

# Mineral Industry Surveys

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## COPPER IN JULY 2004

Average daily mine production of copper in July rose by about 2% compared with that of June yet remained about 2% below production in July 2003, according to data compiled by the U.S. Geological Survey. Production for the first 7 months of 2004 also was about 2% lower than that for the same period in 2003. Average daily refined copper production in July plummeted by 11% owing to reported declines at all of the electrolytic refineries. Refined production for the first 7 months of 2004 was down by about 3% from that of the same period in 2003. Consumption of refined copper, however, continued to show strength, with consumption in July and the first 7 months of the year up by 14% and 10%, respectively, over that of the comparative periods in 2003.

### Update

According to projections of the International Copper Study Group (2004) developed at their 24th Regular Meeting in September, world copper mine production was expected to rise by 900,000 metric tons (t) (6.6%) in 2004 to 14.55 million metric tons (Mt) and by an additional 1.07 Mt (7.4%) in 2005 to 15.6 Mt. World production of refined copper was projected to increase by only 560,000 t (3.7%) to 15.8 Mt in 2004 and by 1.15 Mt (7.3%) in 2005 to 16.9 Mt. With the projected growth in primary refined output lagging that for mine production, the tightness in concentrate supplies experienced in the first one half of 2004 was expected to ease. The growth in copper demand, however, was expected to continue to exceed refined production increases, and production deficits of 700,000 t and 220,000 t, respectively, were anticipated for 2004 and 2005. Demand in Asia was expected to dominate this growth, increasing by 6.4% and 5.4%, respectively, in 2004 and 2005. Apparent consumption in China, which increased by about 11.6% in 2003, was projected to increase by 6.6% and 8.5%, respectively, in 2004 and 2005.

Copper prices soared in September, the COMEX spot price closing the month at \$1.40 per pound of copper. Prices continued to rise during the first week of October, the COMEX

price rising to \$1.47 per pound, the highest level since early 1989.

Quadra Mining Ltd. announced that the concentrator at its Robinson Mine near Ely, NV, had begun processing ore on September 1, and by the end of the first week in September it was operating at about 60% of its design capacity of 38,000 metric tons per day (t/d) of ore. The mine operating company, Robinson Nevada Mining Company, a wholly owned subsidiary of Quadra, contracted with Washington Group International to mine approximately 67 million metric tons per year of ore and waste at Robinson over a 5-year period. Ore and waste removal was expected to ramp up from 80,000 t/d to 200,000 t/d by January. Quadra, a Vancouver, British Columbia, Canada, mining company, purchased Robinson, from BHP Billiton in April 2004 for \$18 million (Quadra Mining Ltd., 2004b). BHP, which built a new mill to process ore from pits first developed by what is now Kennecott Utah Copper Corp., operated the Robinson Mine from 1996-99. Updated reserve estimates and mine plans published by Quadra in August 2004 indicated copper reserves at its 4 pits of 133 Mt of ore grading 0.687% copper and 0.285 grams per metric ton gold; 747,000 t of recoverable copper in concentrates and 18,700 kilograms of recoverable gold at mill recovery rates of 82% and 49.3%, respectively; an overall mine life of 10 years at an average production rate of 75,000 metric tons per year of copper and 1,770 kilograms per year of gold; and an average life-of-the-mine cash cost of \$0.80 per pound of copper. Concentrates are expected to be sold offshore (Quadra Mining Ltd., 2004a).

### References Cited

- International Copper Study Group, 2004, Forecast 2004-2005: Lisbon, Portugal, International Copper Study Group press release, September 23, 1 p.
- Quadra Mining Ltd., 2004a, Quadra Mining Ltd. reports second quarter results, increased mineral reserves and revised mine plan: Vancouver, British Columbia, Canada, Quadra Mining Ltd. press release, August 11, 4 p.
- Quadra Mining Ltd., 2004b, Robinson Mine update—Concentrator begins processing ore—Mining contract signed: Vancouver, British Columbia, Canada, Quadra Mining Ltd. press release, September 8, 2 p.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES<sup>1</sup>

(Metric tons, unless otherwise specified)

