

# Copper

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**K**nown since ancient times, copper derives its chemical symbol, Cu, from the latin word *cuprum*, meaning the island of Cyprus. In nature, copper can occur in its native state; however, it is usually associated with other metals such as zinc, nickel, molybdenum and gold. Copper combines with sulphur and iron to form sulphide minerals, which may occur with these metals in either massive sulphide deposits or as disseminated deposits known as porphyries. Methods for refining copper from its ores were discovered around 5000 B.C.

The most common copper deposits in Canada are accumulations of massive sulphides from volcanic or magmatic activity, and porphyries, which have a magmatic origin. Economic massive sulphide deposits normally contain concentrations of copper and other metals that are higher than those of porphyry deposits, which usually are much larger in volume.

Some of the most common and widespread applications for copper are in electrical transmissions, water tube, castings and heat exchangers. In Canada, more than half of the refined copper used annually is used for electrical applications, mostly wire. Worldwide, over two thirds of copper is used in wire and cable.

Copper is at the heart of the giant generators at power stations, transformers, electric motors of diesel locomotives, starters and generators of automobiles, and thousands of smaller electric motors, such as those used in household appliances. Copper cables are buried underground to form power and communications networks for cities and towns, and are laid beneath the sea to provide links between continents. The second largest user of copper is the brass mill industry, which manufactures copper and copper alloy tube and pipe, plate, sheet and strip, and rods, bars and shapes.

Occurrences of copper minerals in Canada are widespread. However, concentrations of copper-bearing ore that permit

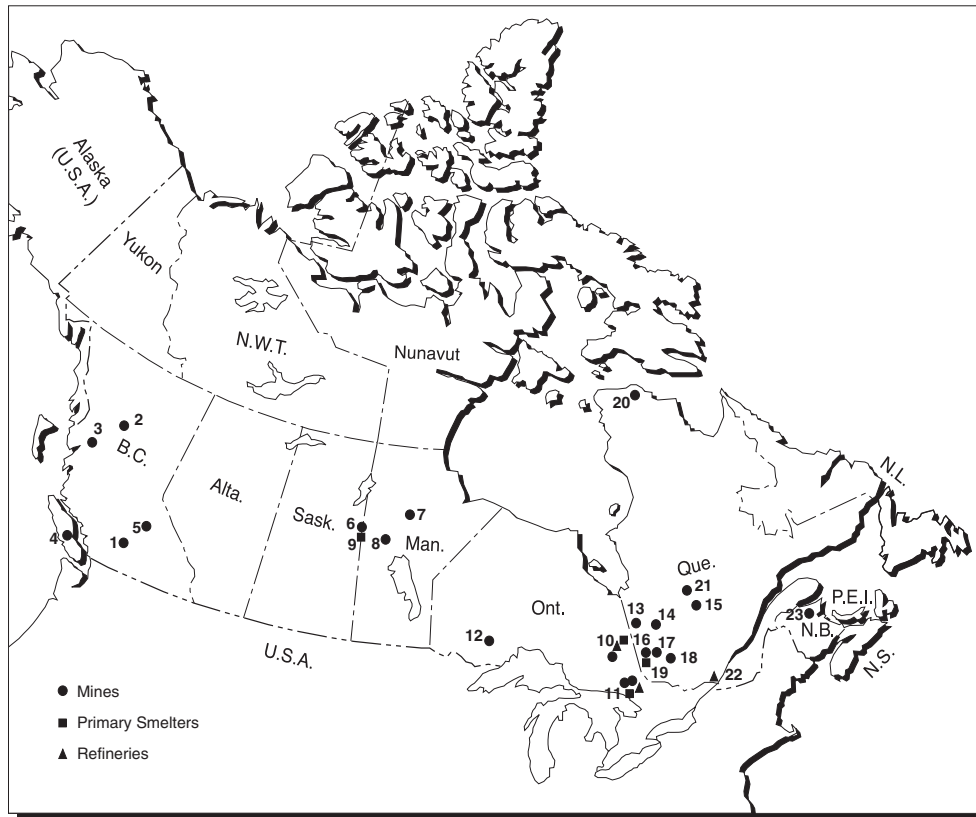
profitable exploitation are confined to relatively few locations (Figure 1). Within Canada, four provinces (British Columbia, Ontario, Quebec and Manitoba) account for the majority of copper production. British Columbia is the largest copper-producing province. Ontario, the second largest copper-producing province, owes much of its importance to the Sudbury region where the metal is recovered in conjunction with nickel mining operations. Another important copper-producing area in Ontario is Timmins. Large-scale copper mining began in Quebec with the opening of the Horne mine at Noranda late in 1927 and the smelter built there now recycles copper and produces primary copper. Copper production in Manitoba, Canada's fourth largest copper-producing province, is centred around the smelter in Flin Flon. Elsewhere in Canada, copper is recovered in minor amounts in the Atlantic provinces, the Yukon and the Northwest Territories. The Voisey's Bay deposit in Newfoundland and Labrador will produce copper as a by-product to nickel and cobalt when it starts production later in the decade.

According to the statistics of the International Copper Study Group (ICSG), world mine production of copper reached 13.7 Mt in 2003 (Figure 2). World refined copper production reached 15.2 Mt and world copper usage reached 15.6 Mt (Figure 3). World mine output of copper in 2004 is expected to increase by 5.8% to 14.47 Mt and in 2005 by an additional 5.8% to a total of 15.31 Mt. World production of refined copper (both primary and secondary) is estimated to increase in 2004 by 3.7% to 15.76 Mt. Canadian mine production of copper totalled 534 287 t in 2003 while refined production reached 454 866 t. Domestic shipments of refined copper reached 235 626 t.

Copper prices on the London Metal Exchange averaged US\$1780/t (81¢/lb) in 2003, up from \$1557/t in 2002.

