 323	71 786	69 114	81 499
Norway	49 748	53 895	65 501	72 905	78 351
Poland	4 956	5 179	5 263	5 315	5 630
Romania	14 607	14 090	13 647	13 174	13 290
Russia	555 000	551 000	561 000	581 000	632 000
Serbia and Montenegro	729	506	400	364	318
Slovakia	203	212	212	201	178
Slovenia	6 800	6 100	5 704	4 926	5 040
Spain	179	557	553	268	372
Turkey	493	266	242	276	344
Ukraine	17 884	18 300	18 700	19 333	20 480
United Kingdom	114 557	112 567	109 816	108 088	100 966
Algeria	83 244	78 240	80 367	82 829	82 009
Angola	580	530	620	900	722
Egypt	18 000	18 304	19 605	17 680	14 090
Equatorial Guinea	98	790	1 050	1 220	1 390
Gabon	100	100	100	125	102
Ivory Coast	1 146	1 062	1 610	1 457	*1 500
Libya	5 880	6 180	6 210	6 400	7 000
Morocco	50	50	49	*49	*49
Nigeria	12 460	15 680	15 120	19 200	22 388
South Africa	*2 000	*2 000	*1 000	...	...
Tunisia	2 000	2 530	2 386	2 700	2 529
Canada	201 569	204 571	208 000	200 475	203 068
Cuba	574	595	585	658	*660
Mexico	35 820	35 310	35 310	36 400	37 100
Trinidad & Tobago	9 758	14 023	17 127	25 774	29 628
USA (c)	543 200	555 500	537 000	541 000	536 000
Argentina	41 229	40 813	40 311	45 048	*49 300
Bolivia	3 597	5 275	6 421	7 398	10 257
Brazil	8 200	8 400	10 000	10 900	11 900
Chile	2 702	2 684	2 543	2 181	2 106
Colombia	5 900	6 100	6 200	6 100	6 400
Ecuador	...	...	...	249	240
Peru	612	629	687	759	*1 100
Venezuela	27 924	29 593	28 415	25 200	28 100
Afghanistan	*3 000	*3 000	*3 000	*3 000	*3 000
Bahrain	8 951	9 263	9 405	11 799	11 595
Bangladesh (d)	9 412	10 573	11 087	11 926	12 821
Brunei	11 300	11 300	11 200	12 400	12 100
China	27 226	30 344	31 900	34 400	40 800
India (b)	27 860	28 037	29 964	30 908	30 820
Indonesia	68 365	66 300	68 795	69 341	66 998
Iran	60 147	69 145	75 000	79 000	85 500
Iraq	3 150	2 760	2 360	1 560	2 900
Israel	10	10	9	8	1 192
Japan	2 453	2 436	2 495	2 836	2 794
Jordan	287	257	256	288	294

Production of natural gas

million m³

Country	2000	2001	2002	2003	2004
Kazakhstan	8 228	4 950	6 018	7 557	11 598
Kuwait (a)	9 600	9 500	8 000	8 900	9 700
Kyrgyzstan	32	33	30	27	29
Malaysia	45 136	46 945	48 308	50 810	53 670
Myanmar	4 400	6 200	6 500	6 900	7 400
Oman	9 500	14 600	16 000	17 800	17 600
Pakistan (d)	23 173	24 786	26 158	28 107	34 058
Qatar	24 900	27 000	29 500	28 000	33 300
Saudi Arabia (a)	49 810	53 690	57 320	60 060	64 000
Syria	6 934	7 186	6 821	9 260	8 200
Taiwan	747	849	887	831	796
Tajikistan	40	50	30	33	36
Thailand	20 075	19 611	20 450	21 299	22 317
Turkmenistan	47 153	51 270	53 500	59 100	*58 568
United Arab Emirates	38 380	39 360	43 390	44 400	45 800
Uzbekistan	56 400	57 400	*57 400	*57 300	*59 600
Vietnam	1 600	1 700	2 000	2 000	4 200
Australia	31 165	32 482	32 606	33 180	35 224
New Zealand	5 918	6 253	5 942	4 493	4 052
Papua New Guinea	143	142	105	142	*150
World Total	2 509 000	2 564 000	2 600 000	2 666 000	2 785 000

Note(s):-

(1) So far as possible the figures in this table exclude flared or reinjected gas

(a) Including one-half of the output of the Neutral Zone

(b) Years ended 31 March following that stated

(c) Dry gas

(d) Years ended 30 June of that stated

Production of phosphate rock

tonnes

Country	2000	2001	2002	2003	2004
Finland	751 291	767 020	799 814	799 339	838 000
Russia	10 540 000	10 488 000	10 763 000	11 050 000	11 346 300
Algeria	877 000	939 000	741 000	905 000	804 900
Burkina Faso	...	1 010	2 350	2 400	2 400
Egypt	1 095 900	779 445	1 218 561	2 183 200	2 218 900
Morocco	19 658 000	20 724 000	21 806 000	22 877 000	25 369 000
Senegal					
Phosphate rock	2 036 900	1 876 400	1 549 100	1 499 600	1 576 000
Aluminium phosphate (a)	23 710	20 610	1 557	3 516	...
South Africa	2 796 225	2 419 941	2 803 265	2 642 970	2 735 150
Tanzania	5 100	4 000	*7 650	3 738	6 570
Togo	1 370 100	1 061 600	1 280 600	1 471 200	1 115 200
Tunisia	8 301 200	8 105 900	7 735 100	7 889 900	8 050 800
Zimbabwe	77 662	86 611	84 926	80 034	83 391
Canada	486 000	780 000	1 003 000	980 500	1 064 000
Mexico	1 052 464	787 283	4 764	5 500	350
USA	38 600 000	31 900 000	36 100 000	35 000 000	35 800 000
Brazil	4 725 106	4 684 546	5 083 703	5 583 778	6 073 902
Chile	18 524	18 977	19 541	21 300	21 465
Colombia	42 615	*43 000	*43 000	*43 000	*43 000
Peru	5 581	4 825	45 252	11 610	—
Venezuela	389 000	398 955	390 342	260 008	300 057
China	22 475 800	24 371 100	*26 000 000	*27 500 000	*29 000 000
Christmas Island (b) (c) (e)	612 000	568 000	517 000	585 737	655 474
India (d)	1 264 035	1 251 553	1 212 834	1 435 959	1 184 351
Iran	...	213 338	303 000	224 000	229 575
Iraq	*200 000	*100 000	*100 000	—	—
Israel	4 110 000	3 230 000	4 091 000	3 707 000	3 290 000
Jordan	5 458 260	5 764 307	7 123 887	6 762 279	6 222 775
Kazakhstan	610 000	971 700	1 197 800	1 260 300	1 698 700
Korea, Dem. P.R. of	*100 000	*100 000	*100 000	*100 000	*100 000
Pakistan (e)	5 208	—	1 362	2 562	2 656
Sri Lanka	34 443	35 770	38 775	40 171	44 000
Syria	2 162 780	2 043 176	2 482 916	2 400 757	2 882 420
Thailand	3 260	2 359	3 680	13 870	2 580
Uzbekistan	169 800	225 000	426 000	433 400	400 000
Vietnam	791 000	683 000	787 800	823 400	901 800
Australia	977 146	1 894 495	2 026 971	2 286 247	2 015 597
Nauru (b) (e)	650 791	449 190	161 950	112 900	*29 000
World Total	133 000 000	128 000 000	138 000 000	141 000 000	146 000 000

Note(s):-

(1) In addition to the countries listed, Indonesia is believed to produce phosphate rock

(a) Including lime phosphates

(b) Exports

(c) Including phosphate dust

(d) Years ended 31 March following that stated

(e) Years ended 30 June of that stated

Mine production of platinum group metals

kilograms (metal content)

