

# Mineral Industry Surveys

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## **ANTIMONY IN THE THIRD QUARTER 2007**

Consumption of primary antimony in the third quarter of 2007 was estimated by the U.S. Geological Survey to be 3% lower than that in the second quarter of 2007 and 19% lower than that in the third quarter of 2006. During the first 8 months of 2007, antimony imports totaled 18,500 metric tons (t) compared with a total of 20,800 t for the comparable period of 2006. During the first 8 months of 2007, China remained the leading supplier of antimony metal and antimony oxide to the United States.

Antimony prices remained fairly steady during the third quarter of 2007. The Platts Metals Week New York dealer price for antimony metal started the third quarter in the range of \$2.43 to \$2.48 per pound and finished the third quarter at \$2.59 to \$2.63 per pound.

U.S. Antimony Corp. (Thompson Falls, MT) announced that it plans to increase antimony production at its Thompson Falls facility by at least 20%, at least 1,090 t (2.4 million pounds) per year from a previously reported 907 t (2 million pounds). The plant produces and sells antimony oxide and antimony metal (Metal Bulletin, 2007b).

A new report from Roskill Information Services Ltd. (London, United Kingdom) offers its views on a wide range of issues regarding the antimony market. The Economics of Antimony (12th ed.) cites the importance of recent Government policy reforms by the dominant world antimony producer, China. Roskill stated that decades of market instability for the main minerals and metals produced by China appear to be finally over. According to Roskill, boom and bust manipulation of markets and prices through alternately dumping supplies and withdrawing from the market of such commodities as antimony, tin, and tungsten had all but destroyed mine output and development in competing countries. The extent to which these events had ravaged China's own mineral resources through overexploitation, high-grading, damage to mine workings, and loss of life apparently was only recently recognized by Chinese authorities, noted Roskill. The widespread mine shutdowns and investigations that followed led to wide-ranging policy reforms aimed at resource conservation, orderly development, mine safety, environmental protection, and value-added further processing, all controlled by quotas and licensing of mining, smelting and exporting. Because China is the world's leading

producer of many metals, the changes had worldwide effect. Antimony prices rose from the 40-year low of less than \$1,000 per metric ton in August 2001 to the \$5,300-to-\$5,400-per-metric-ton level as of mid-2007. Roskill believes that a number of factors not present during past buoyant price periods indicate that the recovery will endure. China is now the world's leading importer of antimony ores and concentrates, and its domestic antimony demand has also become the world's largest. The solid foundation for the antimony industry has reawakened interest in antimony resources in Australia, North America, Russia, South America, and elsewhere, and new projects are under development (Platts Metals Week, 2007b).

The Consolidated Murchison facility of Metorex Ltd. (Johannesburg, South Africa), an antimony and gold mine, has been at a virtual standstill for several weeks owing to a strike that began in early September (Metal Bulletin, 2007a).

Japanese manufacturers of flame retardant materials started testing antimony ingots of non-Chinese origin, in a move to diversify their antimony supply sources. Japanese customs statistics show that Japan imported 40 t of antimony from Kyrgyzstan for the first time in April, and 3 t from Peru in February, also for the first time. China has a 95% share of Japanese antimony imports (Platts Metals Week, 2007c).

In Australia, AGD Mining Ltd. (Melbourne, Australia) announced that since it started production of antimony concentrate at its Costerfield Mine in March 2007 it has produced at a rate of 160 to 200 metric tons per month, less than one-half of the company's initial target rate of 5,500 metric tons per year (Platts Metals Week, 2007a).

#### Update

On November 15, 2007, the Platts Metals Week price for antimony was \$2.65 to \$2.70 per pound.

#### **References Cited**

Metal Bulletin, 2007a, Metorex's antimony and gold mine: Metal Bulletin, no. 9014, September 24, p. 15.

Metal Bulletin, 2007b, U.S. Antimony to lift production at Thompson Falls by at least 20%: Metal Bulletin, no. 8998, June 4, p. 12.

Platts Metals Week, 2007a, AGD antimony output half of plan: Platts Metals Week, v. 78, no. 31, July 30, p. 11.

Platts Metals Week, 2007b, Antimony prices set to hold at \$6,000/mt through 2010—Roskill: Platts Metals Week, v. 78, no. 34, August 20, p. 5.

Platts Metals Week, 2007c, Japanese antimony comsumers test non-Chinese ingot: Platts Metals Week, v. 78, no. 29, July 16, p. 9.

# $\begin{tabular}{ll} TABLE 1 \\ SALIENT ANTIMONY STATISTICS \end{tabular} \\$

(Metric tons, antimony content, unless otherwise specified)

		2007					
	2006	First quarter	Second quarter	Third quarter	Year to date		
Production:							
Primary smelter							
Secondary	W	W	W	W	W		
Imports for consumption:	30,400	6,710	6,890	4,920 2	18,500		
Ore and concentrate	153	85	71	11 2	167		
Metal	7,260	1,380	1,740	1,220 2	4,340		
Oxide <sup>3</sup>	23,000	5,250	5,070	3,700 <sup>2</sup>	14,000		
Exports:	4,470	878	981	768 <sup>2</sup>	2,630		
Metal, alloys, and scrap (gross weight)	959	171	147	119 <sup>2</sup>	437		
Oxide <sup>3</sup>	3,510	707	834	649 <sup>2</sup>	2,190		
Consumption of primary antimony	10,400	2,430 °	2,350 <sup>r</sup>	2,280	7,060		
Price: Average cents per pound <sup>4</sup>	238.01	256.28	252.17	256.92	255.12		
Stocks, end of period <sup>5</sup>	2,110	2,260 <sup>r</sup>	2,210 <sup>r</sup>	2,190	XX		

<sup>&</sup>lt;sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable. -- Zero.

