

# Mineral Industry Surveys

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## ZINC IN NOVEMBER 2006

Domestic mine production (recoverable) of zinc in November 2006 was 53,200 metric tons (t), according to the U.S. Geological Survey. Average daily mine production in November was 1,770 t, 17% lower than that in October but 2% higher than that in November 2005. Mine production for the first 11 months of 2006, however, was slightly lower than that for the first 11 months of 2005. Reported consumption of 31,300 t of refined zinc was 5% lower than that in October and 6% lower than that in November 2005.

The Platts Metals Week average price for North American Special High Grade Zinc for the month of November was 210.78 cents per pound, 13% higher than the October average price and an increase of 169% from the November 2005 average price. The average London Metal Exchange Ltd. (LME) cash price of zinc for November increased to \$4,381.27 per metric ton, 15% higher than the price in October and a 172% increase compared with the price in November 2005. During November 2006, global LME zinc stocks dropped by 20,075 t to 85,800 t.

Teck Cominco Ltd. (Canada) reported that despite inclement weather, all concentrates from the Red Dog Mine (Alaska) were shipped within the 2006 shipping season. However, some sales were shifted to fourth quarter 2006 and first quarter 2007. In third quarter (Q3) 2006, zinc sales were 117,200 t, a decrease of 80,000 t from Q3 2005 sales. Q3 zinc production remained nearly unchanged at 155,300 t, a decrease of 300 t from that of Q3 2005 (Teck Cominco Ltd., 2006).

Lundin Mining Corporation (Canada) has finalized its joint venture with IFC Metropol (Russia) to develop the Ozernoe zinc/lead deposit located in the Republic of Buryatia in Russia. The deposit was reported to have indicated resources of 157 million metric tons of ore grading 5.2% zinc and 1.0% lead. Construction of the open pit mine is scheduled to begin once the feasibility study is complete (Lundin Mining Corp., 2006).

Russian Copper Company (Russia) is planning to build a zinc smelter in Orsk, Russia, near an active mine that is currently

supplying zinc concentrates to the company. The smelter will take approximately 2 years to construct and will cost \$210 million. Construction is scheduled to begin in the latter half of 2007 or early 2008 (Interfax Ltd., 2006).

President Evo Morales of Bolivia announced that plans to nationalize the country's mining sector have been temporarily postponed owing to the government's lack of economic resources to fund the transition (Mining Journal, 2006). The President reportedly called for an investigation of the sale of Comsur (now renamed Sinchi Wayra), from former President Gonzalo Sanchez de Lozadato to Swiss trading house Glencore International AG. The zinc concentrate production capacity of Sinchi Wayra is 241,000 metric tons per year (Platts Metals Week, 2006).

The Defense National Stockpile Center aggregated cash disposal (sale) of zinc in November, under the monthly basic Ordering Agreement DLA-Zinc-004, was approximately 142 t (157 short tons), with an approximate value of \$639,000 (Defense National Stockpile Center, 2006).

## References Cited

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- Platts Metals Week, 2006, Bolivia to probe Comsur sale to Glencore: *Platts Metals Week*, v. 77, no. 45, November 6, p. 10-11.
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TABLE 1  
SALIENT ZINC STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

