

Mineral Industry Surveys

For information, contact:

Daniel L. Edelstein, Copper Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4978, Fax: (703) 648-7757
E-mail: dedelste@usgs.gov

Virginia C. Harper (Data)
Telephone: (703) 648-7983
Fax: (703) 648-7975
E-mail: vharper@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

COPPER IN DECEMBER 2006

The average daily mine production of copper in December was unchanged from that in November, according to data compiled by the U.S. Geological Survey. Following the return to full production in November of two smelters closed for maintenance, the average daily smelter production in December rose by 60% to the highest level since October 2005. Downstream average daily electrolytically refined copper production rose by 21% compared with that in November. Consumption of refined copper continued its fourth quarter downward slide, falling by 8% to its lowest monthly level in 20 years.

At yearend, several companies announced significant progress towards startup of new mining projects. In December, Mercator Minerals Ltd. (Kingman, AZ, and Vancouver, British Columbia, Canada) published an updated preliminary feasibility study for a proposed expansion of its Mineral Park Mine in northwestern Arizona. The current operation consists of a run-of-the-mine leach facility with a capacity to produce 6,800 metric tons per year (t/yr) of electrowon copper, though production was reported to be about one half that level. The revised technical report was for the two-stage development of a 45,000-metric-ton-per-day (t/d) milling operation (up from 34,000 t/d in the previous study) that would produce 26,000 t/yr and 5,700 t/yr, respectively, of copper and molybdenum in concentrate. Production startup of a 23,000-t/d mill was expected by the second quarter of 2008, with a duplicate mill expected to start about 1 year later. Proven and probable reserves of mill ore were estimated at 396 million metric tons (Mt) having a copper equivalent grade of 0.368% copper. Life-of-mine mill production was projected at 500,000 metric tons (t) of copper and 117,000 t of molybdenum. Leach reserves were estimated at 75 Mt grading 0.07% copper. The updated preliminary feasibility study followed Mercator's announcement that it had placed orders for two new ball mills for expedited delivery in early 2008. Mercator had previously planned to use lower-capacity equipment it had purchased in 2005 from the mothballed Mission South mill located at Asarco Incorporated's (Phoenix, AZ) Mission complex. That purchase, however, was being challenged in the U.S. Bankruptcy Court overseeing the restructuring of Asarco on the assertion that Mercator had not

paid a fair market value (Chase, 2006; Mercator Minerals Ltd., 2006a, b; 2007^{§1}).

PolyMet Mining Corp. (Vancouver, British Columbia, Canada) announced in November that it was well advanced with discussions with the State of Minnesota regarding complete permitting of its NorthMet Project and was working with the State to insure that its draft Environmental Impact Statement would be acceptable. PolyMet still expected to meet its target of producing metal by the fourth quarter of 2008 from the NorthMet copper-nickel precious metals ore body in north-eastern Minnesota. In December, PolyMet announced that it had secured a power contract and had purchased additional infrastructure from Cleveland-Cliffs Inc, whose Erie taconite mill, located 6 miles from NorthMet, and connecting rail line had been previously purchased. Successful pilot plant testing earlier in the year of hydrometallurgical processing of bulk concentrate indicated an overall 92% copper recovery as electrowon cathode. Annual production over the first 5 years was projected to average 33,000 t of copper, 7,000 t of contained nickel, and 3,300 kg of precious metals. The proven and probable reserves were estimated at 165 Mt grading 0.31% copper (Polymet Mining Corp., 2006a, b, c).

In November, Quadra Mining Ltd. (Vancouver) announced that having completed an updated technical report, the Board of Directors approved development of the \$128 million Carlota project in Arizona. Startup was scheduled for the second half of 2008 with expected production of 13,000 t of electrowon copper in 2008, ramping up to 34,000 t in 2009. Mine life was projected to be 11 years, from 78 Mt of leachable reserves grading 0.45% copper (Quadra Mining Ltd., 2007[§]).

Mines Management, Inc. (Spokane Washington) announced that having received final approval in November from the Montana State Department of Environmental Quality, it was proceeding with underground evaluation and drilling activities at its Montanore silver-copper project in northwestern Montana. Noranda Minerals Corp. (now owned by Xstrata plc, Zug, Switzerland) had previously developed an adit and surface

¹References that include a section mark (§) are found in the Internet References Cited section.

facility at the site that it abandoned in 1996 (Mines Management, Inc., 2007).

