

Mineral Industry Surveys

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ZINC IN DECEMBER 2001

Estimated domestic mine production in December, at 67,300 metric tons (t), was about 8% more than in November but was about 2% less than in December 2000. Smelter production, at 18,400 t, was 8% less than in November and about 35% less than it was a year before. Apparent consumption, at 67,600 t was slightly less than in November and about 9% lower than in December 2000.

The Platts Metals Week average monthly composite price for North American Special High Grade zinc declined by about 2%, to 37.48 cents per pound in December. Compared with December 2000, the price was about 29% lower.

According to a preliminary report, Teck Cominco Ltd.'s earnings in 2001 were adversely affected by low zinc and copper prices. The effect of low metal prices on earnings by the company was offset by higher profits from electric power sales at the company's Trail smelter in the Canadian province of British Columbia and by a strong performance from its coal operations. Earnings from Trail, which curtailed production in the first half of 2001 and closed its metal operations from July to September to maximize power sales opportunities, amounted to \$222 million, or more than half of Teck Cominco's profits for 2001. Operations at Trail resumed in October, and production reached 62,100 t in the fourth quarter. The Red Dog Mine produced 517,700 t of zinc in concentrate, about 3% less than it did a year before. Due to lower zinc prices, the mine recorded an operating loss of \$13 million in the fourth quarter of 2001, compared with an operating profit of \$36 million during the same period in 2000 (Teck Cominco Ltd., 2002).

Teck Cominco Ltd. closed its Sullivan lead-zinc mine in British Columbia. Mining officially ended on December 7 and the last ore was milled on December 21. The closure, due to ore depletion, had been expected and was hastened by low zinc prices. Zinc concentrate had been processed at Teck Cominco's Trail smelter. During production cutbacks at Trail, some of the concentrate was stockpiled at Sullivan (CRU International Ltd., 2002b).

Australian zinc producer Pasminco Ltd. expects to sell its 105,000-metric-ton-per-year (t/yr) Clarksville, TN, smelter and two mines during the first quarter of 2002. According to an announcement by Pasminco, representatives of an unidentified company planned to visit the Tennessee operations early in the year. The announcement was the first official confirmation by the company that its Tennessee holdings will be sold. Industry sources, however, were not convinced that the sale will be easy in the current depressed zinc market (Platts Metals Week, 2002a).

Brazilian zinc producer Cia Paraibuna de Metais reached full production capacity of 94,000 t/yr by yearend 2001 at its Juiz de Fora electrolytic smelter. Paraibuna, Brazil's second largest zinc producer, cut zinc production to a rate of 47,000 t/yr in July 2001, following the government's introduction of electricity rationing in June. The production cut was larger than required by the government because the company decided to sell part of the energy it generates at its Sobragi hydroelectric plant. The company was able to make more money selling energy rather than zinc. Energy prices started to decline in September, and Paraibuna decided to return to full production on December 3, despite continuation of power rationing in the region where the smelter is located. Paraibuna is currently the subject of due diligence by Teck Cominco Ltd., which made an offer to purchase it in November 2001. The reason behind the purchase offer is Teck Cominco's desire to expand without increasing world zinc smelting capacity, which is already larger than current global consumption (Metal Bulletin, 2002).

Inmet Mining Corp. of Canada is expected to acquire the mining assets offered for sale by Outokumpu Oy of Finland, which decided to withdraw from mining and focus on smelting, production of speciality materials, and development of processing technology. The acquisition, expected to be completed by March 2002, includes an agreement to supply concentrate from Inmet's newly acquired Pyhäsalmi Mine and other company mines to Outokumpu for smelting, and it

provides for cooperation between the two firms on mining and mineral processing technology. In addition to the Pyhäsalmi Mine, Inmet will acquire a portfolio of exploration properties in Finland measuring 3,000 hectares, which have already yielded three high-grade satellite deposits as feed for the Pyhäsalmi beneficiation plant. The mine recently underwent a redevelopment and has proven and probable reserves totaling 17.2 million metric tons grading 2.8% zinc, 1.2% copper, 0.4 gram per ton gold, and 39% sulfur. Based on a production rate of 1.2 million metric tons per year, the mine has an expected life span of until at least 2015. Annual production is expected to average about 30,000 t of zinc in concentrate. Pyrite concentrate is sold under long-term contracts to the fertilizer industry (Mining Journal, 2001a).

