

# Mineral Industry Surveys

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## ZINC IN MARCH 2004

Domestic mine production in March, at 57,800 metric tons (t), was about 5% higher than in February, but was about 12% lower than production in March 2003, according to the U.S. Geological Survey. Smelter production, at 28,200 t, was about 5% higher than the previous month's production and about 30% higher than production in March 2003. Apparent consumption in March, at 90,500 t, was about 9% lower than consumption in February, but was about 8% higher than consumption in March of last year.

The Platts Metals Week composite price for North American Special High Grade zinc in March increased by about 3%, to 55.25 cents per pound of zinc metal; the price was about 42% higher than it was in March 2002.

Zinc treatment charges (TC) for 2004 contracts between North American miners and European smelters are unlikely to be settled in the near future. Traditionally, once a benchmark deal, such as the one recently signed by Vancouver-based Teck Cominco Ltd. and Korea Zinc Co. Ltd., is reached, other deals are conducted at similar terms. During the past couple of years, European smelters have claimed that they should get higher TCs because of higher freight rates to European countries that effectively regionalized what previously was a global market (Metal Bulletin, 2004a).

St. Lawrence Zinc Co. LLC (a subsidiary of Toronto-based Ontzinc Corp.) is planning to reactivate mining at its newly acquired Balmat zinc mine in August of this year. Production is expected to reach a rate of about 45,400 metric tons per year (t/yr) of zinc in concentrate by July 2005 and about 50,000 t/yr thereafter. The company is currently completing plans for narrow vein, minimum dilution mining, hoping to achieve run-of-mine zinc grades in the 12%-13% range. The projected mining rate, however, will use only about 50% of the current mill capacity. The long-term goal is to find new ore reserves and double the mill output to its capacity of nearly 100,000 t/yr (Platts Metals Week, 2004b).

Net earnings of Teck Cominco for the first 3 months of 2004 increased to \$71 million from restated net earnings of \$5 million during the same period in 2003, owing to higher prices for copper and zinc. Refined zinc production and mine production were lower by 4.9% and 9.4%, respectively, compared with the first quarter of last year (Metal-Pages, 2004b§<sup>1</sup>).

Falconbridge Ltd. of Canada will process 60% to 75%, up to maximum of 125,000 t/yr, of the precious metal bearing zinc and copper concentrates produced by Agnico-Eagle Mines Ltd. from its LaRonde Mine in Quebec. The newly signed life-of-mine agreement will improve the overall operating economics of both companies. Falconbridge will benefit from better capacity utilization at its Kidd Creek operations, and Agnico-Eagle will save on transportation costs and benefit from better precious metal recovery (Platts Metals Week, 2004a).

The Peruvian Government denied Doe Run Company's request to extend an environmental compliance deadline for its La Oroya smelter until 2011. Under the original agreement, Doe Run must reduce sulfur dioxide, lead, and arsenic emissions by December 2006. After investing \$120 million, Doe Run has met only 23% of its obligations (Mining Journal, 2004).

The new 100,000-t/yr Kazakhstan smelter is on target to reach nameplate capacity, having made its first deliveries. The Balkhash smelter in southeast Kazakhstan, inaugurated in October 2003, was built for \$150 million and already has supplied 250 t of zinc to domestic customers (Metal-Pages, 2004a§).

India's Hindustan Zinc Ltd. (HZL) plans to increase the capacity of its smelters by 73% to 400,000 t/yr by 2005. Increased feed requirements will be supplied by the expanded Rampura Agucha Mine. In addition, HZL is planning to build a 154-megawatt, coal-fired power plant. This expansion is in response to domestic demand for refined zinc that is growing at the rate of 12% to 15% annually (Metal Bulletin, 2004b).

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

## Update

The initial public offering of Zinifex (formerly Pasminco Ltd.) fell short of expectations. The target price was initially set at \$1.47 to \$1.89 per share, but was cut to \$1.37 owing to poor demand. Shares debuted at an even lower price but increased slightly and closed at \$1.28 per share (CRU International Ltd., 2004).

## References Cited

CRU International Ltd., 2004, Industry news—CRU Monitor—Lead and zinc concentrates: CRU International Ltd., April, p. 12.  
Metal Bulletin, 2004a, Deal on charges no closer despite agreement by Teck Cominco and Korea Zinc: Metal Bulletin, no. 8837, April 12, p. 12.