PRELIMINARY ANNUAL REVIEW OF 2006

- Preliminary production data for the full-year 2006 indicate that U.S. mine production rose by 6% compared with that in 2005: Production of copper in concentrate rose by 15% while electrowon production declined by 4%. Concentrate output rose following a return to full production at Asarco's mines in Arizona, whose production was reduced by a 16-week strike in 2005; increased output from the Bingham Canyon Mine in Utah; and startup of concentrate production at the Morenci Mine in Arizona. Production of electrowon copper at Phelps Dodge Corp.'s mines in the United States fell to 459,000 t from 483,000 t in 2005, while their production of copper in concentrate declined by about 3% to 183,000 t (Phelps Dodge Corp., 2007). Production of copper in concentrate at Bingham Canyon rose by 20% to 266,000 t owing to higher mill throughput and ore grades (Rio Tinto plc, 2007, p. 5). The Lisbon Valley Mine in Utah and the Phoenix Mine in Arizona reported their first copper production in 2006.
- Smelter production for the full-year 2006 was down by 4% from that in 2005, in large part owing to temporary closures at the three operating smelters during the year. (See Copper in June 2006 and Copper in October 2006.) Despite the drop in electrowon production, total refined production was essentially unchanged from that in 2005.
- U.S. reported consumption of refined copper declined by 6% to the lowest level in 15 years and was down by 30% from peak consumption in 2000. Shipments by domestic producers of wire rod declined by 5.8%, and U.S. apparent consumption of wire rod declined by 6.1% from that in 2005 (American Bureau of Metal Statistics, 2007). Shipments during the fourth quarter were particularly weak, declining by 23% from those during the fourth quarter of 2005. The sharp decline was attributed to the weak housing market and high copper prices that encouraged destocking along the entire supply chain.
- Copper prices continued their upward trend during the first 5 months of the year, and in May the COMEX spot price reached a record-high price of \$4.08 per pound, nearly twice the previous record-high price of \$2.28 set in December 2005. The refined copper production deficit that had persisted over the preceding 3 years resulted in tight supplies, limited stock availability, and concerns over supply adequacy. Higher metal prices also led to increased speculative interest in metal markets. Prices generally trended downward during the second half of the year, with the COMEX price

averaging \$3.07 per pound in December and \$3.15 per pound for the year, an 81% increase from that in 2005.

- International Copper Study Group (ICSG) data indicate that the global refined copper market for the first 11 months of 2006 had an apparent production surplus of about 108,000 t. This compares with a production deficit of 263,000 t for the same period in 2005. Reported stocks at the end of November of 955,000 t were up by 104,000 t from those at yearend 2005, yet remained well below the 1.78 Mt held at the end of 2003. Owing to production disruptions in the first part of the year, global mine production for the first 11 months of 2006 was essentially unchanged compared with that in the same period of 2005. Total world refined production, however, increased by 5.1% in the first 11 months of 2006 compared with that of the same period of 2005. World refined usage increased by about 2.6% compared with usage in the same period of 2005 (International Copper Study Group, 2007).

References Cited

- American Bureau of Metal Statistics, Inc., 2007, US copper wire rod market: Chatham, NJ, American Bureau of Metal Statistics, Inc. Report 4, February 28, 8 p.
- Chase, Martyn, 2006, Court backs Asarco request to stop removal of Ariz. Mill: American Metal Market, v. 114, no. 45-2, November 14, p. 6.
- International Copper Study Group, 2007, Copper—Preliminary data for November 2006: Lisbon, Portugal, International Copper Study Group press release, February 16, 2007.
- Mines Management, Inc., 2007, Mines Management announces it is proceeding with Montanore underground drill program: Spokane, WA, Mines Management, Inc. press release, January 4, 2 p.
- Phelps Dodge Corp., 2007, Phelps Dodge reports record quarterly net income of \$1,324.3 million, or \$6.50 per share for the 2006 fourth quarter: Phoenix, Arizona, Phelps Dodge Corp. news release, January 29, 18 p.
- Rio Tinto plc, 2007, Fourth quarter 2006 operations review: London, United Kingdom, Rio Tinto plc news release, January 17, 20 p.
- PolyMet Mining Corp., 2006a, PolyMet and Minnesota Power agree to long-term energy contract: Vancouver, British Columbia, Canada, PolyMet Mining Corp. news release, December 12, 3 p.
- PolyMet Mining Corp., 2006b, PolyMet concludes Minnesota asset purchase from Cleveland-Cliffs: Vancouver, British Columbia, Canada, PolyMet Mining Corp. news release, December 21, 2 p.
- PolyMet Mining Corp., 2006c, PolyMet receives positive definitive feasibility study for its NorthMet copper-nickel-precious metals project: Vancouver, British Columbia, Canada, PolyMet Mining Corp. news release, September 25, 9 p.