Inmet Mining Corp. also agreed to purchase an additional 6% interest in the Çayeli copper-zinc mine in Turkey for about \$8 million. The purchase will increase Inmet's interest in the Çayeli Mine to 55%, subject to government approval. The Çayeli Mine, operated by Çayeli Bakir Isletmeleri A.S., produces about 40,000 t/yr of zinc in concentrate. It is located near the Black Sea in the Rize Province (Mining Journal, 2001b).

Navan Mining plc suspended its Almagrera operations in the Spanish province of Huelva on December 9, 2001, as a result of low metal prices. The operations have been placed into a statutorily regulated care and maintenance mode. The Spanish equivalent of a Chapter 11 bankruptcy declaration was filed with the Spanish courts on December 19. Almagrera produced 13,600 t of zinc in concentrate during the first half of 2001 (CRU International Ltd., 2002a).

Update

Although, as noted above, Pasminco Ltd. has begun to sell its mining operations, the company's strategy has changed from when it initially decided to exit mining and become a smelting company in order to recover investments made by its creditors. Consequently, Pasminco has decided not to sell its Century zinc mine (Australia), reversing the announcement the company had made at the start of 2002. Although there was considerable interest in the mine, the offers received from prospective buyers were below what Pasminco hoped to receive. According to company officials, sale of the mine at a heavily discounted price would not benefit Pasminco or its creditors. A new company restructuring plan by Pasminco and its administrators will be presented to the creditors in April. If the plan is excepted, Pasminco could be relieved of administrative control and resume normal operations in a restructured form. In addition to keeping Century, Pasminco will retain the Budel

zinc smelter (Netherlands), which is dependent on Century's low-iron concentrate feed (Platts Metals Week, 2002b). Furthermore, Pasminco has initiated proceedings to dispose of its Elura lead-zinc mine and Cockle Creek lead and zinc smelter in New South Wales, but will retain the Port Pirie smelter in South Australia, plus the high-grade Rosebery zinc mine in Tasmania, which had previously been targeted for sale. The sale of the Broken Hill zinc operation in New South Wales is currently being negotiated with Consolidated Broken Hill Ltd. The restructured Pasminco would ultimately own two mines (Century and Rosebery) and three smelting operations (Budel, Port Pirie, and Risdom) (Mining Journal, 2002).

On January 3, EuroZinc Mining Corp. of Canada announced that its title to control of the Aljustrel project in Portugal has been secured. An agreement signed on December 20, 2001, by EuroZinc and the Portuguese Government, replaces a previous option agreement that called for EuroZinc to complete specific tasks by specific dates in order to qualify for purchase. The Aljustrel Mine currently has at least 10 years of reserves in two separate deposits. In addition to the mine, assets include a modern mill, offices, a machine shop, stocked warehouses, and a dedicated port facility. The operating company, Pirites Alentejanas S.A., in which EuroZinc expects to own nearly all shares, also holds all of the required operating permits and has negotiated a grant, an interest-free loan, and a tax incentive package valued at \$32 million for production financing. All additional payments required by the new agreement will come from future output, following at least one year of commercial production (EuroZinc Mining Corp., 2002).

