

# Mineral Industry Surveys

## For information, contact:

Jozef Plachy, Zinc Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4982, Fax: (703) 648-7757  
E-mail: [jplachy@usgs.gov](mailto:jplachy@usgs.gov)

Samir Hakim (Data)  
Telephone: (703) 648-4998  
Fax: (703) 648-7975  
E-mail: [shakim@usgs.gov](mailto:shakim@usgs.gov)

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

## ZINC IN JUNE 2004

Domestic mine production in June, at 61,300 metric tons (t), was about 9% higher than in May, but was nearly 8% lower than in June 2003, according to U.S. Geological Survey. Mine production in the first one half of 2004 was nearly 10% lower compared with that of the same period in 2003. Estimated smelter production, at 28,600 t, was the same as in May and more than 18% higher than in June 2003. Apparent consumption, at 97,900 t, was nearly 8% lower than during the previous month, but was about 18% higher than in June 2003.

The Platts Metals Week average monthly composite price for North American Special High Grade zinc decreased by less than 1% to 51.33 cents per pound in June.

The upward trend in zinc prices that carried forward from 2003 into the first quarter of 2004 reversed in April and continued to decline during the following 2 months. The decline is attributed to high inventories in the London Metal Exchange warehouses. In June, inventories remained close to yearend 2003 levels and represented about 5.2 weeks of consumption. A switch by China from being a massive exporter to a net importer of zinc was balanced by Europe's 6.8% decrease in zinc consumption in the first 4 months of 2004, compared with that of the same period in 2003 (Metal-Pages, 2004b§<sup>1</sup>). Treatment charges fell to historic lows as smelting capacity continued to rise despite a severe shortage of concentrates. Spot market treatment charges dropped to about \$100 dollars per metric ton from \$130 per metric ton at the end of 2003. Low zinc prices had discouraged miners from investing in expansions, which had tightened availability of concentrates and put mining companies in a strong position to negotiate treatment charges for their concentrates (Metal Bulletin, 2004).

Despite declining zinc prices during the past few months, zinc prices in the first half of 2004 were higher than during the first half of 2003. This increase helped many zinc mining companies to post better results compared with those of the same period in 2003. For the fiscal year 2003-2004, Perilya Ltd. of Australia recorded a net profit of \$9 million compared with a loss of

\$71,000 during the previous fiscal year (Metal-Pages, 2004a§). Australia's Zinifex Ltd. (formerly Pasminco Ltd.) announced that it had achieved its production targets for the quarter ending in June 2004 and again revised upward its projected profit for the period to more than \$36 million, up from a mid-June forecast of \$31 and the \$10 million it had projected last year (Platts Metals Week, 2004c). For the first 6 months of 2004, Canadian zinc producer Teck Cominco Ltd. reported net earnings of \$161 million compared with \$11 million during the first one half of 2003. The company said that the higher earnings were due mainly to higher prices for the company's products, copper and zinc (Platts Metals Week, 2004b).

Breakwater Resources Ltd. of Canada bought Boliden Westmin Ltd. (a subsidiary of Boliden AB), owner and operator of Myra Falls zinc-copper mine in the southern part of British Columbia, Canada. In 2003, Myra Falls produced 57,400 t of contained zinc and 10,700 t of copper in concentrate (Platts Metals Week, 2004a). Breakwater expects that the acquisition will increase its net revenue during the next 6 years by 85%. Although the mine is predominantly a zinc producer and will increase Breakwater's zinc output by 68%, Myra Falls will actually lessen the company's reliance on the metal owing to the significant value of byproduct copper, gold, and silver production. Myra Falls has proven and probable reserves of 7.8 million metric tons grading 6.3% zinc, 1.2% copper, 1.2 grams per metric ton (g/t) gold, and 40 g/t silver. The acquisition will increase the company's contained zinc reserves and resources by 41% (Mining Journal, 2004).

China and Pakistan signed an agreement to develop the Duddar lead and zinc deposit near Karachi in the province of Balochistan, Pakistan. It will take two and one half years and an investment of about \$70 million to develop the mine that should produce about 100,000 metric tons per year (t/yr) of zinc concentrate and 32,600 t/yr of lead concentrate (China Mining and Mineral Commodity Market, 2004). Increased concentrate supply, however, may not expedite zinc metal production owing to an energy shortage. During the first 4 months of 2004, 24 provinces in China were forced to impose restrictions on electricity consumption. The energy shortage mostly affects the eastern part of the country, where most of the China's heavy

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

industry is located. The shortage is not caused by an inadequate supply, but rather by inefficient energy use, a problem that will not be easy to rectify (Antaïke, 2004).