Internet References Cited

- Mercator Minerals Ltd., 2006a (December 4), Mercator advances copper/molybdenum mill expansion, accessed February 1, 2007, via URL <http://www.mercatorminerals.com>.
- Mercator Minerals Ltd., 2006b (December 29), technical report preliminary feasibility study on phase I & phase II copper-moly milling expansion Mineral Park Mine Mohave County, Arizona, accessed February 1, 2007, via URL <http://www.mercatorminerals.com>.
- Mercator Minerals Ltd., 2007, Mercator reports enhanced economics for Mineral Park expansion incorporating recently purchased milling equipment, accessed February 1, 2007, via URL <http://www.mercatorminerals.com>.
- Quadra Mining Ltd., 2007 (undated), Carlota project, accessed March 1, 2007, at URL <http://www.quadramining.com/s/carlota.asp>.

TABLE 1
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES¹

(Metric tons, unless otherwise specified)

	Source table ²	2006			January - December
		2005 ^p	November	December	
Production:					
Primary:					
Mine, recoverable	(2)	1,140,000	99,900 ^r	103,000	1,200,000
Refinery:					
Electrolytic:					
Domestic and foreign	(4)	654,000	47,700	59,500	675,000
Electrowon	(4)	554,000	43,000	44,800	530,000
Total	(4)	1,210,000	90,700	104,000	1,210,000
Secondary recoverable copper:					
Refineries	(5)	47,200	3,700	3,760	44,800
Ingot makers ³	(5)	94,200 ^r	7,850 ^r	7,850	94,200
Brass and wire-rod mills	(5)	697,000	54,100	49,400	719,000
Foundries, etc. ³	(5)	59,400 ^r	4,950 ^r	4,950	59,400
Smelter, total	(3)	523,000	32,300	53,500	501,000
Consumption:					
Apparent	(8)	2,400,000 ^r	111,000	NA	NA
Refined (reported)	(7)	2,270,000	144,000	132,000	2,130,000
Purchased copper-base scrap	(9)	1,150,000 ^r	89,400 ^r	83,900	1,170,000
Stocks at end of period:					
Total refined	(11)	65,900	157,000 ^r	196,000	XX
Blister, etc.	(11)	44,300	19,000 ^r	18,800	XX
Prices:					
U.S. producer cathode (cents per pound) ⁴	(12)	173.493	322.386	307.200	314.751
Imports: ⁵					
Ores and concentrates ⁶	(14)	223	--	NA	NA
Refined	(14)	1,000,000	58,300	NA	NA
Exports: ⁵					
Ores and concentrates ⁶	(15)	137,000	18,000	NA	NA
Refined	(15)	39,500	6,190	NA	NA

^pPreliminary. ^rRevised. NA Not available. XX Not applicable. -- Zero.

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

²Numbers in parentheses refer to the significant tables where these data are located.

³Monthly data and 2006 cumulative data estimated based on 2005 monthly average.

⁴Source: Platts Metals Week.

⁵Source: U.S. Census Bureau.

⁶Copper content.

TABLE 2
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES¹

(Metric tons)

Period	Recoverable copper			Contained copper		
	Arizona	Others ²	Total	Electrowon	Concentrates ³	Total
2005: ^P						
December	57,500	38,300	95,800	48,000	49,200	97,200
Year	690,000	450,000	1,140,000	554,000	603,000	1,160,000
2006:						
January	55,900	36,700 ^r	92,600	43,000	51,400 ^r	94,400 ^r
February	52,700	34,300 ^r	87,000 ^r	39,600	49,100 ^r	88,700 ^r
March	60,800	44,400	105,000	45,300	62,000	107,000
April	58,900	39,000	97,900	44,400	55,500 ^r	99,900
May	62,000	43,700 ^r	106,000	47,900	60,300 ^r	108,000
June	60,500	41,000	101,000	45,800	57,700 ^r	103,000
July	60,400	42,700 ^r	103,000	45,500	59,600	105,000
August	59,900	40,700 ^r	101,000 ^r	43,700	58,700	102,000
September	59,300	38,900	98,100 ^r	42,800	57,400	100,000
October	59,700 ^r	43,900 ^r	104,000 ^r	44,300	61,300 ^r	106,000 ^r
November	60,800 ^r	39,200 ^r	99,900 ^r	43,000	59,000 ^r	102,000 ^r
December	62,400	40,500	103,000	44,800	59,700	104,000
January - December	713,000	485,000	1,200,000	530,000	692,000	1,220,000

^PPreliminary. ^rRevised.

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

²Includes production from Alaska, Idaho, Missouri, Montana, Nevada, New Mexico, and Utah.

³Includes copper content of precipitates and other metal concentrates.