References Cited

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TABLE 1
SALIENT ZINC STATISTICS 1/

(Metric tons, unless otherwise specified)

	2001				
	2000	October	November	December	January-December
Production:					
Mine, zinc content of concentrate	837,000	70,100	62,100	67,300 e/	807,000
Mine, recoverable zinc	814,000	67,100	59,600	64,700 e/	673,000
Smelter, refined zinc	363,000	19,900	20,000	18,400	299,000
Oxide (gross weight)	107,000	1,430	--	--	57,800
Consumption:					
Refined zinc, reported	640,000	35,700	31,700	31,200	460,000
Ores e/ (zinc content)	225	19	19	19	228
Zinc-base scrap e/ (zinc content)	223,000	18,600	18,600	18,600	223,000
Copper-base scrap e/ (zinc content)	211,000	17,600	17,600	17,600	211,000
Aluminum- and magnesium-base scrap e/ (zinc content)	1,360	113	113	113	1,360
Total e/	1,080,000	72,000	68,000	67,600	896,000
Apparent consumption, metal 2/	1,330,000	83,800	82,800	78,700 3/	1,050,000
Stocks of refined (slab) zinc, end of period:					
Producer 4/	7,890	6,750	7,210	7,380	XX
Consumer 5/	58,300	58,000 r/	56,600 r/	57,100	XX
Merchant	10,500	10,800	10,300	10,300	XX
Total	76,600	75,500 r/	74,100 r/	74,700	XX
Shipments of zinc metal from Government stockpile	38,800	1,850 e/	1,960 e/	1,960 e/	23,500
Imports for consumption:					
Refined (slab) zinc	915,000	59,500	59,000	NA	736,000 6/
Oxide (gross weight)	71,000	6,960	6,070	NA	66,700 6/
Ore and concentrate (zinc content)	52,800	16,300	6,310	NA	71,900 6/
Exports:					
Refined (slab) zinc	2,770	55	58	NA	1,100 6/
Oxide (gross weight)	7,080	1,400	982	NA	10,400 6/
Ore and concentrate (zinc content)	523,000	12,600	72,400	NA	665,000 6/
Waste and scrap (gross weight)	36,100	3,730	3,150	NA	40,000 6/
Price:					
London Metal Exchange, average, dollars per metric ton	\$1,127.73	\$761.14	\$772.49	\$754.28	\$885.43
Platts Metals Week North American Special High Grade, average, cents per pound	55.61	38.04	38.39	37.48	43.96

e/ Estimated. r/ Revised. NA Not available. XX Not applicable. -- Zero.

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

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

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

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

5/ Includes an estimate for companies that report annually.

6/ Includes data through November only.

TABLE 2
REFINED ZINC PRODUCED IN THE UNITED STATES 1/

(Metric tons)

Month	Beginning stocks 2/	Production	Shipments	Ending stocks 2/
2000:				
December	7,890	28,500	28,500	7,890
Year	XX	363,000	365,000	XX
2001:				
January	7,890	31,400	29,400	9,900
February	9,900	31,300	30,200	11,000
March	11,000	30,600	30,200	11,500
April	11,500	32,000	32,800	10,700
May	10,700	28,800	30,500	9,000
June	9,000	22,600	23,000	8,580
July	8,580	18,900	20,100	7,340
August	7,340	19,800	20,600	6,540
September	6,540	24,800	24,500	6,760
October	6,760	19,900	19,900	6,750
November	6,750	20,000	19,500	7,210
December	7,210	18,400	18,200	7,380
January-December	XX	299,000	299,000	XX

XX Not applicable.

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

2/ Includes stocks held at locations other than smelters.

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

TABLE 3
ZINC OXIDE PRODUCED IN THE UNITED STATES 1/ 2/

(Metric tons, gross weight)

Period	Beginning stocks	Production	Shipments	Ending stocks
2000:				
December	3,420	8,320	8,320	3,420
Year	XX	107,000	107,000	XX
2001:				
January	3,420	9,410	9,010	3,820
February	3,820	9,800	9,360	4,260
March	4,260	10,300	10,200	4,340
April	4,340	10,200	10,100	4,410
May	4,410	8,870	10,200	3,090
June	3,090	2,440	4,100	1,430
July	1,430	605	1,190	844
August	844	1,360	70	2,140
September	2,140	3,450	174	5,410
October	5,410	1,430	4,600	2,240
November	2,240	--	2,240	--
December	--	--	--	--
January-December	XX	57,800	61,200	XX

XX Not applicable. -- Zero.