### References Cited

Antaïke, 2004, National news: Antaïke Monthly, no. 92, July, p. 1f.  
China Mining and Mineral Commodity Market, 2004, China invest on a lead-zinc deposit in Pakistan: China Mining and Mineral Commodity Market newsletter, no. 7, August 15, p. 2.  
Metal Bulletin, 2004, Spot zinc concentrate TCs fall to historic lows: Metal Bulletin, no. 8849, July 5, p. 15.  
Mining Journal, 2004, Breakwater finalises Myra Falls purchase: Mining Journal, July 16, p. 3.

Platts Metals Week, 2004a, Boliden finalizes Myra Falls sale: Platts Metals Week, v. 75, no. 28, July 12, p. 4.  
Platts Metals Week, 2004b, Teck Cominco earnings surge on higher metal prices: Platts Metals Week, v. 75, no. 31, August 2, p. 11.  
Platts Metals Week, 2004c, Zinifex again upgrades profit outlook: Platts Metals Week, v. 75, no. 31, August 2, p. 12.

### Internet References Cited

Metal-pages, 2004a (August 24), Profit for Perilya, accessed August 24, 2004, at URL <http://www.metal-pages.com>.  
Metal-pages, 2004b (July 1), Zinc - still no fundamental support, accessed July 8, 2004, at URL <http://www.metal-pages.com>.

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

(Metric tons, unless otherwise specified)

	2003	2004			January- June
	January- December	April	May	June	
<b>Production:</b>					
Mine, zinc content of concentrate	768,000	58,500	56,100	61,300	349,000
Mine, recoverable zinc	738,000	60,100	53,900	59,000	340,000
Smelter, refined zinc	272,000	29,600	28,600	28,600 <sup>c</sup>	170,000
<b>Consumption:</b>					
Refined zinc, reported	423,000	36,700	35,900	37,000	217,000
Ores <sup>c</sup> (zinc content)	727	61	61	61	363
Zinc-base scrap <sup>c</sup> (zinc content)	191,000	15,900	15,900	15,900	95,300
Copper-base scrap <sup>c</sup> (zinc content)	176,000	14,700	14,700	14,700	88,000
Aluminum-and magnesium-base scrap <sup>c</sup> (zinc content)	1,430	120	120	120	717
Total <sup>c</sup>	791,000	67,400	66,600	67,700	402,000
Apparent consumption, metal <sup>2</sup>	1,050,000	102,000	106,000	97,900 <sup>#</sup>	594,000 <sup>3</sup>
<b>Stocks of refined (slab) zinc, end of period:</b>					
Producer <sup>4</sup>	XX	7,300	7,660	6,340	XX
Consumer <sup>5</sup>	XX	55,700	54,500	54,100	XX
Merchant	XX	9,910	10,400	9,910	XX
Total	XX	72,900	72,600	70,300	XX
Shipments of zinc metal from Government stockpile	13,600	3,340 <sup>r</sup>	14,700 <sup>r</sup>	1,170	25,500
<b>Imports for consumption:</b>					
Refined (slab) zinc	758,000	61,200	66,000	NA	328,000 <sup>6</sup>
Oxide (gross weight)	98,300	9,640	9,270	NA	45,900 <sup>6</sup>
Ore and concentrate (zinc content)	164,000	2,740	9,720	NA	105,000 <sup>6</sup>
<b>Exports:</b>					
Refined (slab) zinc	1,680	197	183	NA	971 <sup>6</sup>
Oxide (gross weight)	12,100	1,020	1,270	NA	5,870 <sup>6</sup>
Ore and concentrate (zinc content)	841,000	10,400	16,800	NA	52,700 <sup>6</sup>
Waste and scrap (gross weight)	50,200	4,160	3,580	NA	23,300 <sup>6</sup>
<b>Price:</b>					
London Metal Exchange, average, dollars per metric ton	\$827.32	\$1,032.28	\$1,027.93	\$1,021.08	\$1,048.42
Platts Metals Week North American Special High Grade, average, cents per pound	40.63	52.09	51.76	51.33	52.37

<sup>c</sup>Estimated. <sup>r</sup>Revised. NA Not available. XX Not applicable. -- Zero.

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

<sup>2</sup>Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

<sup>3</sup>Data based on reported consumption, stocks, and estimated trade data.

<sup>4</sup>Data from U.S. Geological Survey and American Bureau of Metal Statistics.

<sup>5</sup>Includes an estimate for companies that report annually.