World refined copper production in 2005 is projected by ICSG members to increase by 6.0% to 16.70 Mt. With the growth of refined output in 2004 lagging that of mines, the tightness for concentrates is expected to ease. Capacity increases in refined production in China, India and Thailand are expected to contribute most of the growth in 2004 and 2005. World refined copper usage in 2004 is estimated to grow by about 6.1% to 16.51 Mt. Usage in 2005 is forecast to grow by an additional 4.3% to 17.22 Mt. Demand growth all over Asia is expected to remain strong

**Figure 1**  
**Copper Producers in Canada, 2003**



Numbers refer to locations on map above.

**MINES**

**BRITISH COLUMBIA**

- 1. Highland Valley Copper (1)
- 2. Northgate Exploration Limited (Kemess mine)
- 3. Huckleberry Mines Ltd. (Huckleberry mine)
- 4. Boliden Westmin (Canada) Limited (Myra Falls mine)
- 5. Imperial Metals Corporation (Mount Polley mine)

**SASKATCHEWAN**

- 6. Hudson Bay Mining and Smelting Co., Limited (Konuto Lake mine)

**MANITOBA**

- 7. Inco Limited (Thompson mine)
- 8. Hudson Bay Mining and Smelting Co., Limited (Chisel Lake North mine)
- 9. Hudson Bay Mining and Smelting Co., Limited (Trout Lake mine, 777 project)

**ONTARIO**

- 10. Falconbridge Limited (Kidd Creek Division)
- 11. Falconbridge Limited (Sudbury Division)
- 12. North American Palladium Ltd. (Lac des Iles mine)

**QUEBEC**

- 13. BHP Billiton Base Metals (Selbaie mine)
- 14. Noranda Inc. (Bell Allard mine)
- 15. Campbell Resources Inc. (Joe Mann mine)
- 16. Breakwater Resources Ltd. (Bouchard-Hébert mine)
- 17. Agnico-Eagle Mines Limited (LaRonde mine)
- 18. Aur Resources, Inc., Novicourt Inc., Teck Cominco Limited (Louvicourt mine)
- 20. Falconbridge Limited (Raglan mine)
- 21. Inmet Mining Corporation (Troilus mine)

**NEW BRUNSWICK**

- 23. Noranda Inc. (Brunswick mine)

**PRIMARY SMELTERS**

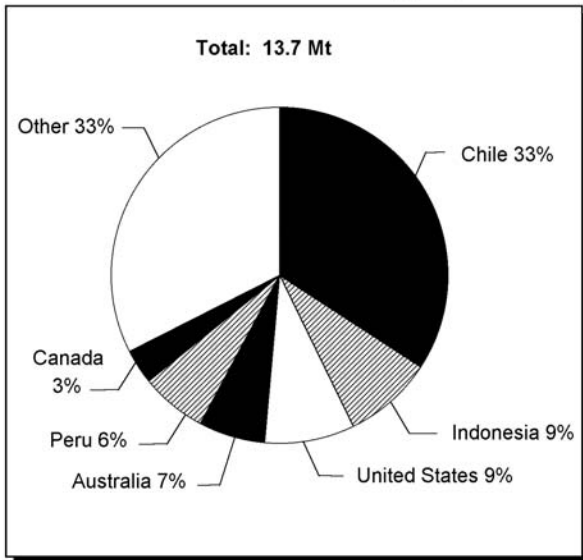
- 9. Hudson Bay Mining and Smelting Co., Limited (Flin Flon)
- 10. Falconbridge Limited (Kidd Creek)
- 11. Inco Limited (Copper Cliff)
- Falconbridge Limited (Falconbridge)
- 19. Noranda Inc. (Horne)

**REFINERIES**

- 10. Falconbridge Limited (Kidd Creek)
- 11. Inco Limited (Copper Cliff)
- 22. Noranda Inc. (CCR Division)

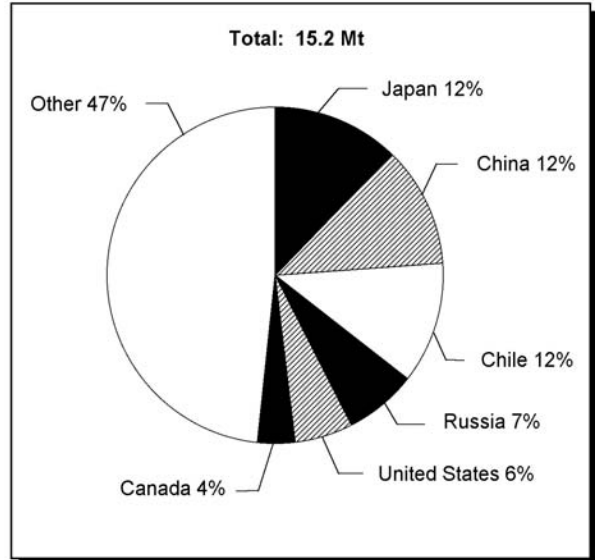
(1) Highland Valley Copper is a partnership of Teck Cominco Limited and BHP Billiton.