TABLE 3
COPPER PRODUCED AT SMELTERS IN
THE UNITED STATES, BY SOURCE^{1,2}

(Metric tons, copper content)

Period	Anode production
2005: ^P	
December	42,200
January - December	523,000
2006:	
January	47,500
February	47,900
March	45,800
April	45,900
May	51,000
June	38,100
July	42,500
August	45,100
September	33,200
October	18,700
November	32,300
December	53,500
January - December	501,000

^PPreliminary.

¹Includes blister, anode and copper from primary or secondary sources.

²Data 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 RECOVERY¹

(Metric tons)

Period	Primary materials			Scrap	Total refined
	Electrolytically refined ²	Electrowon	Total		
2005: ^P					
December	63,100	48,000	111,000	3,880	115,000
Year	654,000	554,000	1,210,000	47,200	1,260,000
2006:					
January	53,000	43,000	96,000	3,820	99,900
February	57,300	39,600	96,900	3,720	101,000
March	68,400	45,300	114,000	3,770	117,000
April	60,800	44,400	105,000	3,700	109,000
May	61,500	47,900	109,000	3,730	113,000
June	64,600	45,800	110,000	3,700	114,000
July	51,300	45,500	96,800	3,700	100,000
August	53,800	43,700	97,500	3,700	101,000
September	55,400	42,800	98,200	3,770	102,000
October	41,800	44,300	86,100	3,700	89,800
November	47,700	43,000	90,700	3,700	94,400
December	59,500	44,800	104,000	3,760	108,000
January - December	675,000	530,000	1,210,000	44,800	1,250,000

^PPreliminary.

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

²From domestic and foreign source materials.

TABLE 5
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP¹

(Metric tons, copper content)

Period	Refineries ²		Ingot makers ³		Brass and wire-rod mills		Foundries, etc. ³		Total ⁴
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2005: ^P									
December	1,340	2,550	2,010 ^r	5,840 ^r	54,500	1,490	1,880 ^r	3,070 ^r	72,700 ^r
Year	16,000	31,200	24,100 ^r	70,100 ^r	667,000	29,800	22,500 ^r	36,900 ^r	898,000 ^r
2006:									
January	1,340	2,480	2,010 ^r	5,840 ^r	63,500	1,460	1,880 ^r	3,070 ^r	81,600 ^r
February	1,340	2,390	2,010 ^r	5,840 ^r	58,300	496	1,880 ^r	3,070 ^r	75,300 ^r
March	1,340	2,430	2,010 ^r	5,840 ^r	62,700	1,560	1,880 ^r	3,070 ^r	80,900 ^r
April	1,340	2,370	2,010 ^r	5,840 ^r	60,700	1,060	1,880 ^r	3,070 ^r	78,300 ^r
May	1,340	2,400	2,010 ^r	5,840 ^r	62,900	1,840	1,880 ^r	3,070 ^r	81,200 ^r
June	1,340	2,370	2,010 ^r	5,840 ^r	63,000	1,400	1,880 ^r	3,070 ^r	80,900 ^r
July	1,340	2,370	2,010 ^r	5,840 ^r	59,400	697	1,880 ^r	3,070 ^r	76,600 ^r
August	1,340	2,370	2,010 ^r	5,840 ^r	60,800	838	1,880 ^r	3,070 ^r	78,200 ^r
September	1,340	2,440	2,010 ^r	5,840 ^r	57,200	772	1,880 ^r	3,070 ^r	74,500 ^r
October	1,340	2,370	2,010 ^r	5,840 ^r	56,400	764	1,880 ^r	3,070 ^r	73,700 ^r
November	1,340	2,370	2,010 ^r	5,840 ^r	53,200	824	1,880 ^r	3,070 ^r	70,600 ^r
December	1,340	2,420	2,010 ^r	5,840 ^r	48,600	824	1,880 ^r	3,070 ^r	66,000 ^r
January - December	16,000	28,800	24,100	70,100	707,000	12,500	22,500	36,900	918,000

^PPreliminary. ^rRevised.

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

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

³Monthly data and 2006 cumulative data estimated based on 2005 annual data.

⁴Does not include an estimate, based on reported 2005 data of 3,280 tons per month from new scrap and 1,200 tons per month of copper recovered from scrap other than copper-base.