<sup>6</sup>Includes data through May only.

TABLE 2  
REFINED ZINC PRODUCED IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Month	Beginning stocks <sup>2</sup>	Production	Shipments	Ending stocks <sup>2</sup>
2003:				
June	7,300	24,200	23,700	7,770
July	7,770	22,100	21,500	8,360
August	8,360	23,500	23,600	8,230
September	8,230	21,600	22,100	7,790
October	7,790	21,800	21,300	8,300
November	8,300	23,500	23,800	8,010
December	8,010	20,200	20,500	7,660
Year	XX	272,000	273,000	XX
2004:				
January	7,660	26,900	28,100	6,440
February	6,440	26,900	28,100	5,230
March	5,230	28,900	28,200	5,960
April	5,960 <sup>e</sup>	29,600	28,300	7,300
May	7,300 <sup>e</sup>	28,600	28,300	7,660
June	7,660 <sup>e</sup>	28,600 <sup>e</sup>	29,900	6,340
January-June	XX	170,000	171,000	XX

<sup>e</sup>Estimated. XX Not applicable.

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

<sup>2</sup>Includes stocks held at locations other than smelters.

Sources: U.S. Geological Survey and American Bureau of Metal Statistics.

TABLE 3  
APPARENT CONSUMPTION OF REFINED ZINC  
ACCORDING TO INDUSTRY USE AND PRODUCT<sup>1</sup>

(Metric tons)

Industry and product	2003	2004			January-June <sup>2</sup>
	January-December	April	May	June <sup>2</sup>	
Galvanizing:					
Sheet and strip	442,000	41,200	43,300	39,800	243,000
Other	146,000	14,900	15,900	13,900	85,900
Total	588,000	56,100	59,200	53,700	328,000
Brass and bronze	167,000	17,300	17,400	16,900	99,500
Zinc-base alloy	222,000	21,100	22,000	20,200	123,000
Other uses <sup>3</sup>	70,700	7,300	7,600	7,200	43,400
Grand total	1,050,000	102,000	106,000	97,900	595,000

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

<sup>2</sup>Data based on reported consumption, stocks and estimated trade data.

<sup>3</sup>Includes zinc used in making zinc dust, desilvering lead, powder, alloys, anodes, chemicals, castings, light metal alloys, rolled zinc, and miscellaneous uses not elsewhere specified.

TABLE 4  
AVERAGE MONTHLY ZINC PRICES<sup>1</sup>

Period	North American	LME cash	
	¢/lb.	¢/lb.	\$/t
2003:			
June	38.87	35.85	790.31
July	40.54	37.52	827.19
August	40.10	37.08	817.48
September	40.07	37.10	817.81
October	43.70	40.71	897.54
November	44.80	41.47	914.16
December	47.85	44.33	977.35
Year	40.63	37.53	827.32
2004:			
January	49.93	46.11	1,016.62
February	53.84	49.32	1,087.26
March	55.25	50.14	1,105.37
April	52.09	46.82	1,032.28
May	51.76	46.63	1,027.93
June	51.33	46.32	1,021.08
January-June	52.37	47.56	1,048.42

<sup>1</sup>Special High Grade.

Source: Platts Metals Week.

TABLE 5  
U.S. EXPORTS OF ZINC<sup>1</sup>

Material	2003		2004 <sup>2</sup>			
	Quantity (metric tons)	Value (thousands)	May		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	1,680	\$1,760	183	\$218	971	\$1,130
Ore and concentrate (zinc content)	841,000	337,000	16,800	5,280	52,700	18,800
Waste and scrap (gross weight)	50,200	32,600	3,580	2,900	23,300	20,300
Powders, flakes, dust (zinc content)	6,550	9,090	696	1,240	3,300	5,880
Oxide (gross weight)	12,100	15,200	1,270	1,780	5,870	8,390
Chloride (gross weight)	1,470	1,650	117	126	888	1,060
Sulfate (gross weight)	2,310	1,440	220	137	1,600	915
Compounds, other (gross weight)	183	472	8	26	51	163

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

<sup>2</sup>Data for June 2004 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF ZINC<sup>1</sup>

Material	2003		2004 <sup>2</sup>			
	Quantity (metric tons)	Value (thousands)	May		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	758,000	\$647,000	66,000	\$78,600	328,000	\$362,000
Ore and concentrate (zinc content)	164,000	60,000	9,720	5,640	105,000	35,100
Waste and scrap (gross weight)	10,300	5,740	686	520	4,620	3,210
Powders, flakes, dust (zinc content)	27,400	41,200	1,650	2,730	9,840	16,000
Oxide (gross weight)	98,300	72,200	9,270	7,720	45,900	37,000
Chloride (gross weight)	663	914	56	83	291	352
Sulfate (gross weight)	25,800	11,700	1,750	937	11,500	5,520
Compounds, other (gross weight)	1,010	951	317	322	929	900