**Figure 2**  
**World Mine Production of Copper, 2003**



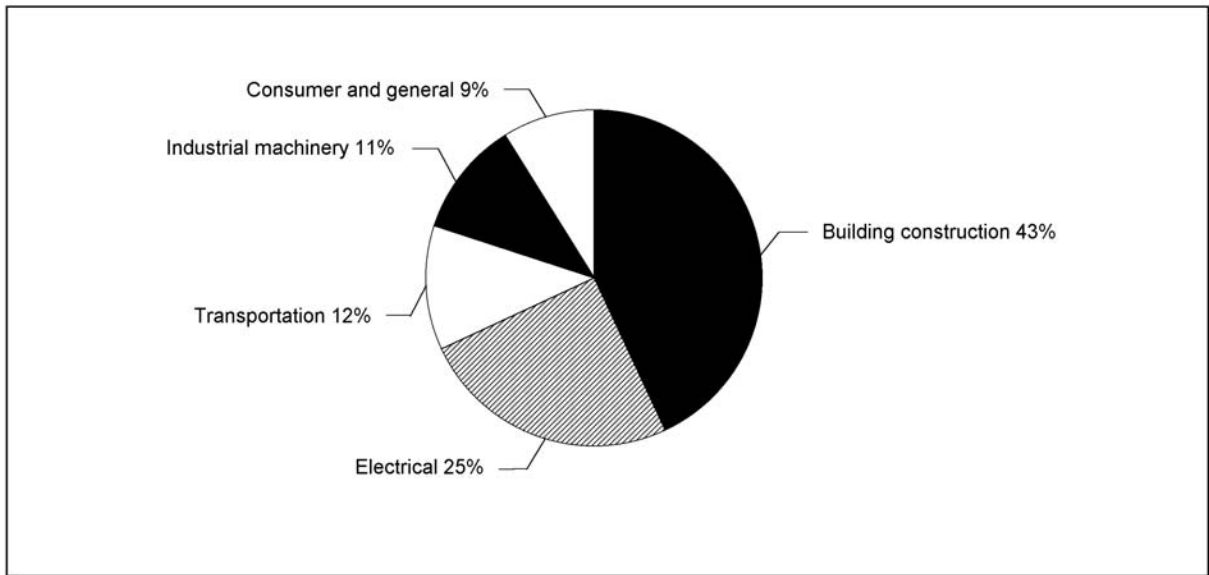
Source: International Copper Study Group.

**Figure 3**  
**World Refined Production of Copper, 2003**



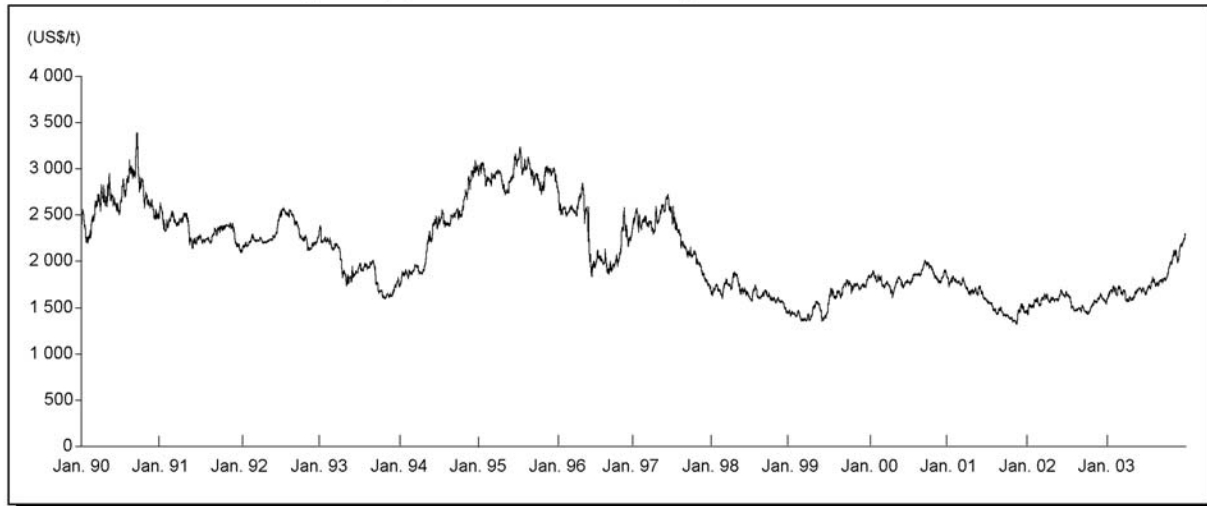
Source: International Copper Study Group.

**Figure 4**  
**North American Copper Markets, 2003**



Source: International Copper Study Group.

**Figure 5**  
**London Metal Exchange Copper Settlement Prices, 1990-2003**



Source: London Metal Exchange.

in both 2004 and 2005. In North America, demand growth is expected to stage a significant recovery in 2004 that will continue into 2005.

In Europe, ICSG figures indicate that usage is expected to show a modest growth in 2004 and 2005. Despite substantial increases of copper output in 2004, the deficit of refined production is expected to go up from 361 000 t to 750 000 t as growth in refined usage is outpacing the growth of refined production. The projected slower growth of refined usage in 2005 results in a lower deficit in 2005 of 521 000 t.

The effective supply to the market for refined copper in 2004 will be affected by the release of strategic stockpiles. Codelco of Chile announced a release from its stockpile of 200 000 t, which was accumulated in 2003. Market sources report that the Chinese State Reserve Bureau is releasing copper from its stockpile in 2004. Neither the timing nor the amount is known; nevertheless, it will have an effect on the supply/demand balance for the year.

*Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 64. (2) Information in this review was current as of October 1, 2004. (3) This and other reviews, including previous editions, are available on the Internet at [www.nrcan.gc.ca/mms/cmy/com\\_e.html](http://www.nrcan.gc.ca/mms/cmy/com_e.html).*

#### NOTE TO READERS

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## TARIFFS

Item No.	Description	Canada			United States	EU	Japan
		MFN	GPT	USA	Canada	Conventional Rate (1)	WTO (2)
2603.00	Copper ores and concentrates						
2603.00.00.10	Copper content	Free	Free	Free	Free	Free	Free
2825.50	Copper oxides and hydroxides	Free	Free	Free	Free	3.2%	4.8%
28.33	Sulphates; alums; peroxosulphates (persulphates)						
	Other sulphates:						
	Of copper						
2833.25	Cupric sulphate	Free	Free	Free	Free	3.2%	3.9%
2833.25.10	Cupric sulphate	Free	Free	Free	Free	3.2%	3.9%
2833.25.90	Other copper sulphates	5.5%	Free	Free	Free	3.2%	3.9%
74.01	Copper mattes; cement copper (precipitated copper)						
7401.10	Copper mattes	Free	Free	Free	Free	Free	Free
7401.20	Cement copper (precipitated copper)	Free	Free	Free	Free	Free	Free
7402.00	Unrefined copper; copper anodes for electrolytic refining	Free	Free	Free	Free	Free	Free-3%
74.03	Refined copper and copper alloys, unwrought						
	Refined copper:						
7403.11	Cathodes and sections of cathodes	Free	Free	Free	Free	Free	Free-3%
7403.12	Wire bars	Free	Free	Free	Free	Free	Free-3%
7403.13	Billets	Free	Free	Free	Free	Free	Free-3%
7403.19	Other	Free	Free	Free	Free	Free	Free-3%
	Copper alloys:						
7403.21	Copper-zinc base alloys (brass)	Free	Free	Free	Free	Free	Free
7403.22	Copper-tin base alloys (bronze)	Free	Free	Free	Free	Free	Free-3%
7403.23	Copper-nickel base alloys (cupro-nickel) or copper-nickel-zinc base alloys (nickel-silver)	Free	Free	Free	Free	Free	Free-3%
7403.29	Other copper alloys (other than master alloys of heading no. 74.05)	Free	Free	Free	Free	Free	Free-3%
7404.00	Copper waste and scrap	Free	Free	Free	Free	Free	Free
7405.00	Master alloys of copper	Free	Free	Free	Free	Free	3%
74.06	Copper powders and flakes	Free	Free	Free	Free	Free	3%
74.07	Copper bars, rods and profiles of refined copper	Free-3%	Free	Free	Free	4.8%	3%
74.08	Copper wire of refined copper	Free-3%	Free	Free	Free	4.8%	3%
74.09	Copper plates, sheets and strip of a thickness exceeding 0.15 mm	Free	Free	Free	Free	4.8%	3%
74.10	Copper foil (whether or not printed or backed with paper, paperboard, plastics or similar backing materials) of a thickness (excluding any backing) not exceeding 0.15 mm	Free	Free	Free	Free	5.2%	3%
74.11	Copper tubes and pipes	2-2.5%	Free	Free	Free	4.8%	3%
74.12	Copper tube or pipe fittings (for example, couplings, elbows, sleeves)	3%	Free	Free	Free	5.2%	Free
74.13	Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated	3%	Free	Free	Free	Free-5.2%	3%
74.14	Cloth (including endless bands), grill and netting, of copper wire; expanded metal of copper	3%	Free	Free	Free	4.3%	Free
74.15	Nails, tacks, drawing pins, staples (other than those of heading no. 83.05) and similar articles, of copper or of iron or steel with heads of copper; screws, bolts, nuts, screw hooks, rivets, cotters, cotter-pins, washers (including spring washers) and similar articles, of copper	Free-3%	Free	Free	Free	3-4%	Free
7416.00	Copper springs	3%	Free	Free	Free	4%	Free
7417.00	Cooking or heating apparatus of a kind used for domestic purposes, non-electric and parts thereof, of copper	3%	Free	Free	Free	4%	Free
74.18	Table, kitchen or other household articles and parts thereof, of copper; pot scourers and scouring or polishing pads, gloves and the like, of copper; sanitary ware and parts thereof, of copper	3%	Free	Free	Free	3%	Free
74.19	Other articles of copper	Free-9.5%	Free-5%	Free	Free	3%	Free

Sources: Canadian *Customs Tariff*, effective January 2004, Canada Border Services Agency; *Harmonized Tariff Schedule of the United States*, 2004; *Official Journal of the European Union* (October 30, 2003 Edition); *Customs Tariff Schedules of Japan, 2003*.

(1) The customs duties applicable to imported goods originating in countries that are Contracting Parties to the General Agreement on Tariffs and Trade or with which the European Community has concluded agreements containing the most-favoured-nation tariff clause shall be the conventional duties shown in column 3 of the Schedule of Duties. (2) WTO rate is shown; lower tariff rates may apply circumstantially.