Country	2000	2001	2002	2003	2004
Russia					
Platinum (a)	35 800	40 400	30 500	32 700	*26 400
Palladium (a)	161 700	135 000	60 000	92 000	*118 200
Other platinum metals	*14 100	*14 500	*14 500	*14 600	*14 600
South Africa					
Platinum	114 459	129 746	133 796	148 348	169 930
Palladium	55 818	62 142	64 244	70 946	81 144
Other platinum metals	36 493	36 859	41 545	46 856	48 387
Zimbabwe					
Platinum	504	435	2 053	2 330	4 438
Palladium	360	313	1 728	1 770	3 564
Other platinum metals	40	35	416	441	810
Canada					
Platinum	6 000	8 100	9 500	7 200	9 700
Palladium	9 500	12 800	15 100	11 500	15 600
Other platinum metals	600	900	1 000	800	1 100
USA					
Platinum	3 110	3 760	4 385	4 168	4 043
Palladium	10 260	12 600	14 805	13 996	13 654
Colombia	339	673	661	828	1 209
Australia					
Platinum	171	174	122	133	196
Palladium	812	828	811	477	846
World Total	450 000	459 000	395 000	449 000	514 000

Note(s):-

- (1) Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ores originating in the country stated
 - (2) Figures for metal production are only given for countries where recovery is thought to be based predominantly on domestic materials or on imported materials which have not been recorded as mine production elsewhere in the table
 - (3) In addition to the countries listed, Bulgaria, China, Ethiopia, Indonesia and Philippines are believed to produce platinum group metals
- (a) Sales from mine production and stocks

Production of potash

tonnes (K₂O content)

Country	2000	2001	2002	2003	2004
Belarus	3 786 000	4 495 000	3 791 000	4 229 000	4 612 000
France					
Potassic salts	321 000	244 000	128 000	—	—
Germany					
Potassic salts	3 407 467	3 548 665	3 471 763	3 563 932	3 626 510
Russia	3 716 000	4 257 600	4 431 600	4 653 300	5 599 100
Spain					
Chloride	521 984	470 933	406 571	505 527	553 237
Ukraine	84 700	74 300	*60 000	*60 000	*50 000
United Kingdom					
Chloride	600 800	531 900	540 100	621 400	539 500
Canada					
Chloride	9 202 000	8 181 000	8 515 000	9 093 000	10 541 000
USA					
Potassic salts	1 300 000	1 200 000	1 200 000	1 100 000	1 300 000
Brazil					
Chloride	351 748	318 585	337 266	415 549	403 080
Chile					
Chloride	*360 000	*420 000	*420 000	*440 000	*430 000
Nitrate	*53 000	*57 000	...	...	...
China	275 000	395 000	*430 000	620 000	1 054 000
Israel					
Chloride	1 748 400	1 774 200	1 918 200	1 958 400	2 138 400
Jordan	1 161 593	1 177 521	1 173 614	1 176 690	1 157 360
World Total	26 900 000	27 100 000	26 900 000	28 500 000	32 100 000

Production of rare earth minerals

tonnes

Country	2000	2001	2002	2003	2004
USA					
Bastnaesite (a)	*5 000	*5 000	*5 000	—	—
Brazil					
Monazite	—	—	—	—	731
China (a)	73 000	80 600	88 000	92 000	98 300
India					
Monazite (b)	1 890	2 651	2 856	2 891	*2 900
Malaysia					
Monazite	818	643	441	795	1 683

Note(s):-

(1) With the exception of the data for USA and China, figures in this table refer to gross tonnage of concentrates

(2) In addition to the countries listed, rare earth minerals are believed to be produced in Brazil, Indonesia, Kazakhstan, Democratic P.R. of Korea, Republic of Korea, Kyrgyzstan, Mozambique, Nigeria, Russia and Vietnam

(a) REO content. Assumed to be 60% of concentrates produced

(b) Years ended 31 March following that stated

Production of salt

tonnes

Country	2000	2001	2002	2003	2004
Albania					
Sea salt	20 596	25 783	22 746	21 448	24 783
Armenia	30 030	28 766	30 330	31 854	31 625
Austria					
Rock salt	1 280	1 384	1 491	1 610	1 228
Salt in brine	640 000	646 000	641 634	723 286	745 670
Azerbaijan	3 801	3 734	5 380	7 645	9 234
Belarus	...	1 052 000	1 369 000	1 543 136	1 882 977
Bosnia & Herzegovina	325 200	439 106	*400 000	*400 000	*400 000
Bulgaria	1 700 000	1 931 000	1 800 000	1 882 000	1 800 000
Croatia	33 668	32 585	30 483	32 533	23 000
Denmark	586 500	587 000	*590 000	*600 000	*600 000
France					
Rock salt	536 000	596 000	434 000	320 000	406 000
Brine salt	1 476 000	1 452 000	1 456 000	1 409 000	1 433 000
Salt in brine	3 306 000	4 023 000	4 056 000	4 351 000	4 371 000
Sea salt	1 294 000	1 536 000	848 000	1 302 000	1 365 000
Germany					
Rock salt	5 360 000	5 326 000	6 134 000	6 178 000	7 268 000
Brine salt	1 206 000	1 211 000	1 249 000	1 123 000	974 000
Salt in brine	6 023 000	6 196 000	6 310 000	6 668 000	7 212 000
Greece	244 709	208 776	126 118	192 161	187 522
Italy					
Rock salt & brine salt	3 332 901	3 301 173	3 342 992	2 922 251	2 876 469
Netherlands	5 564 000	5 717 000	5 773 000	5 980 000	5 896 000
Poland					
Rock salt	841 340	786 609	838 858	847 880	1 099 072
Brine salt	2 652 042	2 688 929	2 719 131	2 790 996	2 940 169
Portugal					
Rock salt	584 516	625 785	604 969	602 035	661 704
Sea salt	74 027	76 653	40 139	86 603	...
Romania	2 307 806	2 225 052	2 257 886	2 416 970	2 398 324
Russia	3 170 000	*2 800 000	*2 800 000	*2 800 000	*2 800 000
Serbia and Montenegro					
Rock salt	10 182	8 624	13 334	15 413	10 344
Sea salt	32 246	26 383	3 787	36 469	22 239
Slovakia	121 700	123 000	97 400	133 100	100 420
Slovenia	5 000	2 000	5 200	3 632	...
Spain					
Rock salt	2 328 464	2 319 800	2 559 760	2 562 832	2 541 000
Sea salt	1 436 345	1 420 000	1 234 679	1 327 108	1 300 000
Other salt	105 187	100 000	97 945	97 730	100 000
Switzerland	452 000	384 000	400 000	461 000	486 000
Turkey					
Rock salt	84 080	46 362	55 305	10 205	*10 000
Sea salt	592 283	522 364	411 646	556 652	*559 000
Other salt	1 450 008	1 202 025	1 729 686	1 675 915	*1 681 000
Ukraine	2 286 500	*2 300 000	*2 300 000	2 906 400	3 339 400
United Kingdom					
Rock salt	*1 700 000	*1 900 000	*1 500 000	*1 700 000	*2 000 000
Brine salt	*1 100 000	*1 100 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (a)	*3 000 000	*3 000 000	*3 200 000	*3 200 000	*3 200 000
Algeria					
Brine salt & sea salt	183 723	195 000	238 000	241 000	241 800
Angola	*30 000	*30 000	*30 000	*30 000	*30 000
Benin (c)	*15 000	*15 000	*15 000	*15 000	*15 000
Botswana	184 800	178 646	315 259	229 432	208 319
Burkina Faso	*6 000	*6 000	*6 000	*6 000	*6 000
Cape Verde	*2 000	*2 000	*2 000	*2 000	*2 000
Djibouti	135 933	173 099	162 266	128 000	30 000
Egypt (j)	*1 200 000	1 434 000	1 341 000	...	1 532 362
Eritrea	47 498	77 835	116 268	52 414	30 754
Ethiopia (d)	56 400	61 000	61 000	61 000	17 462
Ghana	*50 000	68 076	99 593	*265 000	*265 000
Guinea	*15 000	*15 000	*15 000	*15 000	*15 000