	Source table <sup>2</sup>	2004			
		2003 <sup>p</sup>	June	July	January - July
<b>Production:</b>					
<b>Primary:</b>					
Mine, recoverable	(2)	1,120,000	91,100	95,900	634,000
<b>Refinery:</b>					
<b>Electrolytic:</b>					
Domestic and foreign	(4)	662,000	58,900	49,200	377,000
Electrowon	(4)	591,000	49,400	50,700	339,000
Total	(4)	1,250,000	108,000	99,900	715,000
<b>Secondary recoverable copper:</b>					
Refineries	(5)	53,300	4,450 <sup>r</sup>	4,080	29,500
Ingot makers <sup>3</sup>	(5)	119,000	9,890	9,890	69,200
Brass and wire-rod mills	(5)	676,000	58,800 <sup>r</sup>	58,600	424,000
Foundries, et. <sup>3</sup>	(5)	64,600	5,380	5,380	37,700
Smelter, total	(3)	539,000	46,500	46,500	301,000
<b>Consumption:</b>					
Apparent	(8)	2,450,000	227,000	NA	NA
Refined (reported)	(7)	2,300,000	188,000 <sup>r</sup>	202,000	1,440,000
Purchased copper-base scrap	(9)	1,150,000	99,800 <sup>r</sup>	99,000	707,000
<b>Stocks at end of period:</b>					
Total refined	(11)	656,000	244,000	220,000	XX
Blister, etc.	(11)	56,800	60,600 <sup>r</sup>	62,200	XX
<b>Prices:</b>					
U.S. producer cathode (cents per pound) <sup>4</sup>	(12)	85.247	126.008	132.078	128.541
<b>Imports:<sup>5</sup></b>					
Ores and concentrates <sup>6</sup>	(14)	27,100	1,460	NA	NA
Refined	(14)	882,000	51,300	NA	NA
<b>Exports:<sup>5</sup></b>					
Ores and concentrates <sup>6</sup>	(15)	9,860	1,430	NA	NA
Refined	(15)	93,300	2,720	NA	NA

<sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

<sup>2</sup>Numbers in parentheses refer to the significant tables where these data are located.

<sup>3</sup>Monthly data and 2003 cumulative data estimated based on 2002 monthly average.

<sup>4</sup>Source: Platts Metals Week.

<sup>5</sup>Source: U.S. Census Bureau.

<sup>6</sup>Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Recoverable copper			Contained copper		
	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total
2003: <sup>P</sup>						
January - July	433,000	211,000	645,000 <sup>r</sup>	345,000	309,000 <sup>r</sup>	653,000
July	63,900	34,200	98,100	49,500	50,100	99,600
August	63,400	31,400	94,700	50,500	45,400	95,900
September	59,700	34,100	93,900	50,600	44,400	94,900
October	62,300	33,200	95,500	49,600	47,000	96,600
November	60,200	31,800	92,000	46,200	47,000	93,200
December	62,000	33,400	95,300	49,600	46,900	96,500
Year	741,000	375,000	1,120,000	591,000	539,000	1,130,000
2004:						
January	58,500	32,300	90,800	48,700	43,200	91,900
February	55,200	29,600	84,800	44,700	41,100	85,800
March	61,400	31,500	92,900	48,400	45,700	94,100
April	55,600	31,600	87,200	47,600	40,700	88,300
May	56,900	34,100	91,000	49,100	42,900	92,000
June	59,400	31,800	91,100	49,400	42,800	92,200
July	62,100	33,700	95,900	50,700	46,400	97,000
January - July	409,000	225,000	634,000	339,000	303,000	641,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes production from Alaska, Idaho, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>3</sup>Includes copper content of precipitates and other metal concentrates.

TABLE 3  
COPPER PRODUCED AT SMELTERS IN  
THE UNITED STATES, BY SOURCE<sup>1,2</sup>

(Metric tons, copper content)

Period	Anode production
2003: <sup>P</sup>	
January - July	304,000
July	46,600
August	49,200
September	46,000
October	44,100
November	47,800
December	47,400
Total	539,000
2004:	
January	39,700
February	30,100
March	41,300
April	44,400
May	52,900
June	46,500
July	46,500
January - July	301,000

<sup>P</sup>Preliminary.