TABLE 6
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES¹

(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
2005: ^P						
December	104,000	131,000	101,000	128,000	47,900	25,100
Year	1,370,000	1,700,000	1,380,000	1,700,000	XX	XX
2006:						
January	112,000	156,000 ^r	111,000	148,000	48,800	32,700 ^r
February	114,000	125,000	114,000	133,000	48,500	24,300 ^r
March	117,000	146,000 ^r	118,000	146,000 ^r	49,900	24,600 ^r
April	115,000	137,000	115,000	140,000 ^r	49,100	23,700 ^r
May	120,000	146,000 ^r	122,000	150,000 ^r	47,300	22,900 ^r
June	118,000	145,000 ^r	117,000	146,000 ^r	48,500	22,200 ^r
July	101,000	134,000 ^r	104,000	132,000 ^r	45,700	24,400 ^r
August	112,000	139,000 ^r	112,000	139,000 ^r	46,000	24,700
September	106,000	138,000 ^r	107,000	132,000 ^r	45,200	31,200
October	110,000	113,000 ^r	108,000	119,000 ^r	47,300	25,500
November	101,000	110,000 ^r	100,000	108,000 ^r	48,000	28,000
December	93,000	92,100	91,500	95,800	49,500	24,300
January - December	1,320,000	1,580,000	1,320,000	1,590,000	XX	XX

^PPreliminary. ^rRevised. XX Not applicable.

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

TABLE 7
CONSUMPTION OF REFINED COPPER¹

(Metric tons)

Period and item	Brass mills	Wire-rod mills	Other plants ²	Total
2005: ^P				
December	41,200	126,000	5,430 ^r	173,000
Year	528,000	1,680,000	65,200 ^r	2,270,000
2006:				
January	44,300	159,000	5,430 ^r	209,000
February	42,600	125,000	5,430 ^r	173,000 ^r
March	45,000	135,000	5,430 ^r	185,000
April	42,800	141,000	5,430 ^r	189,000
May	47,200	147,000	5,430 ^r	199,000
June	41,500	148,000	5,430 ^r	195,000
July	37,200	139,000	5,430 ^r	182,000
August	38,300	139,000	5,430 ^r	182,000
September	38,900	136,000	5,430 ^r	181,000
October	39,500	110,000	5,430 ^r	155,000 ^r
November	36,200	103,000	5,430 ^r	144,000
December:				
Cathodes	26,100	90,600	956	118,000
Wire bars	--	--	(3)	(3)
Ingots and ingot bars	2,040	--	2,460	4,500
Cakes and slabs	(3)	--	(3)	(3)
Billets and other	8,170	--	2,010	10,200
Total	36,300	90,600	5,430	133,000
January - December	490,000	1,570,000	65,200	2,130,000

^PPreliminary. ^rRevised. -- Zero.

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

²Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2005 annual data.

³Withheld to avoid disclosing company proprietary data; included with "Billets and other."

TABLE 8
U.S. APPARENT CONSUMPTION OF COPPER¹

(Metric tons)

Period	Refined copper production	Copper in old scrap ²	Refined general imports ³	Refined exports ³	Stock change during period	Apparent consumption
2005: ^P						
December	111,000	14,100 ^r	102,000	3,020	4,960	219,000
Year	1,210,000	182,000 ^r	977,000	39,500	(70,700)	2,400,000
2006:						
January	96,000	14,100 ^r	111,000	5,600	16,200	200,000
February	96,900	13,000 ^r	108,000	7,320	24,200 ^r	186,000 ^r
March	114,000	14,100 ^r	80,100	6,780	2,420 ^r	200,000 ^r
April	105,000	13,500 ^r	69,100	9,600	(18,500)	197,000 ^r
May	109,000	14,300 ^r	100,000	6,270	(3,730) ^r	221,000 ^r
June	110,000	13,900 ^r	94,100	13,100	(10,800) ^r	216,000 ^r
July	96,800	13,200 ^r	91,400	6,010	8,720 ^r	187,000 ^r
August	97,500	13,300 ^r	101,000	9,560	5,140 ^r	198,000 ^r
September	98,200	13,300 ^r	106,000	9,330	12,900 ^r	195,000 ^r
October	86,100	13,200 ^r	96,400	13,700	8,750 ^r	173,000 ^r
November	90,700 ^r	13,300 ^r	59,300	6,190	45,900 ^r	111,000
December	104,000	13,400	NA	NA	39,300	NA
January - December	1,210,000	163,000	NA	NA	130,000	NA

^PPreliminary. ^rRevised. NA Not available.

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

²Includes 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 2005 data.

³Source: U.S. Census Bureau.