TABLE 1. CANADA, COPPER PRODUCTION AND TRADE, 2001-03

Item No.	2001		2002		2003	
	(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>MINE PRODUCTION (1)</b>	683 531	–	603 498	–	553 182	–
<b>SHIPMENTS (2)</b>						
New Brunswick	9 048	22 611	9 035	22 271	9 552	23 241
Quebec	98 014	244 937	87 418	215 485	80 314	195 404
Ontario	182 336	455 658	190 391	469 313	161 329	392 513
Manitoba	38 872	97 142	38 949	96 009	28 906	70 327
Saskatchewan	10 796	26 979	10 080	24 847	12 180	29 633
British Columbia	275 245	687 838	248 322	612 114	242 006	588 800
Total	614 312	1 535 165	584 195	1 440 039	534 287	1 299 918
Refinery output	567 720	..	494 522	..	451 687	..
<b>EXPORTS</b>						
2603.00.10						
Copper ores and concentrates						
Copper content						
Japan	245 503	264 611	173 345	202 833	118 570	285 743
China	46 083	84 743	59 307	63 098	19 294	44 185
Philippines	6 699	15 444	7 858	15 669	14 663	39 390
South Korea	19 486	49 887	23 197	46 145	10 735	25 141
India	6 507	16 754	16 281	32 171	7 497	19 256
United States	7 209	11 780	8 348	12 901	86	208
Other countries	8 043	16 676	–	–	3	13
Total	339 530	459 895	288 336	372 817	170 848	413 936
2604.00.00.10, 2607.00.00.10, 2608.00.00.10, 2616.10.00.10						
Other ores and concentrates						
Copper content						
Finland	4 050	2 673	–	–	–	–
2620.30						
Copper ash and residues						
United States	43	106	64	155	187	478
Germany	–	–	20	34	–	–
Total	43	106	84	189	187	478
2825.50						
Copper oxides and hydroxides						
Cuba	–	1	–	–	–	–
2833.25						
Copper sulphates						
United States	5 601	7 241	5 939	7 799	8 551	10 322
7401.10						
Copper mattes						
Norway	16 031	34 655	20 146	40 271	16 886	36 373
Other countries	21	48	–	–	30	151
Total	16 052	34 703	20 146	40 271	16 916	36 524
7401.20						
Copper mattes; cement copper (precipitated copper)						
South Korea	–	–	–	–	8 774	137
Japan	–	–	3 438	322	–	–
United States	–	–	–	4	–	–
Total	–	–	3 438	326	8 774	137
7402.00						
Copper anodes						
United States	80 108	364 768	84 118	387 596	84 076	345 451
Other countries	–	–	–	–	98	2 241
Total	80 108	364 768	84 118	387 596	84 174	347 692
7403.11 to 7403.19						
Refined copper and copper alloys, unwrought						
Refined copper						
United States	270 328	706 128	234 538	594 156	217 520	549 058
Colombia	3 747	17 732	2 747	13 195	2 455	10 337
China	–	–	–	–	1 571	4 113
Other countries	34 822	94 716	833	2 586	30	149
Total	308 897	818 576	238 118	609 937	221 576	563 657

TABLE 1 (cont'd)

Item No.		2001		2002		2003	
		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>EXPORTS (cont'd)</b>							
7403.21 to 7403.29	Refined copper and copper alloys, unwrought						
	Other copper alloys						
	United States	2 737	8 827	3 059	10 065	2 545	7 614
	Other countries	8	59	6	16	27	152
	Total	2 745	8 886	3 065	10 081	2 572	7 766
7404.00	Copper waste and scrap						
	United States	56 447	110 866	52 621	113 670	41 392	81 429
	China	8 539	12 978	13 771	17 533	24 118	26 258
	Taiwan	309	608	477	988	779	1 404
	India	1 423	2 277	1 016	1 479	699	904
	Other countries	3 527	6 159	3 313	4 872	2 421	2 495
	Total	70 245	132 888	71 198	138 542	69 409	112 490
7405.00	Master alloys of copper						
	United States	–	–	–	–	10	34
7406.10 to 7406.20	Copper powders and flakes						
	United Kingdom	–	–	–	–	43	307
	United States	33	237	282	678	25	181
	Taiwan	24	259	23	232	20	180
	Other countries	23	196	25	239	67	446
	Total	80	692	330	1 149	155	1 114
7407.10 to 7407.29	Copper bars, rods and profiles of refined copper and copper alloys						
	United States	6 630	29 348	5 539	24 562	5 598	23 459
	Chile	161	725	129	590	487	1 803
	Other countries	46	244	29	152	148	771
	Total	6 837	30 317	5 697	25 304	6 233	26 033
7408.11 to 7408.29	Copper wire of refined copper and of copper alloys						
	United States	112 831	323 017	131 632	369 048	113 440	303 959
	Other countries	18	194	107	500	230	856
	Total	112 849	323 211	131 739	369 548	113 670	304 815
7409.11 to 7410.22	Copper and copper alloy plates, sheets, strip and foil						
	United States	11 278	56 534	4 695	19 830	1 419	7 080
	Other countries	4 423	18 014	722	2 797	467	2 205
	Total	15 701	74 548	5 417	22 627	1 886	9 285
7411.10 to 7411.29	Copper and copper alloys tubes and pipes						
	United States	18 203	110 002	18 852	115 929	19 678	108 709
	Netherlands	529	3 307	38	253	117	773
	Singapore	43	324	45	307	69	568
	United Kingdom	130	984	31	224	88	470
	Australia	74	728	28	200	47	376
	Other countries	283	1 956	143	797	167	1 425
	Total	19 262	117 301	19 137	117 710	20 166	112 321
7412.10 to 7412.20	Copper and copper alloys tube and pipes						
	United States	..	37 714	..	36 561	..	29 315
	Other countries	..	10 635	..	2 062	..	879
	Total	..	48 349	..	38 623	..	30 194
7413.00	Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated						
	United States	1 013	6 012	722	5 900	1 844	7 090
	China	12	7	2	9	55	135
	Other countries	9	56	39	400	19	112
	Total	1 034	6 075	763	6 309	1 918	7 337

TABLE 1 (cont'd)

Item No.	2001		2002		2003	
	(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>EXPORTS (cont'd)</b>						
7414, 7415, 7416, 7419	Other items of copper					
	United States		..		33 280	
	Other countries		..		3 186	
	Total		..		36 466	
	Total exports		..		2 020 601	
<b>IMPORTS (3)</b>						
2603.00.00.10	Copper ores and concentrates					
	Copper content					
	Chile		106 849		75 676	
	United States		29 468		20 230	
	Peru		19 516		17 885	
	Argentina		17 258		12 898	
	Other countries		46 442		28 910	
	Total		219 533		155 599	
2604.00.00.10, 2607.00.00.10, 2608.00.00.10, 2616.10.00.10	Other ores and concentrates					
	Copper content					
	South Africa		-		605	
	United States		285		417	
	Mexico		129		-	
	Total		414		1 022	
2620.30	Copper ash and residues					
	United States		6 880		12 667	
	Sweden		923		2 970	
	Spain		1 213		324	
	Other countries		893		9	
	Total		9 909		15 970	
2825.50	Copper oxides and hydroxides					
	United States		883		1 282	
	Australia		506		1 037	
	Other countries		1		38	
	Total		1 390		2 357	
2833.25	Copper sulphates					
	China		2 692		4 744	
	Taiwan		7 785		2 561	
	Chile		1 897		2 518	
	United States		731		1 812	
	Singapore		25		1 716	
	France		1 092		898	
	Peru		695		427	
	Russia		201		177	
	Luxembourg		2 691		80	
	Netherlands		656		48	
	Other countries		680		49	
	Total		19 145		15 030	
2836.99.10.20	Copper carbonates					
	United States		..		4	
	United Kingdom		-		3	
	Total		..		7	
2836.99.90.10	Other copper carbonates					
	United States		6		10	
	Other countries		-		9	
	Total		6		19	
2837.19.00.10	Copper cyanides					
	United States		40		130	
	South Korea		5		35	
	Other countries		2		16	
	Total		47		181	