<sup>1</sup>Includes blister, anode and copper from primary or secondary sources.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to total shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY<sup>1</sup>

(Metric tons)

Period	Primary materials			Scrap	Total refined
	Electrolytically refined <sup>2</sup>	Electrowon	Total		
2003: <sup>P</sup>					
January - July	388,000 <sup>r</sup>	345,000	733,000 <sup>r</sup>	32,500 <sup>r</sup>	765,000 <sup>r</sup>
July	56,700	49,500	106,000	4,130	110,000
August	55,100	50,500	106,000	3,910	110,000
September	57,100	50,600	108,000	4,220	112,000
October	53,600	49,600	103,000	4,490	108,000
November	50,500	46,200	96,700	4,050	101,000
December	57,700	49,600	107,000	4,080	111,000
Year	662,000	591,000	1,250,000	53,300	1,310,000
2004:					
January	51,300	48,700	100,000	4,190	104,000
February	50,300	44,700	95,000	3,920	99,000
March	52,300	48,400	101,000	4,330	105,000
April	59,000	47,600	107,000	4,360	111,000
May	55,600	49,100	105,000	4,150	109,000
June	58,900 <sup>r</sup>	49,400	108,000	4,460 <sup>r</sup>	113,000
July	49,200	50,700	99,900	4,080	104,000
January - July	377,000	339,000	715,000	29,500	745,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>From domestic and foreign-source materials.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP<sup>1</sup>

(Metric tons, copper content)

Period	Refineries <sup>2</sup>		Ingot makers <sup>3</sup>		Brass and wire-rod mills		Foundries, etc. <sup>3</sup>		Total <sup>4</sup>
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2003: <sup>P</sup>									
January - July	9,300	23,200 <sup>r</sup>	16,400 <sup>r</sup>	52,800 <sup>r</sup>	378,000 <sup>r</sup>	18,600 <sup>r</sup>	14,200 <sup>r</sup>	23,500 <sup>r</sup>	536,000 <sup>r</sup>
July	1,340	2,800	2,340	7,550	50,600	2,750	2,020	3,360	72,700
August	1,340	2,580	2,340	7,550	52,900	2,190	2,020	3,360	74,300
September	1,340	2,880	2,340	7,550	53,900	2,790	2,020	3,360	76,200
October	1,340	3,160	2,340	7,550	56,300	2,880	2,020	3,360	78,900
November	1,340	2,720	2,340	7,550	51,100	2,450	2,020	3,360	72,900
December	1,340	2,740	2,340	7,550	51,900	2,880	2,020	3,360	74,100
Year	16,000	37,300	28,100	90,600	644,000	31,800	24,300	40,300	912,000
2004:									
January	1,340	2,860	2,340	7,550	57,400	3,610	2,020	3,360	80,500
February	1,340	2,590	2,340	7,550	56,600	3,900	2,020	3,360	79,700
March	1,340	3,000	2,340	7,550	60,100	3,650	2,020	3,360	83,400
April	1,340	3,020	2,340	7,550	60,500	2,900	2,020	3,360	83,000
May	1,340	2,820	2,340	7,550	54,600	3,090	2,020	3,360	77,100
June	1,340	3,120 <sup>r</sup>	2,340	7,550	55,900 <sup>r</sup>	2,910	2,020	3,360	78,500 <sup>r</sup>
July	1,340	2,740	2,340	7,550	56,100	2,440	2,020	3,360	77,900
January - July	9,350	20,100	16,400	52,800	401,000	22,500	14,200	23,500	560,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Electrolytically refined and fire-refined scrap based on source of material at smelter level.

<sup>3</sup>Monthly data and 2003 cumulative data estimated based on 2002 annual data.

<sup>4</sup>Does not include an estimate, based on reported 2002 data of 3,100 tons per month from new scrap and 2,020 tons per month copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES<sup>1</sup>

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2003: <sup>P</sup>						
January - July	791,000 <sup>r</sup>	922,000 <sup>r</sup>	795,000 <sup>r</sup>	927,000 <sup>r</sup>	XX	XX
July	107,000	123,000	110,000	126,000	54,800	31,400
August	111,000	140,000	112,000	142,000	53,500	29,900
September	117,000	142,000	118,000	147,000	53,200	24,900
October	120,000	156,000	119,000	159,000	54,000	21,600
November	110,000	139,000	111,000	136,000	53,500	24,700
December	106,000	131,000	106,000	134,000	53,800	22,200
Year	1,360,000	1,630,000	1,360,000	1,640,000	XX	XX
2004:						
January	115,000	158,000	116,000	151,000	52,400	29,400
February	117,000	146,000	120,000	147,000	52,200	28,500
March	123,000	158,000	124,000	168,000	51,300	19,100
April	125,000	159,000	124,000	160,000	52,400	18,300
May	115,000	160,000	115,000	148,000	51,400	29,600
June	118,000	143,000 <sup>r</sup>	116,000	148,000 <sup>r</sup>	52,700	23,900 <sup>r</sup>
July	117,000	143,000	116,000	143,000	54,100	23,900
January - July	830,000	1,070,000	832,000	1,070,000	XX	XX

