

# Mineral Industry Surveys

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## BISMUTH IN THE FOURTH QUARTER 2010

Bismuth consumption in the United States for the fourth quarter of 2010 was estimated to be 293 metric tons (t), the same as that in the third quarter of 2010, and 11% lower than that in the fourth quarter of 2009. China, Belgium, and the United Kingdom, in descending order, were the leading suppliers of bismuth to the United States for 2010.

The New York dealer price range for bismuth, published in Platts Metals Week, started October 2010 at \$9.15 to \$9.50 per pound and remained fairly steady through the fourth quarter to finish December at \$9.10 to \$9.60 per pound.

Fortune Minerals Ltd. (London, Ontario, Canada) completed the salvage of buildings and equipment from the Golden Giant Mine at Hemlo, Ontario, for use at its Nico project, under development in late 2010. Fortune spent \$18 million to reclaim the Golden Giant assets for use at its proposed gold-cobalt-bismuth-copper mine and concentrator in the Northwest Territories and refinery in Saskatchewan. Fortune purchased those physical assets from Newmont Canada Ltd. [a division of Newmont Mining Corp. (Greenwood Village, CO)] and Mindecom Industrial Constructors Ltd. (Manitouwadge, Ontario, Canada) after the Golden Giant Mine closed

permanently in 2006. The physical assets were moved to Manitoba and Ontario for refurbishment. The Nico deposit, which is about 100 miles northwest of Yellowknife, Northwest Territories, was to be mined by a combination of open pit and underground methods at a production rate of 4,650 metric tons per day (t/d) of ore. Flotation was expected to produce about 180 t/d of bulk concentrate for delivery by truck and rail to the company's proposed hydrometallurgical processing plant near Saskatoon, Saskatchewan. Fortune signed a letter of intent in February 2010 with minor metals processor and distributor MCP Group SA (Tilly, Belgium) for the offtake of bismuth from the mine (Schier, 2010).

### Update

On May 2, 2011, the Platts Metals Week price for bismuth was \$11.40 to \$11.60 per pound.

### Reference Cited

Schier, Thorsten, 2010, Fortune completes equipment recovery: American Metal Market, v. 118, no. 41-5, October 15, p. 8.

TABLE 1  
SALIENT BISMUTH STATISTICS<sup>1</sup>

(Kilograms unless otherwise specified)

	2009	2010				
		First quarter	Second quarter	Third quarter	Fourth quarter	Year to date
Consumption <sup>2</sup>	1,180,000	295,000	295,000	293,000	293,000	1,180,000
Exports <sup>3</sup>	397,000	166,000	183,000	188,000	500,000	1,040,000
Imports for consumption	1,250,000	454,000	461,000	413,000	294,000	1,620,000
Price per pound, dealer, average of period	\$7.84	\$7.94	\$9.17	\$8.49	\$9.45	\$8.76
Stocks, end of period, consumer	134,000	134,000	133,000	136,000	133,000	133,000

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

<sup>2</sup>Estimated, based on net imports.

<sup>3</sup>Comprises bismuth metal and the bismuth content of alloys and waste and scrap.

TABLE 2  
ESTIMATED BISMUTH METAL CONSUMED IN THE UNITED STATES, BY USE<sup>1</sup>

(Kilograms)

Use	2009	2010				
		First quarter	Second quarter	Third quarter	Fourth quarter	Year to date
Chemicals <sup>2</sup>	706,000	176,000	176,000	176,000	176,000	704,000
Bismuth alloys	52,300	18,000	17,800	15,800	17,200	68,800
Metallurgical additives	422,000	101,000	101,000	100,000	99,500	401,000
Other	3,250	728	728	728	726	2,910
Total	1,180,000	295,000	295,000	293,000	293,000	1,180,000

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

<sup>2</sup>Includes industrial and laboratory chemicals, cosmetics, and pharmaceuticals.

TABLE 3  
U.S. EXPORTS OF BISMUTH METAL, BY COUNTRY<sup>1</sup>

(Kilograms)

Country	2009	2010						
		First quarter	Second quarter	Third quarter	October	November	December	January-December
Argentina	220	64	11	--	316	--	--	391
Austria	--	--	20,000	--	--	--	--	20,000
Belgium	56,600	14,800	--	--	--	--	--	14,800
Brazil	13,400	2,410	524	--	--	--	7,630	10,600
Canada	32,900	7,230	15,900	14,600	480	3,090	116	41,400
China	28,800	--	10,400	1,340	603	1,010	13,000	26,400
Colombia	1,230	118	205	205	--	--	215	743
Costa Rica	--	2,930	4,340	3,380	626	1,250	--	12,500
Czech Republic	99	--	--	--	--	--	--	--
Dominican Republic	6,550	--	--	--	--	--	--	--
France	121,000	54,800	66,600	93,500	--	--	--	215,000
Germany	2,420	36,900	26,400	660	--	330	9,240	73,500
Hong Kong	2,410	8,250	--	1,010	--	--	--	9,260
Japan	11,000	--	--	3,110	1,060	--	--	4,160
Mexico	59,300	30,500	13,700	23,800	8,400	9,760	13,900	100,000
Saudi Arabia	27	--	--	--	--	--	--	--
Singapore	445	100	229	1,220	462	50	--	2,060
Thailand	8,590	7,630	3,310	7,110	--	575	3,060	21,700
United Kingdom	4,710	--	--	1,270	--	50	--	1,320
Vietnam	45,200	355	21,100	34,800	103,000	168,000	153,000	480,000
Other	1,790	235	95	1,740	1,540	27	32	3,670
Total	397,000	166,000	183,000	188,000	117,000	184,000	200,000	1,040,000

-- 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.

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

(Kilograms)

Country	2009	2010						
		First quarter	Second quarter	Third quarter	October	November	December	January-December
Belgium	450,000	175,000	201,000	135,000	59,900	43,700	60,000	674,000
Canada	5,740	9,930	6,450	3,000	--	217	1,720	21,300
China	554,000	252,000	247,000	260,000	59,800	17,500	39,100	875,000
Germany	1,600	370	3,230	100	40	--	350	4,090
Korea, Republic of	75,100	--	--	--	10,000	--	--	10,000
Mexico	59,400	--	--	40	--	--	--	40
Peru	29,400	--	--	455	--	--	--	455
United Kingdom	62,400	16,700	3,230	14,300	1,650	--	--	35,800
Other	13,300	100	612	378	--	297	--	1,390
Total	1,250,000	454,000	461,000	413,000	131,000	61,700	101,000	1,620,000

-- 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.