TABLE 1 (cont'd)

Item No.		2001		2002		2003	
		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>IMPORTS (cont'd)</b>							
3212.90.90.12	Pigments based on copper or copper alloy powders and flakes						
	Germany	6	115	3	54	7	126
	United States	13	104	6	55	14	126
	Other countries	—	3	—	—	—	1
	<b>Total</b>	<b>19</b>	<b>222</b>	<b>9</b>	<b>109</b>	<b>21</b>	<b>253</b>
7401.10	Copper mattes						
	Botswana	—	—	—	—	888	2 098
	United States	2	6	100	367	—	2
	<b>Total</b>	<b>2</b>	<b>6</b>	<b>100</b>	<b>367</b>	<b>888</b>	<b>2 100</b>
7401.20	Copper mattes; cement copper (precipitated copper)						
	Norway	—	—	—	—	738	2 003
	Germany	19	41	114	328	280	680
	United States	5	17	34	91	148	374
	United Kingdom	—	—	6	17	13	35
	Netherlands	121	237	23	113	—	—
	<b>Total</b>	<b>145</b>	<b>295</b>	<b>177</b>	<b>549</b>	<b>1 179</b>	<b>3 092</b>
7402.00	Copper anodes						
	Chile	12 504	29 522	40 687	97 513	104 509	250 285
	United States	13 789	24 851	17 799	31 747	17 007	29 468
	Mexico	—	—	—	—	5 597	19 721
	Germany	2 975	9 500	—	—	228	833
	Other countries	1 294	3 298	1	3	11	17
	<b>Total</b>	<b>30 562</b>	<b>67 171</b>	<b>58 487</b>	<b>129 263</b>	<b>127 352</b>	<b>300 324</b>
7403.11 to 7403.19	Refined copper and copper alloys, unwrought						
	Refined copper						
	Chile	493	1 337	6 283	15 130	12 265	31 500
	Peru	233	670	—	—	4 584	11 505
	United States	6 538	18 495	3 199	8 933	2 134	6 008
	Japan	689	2 239	2 034	6 839	1 344	4 143
	Other countries	40	122	176	542	1 377	3 845
	<b>Total</b>	<b>7 993</b>	<b>22 863</b>	<b>11 692</b>	<b>31 444</b>	<b>21 704</b>	<b>57 001</b>
7403.21 to 7403.29	Refined copper and copper alloys, unwrought						
	Copper alloys						
	United States	8 102	28 011	7 087	26 430	6 223	22 090
	Germany	17	41	12	56	113	564
	Other countries	376	1 650	163	614	107	451
	<b>Total</b>	<b>8 495</b>	<b>29 702</b>	<b>7 262</b>	<b>27 100</b>	<b>6 443</b>	<b>23 105</b>
7404.00	Copper waste and scrap						
	United States	72 401	128 765	39 410	68 377	35 859	57 676
	Cuba	781	1 346	1 257	1 823	983	1 417
	United Kingdom	169	564	290	1 099	319	1 234
	Chile	4 983	13 679	—	—	—	—
	Sweden	12 489	14 992	—	—	—	—
	Other countries	262	508	581	1 228	425	733
	<b>Total</b>	<b>91 085</b>	<b>159 854</b>	<b>41 538</b>	<b>72 527</b>	<b>37 586</b>	<b>61 060</b>
7405.00	Master alloys of copper						
	United States	184	833	298	1 340	446	1 728
	China	40	163	100	391	82	303
	Other countries	86	332	87	303	3	18
	<b>Total</b>	<b>310</b>	<b>1 328</b>	<b>485</b>	<b>2 034</b>	<b>531</b>	<b>2 049</b>
7406.10 to 7406.20	Copper powders and flakes						
	United States	1 891	9 204	1 988	9 447	1 589	7 316
	France	90	394	90	392	114	438
	Germany	28	400	29	414	26	343
	China	—	—	6	34	62	340
	United Kingdom	30	434	23	333	14	155
	Other countries	4	24	23	115	40	237
	<b>Total</b>	<b>2 043</b>	<b>10 456</b>	<b>2 159</b>	<b>10 735</b>	<b>1 845</b>	<b>8 829</b>

TABLE 1 (cont'd)