Production of salt

tonnes

Country	2000	2001	2002	2003	2004
Kenya (h)	16 359	5 664	18 848	21 199	31 139
Libya	*40 000	*40 000	*40 000	*40 000	*40 000
Madagascar	26 000	26 000	17 000	*23 000	*23 000
Mali	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritania	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritius (c)	6 000	*6 000	7 000	7 000	*7 000
Morocco	162 385	233 816	266 903	236 443	240 000
Mozambique	*7 000	*10 000	*80 000	*80 000	*80 000
Namibia	543 218	564 841	455 912	651 431	750 821
Niger	*2 000	*2 000	*2 000	*2 000	*2 000
Senegal	124 000	109 800	171 500	235 000	167 800
Sierra Leone	4 083	2 889	1 821	1 004	—
Somalia	*1 000	*1 000	*1 000	*1 000	*1 000
South Africa	345 632	356 582	428 887	437 896	343 831
Sudan	86 599	77 783	83 000	*84 000	*84 000
Tanzania	70 000	65 000	71 200	58 978	57 062
Tunisia (c)	662 000	712 400	615 800	819 000	1 117 000
Uganda	*5 000	*5 000	*5 000	*5 000	*5 000
Bahamas	1 073 413	987 703	1 074 355	1 245 447	1 284 294
Canada					
Rock salt	9 298 285	11 503 494	10 158 045	11 957 298	12 071 303
Other salt (e)	2 695 422	2 189 514	2 114 417	1 994 490	2 052 333
Costa Rica	*37 000	*37 000	*37 000	*37 000	*37 000
Cuba	177 000	*180 000	*180 000	*180 000	*185 000
Dominican Republic					
Rock salt	12 221	*12 000	29 560	...	...
Sea salt	*50 000	*50 000	*50 000	*50 000	*50 000
El Salvador (c)	32 444	31 609	31 552	31 366	*31 000
Guatemala (c)	*50 000	*50 000	*50 000	*50 000	*50 000
Honduras	*25 000	*25 000	*25 000	*25 000	*25 000
Mexico	8 884 370	8 501 137	7 801 948	7 546 987	8 565 520
Netherlands Antilles	292 867	395 195	380 805	*400 000	*400 000
Nicaragua (c)	16 100	17 710	23 023	...	...
Panama (c)	11 392	24 422	15 553	13 182	18 608
USA					
Rock salt (f)	13 600 000	14 600 000	13 500 000	16 300 000	18 300 000
Salt in brine (f)	22 500 000	20 400 000	19 300 000	20 000 000	20 500 000
Evaporated salt (f)	7 140 000	7 210 000	7 490 000	7 400 000	7 620 000
Argentina	1 348 514	1 269 814	1 080 328	1 667 829	1 361 531
Brazil					
Rock salt	1 448 000	1 208 000	1 274 000	1 420 000	1 442 000
Sea salt	4 626 000	4 370 000	4 835 000	5 144 000	5 205 968
Chile	5 082 911	5 989 416	3 502 613	6 213 473	4 938 928
Colombia					
Rock salt	177 687	168 139	180 714	208 222	225 695
Sea salt	282 189	383 529	351 324	271 212	302 301
Ecuador	*90 000	*90 000	*90 000	*90 000	*90 000
Peru	247 619	418 954	281 098	187 416	248 898
Venezuela (c)	*350 000	*350 000	*350 000	*350 000	*350 000
Afghanistan	*13 000	*13 000	*13 000	*13 000	*13 000
Bangladesh (j)	39 376	39 839	40 575	41 787	46 047
Cambodia	25 000	11 000	72 500	36 000	*40 000
China	35 182 800	34 547 500	36 024 000	34 377 000	37 100 000
India					
Rock salt	2 600	2 500	1 900	1 000	3 800
Sea salt	11 219 100	10 295 000	14 366 400	11 787 300	11 949 500
Other salt	4 429 600	3 986 500	3 510 900	3 094 100	2 807 900
Indonesia	*680 000	*680 000	*680 000	*680 000	*680 000
Iran (g)	1 320 668	1 537 527	1 509 367	1 553 526	1 791 000
Iraq	*300 000	*300 000	203 000	50 000	*50 000
Israel	590 000	590 000	570 000	540 000	570 000
Japan (i)	1 374 000	1 358 000	1 282 000	1 263 000	1 225 000
Jordan (b)	344 094	321 000	406 652	...	...
Kazakhstan	36 283	274 497	173 564	282 389	...

Production of salt

tonnes

Country	2000	2001	2002	2003	2004
Korea, Dem. P.R. of	*500 000	*500 000	*500 000	*500 000	*500 000
Korea, Republic of	*800 000	*800 000	*800 000	*800 000	*800 000
Kuwait	36 800	*40 000	*40 000	*40 000	*40 000
Laos	3 637	2 635	5 410	16 130	*15 000
Lebanon	15 000	15 000	15 000	15 000	15 000
Mongolia	*100 000	*100 000	*100 000	*100 000	*100 000
Myanmar (b) (c)	*35 000	*35 000	*35 000	*35 000	*35 000
Oman	11 700	13 983	14 410	12 300	*15 000
Pakistan					
Rock salt (j)	1 359 776	1 261 141	1 423 478	1 426 067	1 639 516
Sea salt (j)	12 006	12 750	16 185	16 652	—
Philippines (c)	589 528	236 987	460 983	429 160	...
Saudi Arabia					
Rock salt & brine salt	409 000	547 800	547 000	547 000	*547 000
Sri Lanka	70 107	130 272	73 784	81 791	*79 000
Syria	105 763	182 073	145 018	128 265	141 445
Taiwan	273 374	252 555	247 895	178 826	159 091
Tajikistan	*40 000	*40 000	*40 000	*40 000	*40 000
Thailand					
Rock salt	792 250	852 565	908 968	892 243	1 031 200
Other salt	*100 000	*100 000	*100 000	*100 000	*100 000
Turkmenistan	201 000	218 000	*215 000	*215 000	*215 000
Uzbekistan	*60 000	*60 000	*60 000	*60 000	*60 000
Vietnam	590 000	575 000	1 089 000	*1 275 000	*1 300 000
Yemen, Republic of	*95 000	113 000	125 000	116 000	*120 000
Australia (k)	8 847 000	9 254 000	9 961 000	10 560 000	11 221 000
New Zealand	130 350	31 315	130 985	108 460	94 010
World Total	211 400 000	212 300 000	213 300 000	220 800 000	230 300 000

Note(s):-

- (1) This table does not include production of refined salt
- (2) Salt is known to be produced in many countries for which statistics are not available.

- (a) Used for purposes other than salt-making
- (b) Brine salt
- (c) Sea salt
- (d) Years ended 7 July of that stated
- (e) Including salt in brine
- (f) Sold or used by producers
- (g) Years ended 20 March following that stated
- (h) Lake salt
- (i) Years ended 31 March following that stated
- (j) Years ended 30 June of that stated
- (k) Excluding Victoria and the Northern Territory

Production of selenium metal

tonnes

Country	2000	2001	2002	2003	2004
Belgium	*200	*200	*200	*200	*200
Finland	37	42	37	52	65
Germany	*100	*100	*100	*100	*100
Poland	65	65	68	78	83
Russia	41	48	60	81	85
Serbia and Montenegro	21	14	17	7	—
Sweden	104	88	118	107	*100
Zambia	10	13	*11	*10	*10
Canada	335	238	175	253	277
Chile (a)	47	84	...	...	...
Peru	21	16	21	24	21
China	*65	*65	*65	*65	*65
India (b)	10	10	6	2	—
Japan	612	735	752	734	599
Kazakhstan	*40	*40	*40	*40	*40
Philippines	38	43	*40	*40	...
Uzbekistan	*20	*20	*20	*20	*20