<sup>P</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER<sup>1</sup>

(Metric tons)

Period and item	Brass mills	Wire-rod mills	Other plants <sup>2</sup>	Total
2003: <sup>P</sup>				
January - July	346,000	930,000 <sup>r</sup>	39,400 <sup>r</sup>	1,320,000 <sup>r</sup>
July	49,500	122,000	5,630	177,000
August	46,800	143,000	5,630	195,000
September	48,000	143,000	5,630	197,000
October	49,500	157,000	5,630	212,000
November	49,600	140,000	5,630	195,000
December	46,900	128,000	5,630	181,000
Year	587,000	1,640,000	67,600	2,300,000
2004:				
January	47,900	156,000	5,630	210,000
February	49,600	146,000	5,630	201,000
March	54,300	158,000	5,630	218,000
April	52,400	158,000	5,630	216,000
May	45,300	156,000	5,630	207,000
June	46,000	136,000 <sup>r</sup>	5,630	188,000 <sup>r</sup>
July:				
Cathodes	35,100	146,000	818	182,000
Wire bars	--	--	(3)	(3)
Ingots and ingot bars	1,150	--	2,230	3,390
Cakes and slabs	(3)	--	(3)	(3)
Billets and other	14,700	W	2,580	17,300
Total	50,900	146,000	5,630	202,000
January - July	346,000	1,060,000	39,400	1,440,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not added to totals shown.

<sup>2</sup>Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2002 annual data.

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included with "Billets and others."

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER<sup>1</sup>

(Metric tons)

Period	Refined copper production	Copper in old scrap <sup>2</sup>	Refined general imports <sup>3</sup>	Refined exports <sup>3</sup>	Stock change during period	Apparent consumption
2003: <sup>P</sup>						
January - June	626,000 <sup>r</sup>	114,000 <sup>r</sup>	338,000	44,400	(226,000) <sup>r</sup>	1,260,000 <sup>r</sup>
June	102,000	18,600	51,500	23,000	(59,200)	208,000
July	106,000	18,500	40,700	5,080	(36,300)	197,000
August	106,000	17,700	72,700	4,080	5,710	186,000
September	108,000	18,600	46,000	4,330	(30,600)	198,000
October	103,000	19,000	69,100	4,640	(58,300)	245,000
November	96,700	18,100	63,300	8,470	(24,400)	194,000
December	107,000	18,600	57,200	22,300	(11,000)	172,000
Year	1,250,000	224,000	687,000	93,300	(381,000)	2,450,000
2004:						
January	100,000	19,400	43,700	11,000	(77,100)	229,000
February	95,000	19,400	45,400	18,500	(63,600)	205,000
March	101,000	19,600	62,500	23,900	(75,100)	234,000
April	107,000	18,900	59,300	28,400	(93,800)	250,000
May	105,000	18,800	56,300	3,700	(40,300)	216,000
June	108,000	19,000 <sup>r</sup>	40,400	2,720	(61,600)	227,000
July	99,900	18,100	NA	NA	(24,500)	NA
January - June	615,000	115,000	308,000	88,200	(412,000)	1,360,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2002 data.

<sup>3</sup>Source: U.S. Census Bureau.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP<sup>1</sup>