Item No.		2001		2002		2003	
		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>IMPORTS (cont'd)</b>							
7407.10 to 7407.29	Copper bars, rods and profiles of refined copper and copper alloys						
	United States	30 277	100 680	32 737	103 892	31 343	98 335
	South Korea	2 023	3 699	953	1 304	1 954	2 152
	Poland	2 928	6 092	1 326	2 975	429	1 325
	France	137	616	116	502	227	1 050
	United Kingdom	368	2 181	135	718	176	847
	Other countries	2 046	6 209	1 560	4 721	1 740	6 289
	<b>Total</b>	<b>37 779</b>	<b>119 477</b>	<b>36 827</b>	<b>114 112</b>	<b>35 869</b>	<b>109 998</b>
7408.11 to 7408.29	Copper wire of refined copper and of copper alloys						
	United States	21 369	70 430	18 908	62 144	13 993	44 256
	Germany	718	3 004	534	2 340	537	2 135
	South Korea	101	573	176	931	266	1 210
	Japan	70	339	116	561	230	1 040
	China	185	728	356	1 029	124	582
	Other countries	2 292	7 131	2 444	8 910	1 379	5 285
	<b>Total</b>	<b>24 735</b>	<b>82 205</b>	<b>22 534</b>	<b>75 915</b>	<b>16 529</b>	<b>54 508</b>
7409.11 to 7410.22	Copper and copper alloy plates, sheets, strip and foil						
	United States	20 698	137 339	18 287	124 279	17 485	107 929
	Netherlands	3 477	14 857	2 795	11 935	2 676	11 200
	Germany	7 023	27 686	2 301	11 860	1 731	8 730
	Sweden	923	4 138	1 375	6 195	1 154	5 178
	China	1 185	4 896	614	4 407	668	4 049
	Other countries	3 959	22 849	2 465	13 673	2 317	11 902
	<b>Total</b>	<b>37 265</b>	<b>211 765</b>	<b>27 837</b>	<b>172 349</b>	<b>26 031</b>	<b>148 988</b>
7411.10	Pipes and tubes, refined copper						
	United States	7 058	34 082	7 798	35 969	7 997	34 427
	South Korea	655	2 502	1 319	4 881	764	2 853
	China	145	589	460	1 749	613	2 089
	Other countries	303	1 485	411	1 873	558	2 289
	<b>Total</b>	<b>8 161</b>	<b>38 658</b>	<b>9 988</b>	<b>44 472</b>	<b>9 932</b>	<b>41 658</b>
7411.21	Pipes and tubes, copper-zinc base alloys						
	United States	1 580	8 562	1 485	9 523	1 168	7 521
	China	1 174	5 885	1 188	6 732	832	4 391
	Germany	671	3 688	663	3 519	771	3 975
	Other countries	1 233	4 804	1 370	5 028	1 402	5 288
	<b>Total</b>	<b>4 658</b>	<b>22 939</b>	<b>4 706</b>	<b>24 802</b>	<b>4 173</b>	<b>21 175</b>
7411.22	Pipes and tubes, copper-nickel base alloys or copper-nickel-zinc base alloys						
	United States	414	2 726	402	2 834	402	2 834
	United States	320	2 068	275	1 863	318	1 934
	Russia	—	—	77	574	180	1 299
	South Korea	13	140	—	1	54	415
	Other countries	81	518	53	416	62	374
	<b>Total</b>	<b>414</b>	<b>2 726</b>	<b>405</b>	<b>2 854</b>	<b>614</b>	<b>4 022</b>
7411.29	Plates and tubes, copper alloys, n.e.s.						
	United States	2 086	12 889	690	4 044	709	3 870
	China	53	399	103	441	56	299
	Other countries	199	1 044	59	404	70	434
	<b>Total</b>	<b>2 338</b>	<b>14 332</b>	<b>852</b>	<b>4 889</b>	<b>835</b>	<b>4 603</b>
7412.10	Fittings, pipe or tube, of refined copper						
	United States	619	8 602	797	10 564	888	10 199
	South Korea	191	1 904	352	3 051	497	2 901
	China	53	420	49	454	95	700
	Other countries	91	1 391	75	1 163	105	1 383
	<b>Total</b>	<b>954</b>	<b>12 317</b>	<b>1 273</b>	<b>15 232</b>	<b>1 585</b>	<b>15 183</b>

TABLE 1 (cont'd)

Item No.		2001		2002		2003	
		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>IMPORTS (cont'd)</b>							
7412.20	Fittings, pipe or tube, copper alloys						
	United States	3 390	50 354	4 067	56 253	3 922	48 487
	China	816	6 204	1 075	8 035	1 642	11 032
	Taiwan	617	6 279	622	6 354	749	5 883
	South Korea	245	1 844	255	2 050	319	2 607
	Other countries	527	6 556	563	6 982	768	8 563
	Total	5 595	71 237	6 582	79 674	7 400	76 572
7413.00	Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated						
	United States	6 250	27 254	6 258	23 988	6 513	24 787
	Other countries	2 252	7 518	2 383	7 814	1 082	3 851
	Total	8 502	34 772	8 641	31 802	7 595	28 638
7414.20	Endless bands of copper wire for machinery						
	United States	..	249	..	151	..	117
	China	..	7	..	8	..	17
	Japan	..	10	..	1	..	11
	Italy	..	1	..	3	..	10
	Other countries	..	90	..	64	..	13
	Total	..	357	..	227	..	168
7414.90	Cloth, grill and netting of copper wire and expanded metal of copper						
	United States	193	816	155	736	73	391
	Other countries	21	102	25	115	15	90
	Total	214	918	180	851	88	481
7415.10	Nails, tacks, drawing pins, staples and similar articles of copper or of iron or steel with copper heads						
	United States	72	419	76	425	48	294
	Taiwan	26	155	34	210	35	198
	China	18	102	5	27	19	101
	Other countries	38	237	50	320	39	242
	Total	154	913	165	982	141	835
7415.21	Copper washers, including spring						
	United States	127	753	299	2 091	357	2 228
	United Kingdom	61	356	52	421	68	470
	China	40	231	44	291	46	327
	Other countries	47	345	35	217	55	342
	Total	275	1 685	430	3 020	526	3 367
7415.29	Articles of copper, not threaded, n.e.s., similar to those of headings 7415.10 and 7415.21						
	United States	536	2 766	669	3 468	577	3 029
	China	20	58	15	89	31	159
	Germany	14	80	16	87	20	97
	Japan	10	47	16	84	18	88
	Other countries	374	2 068	206	1 179	69	428
	Total	954	5 019	922	4 907	715	3 801
7415.31	Copper screws, for wood						
	China	13	75	–	–	–	–
	Taiwan	19	123	–	–	–	–
	Other countries	2	12	–	–	–	–
	Total	34	210	–	–	–	–
7415.32 (4)	Screws, bolts and nuts of copper, excluding wood screws						
	United States	680	3 488	..	..	..	..
	Taiwan	286	1 326	..	..	..	..
	Other countries	265	1 467	..	..	..	..
	Total	1 231	6 281	..	..	..	..