Note(s):-

(1) In addition to the countries listed, Australia, the Republic of Korea and Zimbabwe are believed to produce selenium metal

(a) Exports

(b) Years ended 31 March following that stated

Production of sillimanite minerals

tonnes

Country	2000	2001	2002	2003	2004
France					
Andalusite	63 000	61 000	59 000	62 000	68 000
Spain					
Andalusite	*260	*250	*250	*200	*200
South Africa					
Andalusite	182 674	193 225	165 087	164 921	*165 000
Zimbabwe					
Kyanite	10 970	9 682	6 138	5 707	491
USA					
Kyanite (b)	90 000	90 000	90 000	90 000	90 000
Brazil					
Kyanite (c)	*200	*200	*200	*200	*200
China					
Andalusite	15 000	20 000	...	...	...
Kyanite	50 720	27 700	...	...	...
Sillimanite	20 800	163 100	...	...	...
India					
Kyanite (a)	4 733	4 225	5 327	9 057	7 710
Sillimanite (a)	15 498	14 720	13 290	19 729	28 761
Australia					
Sillimanite	110	70	233	206	71

Note(s):-

- (1) A number of other countries produce sillimanite minerals but details of output are not reported
- (2) In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is known to be produced in Denmark, France, Hungary and the United Kingdom

- (a) Years ended 31 March following that stated
- (b) Including related minerals
- (c) Including beneficiated and directly shipped material

Mine production of silver

kilograms (metal content)

Country	2000	2001	2002	2003	2004
Armenia	—	—	5 500	*4 000	*4 000
Bulgaria	54 534	56 806	60 000	*60 000	*60 000
Finland	*10 000	*11 000	*15 000	*20 000	*20 000
France	723	929	709	495	682
Greece	30 644	62 400	74 800	7 000	—
Irish Republic	16 700	8 700	7 500	8 500	5 200
Italy	*1 000	*1 000	*1 000	*1 000	—
Macedonia	*10 000	*10 000	*10 000	*10 000	*10 000
Poland	1 163 600	1 230 700	1 343 000	1 332 200	1 372 700
Portugal	20 430	23 100	19 500	21 100	24 400
Romania	*18 000	*18 000	*18 000	*18 000	*18 000
Russia (a)	*400 000	*400 000	*400 000	*700 000	*1 062 000
Serbia and Montenegro (a)	9 068	5 745	6 838	2 028	2 275
Spain	114 537	55 000	12 792	2 173	3 581
Sweden	328 737	306 029	320 823	340 701	319 563
Turkey	193 000	188 000	124 000	149 000	*150 000
Algeria	*1 500	*1 500	1 400	500	100
Congo, Democratic Republic	500	500	2 100	35 700	69 700
Ethiopia (b)	1 018	3 545	900	999	1 133
Ghana	2 100	1 900	2 129	3 080	3 035
Morocco	289 000	280 700	276 800	200 430	*201 000
Namibia (a)	9 300	20 396	43 632	29 367	27 153
South Africa	144 100	109 600	113 108	87 325	73 124
Sudan	—	1 600	3 300	2 800	2 900
Tanzania	...	6 861	6 690	7 986	13 216
Tunisia	3 700	3 650	*3 000	*3 000	*3 000
Zambia	*6 000	—	—	—	—
Zimbabwe	3 799	3 449	3 219	2 483	3 216
Canada	1 212 386	1 320 030	1 407 558	1 310 153	1 335 827
Honduras	52 485	46 760	52 796	50 884	48 217
Mexico	2 620 495	2 759 985	2 746 989	2 568 877	2 569 478
Nicaragua	1 589	2 532	2 198	2 040	2 950
USA	1 980 100	1 740 000	1 354 000	1 239 400	1 246 100
Argentina	78 271	152 802	125 878	133 907	155 368
Bolivia	433 590	409 720	460 900	466 300	413 980
Brazil	10 000	10 000	10 000	6 496	6 192
Chile	1 242 194	1 348 667	1 210 473	1 312 789	1 360 140
Colombia	7 970	7 242	6 986	9 511	8 539
Peru	2 437 706	2 673 834	2 761 486	2 910 922	3 059 829
China	1 569 145	2 013 250	*2 200 000	2 400 000	2 450 000
India (c)	46 150	57 675	59 502	37 870	10 955
Indonesia	314 032	348 332	293 520	285 206	262 935
Iran	*20 000	*20 000	*23 000	*23 000	*23 000
Japan	103 587	82 452	103 203	99 162	85 999
Kazakhstan (a)	895 077	943 027	855 612	804 874	707 443
Korea, Dem. P.R. of	*50 000	*50 000	*50 000	*50 000	*50 000
Korea, Republic of	—	58	6 802	15 417	50 866
Laos	—	—	—	4 400	2 735
Malaysia	4	3	—	—	364
Mongolia	*21 000	*21 000	*21 000	*21 000	*21 000
Myanmar (a) (c)	2 019	*700	*700	*700	*700
Philippines	23 569	29 590	8 810	9 533	9 315
Saudi Arabia	9 390	10 000	10 000	11 000	*6 000
Uzbekistan	*60 000	*60 000	*60 000	*60 000	*60 000

Mine production of silver

kilograms (metal content)

Country	2000	2001	2002	2003	2004
Australia	2 059 000	1 970 000	2 077 000	1 868 000	2 209 000
Fiji	1 475	2 109	1 901	1 247	*1 200
New Zealand	22 886	27 118	28 725	29 932	*30 100
Papua New Guinea	79 197	69 368	63 349	61 900	53 800
Solomon Islands	*700	—	—	—	—
World Total	18 186 000	18 987 000	18 878 000	18 844 000	19 692 000

Note(s):-

(1) Countries producing less than 1000 kg per year include Jamaica, Oman and Thailand

(a) Smelter and/or refinery production

(b) Years ended 7 July of that stated

(c) Years ended 31 March following that stated

Production of natural sodium carbonate

tonnes

Country	2000	2001	2002	2003	2004
Botswana	191 000	251 231	283 197	234 520	263 358
Ethiopia (a)	3 805	7 543	3 843	4 377	6 444
Kenya	238 190	297 780	304 110	352 560	353 835
USA	10 200 000	10 300 000	10 500 000	10 600 000	11 000 000
Pakistan	3 075	3 513	3 669	—	—

Note(s):-

(a) Years ended 7 July of that stated

Production of strontium minerals

tonnes

Country	2000	2001	2002	2003	2004
Spain	158 590	164 030	171 293	152 383	158 000
Turkey	24 150	63 635	*70 000	*70 000	*70 000
Morocco	7 539	1 879	3 780	*2 700	*2 700
Mexico	157 420	145 789	94 015	130 329	87 610
Argentina (a)	4 656	3 655	2 595	4 300	6 727
China	...	...	...	*180 000	...
Iran	...	—	—	2 100	7 500
Pakistan (b)	1 079	—	416	27	570

Note(s):-

(1) In addition to the countries listed, Germany and Poland are believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 30 June of that stated

Production of sulphur and pyrites

tonnes (sulphur content)