Metal Bulletin, 2004b, HZL to boost zinc capacity to 400,000 tpy: Metal Bulletin, no. 8837, April 12, p. 12.  
Mining Journal, 2004, Peru says no to Doe Run extension: Mining Journal, April 16, p. 7.  
Platts Metals Week, 2004a, Falconbridge to process LaRonde zinc: Platts Metals Week, v. 75, no. 16, April 19, p. 15.  
Platts Metals Week, 2004b, Ontzinc to start mining at Balmat August: Platts Metals Week, v. 75, no. 16, April 19, p. 15.

## Internet References Cited

Metal-Pages, 2004a (April 30), Kazakh Zn plant nears top production, accessed May 7, 2004, at URL <http://www.metal-pages.com>.  
Metal-Pages, 2004b (April 27), Profit soars for Teck, accessed April 28, 2004, at URL <http://www.metal-pages.com>.

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

(Metric tons, unless otherwise specified)

	2003	2004			
	January- December	January	February	March	January- March
<b>Production:</b>					
Mine, zinc content of concentrate	768,000	60,400	55,300 <sup>r</sup>	57,800	173,000
Mine, recoverable zinc	738,000	58,000 <sup>r</sup>	53,100 <sup>r</sup>	55,500	167,000
Smelter, refined zinc	272,000	26,900	26,900	28,200	81,900
<b>Consumption:</b>					
Refined zinc, reported	423,000	35,100	36,200	36,600	108,000
Ores <sup>e</sup> (zinc content)	727	61	61	61	182
Zinc-base scrap <sup>e</sup> (zinc content)	191,000	15,900	15,900	15,900	47,600
Copper-base scrap <sup>e</sup> (zinc content)	176,000	14,700	14,700	14,700	44,000
Aluminum-and magnesium-base scrap <sup>e</sup> (zinc content)	1,430	120	120	120	359
Total <sup>c</sup>	791,000	65,800	66,900	67,300	200,000
Apparent consumption, metal <sup>2</sup>	1,050,000	98,900	99,100 <sup>r</sup>	90,500	289,000 <sup>3</sup>
<b>Stocks of refined (slab) zinc, end of period:</b>					
Producer <sup>4</sup>	XX	6,440	5,230 <sup>r</sup>	5,960	XX
Consumer <sup>5</sup>	XX	55,500	55,000	54,800	XX
Merchant	XX	9,920	9,460	9,890	XX
Total	XX	71,800	69,700 <sup>r</sup>	70,700	XX
Shipments of zinc metal from Government stockpile	13,600	3,340	--	3,220	6,560
<b>Imports for consumption:</b>					
Refined (slab) zinc	758,000	70,300	59,500	NA	130,000 <sup>6</sup>
Oxide (gross weight)	98,300	8,160	8,940	NA	17,100 <sup>6</sup>
Ore and concentrate (zinc content)	164,000	39,600	--	NA	39,600 <sup>6</sup>
<b>Exports:</b>					
Refined (slab) zinc	1,680	160	170	NA	330 <sup>6</sup>
Oxide (gross weight)	12,100	907	987	NA	1,890 <sup>6</sup>
Ore and concentrate (zinc content)	841,000	860	15,700	NA	16,600 <sup>6</sup>
Waste and scrap (gross weight)	50,200	4,770	4,690	NA	9,460 <sup>6</sup>
<b>Price:</b>					
London Metal Exchange, average, dollars per metric ton	\$827.32	\$1,016.62	\$1,087.26	\$1,105.37	\$1,069.75
Platts Metals Week North American Special High Grade, average, cents per pound	40.63	49.93	53.84	55.25	53.00

<sup>e</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 February 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:				
March	8,930	21,700	24,500	6,110
April	6,110	23,000	20,700	8,340
May	8,340	22,400	23,500	7,300
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
January-March	XX	82,700	84,400	XX

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-March
	January-December	January	February <sup>f</sup>	March <sup>2</sup>	
Galvanizing:					
Sheet and strip	442,000	40,900	40,100	37,000	118,000
Other	146,000	14,400	14,400	12,400	41,200
Total	588,000	55,300	54,500	49,500	159,000
Brass and bronze	167,000	15,600	16,800	15,500	47,900
Zinc-base alloy	222,000	20,700	20,600	18,800	60,000
Other uses <sup>3</sup>	70,700	7,300	7,200	6,800	21,300
Grand total	1,050,000	98,900	99,100	90,500	289,000

<sup>f</sup>Revised.