TABLE 9
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP¹

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers ²		Brass and wire-rod mills ³		Foundries, etc. ²		Total scrap used
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2005: ^P									
December	1,350	2,570	4,010 ^r	8,050 ^r	68,000	1,640	3,340 ^r	3,470 ^r	92,400 ^r
Year	16,200	31,700 ^r	48,100 ^r	96,600 ^r	842,000	31,600	40,100 ^r	41,600 ^r	1,150,000 ^r
2006:									
January	1,350	2,510 ^r	4,010 ^r	8,050 ^r	79,400	1,590	3,340 ^r	3,470 ^r	104,000 ^r
February	1,350	2,390 ^r	4,010 ^r	8,050 ^r	72,900	659	3,340 ^r	3,470 ^r	96,200 ^r
March	1,350	2,390 ^r	4,010 ^r	8,050 ^r	78,500	1,730	3,340 ^r	3,470 ^r	103,000 ^r
April	1,350	2,390 ^r	4,010 ^r	8,050 ^r	75,500	1,070	3,340 ^r	3,470 ^r	99,200 ^r
May	1,350	2,390 ^r	4,010 ^r	8,050 ^r	78,300	1,850	3,340 ^r	3,470 ^r	103,000 ^r
June	1,350	2,390 ^r	4,010 ^r	8,050 ^r	78,900	1,410	3,340 ^r	3,470 ^r	103,000 ^r
July	1,350	2,390 ^r	4,010 ^r	8,050 ^r	73,000	704	3,340 ^r	3,470 ^r	96,300 ^r
August	1,350	2,390 ^r	4,010 ^r	8,050 ^r	76,600	847	3,340 ^r	3,470 ^r	100,000 ^r
September	1,350	2,390 ^r	4,010 ^r	8,050 ^r	71,800	780	3,340 ^r	3,470 ^r	95,200 ^r
October	1,350	2,390 ^r	4,010 ^r	8,050 ^r	70,900	772	3,340 ^r	3,470 ^r	94,300 ^r
November	1,350	2,390 ^r	4,010 ^r	8,050 ^r	66,000	832	3,340 ^r	3,470 ^r	89,400 ^r
December	1,350	2,390	4,010	8,050	60,500	832	3,340	3,470	83,900
January - December	16,200	28,700	48,100	96,600	882,000	13,100	40,100	41,600	1,170,000

^PPreliminary. ^rRevised.

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

²Monthly data and 2006 cumulative data estimated from 2005 annual data.

³Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP^{1,2}

(Metric tons, gross weight)

Scrap type and processor	2005 ^p	2006			
		October	November	December	January - December
No. 1 wire and heavy:					
Smelters and refiners	58,900	6,060 ^r	6,060 ^r	6,060	72,700
Brass and wire-rod mills	382,000	31,000	30,600	28,000	400,000
No. 2 mixed heavy and light:					
Smelters and refiners	25,200	2,330 ^r	2,330 ^r	2,390	28,300
Brass and wire-rod mills	5,260	1,140	1,220	861	13,600
Total unalloyed scrap:					
Smelters and refiners	84,100	8,380 ^r	8,380 ^r	8,440	101,000
Brass and wire-rod mills	387,000	32,100	31,800	28,900	414,000
Red brass:³					
All plants	40,700	2,820 ^r	2,860 ^r	2,720	35,400
Leaded yellow brass:					
All plants	191,000	14,700	14,100	13,300	185,000
Yellow and low brass:					
All plants	175,000	15,100	11,600 ^r	11,000	175,000
Cartridge cases and brass:					
All plants	94,500	7,820 ^r	7,510 ^r	6,540	93,900
Auto radiators:					
Smelters and refiners	25,000	2,030 ^r	2,030 ^r	2,030	24,300
Bronzes:					
Smelters and refiners	11,100	862 ^r	862 ^r	862	10,300
Brass mills	5,790	501	660	499	7,110
Nickel-copper alloys:					
All plants	18,200	1,480 ^r	1,150 ^r	1,190	18,500
Low grade and residues:					
Smelters and refiners	35,000 ^r	2,910 ^r	2,910 ^r	2,910	35,000
Other alloy scrap:⁴					
Smelters and refiners	1,130	99 ^r	99 ^r	99	1,180
Brass mills	5,400 ^r	450 ^r	450 ^r	450	5,400
Total alloyed scrap:					
Smelters and refiners	115,000	9,050 ^r	9,050 ^r	9,050	109,000
Brass mills	488,000	39,700 ^r	35,200	32,600	483,000
Total scrap:					
Smelters and refiners	199,000	17,400 ^r	17,400 ^r	17,500	210,000
Brass and wire-rod mills	875,000 ^r	71,800 ^r	67,000	61,400	897,000

^pPreliminary. ^rRevised.

¹Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 6,800 tons of scrap per month based on 2005 annual data; monthly data include estimates of about 12,100 tons of scrap per month consumed by ingot makers.