Country	2000	2001	2002	2003	2004
Austria					
Recovered (d)	50 377	50 135	54 925	50 568	55 322
Belarus					
Recovered (d)	19 142	21 653	28 162	22 292	32 288
Belgium					
Recovered (c) (d)	410 000	368 000	359 000	383 000	371 000
Bulgaria					
Recovered (c)	209 000	203 000	245 000	260 000	118 000
Recovered (d)	30 000	30 000	30 000	30 000	25 000
Croatia					
Recovered (d)	9 000	7 000	7 069	7 471	9 000
Czech Republic					
Recovered (d)	45 000	40 000	40 000	45 000	60 000
Denmark					
Recovered (d)	4 041	3 981	4 386	4 751	4 660
Finland					
Pyrites	360 000	260 000	235 000	276 200	283 700
Recovered (c)	293 241	311 430	307 924	304 044	301 226
Recovered (d)	46 000	46 000	55 000	61 000	65 000
France					
Recovered (d)	801 600	840 000	795 600	710 400	698 400
Recovered (e)	*250 000	*260 000	229 000	196 000	196 000
Germany					
Recovered (c)	80 128	80 000	46 000	—	—
Recovered (d)	1 611 792	1 640 000	1 657 200	1 619 900	1 526 700
Recovered (e)	42 518	40 000	41 900	43 900	40 000
Greece					
Recovered (d)	150 000	153 000	157 000	162 000	160 000
Hungary					
Recovered (d)	34 082	43 000	52 000	51 000	51 000
Italy					
Recovered (c)	203 000	203 000	142 000	127 000	113 000
Recovered (d)	490 000	540 000	560 000	565 000	575 000
Lithuania					
Recovered (d)	28 000	47 000	49 824	48 515	67 094
Macedonia					
Recovered (c)	26 000	26 000	26 000	7 000	—
Netherlands					
Recovered (c)	123 000	126 000	124 000	131 000	137 000
Recovered (d)	428 000	384 000	373 000	408 000	410 000
Norway					
Recovered (c)	*90 000	*95 000	95 000	100 000	*100 000
Recovered (d)	18 000	18 000	19 000	20 000	18 000
Poland					
Frasch	1 369 259	942 252	760 320	762 689	821 489
Recovered (c)	*278 600	*280 000	*275 000	293 700	*300 000
Recovered (d)	16 483	27 602	22 777	23 384	23 767
Portugal					
Recovered	28 000	35 000	28 000	27 000	25 000
Romania					
Pyrites	9 883	1 835	—	—	—
Recovered	35 000	41 000	29 000	49 000	53 000
Russia					
Pyrites	404 000	324 000	261 000	357 000	289 000
Recovered (d)	4 948 298	5 239 515	5 589 969	5 804 740	5 909 958
Recovered (e)	438 000	458 000	458 000	523 000	572 000
Sulphur ore	9 630	13 216	...	...	...
Serbia and Montenegro					
Recovered (c)	46 000	75 000	82 000	83 000	88 000
Slovakia					
Recovered (c)	5 000	5 000	5 000	5 000	5 000
Recovered (d)	51 000	57 000	61 000	60 000	65 000
Spain					
Pyrites	94 222	89 796	—	—	—
Recovered (c)	454 000	461 000	544 000	560 000	488 000
Recovered (d)	115 000	135 000	140 000	145 000	145 000

Production of sulphur and pyrites

tonnes (sulphur content)

Country	2000	2001	2002	2003	2004
Sweden					
Recovered (c)	95 800	160 100	177 600	180 200	185 800
Recovered (d)	58 521	54 530	51 065	62 454	62 238
Turkey					
Pyrites	45 000	26 000	34 000	28 000	20 000
Recovered (d) (e)	118 000	126 000	123 000	94 000	68 000
Ukraine					
Sulphur ore	88 000	126 000	124 000	142 000	136 000
United Kingdom					
Recovered (c)	51 400	62 400	66 400	4 800	—
Recovered (d)	140 000	111 000	125 000	115 000	120 000
Algeria					
Recovered (d)	12 000	7 000	19 000	19 000	20 000
Egypt					
Recovered (d)	60 000	78 000	78 000	78 000	78 000
Libya					
Recovered (d)	*13 000	*15 000	*15 000	*15 000	*15 000
Namibia					
Pyrites	6 000	34 491	1 817	15 893	1 829
South Africa					
Pyrites	145 650	150 184	183 004	175 621	150 166
Recovered (a) (c) (d)	157 169	238 128	316 219	438 271	424 000
Zambia					
Pyrites	21 000	25 000	—	—	—
Recovered (c)	52 000	52 000	52 000	52 000	52 000
Zimbabwe					
Pyrites	29 000	21 700	19 000	19 000	42 400
Canada					
Recovered (c)	1 167 000	1 124 000	1 109 000	992 000	1 089 000
Recovered (d)	8 779 000	8 320 000	7 816 000	8 036 000	8 421 000
Cuba					
Recovered (d)	*5 000	*5 000	*5 000	*5 000	*5 000
Mexico					
Recovered (c)	474 000	572 000	588 000	539 000	703 000
Recovered (d)	851 000	878 000	887 000	1 051 968	1 121 546
Netherlands Antilles					
Recovered (d)	38 000	36 000	25 000	23 000	28 000
Trinidad & Tobago					
Recovered (d)	14 900	24 400	14 000	29 000	17 000
USA					
Frasch	900 000	—	—	—	—
Recovered (c)	1 030 000	982 000	772 000	683 000	*700 000
Recovered (d)	8 590 000	8 480 000	8 510 000	8 910 000	*9 300 000
Argentina					
Recovered (c)	23 000	23 000	23 000	23 000	23 000
Brazil					
Pyrites	23 720	24 468	22 620	19 246	24 174
Recovered (c)	217 238	280 079	284 184	285 824	279 631
Recovered (d)	81 762	80 125	77 185	90 332	91 804
Chile					
Recovered (c)	1 096 000	1 160 000	1 231 000	1 426 000	1 507 000
Colombia					
Recovered (d)	*16 000	15 465	23 880	23 660	*24 000
Sulphur ore	91 996	69 344	60 162	73 024	97 586
Ecuador					
Recovered (d)	20 800	*20 700	*20 700	*20 700	*20 700
Sulphur ore	*4 000	*4 000	*4 000	*4 000	*4 000
Peru					
Recovered (c)	*60 000	*60 000	*60 000	*60 000	*60 000
Venezuela					
Recovered (d)	320 000	340 000	570 000	560 000	800 000

Production of sulphur and pyrites

tonnes (sulphur content)

Country	2000	2001	2002	2003	2004
Abu Dhabi					
Recovered (d)	1 122 000	1 488 000	1 900 000	1 925 000	1 926 000
Bahrain					
Recovered (d)	73 060	70 884	71 000	63 507	74 850
China					
Pyrites	4 010 000	3 678 000	3 240 000	4 655 000	5 113 000
Recovered	1 797 000	2 391 000	2 400 000	2 637 000	3 070 000
Sulphur ore	250 000	260 000	450 000	700 000	800 000
India					
Recovered (c)	359 000	458 000	458 000	539 000	539 000
Recovered (d) (e)	376 000	526 000	326 000	451 000	501 000
Indonesia					
Recovered (c)	212 000	212 000	196 000	212 000	172 000
Recovered (d)	60 000	70 000	95 000	95 000	100 000
Sulphur ore	*3 500	*3 600	*3 600	*3 600	*3 600
Iran					
Recovered (d)	963 000	880 000	1 200 000	1 310 000	1 400 000
Iraq					
Recovered (d)	300 000	300 000	300 000	150 000	100 000
Israel					
Recovered (d)	38 000	35 000	36 000	45 000	42 000
Japan					
Recovered (c) (f)	1 567 000	1 519 000	1 592 000	1 528 000	1 545 000
Recovered (d)	2 072 000	2 424 389	1 865 424	1 952 000	1 894 000
Kazakhstan					
Recovered (c)	294 000	310 000	261 000	327 000	351 000
Recovered (d)	1 244 700	1 469 400	1 600 000	1 585 000	1 625 000
Korea, Dem. P.R. of					
Pyrites	18 000	18 000	18 000	18 000	18 000
Recovered (c)	16 000	16 000	16 000	16 000	*16 000
Korea, Republic of					
Recovered (c)	572 000	665 000	753 000	747 000	796 000
Recovered (d)	650 000	650 000	660 000	660 000	660 000
Kuwait					
Recovered (d)	512 000	524 000	634 000	714 000	682 000
Oman					
Recovered (d)	*30 000	*30 000	*30 000	*30 000	*30 000
Pakistan					
Recovered (b)	22 812	17 428	22 580	19 402	23 873
Philippines					
Recovered (c)	134 000	145 000	154 000	162 000	163 000
Recovered (d)	20 000	25 000	30 000	30 000	40 000
Qatar					
Recovered (d)	190 868	220 624	250 000	272 274	307 187
Saudi Arabia					
Recovered (d)	2 101 391	2 345 000	2 364 000	2 179 000	2 225 000
Singapore					
Recovered (d)	265 000	230 000	180 000	180 000	215 000
Syria					
Recovered (d)	9 330	11 781	11 740	13 516	14 996
Taiwan					
Recovered	205 588	223 659	212 343	225 006	222 670
Thailand					
Recovered (c)	46 000	46 000	46 000	46 000	90 000
Recovered (d)	180 000	195 000	170 000	170 000	200 000
Turkmenistan					
Sulphur ore	3 709	5 628	...	...	...
Uzbekistan					
Recovered (c)	163 000	163 000	163 000	163 000	163 000
Recovered (d)	285 000	310 000	360 000	360 000	360 000