	2005	2006			
	January- December	September	October	November	January- November
<b>Production:</b>					
Mine, zinc content of concentrate	748,000	68,400	68,900	55,400	677,000
Mine, recoverable zinc	720,000	65,800	66,300	53,200	651,000
Smelter, refined zinc <sup>2</sup>	259,000	24,100 <sup>e</sup>	23,800 <sup>e</sup>	19,000 <sup>e</sup>	228,000 <sup>e</sup>
<b>Consumption:</b>					
Refined zinc, reported	405,000	31,400	32,800 <sup>r</sup>	31,300	367,000
Ores <sup>e</sup> (zinc content)	727	61	61	61	666
Zinc-base scrap <sup>e</sup> (zinc content)	191,000	15,900	15,900	15,900	175,000
Copper-base scrap <sup>e</sup> (zinc content)	176,000	14,700	14,700	14,700	161,000
Aluminum-and magnesium-base scrap <sup>e</sup> (zinc content)	1,430	120	120	120	1,320
Total <sup>e</sup>	774,000	62,100	63,600 <sup>r</sup>	62,000	705,000
Apparent consumption, metal <sup>3</sup>	939,000	117,000	95,500	111,000 <sup>4</sup>	1,040,000
<b>Stocks of refined (slab) zinc, end of period:</b>					
Producer <sup>5</sup>	XX	7,110 <sup>e</sup>	7,160 <sup>e</sup>	6,750 <sup>e</sup>	XX
Consumer <sup>6</sup>	XX	49,400	49,700	50,300	XX
Merchant	XX	10,400	10,400	10,400	XX
Total	XX	66,900	67,200	67,400	XX
Shipments of zinc metal from Government stockpile	26,800 <sup>r</sup>	5,460 <sup>r</sup>	1,900 <sup>r</sup>	NA <sup>7</sup>	32,700
<b>Imports for consumption:</b>					
Refined (slab) zinc	668,000	71,300	92,000	NA	724,000 <sup>8</sup>
Oxide (gross weight)	109,000	6,860	14,000	NA	111,000 <sup>8</sup>
Ore and concentrate (zinc content)	156,000	617	4,630	NA	219,000 <sup>8</sup>
<b>Exports:</b>					
Refined (slab) zinc	784	359	189	NA	1,500 <sup>8</sup>
Oxide (gross weight)	14,600	2,480	2,490	NA	23,800 <sup>8</sup>
Ore and concentrate (zinc content)	786,000	157,000	225,000	NA	779,000 <sup>8</sup>
Waste and scrap (gross weight)	56,000	10,100	10,400	NA	68,500 <sup>8</sup>
<b>Price:</b>					
London Metal Exchange, average, dollars per metric ton	1,381.37	3,402.25	3,822.07	4,381.27	3,171.69
Platts Metals Week North American Special High Grade, average, cents per pound	67.14	166.60	186.07	210.78	154.06

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. XX Not applicable.

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

<sup>2</sup>Includes zinc metal used to manufacture zinc oxide.

<sup>3</sup>Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

<sup>4</sup>Data based on reported consumption, stocks, and estimated trade data.

<sup>5</sup>Data from U.S. Geological Survey and American Bureau of Metal Statistics.

<sup>6</sup>Includes an estimate for companies that report annually.

<sup>7</sup>Monthly shipments are not reflected by changes in inventory due to an inventory adjustment or shipment delays.

<sup>8</sup>Includes data through October only.

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

(Metric tons)

Month	Beginning stocks <sup>3</sup>	Production	Shipments	Ending stocks <sup>3</sup>
<b>2005:</b>				
November	4,010	24,600	24,500	4,040
December	4,040	23,700	22,200	5,590
January-December	XX	259,000	258,000	XX
<b>2006:</b>				
January	5,590	21,200 <sup>e</sup>	20,100 <sup>e</sup>	6,750
February	6,750	19,000 <sup>e</sup>	20,200 <sup>e</sup>	5,530
March	5,530	22,100 <sup>e</sup>	21,100 <sup>e</sup>	6,580
April	6,580	19,300 <sup>e</sup>	18,800 <sup>e</sup>	7,150
May	7,150	19,100 <sup>e</sup>	19,900 <sup>e</sup>	6,300
June	6,300	19,200 <sup>e</sup>	19,000 <sup>e</sup>	6,510
July	6,510	22,100 <sup>e</sup>	22,300 <sup>e</sup>	6,340
August	6,340	19,200 <sup>e</sup>	19,100 <sup>e</sup>	6,450
September	6,450	24,100 <sup>e</sup>	23,400 <sup>e</sup>	7,110
October	7,110	23,800 <sup>e</sup>	23,700 <sup>e</sup>	7,160
November	7,160	19,000 <sup>e</sup>	19,500 <sup>e</sup>	6,750
January-November	XX	228,000 <sup>e</sup>	227,000 <sup>e</sup>	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 zinc metal used to manufacture zinc oxide.