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers <sup>2</sup>		Brass and wire-rod mills <sup>3</sup>		Foundries, etc. <sup>2</sup>		Total scrap used
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2003: <sup>P</sup>									
January - July	9,470	23,600 <sup>r</sup>	24,400 <sup>r</sup>	74,800 <sup>r</sup>	475,000 <sup>r</sup>	19,000 <sup>r</sup>	24,700 <sup>r</sup>	26,100 <sup>r</sup>	677,000 <sup>r</sup>
July	1,390	2,780	3,490	10,700	62,800	2,790	3,530	3,730	91,200
August	1,350	2,600	3,490	10,700	65,900	2,230	3,530	3,730	93,600
September	1,350	2,900	3,490	10,700	67,500	2,850	3,530	3,730	96,000
October	1,350	3,180	3,490	10,700	70,800	2,990	3,530	3,730	99,800
November	1,350	2,560	3,490	10,700	64,000	2,550	3,530	3,730	91,900
December	1,350	2,760	3,490	10,700	65,200	2,980	3,530	3,730	93,700
Year	16,200	37,600	41,900	128,000	808,000	32,600	42,300	44,800	1,150,000
2004:									
January	1,350	2,880	3,490	10,700	71,900	3,730	3,530	3,730	101,000
February	1,350	2,610	3,490	10,700	70,800	4,020	3,530	3,730	100,000
March	1,350	3,020	3,490	10,700	75,900	3,760	3,530	3,730	105,000
April	1,350	3,050	3,490	10,700	75,400	2,930	3,530	3,730	104,000
May	1,350	2,770	3,490	10,700	68,500	3,200	3,530	3,730	97,300
June	1,350	3,150 <sup>r</sup>	3,490	10,700	70,900 <sup>r</sup>	3,040	3,530	3,730	99,800 <sup>r</sup>
July	1,350	2,760	3,490	10,700	70,900	2,620	3,530	3,730	99,000
January - July	9,440	20,200	24,400	74,800	504,000	23,300	24,700	26,100	707,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Monthly data and 2003 cumulative data estimated from 2002 annual data.

<sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP<sup>1,2</sup>

(Metric tons, gross weight)

Scrap type and processor	2003 <sup>p</sup>		2004			
	January - July	Year	May	June	July	January - July
<b>No. 1 wire and heavy:</b>						
Smelters and refiners	40,900 <sup>r</sup>	70,200	5,860	5,860	5,860	41,000
Brass and wire-rod mills	221,000 <sup>r</sup>	377,000	32,600	32,000	32,500	239,000
<b>No. 2 mixed heavy and light:</b>						
Smelters and refiners	19,000 <sup>r</sup>	29,500	2,090	2,470	2,080	15,500
Brass and wire-rod mills	3,140	5,750	533	574	299	4,250
<b>Total unalloyed scrap:</b>						
Smelters and refiners	59,900 <sup>r</sup>	99,700	7,950	8,320	7,940	56,500
Brass and wire-rod mills	224,000 <sup>r</sup>	383,000	33,200	32,500	32,800	243,000
<b>Red brass:<sup>3</sup></b>						
All plants	28,400 <sup>r</sup>	49,200	4,310	4,440	4,250	30,300
<b>Leaded yellow brass:</b>						
All plants	183,000	311,000	26,600	28,800	28,400	195,000
<b>Yellow and low brass:</b>						
All plants	30,000 <sup>r</sup>	49,900	3,390	3,350	3,340	23,600
<b>Cartridge cases and brass:</b>						
All plants	47,200	79,400	6,300	7,020	6,980	49,600
<b>Auto radiators:</b>						
Smelters and refiners	23,500 <sup>r</sup>	40,200	3,350	3,350	3,350	23,500
<b>Bronzes:</b>						
Smelters and refiners	5,920 <sup>r</sup>	10,100	845	845	845	5,920
Brass mills	3,270	5,390	597	580	580	3,830
<b>Nickel-copper alloys:</b>						
All plants	9,250 <sup>r</sup>	16,700	1,670	1,660	1,660	12,400
<b>Low grade and residues:</b>						
Smelters and refiners	9,440 <sup>r</sup>	16,200	1,350	1,350	1,350	9,440
<b>Other alloy scrap:<sup>4</sup></b>						
Smelters and refiners	1,820 <sup>r</sup>	3,120 <sup>r</sup>	260 <sup>r</sup>	260 <sup>r</sup>	260	1,820
Brass mills	2,180	4,110	428	332	332	3,050
<b>Total alloyed scrap:</b>						
Smelters and refiners	74,000 <sup>r</sup>	98,000	10,600	10,600	10,600	74,000
Brass mills	270,000	487,000	38,600	41,400	40,700	285,000
<b>Total scrap:</b>						
Smelters and refiners	134,000 <sup>r</sup>	198,000	18,500	18,900	18,500	130,000
Brass and wire-rod mills	494,000 <sup>r</sup>	870,000	71,700	73,900	73,600	528,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap: Smelters and refiners."