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

³Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

⁴Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

TABLE 11
COPPER STOCKS AT END OF PERIOD¹

(Metric tons)

Period	Crude copper ²	Refined copper					LME ⁶	Total refined
		Refineries ³	Wire-rod mills ³	Brass mills ³	Other ⁴	Comex ⁵		
2005: ^P								
December	44,300	8,190	20,400	24,500	5,750	6,180	800	65,900
2006:								
January	17,300	11,200	26,800	27,800	5,750	10,600	25	82,100
February	21,700	14,500	28,600	29,900	5,750	27,600 ^r	--	106,000 ^r
March	15,200	13,300	27,700	28,100	5,750	32,000	1,880	109,000
April	18,800	7,690	28,400	31,700	5,750	15,500	1,080	90,200
May	40,600	10,000	30,300	31,400	5,750	8,660 ^r	350	86,400 ^r
June	18,600	5,400	24,400	32,700	5,750	7,170 ^r	225	75,600 ^r
July	23,900	6,520	31,600	34,300	5,750	6,130 ^r	--	84,300 ^r
August	20,500	9,030	24,800	38,600	5,750	11,300 ^r	--	89,500 ^r
September	27,300	9,490	30,500	36,400	5,750	18,500 ^r	1,800	102,000 ^r
October	24,300	11,900	24,400	33,700	5,750	21,100 ^r	14,300	111,000 ^r
November	19,000 ^r	20,000 ^r	30,100	35,800	5,750	28,700 ^r	36,700	157,000 ^r
December	18,800	28,100	21,500	34,500	5,750	30,900	75,600	196,000

^PPreliminary. ^rRevised. -- Zero.

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

²Copper content of blister and other materials in transit and in process of refining.

³Stocks of refined copper as reported; no estimates are made for nonrespondents.

⁴Monthly estimates based on reported and 2005 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

⁵Comex Division of New York Mercantile Exchange, Inc., New York.

⁶London 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 ¹	Comex first position ²	LME cash price Grade A
2005: ^P			
December	222.511	217.245	207.569
Year	173.493	168.227	166.837
2006:			
January	224.000	218.258	214.716
February	230.905	225.079	225.965
March	238.235	232.409	231.438
April	302.679	296.853	289.673
May	381.687	375.861	364.874
June	345.474	339.648	326.400
July	368.147	362.321	349.740
August	358.887	353.061	348.985
September	352.184	346.385	344.768
October	345.226	339.400	340.164
November	322.386	316.560	318.786
December	307.200	301.413	302.690
January - December	314.751	308.937	304.850

^PPreliminary.

¹Listed as "U.S. producer cathode."

²Listed 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	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 Scrap	Red brass turnings and borings
2005: ^P				
December	201.59	179.59	117.91	74.07
Year	153.46	137.28	95.92	61.10
2006:				
January	208.32	188.91	125.00	82.50
February	221.85	206.90	125.00	82.50
March	229.26	225.24	170.00	77.50
April	283.85	257.95	170.00	77.50
May	355.17	322.74	170.00	77.50
June	310.98	279.19	192.62	121.10
July	333.43	273.15	197.35	118.20
August	328.30	265.84	210.05	125.32
September	320.65	282.05	208.10	125.30
October	315.34	285.23	216.09	129.27
November	298.18	272.48	216.50	126.85
December	286.97	266.36	206.50	121.56
January - December	291.03	260.50	183.93	105.43

^PPreliminary.

Source: American Metal Market.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS¹

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2006			2006			2006			2006		
	2005	January - November	November	2005	January - November	November	2005	January - November	November	2005	January - November	November
Austria	--	--	--	--	--	--	--	--	--	3,360	--	1,510
Brazil	--	--	--	--	--	--	10	--	--	30,500	--	20,200
Canada	2	--	191	138	10	510	86,500	7,060	80,400	296,000	20,900	244,000
Chile	--	--	--	--	--	--	41,700	6,890	71,500	429,000	20,300	492,000
Finland	--	--	--	--	--	--	65	34	894	2,910	--	--
Germany	--	--	--	--	--	(2)	12	(2)	8	24,900	1,830	24,700
Japan	--	--	--	--	--	--	(2)	--	(2)	5,340	464	5,760
Kazakhstan	--	--	--	--	--	--	--	--	--	6,300	2,270	48,100
Mexico	221	--	--	37	(2)	17	3,870	267	2,810	28,900	5,370	22,500
Peru	--	--	--	--	--	--	--	--	--	154,000	7,150	151,000
Taiwan	--	--	--	1,180	86	1,040	--	--	--	--	--	--
Other	--	--	1	287	14	127	16	--	21	23,200	4	7,930
Total	223	--	192	1,640	111	1,700	132,000	14,300	156,000	1,000,000	58,300	1,020,000

-- Zero.