Production of sulphur and pyrites

tonnes (sulphur content)

Country	2000	2001	2002	2003	2004
Australia					
Recovered (c)	654 000	817 000	899 000	863 000	850 000
Recovered (d)	30 000	45 000	60 000	60 000	60 000
World Total					
Pyrites	5 200 000	4 700 000	4 000 000	5 600 000	5 900 000
Frasch	2 300 000	900 000	800 000	800 000	800 000
Recovered	52 000 000	54 500 000	55 100 000	56 500 000	58 500 000
Sulphur ore	500 000	500 000	700 000	900 000	1 100 000

Note(s):-

- (a) Including production from synthetic fuels
- (b) Years ended 30 June of that stated
- (c) From metal sulphide processing
- (d) From petroleum refining and/or natural gas
- (e) Other
- (f) Including S content of sulphur ore

Production of talc

tonnes

Country	2000	2001	2002	2003	2004
Austria	133 060	137 776	138 195	137 596	136 305
Finland	502 000	476 620	477 229	501 658	528 943
France	409 000	417 000	359 000	394 000	402 000
Germany	*15 000	*9 000	*8 000	3 859	...
Greece	2 300	2 073	670	500	200
Italy	121 068	126 868	125 040	122 849	138 367
Macedonia	562	557	550	550	*600
Norway	26 660	24 626	23 564	*24 000	23 725
Portugal	9 895	8 362	8 279	5 460	6 231
Romania	7 850	7 270	7 310	10 082	9 725
Russia	105 549	111 645	93 841	129 888	154 138
Slovakia	1 800	2 600	2 290	4 200	7 100
Spain					
Talc	115 154	119 000	108 312	101 739	107 829
Pyrophyllite	...	...	...	900	700
Sweden	20 000	14 000	20 000	7 000	8 000
Turkey					
Pyrophyllite	54 278	...	...	...	...
United Kingdom	4 832	4 947	6 194	6 494	4 000
Egypt (d)	*35 000	36 827	45 529	*40 000	50 210
Morocco					
Talc	4 069	5 844	6 708	1 959	*2 000
Pyrophyllite	24 359	21 042	33 686	28 338	...
South Africa					
Talc	5 600	3 030	2 511	6 719	12 593
Pyrophyllite	11 989	14 047	15 587	14 350	28 480
Zimbabwe	989	1 273	1 024	196	—
Canada	86 000	45 000	93 000	87 000	80 000
Guatemala	832	1 960	...	1 585	2 863
Mexico	20 569	77 650	111 622	114 870	101 896
USA	851 000	863 000	828 000	840 000	857 000
Argentina					
Talc	6 730	1 665	1 643	1 700	7 620
Pyrophyllite	3 877	2 155	2 341	4 525	12 594
Brazil (b)	450 000	397 000	348 000	369 000	400 975
Chile	2 421	4 177	3 537	4 374	2 993
Colombia	*15 000	*15 000	*15 000	*15 000	*15 000
Peru					
Talc	9 668	10 737	10 685	10 791	9 548
Pyrophyllite	*8 000	8 069	9 514	12 291	14 282
Uruguay	2 093	1 695	816	1 095	1 042
Bhutan	16 321	13 528	23 118	23 101	39 797
China	1 975 070	2 555 500	*2 600 000	*3 000 000	*3 000 000
India					
Pyrophyllite (e)	148 346	150 345	147 233	176 240	269 712
Steatite (e)	595 724	578 857	688 135	726 398	749 969
Iran (a)	58 971	65 779	60 872	65 833	108 541
Japan					
Talc	19 260	18 478	22 142	24 328	18 253
Pyrophyllite	433 411	403 137	416 188	408 435	401 688
Korea, Dem. P.R. of	*120 000	*120 000	*110 000	*110 000	*110 000
Korea, Republic of					
Talc	11 344	47 712	37 863	47 911	79 313
Pyrophyllite	917 972	1 101 825	889 961	912 285	827 895
Nepal (c)	5 852	3 923	2 621	6 905	3 435
Pakistan (d)	47 977	50 733	53 572	65 813	52 483
Taiwan	—	130	27	466	410
Thailand					
Talc	7 390	6 838	1 702	8 501	12 592
Pyrophyllite	46 011	59 602	103 496	73 556	108 691

Production of talc

tonnes

Country	2000	2001	2002	2003	2004
Australia (d)					
Talc	178 545	173 446	160 741	165 980	140 645
Pyrophyllite (d)	1 727	—	868	*1 000	*1 000
World Total	7 700 000	8 400 000	8 300 000	8 900 000	9 100 000

Note(s):-

- (a) Years ended 20 March following that stated
- (b) Including talc, agalmatolite and pyrophyllite
- (c) Years ended 15 July of that stated
- (d) Years ended 30 June of that stated
- (e) Years ended 31 March following that stated

Production of tantalum and niobium minerals

tonnes

Country	2000	2001	2002	2003	2004
Burundi					
Columbite-tantalite	31	123	72	24	23
Ethiopia					
Tantalite (a)	66	47	55	58	71
Mozambique					
Tantalite	—	27	47	189	712
Nigeria					
Tantalite	*25	*25	*25	*25	*25
Rwanda					
Columbite-tantalite	561	241	96	128	200
Uganda					
Columbite-tantalite	3	11	6	16	0
Zimbabwe					
Columbite-tantalite	4	23	26	231	27
Canada					
Pyrochlore	6 000	7 800	*7 800	*7 600	*8 000
Tantalite	190	277	215	203	209
Brazil					
Pyrochlore	63 117	*70 000	*60 000	*66 000	*63 000
Columbite-tantalite	6 400	7 300	5 800	6 200	6 900
Djalmaite	84	...	...	...	...
China					
Columbite-tantalite	217	357	*350	*350	*350
Malaysia					
Struverite	969	8 430	2 298	2 619	1 210
Australia					
Tantalite	*1 300	*1 700	*2 300	*2 300	*2 400
World Total concentrates	79 000	96 400	79 100	85 900	83 100
Nb content	*24 700	*32 700	*31 000	*29 700	*31 300
Ta content	*1 200	*2 100	*1 600	*1 700	*1 600

Note(s):-

- (1) Niobium and tantalum minerals are believed to be produced in D R Congo, French Guiana, Ivory Coast, Russia and Zambia. Minor quantities are produced in Bolivia
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates
- (3) Niobium and tantalum are also recovered from tin slags. This source is particularly important in the case of tantalum and in recent years is believed to have accounted for over 60% of all tantalum recovered
- (4) No detailed information on the production of tantalum bearing tin slags is available but the major producer is Thailand and small amounts from Australia, Brazil, Nigeria, Portugal, and D R Congo

(a) Years ended 7 July of that stated

Production of tellurium metal

tonnes

Country	2000	2001	2002	2003	2004
Canada	53	51	39	40	69
USA	50	50	50	50	50
Peru	22	19	22	26	22
Japan	36	39	29	33	33