<sup>1</sup>Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,240 tons of scrap per month based on 2002 annual data; monthly data include estimates of about 14,200 tons of scrap per month consumed by ingot makers.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Includes composition turnings, silicon bronze, zinc bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

<sup>4</sup>Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

TABLE 11  
COPPER STOCKS AT END OF PERIOD<sup>1</sup>

(Metric tons)

Period	Crude copper <sup>2</sup>	Refined copper					LME <sup>6</sup>	Total refined
		Refineries <sup>3</sup>	Wire-rod mills <sup>3</sup>	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex <sup>5</sup>		
2003: <sup>P</sup>								
July	42,300	4,820	28,400	23,700	3,600	282,000	431,000	774,000
August	47,900	5,310	30,100	20,400	3,600	276,000	444,000	780,000
September	44,500	4,100	33,300	17,600	3,600	271,000	419,000	749,000
October	51,700	3,590	23,200	14,700	3,600	267,000	379,000	691,000
November	57,500	6,960	20,900	19,500	3,600	262,000	353,000	667,000
December	56,800	12,100	29,700	20,200	3,600	255,000	335,000	656,000
2004:								
January	49,900	9,840	22,500	12,500	3,600	239,000	291,000	578,000
February	48,100	10,100	25,200	16,300	3,600	219,000	240,000	515,000
March	43,200	10,800	30,700	14,200	3,600	213,000	167,000	440,000
April	62,900 <sup>r</sup>	8,510	19,100	16,700	3,600	172,000	126,000	346,000
May	69,100 <sup>r</sup>	11,100	27,500	18,000	3,600	132,000	114,000	306,000
June	60,600 <sup>r</sup>	5,680	27,300	19,600	3,600	95,100	92,800	244,000
July	62,200	6,780	30,200	19,100	3,600	79,000	80,800	220,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Copper content of blister and other materials in transit and in process of refining.

<sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>4</sup>Monthly estimates based on reported and 2002 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>5</sup>Commodity Exchange Inc., New York.

<sup>6</sup>London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES  
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price cathode <sup>1</sup>	Comex first position <sup>2</sup>	LME cash price Grade A
2003:			
July	82.245	78.055	77.549
August	84.165	79.995	79.826
September	86.030	81.840	81.152
October	92.290	88.104	87.099
November	96.867	92.681	93.215
December	103.917	99.731	99.831
Year	85.247	81.050	80.684
2004:			
January	114.336	110.150	109.911
February	129.302	125.116	125.144
March	138.323	134.137	136.439
April	133.646	128.481	133.694
May	126.097	120.968	123.960
June	126.008	120.862	121.832
July	132.078	126.812	127.342
January - July	128.541	123.789	125.475

<sup>1</sup>Listed as "U.S. producer cathode."

<sup>2</sup>Listed as "Comex high grade first position."

Sources: Platts Metals Week and American Metal Market.

TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Dealers (New York)			
	Brass mills No. 1 scrap	Refiners No. 2 scrap	No. 2 Scrap	Red brass turnings and borings
2003:				
July	77.50 <sup>r</sup>	68.23 <sup>r</sup>	49.00 <sup>r</sup>	38.00 <sup>r</sup>
August	79.48	69.43	49.00	38.00
September	81.96	72.75	54.43	38.00
October	87.09	77.89	55.18	38.00
November	92.22	82.81	59.44	38.44
December	98.76	89.69	67.00	46.00
Year	80.17 <sup>r</sup>	70.42 <sup>r</sup>	52.70 <sup>r</sup>	38.65 <sup>r</sup>
2004:				
January	108.80	98.38	72.60	50.20
February	124.08	112.66	75.84	52.37
March	132.89	118.57	91.00	60.30
April	127.30	107.18	90.91	58.82
May	119.65	96.28	89.00	55.00
June	119.82	96.55	89.00	55.00
July	125.52	101.33	89.00	55.00
January - July	122.58	104.42	85.34	55.24

<sup>r</sup>Revised.