TABLE 1 (cont'd)

Item No.		2001		2002		2003	
		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
<b>IMPORTS (cont'd)</b>							
7415.33 (4)	Screws, bolts and nuts of copper, excluding wood screws						
	United States	..	..	787	3 698	560	2 660
	China	..	..	167	889	255	1 176
	Taiwan	..	..	429	1 312	379	1 067
	Other countries	..	..	71	391	135	698
	Total	..	..	1 454	6 290	1 329	5 601
7415.39	Articles of copper, threaded, n.e.s., similar to bolts, nuts and screws						
	United States	552	2 941	634	3 360	722	3 701
	Other countries	135	708	261	1 152	179	893
	Total	687	3 649	895	4 512	901	4 594
7416.00	Copper springs						
	Germany	..	166	..	511	..	615
	United States	..	292	..	293	..	241
	Taiwan	..	21	..	100	..	75
	Other countries	..	4	..	31	..	11
	Total	..	483	..	935	..	942
7419.10	Chain and parts thereof of copper						
	United States	44	248	43	308	35	236
	Other countries	18	144	15	120	23	173
	Total	62	392	58	428	58	409
7419.91	Articles of copper, not further worked than cast, moulded, stamped or forged	3 262	25 568	3 920	26 043	3 920	26 043
	United States	2 578	21 542	3 664	24 179	1 720	15 916
	Other countries	729	4 282	266	1 917	192	1 741
	Total	3 307	25 824	3 930	26 096	1 912	17 657
7419.99	Articles of copper, n.e.s.						
	United States	..	27 233	..	25 249	..	22 499
	China	..	5 858	..	5 854	..	6 871
	Taiwan	..	3 679	..	4 231	..	3 799
	India	..	3 021	..	3 786	..	3 042
	Germany	..	4 087	..	3 701	..	2 403
	Other countries	..	5 264	..	5 862	..	5 926
	Total	..	49 142	..	48 683	..	44 540
	Total imports	..	1 459 211	..	1 240 331	..	1 235 738

Sources: Natural Resources Canada; Statistics Canada.

– Nil; .. Not available or not applicable; n.e.s. Not elsewhere specified.

(a) Data believed to be tonnage of concentrates and not tonnes of copper in concentrate. (b) Tonnage of concentrates adjusted by unit value and may not reflect tonnes of copper in concentrates.

(1) Copper contained in concentrates produced. (2) Anode copper recovered in Canada from domestic concentrates plus exports of payable copper in concentrate and matte. (3) Imports from "other countries" may include re-imports from Canada. (4) HS code changed from 7415.32 to 7415.33 as of 2002.

Note: Numbers may not add to totals due to rounding.

**TABLE 2. CANADA, COPPER PRODUCTION, TRADE (1) AND USE, 1975, 1980 AND 1985-2003**

	Production		Exports			Imports Refined	Use (3) Refined
	Shipments (2)	Refinery Output	Concentrates and Matte	Refined	Total		
	(tonnes)						
1975	733 826	529 197	314 518	320 705	635 223	10 908	196 106
1980	716 363	505 238	286 076	335 022	621 098	13 466	208 590
1985	738 637	499 626	320 619	280 033	600 652	19 131	222 466
1986	698 527	493 445	341 390	306 822	648 212	20 901	225 586
1987	794 149	491 124	381 126	288 800	669 926	16 583	231 288
1988	758 478	528 723	348 404	268 680	617 084	4 659	236 280
1989	704 432	515 216	348 739	321 690	670 429	4 408	213 046
1990	771 433	515 835	374 875	335 941	710 816	2 611	180 605
1991	780 362	538 339	348 080	377 985	726 065	2 321	159 170
1992	761 694	539 302	346 842	385 761	732 603	8 916	156 132
1993	709 650	561 580	319 840	408 364	728 204	21 155	185 565
1994	590 784	549 869	237 554	388 568	626 122	(r) 19 594	(r) 199 350
1995	700 843	572 616	(r) 274 492	(r) 434 693	(r) 709 186	(r) 24 176	(r) 189 550
1996	652 499	559 200	409 577	384 338	793 915	28 700	218 280
1997	647 779	560 582	515 547	381 476	897 023	22 602	224 776
1998	690 762	562 261	450 867	355 825	806 692	18 685	246 212
1999	581 583	548 563	355 838	294 107	(r) 649 944	(r) 16 475	(r) 266 505
2000	621 889	551 393	(r) 426 007	288 334	714 341	11 875	272 075
2001	614 312	567 720	(r) 359 634	308 898	668 532	7 994	265 210
2002	584 195	494 522	(r) 311 920	238 117	550 037	11 692	274 133
2003 (p)	534 287	451 687	196 538	221 577	418 115	21 706	257 325

Sources: Natural Resources Canada; Statistics Canada.

(p) Preliminary; (r) Revised.

(1) Beginning in 1988, exports and imports are based on the new Harmonized System and may not be in complete accordance with previous method of reporting. (2) From 1975 to 1988, anode copper recovered in Canada from domestic concentrate plus exports of payable copper in concentrates and matte. Starting in 1989 to date, recoverable copper in concentrate shipped. (3) Producers' domestic shipments of refined copper plus imports of refined shapes.