Note(s):-

- (1) In addition to the countries listed, Germany is believed to produce tellurium metal

Mine production of tin

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Portugal	1 246	1 201	345	203	200
Russia	6 600	5 500	5 200	5 400	5 300
Congo, Democratic Republic	1 750	1 650	1 450	2 600	6 800
Niger	...	...	...	...	3 100
Nigeria	2 752	2 890	789	891	1 374
Rwanda	400	169	197	300	547
Bolivia	12 503	12 039	13 210	16 386	17 609
Brazil	14 200	13 016	12 023	12 217	12 468
Peru (a)	37 410	38 182	38 815	40 202	41 613
China	99 400	93 000	*81 000	*101 800	117 247
Indonesia	51 629	56 286	67 455	66 284	60 697
Kazakhstan	*500	23	24	13	14
Laos	560	570	430	420	*400
Malaysia	6 307	4 972	4 215	3 358	2 745
Myanmar	500	500	300	400	300
Thailand	2 363	2 383	1 384	980	694
Vietnam	1 800	1 700	1 700	2 100	*3 500
Australia	9 106	9 983	7 078	3 819	800
World Total	249 000	244 000	236 000	257 000	275 000

Note(s):-

(a) Recoverable

Smelter production of tin

tonnes

Country	2000	2001	2002	2003	2004
Russia	5 200	5 069	5 115	3 700	3 000
Nigeria	2 760	2 870	728	801	...
Mexico	1 204	1 789	1 756	1 769	*1 800
Bolivia (a)	9 353	11 292	10 976	9 823	13 627
Brazil	13 823	12 109	11 538	10 583	11 512
Peru	17 357	25 070	35 828	39 181	40 624
China	110 200	104 900	81 800	98 100	108 000
Indonesia	46 432	53 470	58 800	62 500	*70 000
Malaysia	26 228	30 417	30 887	18 211	33 900
Thailand	17 076	22 387	17 500	15 200	20 800
Vietnam	1 803	1 700	1 700	2 100	3 500
Australia	733	1 094	791	597	467
World Total	252 000	272 000	257 000	263 000	308 000

Note(s):-

(1) Figures relate to both primary and secondary metal

(2) In addition to the countries listed, many countries produce small amounts of secondary metal

(a) Refined, including alloys

Production of titanium minerals

tonnes

Country	2000	2001	2002	2003	2004
Norway					
Ilmenite	690 900	777 000	837 000	859 000	867 000
Ukraine					
Ilmenite	576 749	*600 000	*550 000	*610 000	*600 000
Rutile	132 517	*150 000	*100 000	*100 000	*100 000
Egypt					
Ilmenite	66 000	66 000	69 000	...	...
South Africa					
Ilmenite (b)	*1 853 000	*1 751 000	*1 649 000	*1 581 000	*1 732 000
Rutile	*123 000	*122 000	*140 000	*100 000	*100 000
Canada					
Ilmenite (a) (b)	*2 100 000	*2 300 000	*2 100 000	*1 900 000	*2 000 000
USA	400 000	500 000	400 000	500 000	*500 000
Brazil					
Ilmenite	123 000	*162 000	174 382	*118 000	*130 000
Rutile	3 162	*2 500	2 645	*2 500	*3 000
China					
Ilmenite	*650 000	*750 000	*840 000	*840 000	*840 000
India					
Ilmenite (c)	429 707	450 678	374 688	465 185	*450 000
Rutile (c)	18 974	17 817	14 531	19 646	*19 000
Korea, Republic of					
Ilmenite	168 664	161 988	142 726	114 660	150 744
Malaysia					
Ilmenite	124 801	129 750	106 198	95 148	61 471
Rutile	...	...	7 059	18 472	27 308
Vietnam					
Ilmenite	*130 000	*170 000	*170 000	*220 000	*325 000
Australia					
Ilmenite	2 146 000	2 019 000	2 092 000	2 006 000	1 921 000
Rutile	207 000	207 000	219 000	173 000	162 000
Leucoxene	37 000	30 000	38 000	57 000	45 000
World Total					
Ilmenite (wt of concs)	9 500 000	9 800 000	9 500 000	9 400 000	9 600 000
Rutile (wt of concs)	485 000	499 000	483 000	414 000	411 000
All forms (TiO ₂ content)	*4 900 000	*5 100 000	*4 900 000	*4 800 000	*5 000 000

Note(s):-

(1) The figures in this table refer to gross tonnage of titanium concentrates

(2) Some ilmenite is converted to synthetic rutile in Australia, India, Japan, Taiwan and USA

(a) Canada produces some ilmenite which is sold as such and not processed into slag, but tonnages are small

(b) Processed into slag. In 2004 South Africa produced an estimated 1 091 000 tonnes (85% TiO₂) and Canada produced an estimated 833 000 tonnes (80-95% TiO₂)

(c) Years ended 31 March following that stated

Mine production of tungsten

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Austria	1 421	1 429	1 377	1 381	1 335
Portugal (c)	743	700	693	715	746
Russia (c)	*3 500	*3 500	*3 400	*3 900	*3 000
Rwanda	144	142	153	78	120
Uganda	—	14	52	2	17
Canada	—	—	2 295	3 654	—
Bolivia	393	532	376	441	357
Brazil (a)	18	22	24	30	262
China	23 453	27 473	33 500	34 700	44 000
Korea, Dem. P.R. of	*500	*500	*600	*600	*600
Kyrgyzstan	*100	*100	*100	*100	*100
Malaysia	—	268	—	...	...
Mongolia	52	63	35	12	48
Myanmar (b)	74	48	83	93	100
Thailand (c)	54	92	53	390	337
Uzbekistan	192	260	250	300	300
World Total	30 600	35 100	43 000	46 400	51 300

Note(s):-

(a) Mainly scheelite

(b) Including tungsten content of tin-wolframite concentrates

(c) Wolframite and scheelite

Mine production of uranium

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Czech Republic	498	490	477	458	435
France	319	194	12	—	—
Germany	28	27	221	104	77
Portugal	13	4	2	—	—
Romania	*50	85	90	90	90
Russia	*2 000	*2 500	*2 900	*3 150	*3 280
Spain	251	0	0	—	—
Ukraine	*500	*750	*800	*800	*800
Namibia	2 713	2 237	3 369	2 661	3 481
Niger	2 898	2 919	3 076	3 143	3 273
South Africa	861	903	846	758	752
Canada	10 683	12 487	11 607	10 456	13 712
USA	1 522	1 015	901	*770	878
Brazil	50	58	270	310	300
China	*500	*665	*730	*750	*750
India	*200	*230	*230	*230	*230
Kazakhstan	1 752	2 050	2 800	3 300	3 719
Pakistan	*23	*46	*38	*45	*45
Uzbekistan	2 350	1 962	1 860	1 770	2 016
Australia	7 588	7 652	7 146	7 633	9 010
World Total	34 800	36 300	37 400	36 400	42 800
World Total (U ₃ O ₈ equivalent)	41 100	42 800	44 100	43 000	50 500

Note(s):-

(1) Excluding uranium production from decommissioning operations in France, Germany and Spain

Mine production of vanadium

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Russia	...	...	30 306	18 099	24 277
South Africa	18 021	18 184	25 227	27 172	*23 000
China	*12 000	*12 000	*13 200	*14 000	*16 000
Kazakhstan	*1 000	*1 000	*1 000	*1 000	*1 000
Australia	1 510	2 494	3 146	694	220
World Total	62 000	64 000	73 000	61 000	64 000

Note(s):-

(1) This table includes vanadium in slag products but excludes vanadium recovered as a byproduct of the refining and burning of heavy oils

