

# Mineral Industry Surveys

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## BISMUTH IN THE THIRD QUARTER 2001

Total bismuth consumption in the United States increased 5.3% to 571 metric tons (t) during the third quarter of 2001 compared with the second quarter. All consumption sectors increased use for the quarter: chemical and pharmaceutical use, up 8%; bismuth alloys, 5%; and metallurgical additives, 1%. Total domestic consumption was 6.5% higher than that of the third quarter of 2000.

The New York dealer price for bismuth as published in Platts Metals Week began the quarter at \$3.73 per pound. It declined slowly during the quarter except for a small increase at the end of August. The price reached \$3.58 per pound by the end of the quarter.

Chinese producers exerted moderate downward pressure on prices with low-priced offerings, but there was little buying interest. Buyers seemed ready to use up stocks and wait for prices to fall lower; but they did not decrease further—possibly because China did not have a large excess of supply during the quarter (Mining Journal, 2001a). It is also possible that Chinese producers may be stockpiling materials, waiting for the price to increase again (Metal Bulletin, 2001).

Support for the bismuth price was provided by concern over possible fluctuations in production levels at the Doe Run operations in Peru because Doe Run's parent company, Renco Metals Co., filed for chapter 11 bankruptcy in August owing to lack of profits from its other subsidiary, Magnesium Corporation of America. In the past, when bismuth production from Peru decreased, world prices usually increased (Mining Journal, 2001b). China, Mexico, and Peru are the world's largest mine producers of bismuth. They account for about two

thirds of world production, with each country supplying roughly equal amounts.

In Canada, Fortune Minerals, Ltd. in London, Ontario, is seeking partners to develop its NICO deposit in the Northwest Territories. The deposit contains cobalt, bismuth, and gold. According to the company's plan, cobalt and gold would be processed in-house. Bismuth concentrates would be sent to another Canadian company or exported for processing. The project is expected to supply 1,000 metric tons per year of bismuth over a period of 15 years (Fortune Minerals, 2001).

### Update

The New York dealer price for bismuth had declined to \$3.45 per pound by mid November. Preliminary data indicate that U.S. imports were 537 t for the third quarter of 2001. This would make imports for the first 3 quarters of 2001 total more than 1,800 t.

### References Cited

- Fortune Minerals, 2001, Fortune Minerals announces further improvements to metal recoveries from the NICO deposit: London, Ontario, Canada, Fortune Minerals press release, September 25, 2 p.
- Metal Bulletin, 2001, Bismuth remains steady: Metal Bulletin, no. 8609, September 20, p. 8.
- Mining Journal, 2001a, Minor metals fail to respond: Mining Journal, v. 337, no. 8653, September 28, p. 245.
- 2001b, Minor metals in the doldrums: Mining Journal, v. 337, no. 8649, August 31, p. 166, 167.

TABLE 1  
SALIENT BISMUTH STATISTICS 1/

(Kilograms, unless otherwise specified)

	2000	2001			Year to date
		First quarter	Second quarter	Third quarter	
Consumption	2,130,000	556,000	542,000	571,000	1,670,000
Exports 2/	491,000	165,000	176,000	NA	NA
Imports for consumption	2,410,000	681,000	596,000	NA	NA
Price per pound, dealer, end of period	\$4.00	\$4.15	\$3.73	\$3.58	XX
Stocks, end of period, consumer	118,000	119,000	126,000	107,000	XX

NA Not available. XX Not applicable.

1/ Data are rounded to no more than three significant digits.

2/ Comprises bismuth metal and the bismuth content of alloys and waste and scrap.

TABLE 2  
BISMUTH METAL CONSUMED IN THE UNITED STATES, BY USE 1/

(Kilograms)

Use	2000	2001			Year to date
		First quarter	Second quarter	Third quarter	
Chemicals 2/	861,000	217,000	193,000	209,000	619,000
Bismuth alloys	889,000	243,000	244,000	257,000	744,000
Metallurgical additives	346,000	86,000	93,500	94,400	274,000
Other	34,000	10,500	11,000	11,500	33,000
Total	2,130,000	556,000	542,000	571,000	1,670,000

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

2/ Includes industrial and laboratory chemicals, cosmetics, and pharmaceuticals.

TABLE 3  
U.S. EXPORTS OF BISMUTH METAL, ALLOYS, AND WASTE AND SCRAP, BY COUNTRY 1/

(Kilograms, metal content)

Country	2000	2001 2/					January - August
		First quarter	Second quarter	June	July	August	
Belgium	819	62,300	72,700	37,000	19,600	--	155,000
Canada	84,900	31,500	25,300	15,000	10,900	4,710	72,400
China	--	12	--	--	--	--	12
Dominican Republic	2,570	888	1,230	638	267	--	2,380
France	87	--	--	--	--	--	--
Germany	151,000	33,300	35,000	--	22,000	--	90,300
Honduras	14,600	--	--	--	--	--	--
Hong Kong	912	12	60	--	--	--	72
Japan	5	--	--	--	--	--	--
Korea, Republic of	33,700	--	--	--	--	--	--
Malaysia	5,930	--	--	--	--	--	--
Mexico	99,100	12,400	17,300	7,900	12,700	17,600	59,900
Netherlands	21,100	15,000	21,600	2,470	--	--	36,600
Norway	20	--	--	--	--	--	--
Philippines	--	2,070	--	--	--	--	2,070
Russia	4,750	2,080	523	523	--	1,650	4,250
Singapore	276	--	250	--	--	10	260
Taiwan	510	--	--	--	--	--	--
Trinidad and Tobago	13,100	--	--	--	--	--	--
United Kingdom	56,300	825	1,580	--	465	--	2,870
Venezuela	1,330	4,250	--	--	--	--	4,250
Total	491,000	165,000	176,000	63,500	65,900	23,900	430,000

-- Zero.

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

2/ September data were not available at the time of publication.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF BISMUTH METAL, BY COUNTRY 1/

(Kilograms)

Country	2000	2001 2/					January - August
		First quarter	Second quarter	June	July	August	
Bahamas, The	5,400	--	--	--	--	--	--
Belgium	832,000	252,000	237,000	60,800	38,900	60,600	588,000
Canada	120,000	11,800	8,380	3,380	2,090	1,930	24,200
China	426,000	144,000	174,000	24,900	20,100	43,100	381,000
Denmark	--	4	15	--	14	19	52
Finland	1	--	--	--	--	--	--
France	--	1,050	--	--	--	--	1,050
Germany	56,600	16,200	--	--	76	41,400	57,700
Italy	--	506	--	--	--	--	506
Japan	6,830	3,070	2,690	1,620	570	500	6,830
Korea, Republic of	14	--	--	--	--	--	--
Mexico	516,000	135,000	155,000	39,100	79,000	38,400	408,000
Netherlands	409	128	582	221	--	449	1,160
Peru	20,400	--	--	--	--	--	--
Spain	420	400	--	--	--	5,000	5,400
United Kingdom	430,000	116,000	17,900	--	40,600	17,900	192,000
Total	2,410,000	681,000	596,000	130,000	181,000	209,000	1,670,000

-- Zero.

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

2/ September data were not available at the time of publication.

Source: U.S. Census Bureau.