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

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 15
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS¹

(Metric tons, copper content)

Country or territory	Ore and concentrate ²			Matte, ash and precipitates			Blister and anodes			Refined		
	2006			2006			2006			2006		
	2005	November	January - November	2005	November	January - November	2005	November	January - November	2005	November	January - November
Australia	--	--	--	11	--	1,840	43	--	55	67	--	64
Belgium	41	--	--	37	(3)	75	724	--	427	49	--	--
Canada	18,300	1,890	20,300	30,900	2,680	65,900	20,500	114	4,280	2,070	4,040	70,800
China	75,700	8,360	30,500	9,650	291	6,170	343	7	347	19,000	1,200	9,900
Costa Rica	3	--	--	(3)	2	9	1	(3)	(3)	2	--	11
Germany	--	--	--	93	--	2	779	199	1,220	182	--	112
Hong Kong	2	--	--	1	--	6	3,190	316	3,500	7	22	66
India	149	--	5,200	1	--	3	58	--	171	6,650	738	4,650
Japan	28,700	2,640	15,000	70	--	2	2,230	8	637	5	--	(3)
Korea, Republic of	1	--	2,980	32	--	11	464	53	840	132	40	123
Mexico	6,380	5,070	17,600	682	745	13,800	2,660	3	335	9,860	14	5,200
Saudi Arabia	--	--	--	--	--	--	11	--	--	11	--	93
Singapore	19	--	--	20	--	44	491	19	401	13	3	11
Spain	1,730	--	104	--	--	--	203	25	165	--	16	59
Sweden	--	--	1	--	--	--	3,190	--	1,820	--	--	164
Taiwan	15	--	16	14	1	11	1,680	120	1,470	180	--	191
Other	5,600	--	43	338	255	1,500	4,950	133	1,840	1,300	118	2,080
Total	137,000	18,000	91,700	41,800	3,980	89,400	41,600	999	17,500	39,500	6,190	93,500

-- Zero.

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

²Data for 2006 adjusted by U.S. Geological Survey to reflect estimated copper content.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 16
U.S. COPPER SCRAP IMPORTS¹

(Metric tons, gross weight)

Country or territory	Unalloyed			Alloyed		
	2006			2006		
	2005	November	January - November	2005	November	January - November
Brazil	--	--	--	276	--	201
Canada	9,080	621	6,960	47,700	2,730	40,900
China	--	--	1	120	45	587
Costa Rica	2,020	209	1,700	495	210	1,480
Germany	85	--	34	76	--	1
Guatemala	79	35	179	1,500	251	2,160
Honduras	1,910	101	1,640	651	64	731
Jamaica	269	52	318	125	32	150
Japan	70	18	104	135	--	32
Mexico	13,300	590	6,460	24,800	2,440	27,300
Nicaragua	831	115	858	573	58	443
Russia	--	--	--	--	--	101
Singapore	--	--	--	102	42	367
Taiwan	2	--	--	348	16	231
United Kingdom	258	20	183	925	--	570
Other	2,150	161	4,950	5,850	484	10,900
Total	30,100	1,920	23,400	83,700	6,370	86,100

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 17
U.S. COPPER SCRAP EXPORTS¹

(Metric tons, gross weight)

Country or territory	Unalloyed							Alloyed					
	2005	2006						2005	2006				
		No. 1		No. 2		Other			Segregated		Unsegregated		
		November	January - November	November	January - November	November	January - November		November	January - November	November	January - November	
Belgium	644	--	176	--	22	146	1,040	6,890	319	1,990	688	9,750	
Canada	27,900	--	--	--	--	2,960	69,500	13,900	697	13,400	936	24,500	
China	265,000	3,050	43,200	11,200	112,000	8,120	71,200	182,000	15,600	126,000	12,600	103,000	
Germany	10,600	115	2,340	715	1,520	987	10,100	9,990	331	6,470	479	8,340	
Hong Kong	9,200	50	246	661	3,510	755	1,440	12,800	197	1,020	854	9,260	
India	4,460	--	220	--	21	58	1,000	15,800	564	9,080	--	781	
Japan	6,710	192	1,050	193	536	531	5,160	7,950	410	6,030	126	1,380	
Korea, Republic of	27,200	391	8,580	116	3,120	452	7,760	10,200	861	10,900	79	490	
Mexico	1,010	--	181	--	--	230	443	1,570	21	724	173	5,950	
Spain	145	--	10	--	59	--	118	5,580	37	331	338	8,280	
Taiwan	11,600	1,280	5,430	2,420	11,100	317	2,870	10,600	1,040	9,360	--	65	
Thailand	874	1	1	--	--	--	178	475	--	225	--	--	
United Kingdom	276	--	1	--	4	19	99	3,440	21	423	--	--	
Other	1,120	54	1,150	--	90	167	1,400	10,200	314	3,030	582	6,750	
Total	366,000	5,130	62,600	15,300	132,000	14,700	172,000	291,000	20,400	189,000	16,800	179,000	

-- Zero.

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

Source: U.S. Census Bureau.