1/ Excludes impure zinc oxide produced from other processes.

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

TABLE 4
ESTIMATED DISTRIBUTION OF ZINC OXIDE SHIPMENTS BY INDUSTRY 1/ 2/ 3/

(Metric tons, gross weight)

Industry	2000	2001			January- December
		October	November	December	
Agriculture	1,600	46	23	--	1,190
Ceramics	5,400	138	67	--	2,770
Chemicals	23,300	1,240	606	--	13,900
Paints	3,790	92	44	--	1,970
Photocopying	2,930	184	90	--	1,830
Rubber	68,700	2,800	1,370	--	38,400
Other	1,490	92	45	--	1,120
Total	107,000	4,600	2,240	--	61,200

-- Zero.

1/ Distribution of U.S. producers only. Imports excluded because distribution by industry cannot be distinguished.

2/ May include in-house consumption.

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

TABLE 5
APPARENT CONSUMPTION OF REFINED ZINC ACCORDING TO
INDUSTRY USE AND PRODUCT 1/

(Metric tons)

Industry and product	2000	2001			January- December
		October	November	December 2/	
Galvanizing:					
Sheet and strip	517,000	35,700	36,100	34,500	433,000
Other	190,000	11,700	12,500	11,400	146,000
Total	707,000	47,400	48,600	45,900	579,000
Brass and bronze	184,000	12,600	12,700	12,400	148,000
Zinc-base alloy	246,000	15,700	14,900	14,000	190,000
Other uses 3/	192,000	8,100	6,600	6,400	129,000
Grand total	1,330,000	83,800	82,800	78,700	1,050,000

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

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

3/ 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 6
AVERAGE MONTHLY ZINC PRICES 1/

Period	North	LME cash	
	American ¢/lb.	¢/lb.	\$/t
2000:			
December	52.57	48.05	1,059.40
Year	55.61	51.15	1,127.73
2001:			
January	51.28	46.86	1,033.06
February	50.39	46.29	1,020.51
March	49.52	45.56	1,004.41
April	48.01	43.96	969.08
May	46.34	42.53	937.62
June	44.34	40.58	894.57
July	42.42	38.65	852.06
August	41.31	37.54	827.68
September	39.97	36.21	798.21
October	38.04	34.52	761.14
November	38.39	35.04	772.49
December	37.48	34.21	754.28
January-December	43.96	40.16	885.43

1/ Special High Grade.

Source: Platts Metals Week.

TABLE 7
U.S. EXPORTS OF ZINC 1/

Material	2001 2/					
	2000		November		Year to date	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	2,770	\$3,380	58	\$54	1,100	\$1,200
Ore and concentrate (zinc content)	523,000	298,000	72,400	13,700	665,000	274,000
Waste and scrap (gross weight)	36,100	21,600	3,150	1,680	40,000	20,900
Powders, flakes, dust (zinc content)	4,830	9,030	433	594	4,010	6,300
Oxide (gross weight)	7,080	12,400	982	1,810	10,400	15,700
Chloride (gross weight)	3,290	2,440	114	128	1,550	1,470
Sulfate (gross weight)	5,430	3,350	327	198	4,400	2,630
Compounds, other (gross weight)	447	1,030	12	24	215	453

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

2/ Data for December 2001 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ZINC 1/