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

<sup>2</sup>Data for June 2004 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 7  
SHIPMENTS OF ZINC METAL FROM THE NATIONAL DEFENSE  
STOCKPILE<sup>1</sup>

(Metric tons)

Period	Beginning inventory	Shipments	Ending inventory
2003:			
June	107,000	--	107,000
July	107,000	3,530	104,000
August	104,000	712	103,000
September	103,000	841	102,000
October	102,000	--	102,000
November	102,000	539	102,000
December	102,000	6,270	95,200
Year	XX	13,600	XX
2004:			
January	95,200	3,340	91,900
February	91,900	--	91,900
March	91,900	2,920 <sup>r</sup>	89,000
April	89,000	3,340 <sup>r</sup>	85,600
May	85,600	14,700 <sup>r</sup>	70,900
June	70,900	1,170	69,800
January-June	XX	25,500	XX

<sup>r</sup>Revised. XX Not applicable. -- Zero.

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

Source: Defense Logistics Agency.

TABLE 8  
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY<sup>1</sup>

(Metric tons)

Material and country	General imports			Imports for consumption		
	2003	2004		2003	2004	
		May	Year to date		May	Year to date
<b>Ore and concentrate (zinc content):</b>						
Australia	43,400	--	19,300	43,400	--	19,300
Ireland	36,500	--	3,730	36,500	--	3,730
Mexico	9,400	--	2,890	9,400	--	2,890
Peru	74,600	9,350	78,200	74,600	9,350	78,200
Other	--	376	877	--	376	877
<b>Total</b>	<b>164,000</b>	<b>9,720</b>	<b>105,000</b>	<b>164,000</b>	<b>9,720</b>	<b>105,000</b>
<b>Blocks, pigs, or slab:</b>						
Australia	22,000	--	7,940	14,400	1,690	23,200
Brazil	27,600	4,050	12,100	22,400	4,050	12,100
Canada	498,000	40,700	203,000	498,000	40,700	203,000
China	23,800	14	14	48	1,920	5,250
Japan	50	--	--	--	--	196
Kazakhstan	19,700	--	2,310	19,700	--	2,310
Korea, Republic of	34,000	--	7,730	1,340	1,370	13,600
Mexico	141,000	9,570	49,900	141,000	9,570	49,900
Peru	43,400	2,650	5,480	42,900	3,290	8,170
Poland	1,600	--	--	1,600	--	--
Other	17,100	2,220	9,220	16,200	3,410	10,200
<b>Total</b>	<b>829,000</b>	<b>59,200</b>	<b>298,000</b>	<b>758,000</b>	<b>66,000</b>	<b>328,000</b>
<b>Dross, ashes, fume (zinc content)</b>	<b>14,100</b>	<b>1,520</b>	<b>6,640</b>	<b>14,100</b>	<b>1,520</b>	<b>6,640</b>
<b>Grand total</b>	<b>1,010,000</b>	<b>70,400</b>	<b>409,000</b>	<b>936,000</b>	<b>77,200</b>	<b>440,000</b>
<b>Oxide (gross weight):</b>						
Canada	47,300	4,310	19,800	47,300	4,310	19,800
China	575	--	87	575	--	87
Italy	770	1,060	4,680	770	1,060	4,680
Japan	965	177	526	965	177	526
Mexico	40,500	3,330	18,600	40,500	3,330	18,600
Netherlands	4,820	327	1,720	4,820	327	1,720
Other	3,420	68	467	3,420	68	467
<b>Total</b>	<b>98,300</b>	<b>9,270</b>	<b>45,900</b>	<b>98,300</b>	<b>9,270</b>	<b>45,900</b>
<b>Other (gross weight):</b>						
Waste and scrap	10,300	686	4,620	10,300	686	4,620
Sheets	1,790	339	1,030	1,790	339	1,030
<b>Powders, flakes, dust (zinc content)</b>	<b>27,500</b>	<b>1,650</b>	<b>9,840</b>	<b>27,400</b>	<b>1,650</b>	<b>9,840</b>

-- Zero.

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

<sup>2</sup>Data for June 2004 were not available at time of publication.

Source: U.S. Census Bureau.