<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	LME cash	
	American ¢/lb.	¢/lb.	\$/t
2003:			
March	38.88	35.86	790.60
April	37.23	34.21	754.30
May	38.18	35.17	775.33
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
January-March	53.00	48.52	1,069.75

<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)	February		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	1,680	\$1,760	170	\$199	330	\$381
Ore and concentrate (zinc content)	841,000	337,000	15,700	3,810	16,600	4,610
Waste and scrap (gross weight)	50,200	32,600	4,690	4,180	9,460	8,130
Powders, flakes, dust (zinc content)	6,550	9,090	607	1,110	1,180	2,100
Oxide (gross weight)	12,100	15,200	987	1,540	1,890	2,780
Chloride (gross weight)	1,470	1,650	169	199	268	350
Sulfate (gross weight)	2,310	1,440	395	236	715	404
Compounds, other (gross weight)	183	472	27	78	39	118

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

<sup>2</sup>Data for March 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)	February		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	758,000	\$647,000	59,500	\$68,700	130,000	\$139,000
Ore and concentrate (zinc content)	164,000	60,000	--	--	39,600	11,600
Waste and scrap (gross weight)	10,300	5,740	922	637	1,680	1,110
Powders, flakes, dust (zinc content)	27,400	41,200	1,820	2,880	3,690	5,820
Oxide (gross weight)	98,300	72,200	8,940	7,010	17,100	13,500
Chloride (gross weight)	663	914	48	83	48	93
Sulfate (gross weight)	25,800	11,700	2,110	1,030	4,980	2,180
Compounds, other (gross weight)	1,010	951	108	134	200	267

-- Zero.

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

<sup>2</sup>Data for March 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:			
March	108,000	--	108,000
April	108,000	200	108,000
May	108,000	997	107,000
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	3,220	89,000
January-March	XX	6,560	XX

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>1,2</sup>

(Metric tons)

Material and country	General imports			Imports for consumption		
	2003	2004		2003	2004	
		February	Year to date		February	Year to date
<b>Ore and concentrate (zinc content):</b>						
Australia	43,400	--	--	43,400	--	--
Ireland	36,500	--	--	36,500	--	--
Mexico	9,400	--	--	9,400	--	--
Peru	74,600	--	39,600	74,600	--	39,600
Other	--	--	--	--	--	--
<b>Total</b>	<b>164,000</b>	<b>--</b>	<b>39,600</b>	<b>164,000</b>	<b>--</b>	<b>39,600</b>
<b>Blocks, pigs, or slab:</b>						
Australia	22,000	--	--	14,400	2,630	8,900
Brazil	27,600	1,960	4,880	22,400	1,970	4,890
Canada	498,000	42,100	83,000	498,000	42,100	83,000
China	23,800	--	--	48	1,280	1,280
Japan	50	--	--	--	--	--
Kazakhstan	19,700	--	2,310	19,700	--	2,310
Korea, Republic of	34,000	--	--	1,340	50	3,690
Mexico	141,000	9,500	22,600	141,000	9,500	22,600
Peru	43,400	--	1,120	42,900	450	1,570
Poland	1,600	--	--	1,600	--	--
Other	17,100	1,660	1,660	16,200	1,660	1,660
<b>Total</b>	<b>829,000</b>	<b>55,100</b>	<b>116,000</b>	<b>758,000</b>	<b>59,500</b>	<b>130,000</b>
<b>Dross, ashes, fume (zinc content)</b>						
Grand total	1,010,000	56,300	157,000	936,000	60,700	172,000
<b>Oxide (gross weight):</b>						
Canada	47,300	4,010	7,630	47,300	4,010	7,630
China	575	3	86	575	3	86
Italy	770	800	1,120	770	800	1,120
Japan	965	66	172	965	66	172
Mexico	40,500	3,670	7,220	40,500	3,670	7,220
Netherlands	4,820	395	667	4,820	395	667
Other	3,420	--	221	3,420	--	221
<b>Total</b>	<b>98,300</b>	<b>8,940</b>	<b>17,100</b>	<b>98,300</b>	<b>8,940</b>	<b>17,100</b>
<b>Other (gross weight):</b>						
Waste and scrap	10,300	922	1,680	10,300	922	1,680
Sheets	1,790	95	169	1,790	95	169
<b>Powders, flakes, dust (zinc content)</b>	<b>27,500</b>	<b>1,820</b>	<b>3,690</b>	<b>27,400</b>	<b>1,820</b>	<b>3,690</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 March 2004 were not available at time of publication.

Source: U.S. Census Bureau.