Production of vermiculite

tonnes

Country	2000	2001	2002	2003	2004
Russia	*25 000	*25 000	*25 000	*40 000	*30 000
Egypt (c)	...	270	380	*400	*400
Kenya	124	—	—	—	—
South Africa	208 835	160 265	210 297	182 802	194 515
Uganda	—	100	664	1 724	2 448
Zimbabwe	16 215	9 104	21 494	13 260	27 150
USA (a)	*150 000	*110 000	*100 000	*110 000	*100 000
Argentina	*2 800	1 110	1 050	1 124	1 293
Brazil	31 676	21 000	23 000	26 000	25 000
China	*60 000	*70 000	*80 000	*90 000	*100 000
India (b)	5 003	5 097	5 499	4 493	3 273
Iran	...	3 255	2 845	...	...
Japan	*6 500	*6 400	*6 200	*6 200	*6 000
Australia (c)	11 750	12 038	6 696	13 436	9 676

Note(s):-

(1) In addition to the countries listed Malawi is believed to produce vermiculite

(a) Sold or used by producers

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

Production of wollastonite

tonnes

Country	2000	2001	2002	2003	2004
Finland	17 000	18 399	17 400	17 300	16 763
Namibia	406	284	742	585	406
Mexico	30 836	39 830	42 756	31 234	28 224
USA	*130 000	*130 000	*150 000	*120 000	*120 000
China	427 540	*400 000	*400 000	*400 000	395 385
India (a)	121 891	136 420	178 298	150 814	172 530

Note(s):-

(1) In addition to the countries listed, Turkey is believed to produce wollastonite

(a) Years ended 31 March following that stated

Mine production of zinc

tonnes (metal content)

Country	2000	2001	2002	2003	2004
Armenia	528	745	782	2 065	1 927
Bulgaria	10 100	10 600	12 900	13 000	15 548
Finland	16 100	20 100	34 100	38 800	37 200
Georgia	*1 000	*1 000	—	—	—
Greece	16 834	31 737	35 000	3 000	—
Irish Republic	263 000	298 100	276 700	419 000	438 300
Macedonia	25 000	20 000	20 000	—	—
Poland	156 900	152 700	152 100	154 277	140 381
Romania	27 452	29 786	21 512	22 081	18 604
Russia	136 000	157 000	162 000	159 000	151 000
Serbia and Montenegro	3 266	5 988	6 273	5 618	—
Spain	202 360	165 568	69 926	15 140	—
Sweden	176 788	156 334	148 620	185 884	197 034
Turkey	48 000	36 000	33 100	33 600	39 000
Algeria	5 500	5 700	4 500	1 450	...
Congo, Democratic Republic	200	*700	—	—	—
Morocco	105 082	89 631	90 513	68 912	*68 000
Namibia	32 937	37 622	41 042	58 052	66 028
South Africa	62 703	61 221	64 173	41 239	32 001
Tunisia	41 200	40 098	35 692	38 000	29 011
Canada	1 002 242	1 064 744	916 220	788 063	790 737
Honduras	43 064	48 485	46 339	43 766	41 413
Mexico	392 791	428 828	446 104	413 991	426 360
USA	851 900	842 100	780 000	767 600	738 900
Argentina	34 858	39 703	37 325	29 839	27 220
Bolivia	149 134	141 983	141 708	145 490	148 149
Brazil	100 254	111 432	136 339	152 822	158 962
Chile	31 403	32 762	36 161	33 051	27 635
Peru	910 303	1 056 629	1 221 616	1 372 790	1 209 006
China	1 780 300	1 693 200	1 624 100	2 029 100	2 264 000
India (a)	198 800	214 600	262 100	318 300	359 700
Iran	102 000	105 000	121 000	111 000	114 000
Japan	63 480	47 892	41 581	47 800	47 800
Kazakhstan	322 100	344 700	392 400	393 200	361 400
Korea, Dem. P.R. of	*34 000	*28 000	*32 000	*52 000	*62 000
Korea, Republic of	11 500	5 100	99	—	14
Laos	—	11 500	540	1 200	1 000
Myanmar	400	500	100	100	200
Saudi Arabia	3 047	*3 000	1 200	900	—
Thailand	15 909	8 866	15 188	14 830	19 948
Vietnam	22 000	43 000	44 000	50 000	*10 000
Australia	1 419 000	1 517 000	1 469 000	1 479 000	1 334 000
World Total	8 800 000	9 100 000	9 000 000	9 500 000	9 400 000

Note(s):-

(a) Years ended 31 March following that stated

Production of slab zinc

tonnes

Country	2000	2001	2002	2003	2004
Belgium	263 800	256 400	238 700	244 400	272 500
Bulgaria	84 000	88 000	83 000	86 800	101 500
Finland	222 900	248 800	235 300	265 900	284 525
France	318 100	328 900	333 300	257 000	260 000
Germany	356 516	361 348	378 561	388 131	382 020
Italy	170 300	178 600	175 800	123 100	118 400
Macedonia	62 922	52 000	56 000	28 000	—
Netherlands	216 768	204 794	203 460	224 000	228 100
Norway	138 390	144 694	144 538	143 627	140 901
Poland	173 000	174 700	158 900	154 200	155 500
Portugal	*4 000	*4 000	*4 000	*4 000	*4 000
Romania	51 929	48 000	38 000	51 000	*50 000
Russia	241 025	249 000	257 000	253 000	239 000
Serbia and Montenegro	8 300	13 467	1 478	62	5 000
Spain	391 000	437 000	503 000	519 000	525 000
United Kingdom	99 600	99 600	99 600	16 600	—
Algeria	26 335	26 000	33 900	34 928	36 848
Namibia	—	—	—	47 759	119 205
South Africa	103 250	109 000	111 000	112 000	105 000
Zambia	—	—	2 000	2 000	2 000
Canada	779 892	661 172	793 410	761 199	805 077
Mexico	235 073	303 810	302 122	320 364	325 220
USA	370 700	310 700	294 400	302 600	306 000
Argentina	39 269	42 907	41 797	42 360	38 298
Brazil	198 777	204 037	254 700	264 500	273 000
Peru	199 813	204 646	172 688	202 076	195 692
China	1 957 000	2 037 600	2 155 100	2 298 000	2 537 000
India	204 000	234 000	248 000	280 000	270 000
Iran (a)	53 000	73 000	81 000	78 428	109 400
Japan	654 384	644 358	639 925	651 246	634 637
Kazakhstan	262 570	277 073	286 454	294 965	316 700
Korea, Dem. P.R. of	*37 000	*31 000	*34 000	*55 000	*70 000
Korea, Republic of	474 829	503 315	605 990	644 218	668 666
Thailand	101 142	104 300	105 100	113 900	115 500
Uzbekistan	72 500	80 100	78 900	58 100	*58 000
Australia	498 000	561 000	572 000	560 000	479 000
World Total	9 100 000	9 300 000	9 700 000	9 900 000	10 200 000

Note(s):-

(a) Years ended 20 March following that stated

Production of zirconium minerals

tonnes

Country	2000	2001	2002	2003	2004
Russia (a)	6 300	*6 500	*6 500	*6 500	*6 500
Ukraine	*30 000	*33 600	*34 300	*35 000	*35 000
Gambia	...	...	...	12 000	*12 000
South Africa	*325 000	*262 000	*420 000	*370 000	*379 000
USA	180 000	170 000	132 000	144 000	172 000
Brazil (a)	28 335	17 031	20 000	29 900	34 855
China	29 898	25 594	*20 000	*20 000	*20 000
India	*19 000	*19 000	*19 000	*20 000	22 000
Indonesia	*250	*250	*250	*250	*200
Malaysia	3 642	3 768	5 293	3 456	6 686
Vietnam (b)	*7 200	*8 000	*10 800	*21 300	*60 000
Australia	374 000	393 000	413 000	462 000	439 000
World Total	1 016 000	951 000	1 093 000	1 124 000	1 187 000

Note(s):-

(1) In this table the term 'zirconium minerals' is understood to mean zircon, unless otherwise stated

(a) Including caldasite rock containing zircon and baddeleyite

(b) Conservative BGS estimates, based on exports



Price £30