Material	2001 2/					
	2000		November		Year to date	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	915,000	\$1,100,000	59,000	\$49,400	736,000	\$710,000
Ore and concentrate (zinc content)	52,800	26,900	6,310	1,980	71,900	27,500
Waste and scrap (gross weight)	36,500	16,200	3,260	1,500	36,400	10,700
Powders, flakes, dust (zinc content)	23,000	45,700	2,220	3,580	24,500	41,600
Oxide (gross weight)	71,000	74,200	6,070	5,040	66,700	61,900
Chloride (gross weight)	1,110	1,240	43	66	918	933
Sulfate (gross weight)	13,700	6,800	1,590	758	15,200	6,810
Compounds, other (gross weight)	1,670	1,710	78	89	1,360	1,320

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

2/ Data for December 2001 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 9
SHIPMENTS OF ZINC METAL FROM THE NATIONAL DEFENSE
STOCKPILE 1/

(Metric tons)

Period	Beginning inventory	Shipments	Ending inventory
2000:			
December	139,000	995	138,000
Year	XX	38,800	XX
2001:			
January	138,000	1,790	136,000
February	136,000	2,080	134,000
March	134,000	1,800	132,000
April	132,000	2,020	130,000
May	130,000	1,710	129,000
June	129,000	771	128,000
July	128,000	2,570	125,000
August	125,000	3,340	122,000
September	122,000	1,680	120,000
October	120,000	1,850 e/	118,000
November	118,000	1,960 e/	116,000
December	116,000	1,960 e/	114,000
January-December	XX	23,500	XX

e/ Estimated. XX Not applicable.

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

Source: Defense Logistics Agency.

TABLE 10
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY 1/

(Metric tons)

Material and country	General imports			Imports for consumption		
	2000	2001 2/		2000	2001 2/	
		November	Year to date		November	Year to date
Ore and concentrate (zinc content):						
Australia	20,200	--	17,200	20,200	--	17,200
Mexico	7,490	139	10,600	6,930	139	10,600
Netherlands	10,100	--	--	10,100	--	--
Peru	20,300	6,180	43,000	15,400	6,180	43,000
Other	379	--	1,150	68	--	1,150
Total	58,600	6,310	71,900	52,800	6,310	71,900
Blocks, pigs, or slab:						
Australia	45,900	--	54,600	45,900	--	28,600
Brazil	9,270	--	15,000	9,270	--	15,000
Canada	534,000	38,400	398,000	534,000	38,400	398,000
China	24,500	--	28,300	25,900	--	6,780
Kazakhstan	65,500	--	74,800	65,500	--	74,800
Korea, Republic of	48,100	--	22,600	48,100	--	10,800
Mexico	90,800	12,300	129,000	90,800	12,300	127,000
Peru	56,300	7,930	44,400	56,300	7,930	44,400
Russia	24,200	--	14,400	24,200	--	14,400
Other	15,100	7,380	28,500	15,100	373	15,500
Total	913,000	66,000	810,000	915,000	59,000	736,000
Dross, ashes, fume (zinc content)	15,500	1,050	10,900	15,500	1,050	10,900
Grand total	987,000	73,400	893,000	983,000	66,400	819,000
Oxide (gross weight):						
Canada	44,100	4,150	44,500	44,100	4,150	44,500
China	1,170	23	227	1,170	23	227
Germany	1,100	22	229	1,100	22	229
Japan	1,110	144	990	1,110	144	990
Mexico	19,500	1,420	17,000	19,500	1,420	17,000
Netherlands	2,430	255	2,670	2,430	255	2,670
Other	1,670	58	1,090	1,670	58	1,090
Total	71,000	6,070	66,700	71,000	6,070	66,700
Other (gross weight):						
Waste and scrap	36,500	3,260	36,400	36,500	3,260	36,400
Sheets	9,380	764	6,440	9,380	764	6,440
Powders, flakes, dust (zinc content)	23,000	2,220	24,500	23,000	2,220	24,500

-- Zero.

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

2/ Data for December 2001 were not available at time of publication.

Source: U.S. Census Bureau.