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2004			2004			2004			2004		
	2003	June	January - June	2003	June	January - June	2003	June	January - June	2003	June	January - June
Brazil	--	--	--	--	--	--	(2)	--	--	11,800	--	1,510
Canada	86	--	--	187	--	36	83,600	5,810	41,900	218,000	11,000	129,000
Chile	4,940	--	--	--	--	--	45,200	2,960	17,600	348,000	22,900	123,000
Germany	--	--	--	59	--	--	--	--	--	8,530	4,120	9,060
Japan	--	--	--	--	--	--	(2)	--	19	5,020	333	2,250
Mexico	22,000	1,460	18,000	501	--	103	10,200	567	3,460	21,600	--	8,240
Namibia	--	--	--	--	--	--	17,700	3,710	7,710	--	--	--
Peru	--	--	--	--	--	--	5	--	1,510	258,000	12,700	82,800
Taiwan	--	--	--	699	119	555	--	--	--	--	--	(2)
United Kingdom	--	--	--	--	--	--	2	2	3	10,100	(2)	10
Other	--	--	--	54	2	35	23	--	12	1,220	209	321
Total	27,100	1,460	18,000	1,500	121	729	157,000	13,000	72,200	882,000	51,300	356,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2003	2004		2003	2,004		2003	2004		2003	2004	
		June	January - June		June	January - June		June	January - June		June	January - June
Belgium	87	--	--	39	--	6	--	234	516	2	--	--
Canada	7,540	1,180	13,400	6,740	1,950	9,300	17,200	1,340	14,000	2,100	429	1,140
China	1,380	61	419	153	--	33	567	--	188	71,600	--	19,300
Germany	--	--	25	(2)	3	18	441	339	552	185	14	58
Hong Kong	27	64	160	74	--	12	2,650	220	1,800	52	--	3
India	--	--	36	175	--	20	118	28	28	1,370	290	1,820
Italy	--	--	--	5	--	--	219	--	54	81	1,090	20,100
Japan	107	--	13	40	2	39	85	43	340	251	--	39
Korea, Republic of	--	--	23	12	2	6	788	906	4,020	742	--	3,170
Mexico	224	46	112	8,090	389	1,660	252	(2)	24	12,200	301	3,170
Philippines	--	--	--	--	--	--	44	161	662	163	--	--
Saudi Arabia	--	--	--	--	--	--	--	--	--	28	--	7,840
Singapore	6	--	--	4	--	4	478	60	370	71	--	39
Spain	46	48	95	36	--	--	422	10	228	5	--	--
Taiwan	11	--	96	--	--	5	1,270	80	718	3,630	--	28,500
United Arab Emirates	4	--	5	4	5	5	503	--	347	4	--	--
United Kingdom	41	--	9	77	14	53	430	45	238	42	7	42
Other	392 <sup>r</sup>	33	78	186 <sup>r</sup>	3	209	652 <sup>r</sup>	46	492	835 <sup>r</sup>	592	3,000
Total	9,860	1,430	14,500	15,600	2,360	11,400	26,100	3,510	24,600	93,300	2,720	88,200

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 16  
U.S. COPPER SCRAP TRADE<sup>1</sup>

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	2004			2004			2004			2004		
	2003	June	January - June	2003	June	January - June	2003	June	January - June	2003	June	January - June
Belgium	--	--	--	46	--	--	2,630	86	1,680	6,010	883	4,140
Canada	4,130	572	2,820	37,300	4,050	23,100	21,200	3,570	16,100	17,500	1,060	6,930
China	--	--	--	824	--	233	225,000	15,900	98,500	245,000	12,800	122,000
Costa Rica	921	131	629	404	18	173	--	--	--	6	--	--
Dominican Republic	1,100	17	365	766	8	257	--	--	--	4	--	--
Germany	19	--	2	5,250	7	1,100	7,900	1,390	3,850	7,680	1,580	5,680
Guatemala	474	26	207	869	86	295	--	--	--	--	--	--
Honduras	534	110	467	488	37	301	--	--	--	--	--	--
Hong Kong	--	--	--	--	--	--	2,530	224	2,990	9,600	297	6,370
India	--	--	--	18	--	--	5,550	396	2,390	45,400	3,440	19,900
Jamaica	640	35	277	140	15	101	--	--	--	--	--	--
Japan	77	7	41	261	--	60	6,790	950	4,250	9,110	1,110	4,810
Korea, Republic of	--	--	--	21	--	--	25,400	1,490	14,300	15,500	1,310	9,790
Malaysia	--	--	--	272	66	113	3,620	106	383	88	--	28
Mexico	9,950	842	4,810	18,700	2,020	11,400	3,200	427	2,340	808	49	815
Taiwan	--	--	--	462	358	1,340	8,500	1,100	5,550	6,860	895	7,510
United Kingdom	278	81	204	781	232	623	97	20	20	857	1,380	2,330
Other	1,480	161	972	4,390	343	1,970	2,940	127	586	9,070	1,040	5,980
Total	19,600	1,980	10,800	71,000	7,240	41,100	316,000	25,700	153,000	373,000	25,800	196,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.