TABLE 2 INDUSTRY STOCKS OF PRIMARY ANTIMONY IN THE UNITED STATES  $^{\rm I}$ 

(Metric tons, antimony content)

	2007 <sup>2</sup>					
Class of material	First quarter <sup>r</sup>	Second quarter r	Third quarter			
Oxide	1,680	1,760	1,740			
Other <sup>3</sup>	582	455	453			
Total	2,260	2,210	2,190			

rRevised.

 $\label{eq:table 3} \textbf{CONSUMPTION OF PRIMARY ANTIMONY}^{1,\,2}$ 

(Metric tons, antimony content)

		2007				
Class of material consumed	2006	First quarter <sup>r</sup>	Second quarter <sup>r</sup>	Third quarter	Year to date	
Oxide	8,710	1,950	1,970	2,000	5,920	
Other <sup>3</sup>	1,710	476	383	280	1,140	
Total	10,400	2,430	2,350	2,280	7,060	

Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits, except prices.

<sup>&</sup>lt;sup>2</sup>Data for July and August only; September data were not available at time of publication.

<sup>&</sup>lt;sup>3</sup>Antimony content is calculated by the U.S. Geological Survey.

<sup>&</sup>lt;sup>4</sup>Source: Platts Metals Week. New York dealer price for 99.5% to 99.6% metal, c.i.f. U.S. ports.

<sup>&</sup>lt;sup>5</sup>Producer and consumer stocks.

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

<sup>&</sup>lt;sup>2</sup>Estimated 100% coverage based on quarterly respondents and respondents who held 52% of the total stocks of antimony at the end of 2006.

<sup>&</sup>lt;sup>3</sup>Includes ore and concentrate, sulfide, and residues.

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

<sup>&</sup>lt;sup>2</sup>Estimated 100% coverage based quarterly respondents and respondents who consumed 72% of the total antimony in 2006.

<sup>&</sup>lt;sup>3</sup>Includes ores and concentrates, metal, sulfide, and residues.

 ${\bf TABLE~4} \\ {\bf CONSUMPTION~OF~PRIMARY~ANTIMONY,~BY~CLASS~OF~MATERIAL~PRODUCED}^1 \\$ 

(Metric tons, antimony content)

Product		2007					
	2006	First quarter <sup>r</sup>	Second quarter <sup>r</sup>	Third quarter	Year to date		
Metal <sup>2</sup>	3,000	W	W	W	W		
Nonmetal <sup>3</sup>	3,600	W	W	W	W		
Flame-retardants:							
Plastics	2,810	96	215	90	401		
Other <sup>4</sup>	1,000	122	25	137	284		
Total	3,820	218	240	227	685		
Reported consumption	10,400	710	666	622	2,000		
Total consumption <sup>5</sup>	XX	2,430	2,350	2,280	7,060		

Revised. W Withheld to avoid disclosing company proprietary data; included with "Reported consumption." XX Not applicable.

 ${\bf TABLE~5}$  U.S. IMPORTS FOR CONSUMPTION OF ANTIMONY, BY CLASS AND COUNTRY  $^1$ 

(Metric tons, antimony content)

	2007						
		First	Second				January-
Class and country	2006	quarter	quarter	June	July	August	August <sup>2</sup>
Ore and concentrate:							
Bolivia	130	41	52	34	11		105
Other	24	44	19	4			62
Total	153	85	71	37	11		167
Metal:							
China	5,070	705	1,030	228	300	646	2,680
Mexico	800	284	173	58	46	67	570
Peru	846	127	147	54		18	292
Other	543	265	399	128	17	121	803
Total	7,260	1,380	1,740	468	364	852	4,340
Oxide: <sup>3</sup>							
Belgium	1,680	430	423	67	175	107	1,140
China	10,600	2,780	2,390	913	920	1,070	7,160
Mexico	8,780	1,930	2,200	705	700	643	5,470
Other	1,910	103	69	39	26	55	252
Total	23,000	5,250	5,070	1,720	1,820	1,870	14,000
Grand total	30,400	6,710	6,890	2,230	2,200	2,730	18,500
Other antimony compounds (gross weight)	47	5	14		5		24

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

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

<sup>&</sup>lt;sup>2</sup>Includes ammunition, antimonial lead, bearing metals and bearings, cable coverings, castings, sheet and pipe, and solder.

<sup>&</sup>lt;sup>3</sup>Includes adhesives, pigments, rubber, and textiles.

<sup>&</sup>lt;sup>4</sup>Includes ammunition primers, pigments, ceramics and glass, and plastics.

<sup>&</sup>lt;sup>5</sup>Estimated 100% coverage based on quarterly respondents and respondents who consumed 72% of the total antimony in 2006.

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

<sup>&</sup>lt;sup>2</sup>May include revisions to prior months' data.

<sup>&</sup>lt;sup>3</sup>Antimony content is calculated by the U.S. Geological Survey.