<sup>3</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	2005	2006			January- November
	January- December	September	October	November <sup>2</sup>	
<b>Galvanizing:</b>					
Sheet and strip	392,000	47,100	39,000	44,800	429,000
Other	121,000	18,700	13,900	17,400	150,000
Total	513,000	65,800	52,900	62,200	579,000
Brass and bronze	147,000	18,200	14,800	16,800	162,000
Zinc-base alloy	203,000	24,900	20,500	23,700	223,000
Other uses <sup>3</sup>	76,900	8,400	7,300	8,100	79,400
Grand total	939,000	117,000	95,500	111,000	1,040,000

<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 ZINC PRICES<sup>1</sup>

Period	North American	LME <sup>2</sup> cash	
	¢/lb.	¢/lb.	\$/t
2005:			
November	78.47	73.06	1,610.61
December	88.01	82.62	1,821.44
January-December	67.14	62.66	1,381.37
2006:			
January	100.96	94.80	2,089.92
February	106.84	100.65	2,218.90
March	116.80	109.61	2,416.44
April	148.56	139.88	3,083.75
May	172.59	161.68	3,564.51
June	157.93	146.27	3,224.66
July	163.73	151.45	3,338.80
August	163.83	151.77	3,346.00
September	166.60	154.32	3,402.25
October	186.07	173.37	3,822.07
November	210.78	198.73	4,381.27
January-November	154.06	143.87	3,171.69

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

<sup>2</sup>London Metal Exchange.

Source: Platts Metals Week.

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

Material	2005		2006 <sup>2</sup>			
			October		Year to date	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	784	\$1,500	189	199	1,500	\$2,570
Ore and concentrate (zinc content)	786,000	477,000	225,000	324,000	779,000	995,000
Waste and scrap (gross weight)	56,000	62,000	10,400	11,500	68,500	83,000
Powders, flakes, dust (zinc content)	9,310	18,500	2,130	4,900	13,200	26,900
Oxide (gross weight)	14,600	23,600	2,490	4,440	23,800	37,700
Chloride (gross weight)	1,860	2,310	122	153	1,200	1,470
Sulfate (gross weight)	2,820	1,870	10,700	3,220	34,100	19,200
Compounds, other (gross weight)	1,130	887	29	118	652	2,020

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

<sup>2</sup>Data for November 2006 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	2005		2006 <sup>2</sup>			
	Quantity (metric tons)	Value (thousands)	October		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	668,000	\$875,000	92,000	\$268,000	724,000	\$1,610,000
Ore and concentrate (zinc content)	156,000	117,000	4,630	8,610	219,000	141,000
Waste and scrap (gross weight)	9,580	8,820	1,090	1,500	11,400	14,300
Powders, flakes, dust (zinc content)	23,400	46,000	2,980	11,800	25,300	86,200
Oxide (gross weight)	109,000	127,000	14,000	31,100	111,000	205,000
Chloride (gross weight)	723	1,250	115	182	1,060	1,540
Sulfate (gross weight)	31,100	16,600	4,290	3,870	38,500	27,600
Compounds, other (gross weight)	7,010	6,370	130	179	4,460	3,380

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

<sup>2</sup>Data for November 2006 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	Shipments	Ending inventory <sup>2</sup>
2005:		
November	2,280 <sup>r</sup>	50,100 <sup>r</sup>
December	5,040 <sup>r</sup>	45,100 <sup>r</sup>
January-December	26,800 <sup>r</sup>	XX
2006:		
January	NA <sup>3</sup>	46,200 <sup>r</sup>
February	4,590 <sup>r</sup>	41,600 <sup>r</sup>
March	4,500 <sup>r</sup>	37,100 <sup>r</sup>
April	3,590 <sup>r</sup>	33,500 <sup>r</sup>
May	4,640 <sup>r</sup>	28,800 <sup>r</sup>
June	3,380 <sup>r</sup>	25,500 <sup>r</sup>
July	994 <sup>r</sup>	24,500 <sup>r</sup>
August	3,690 <sup>r</sup>	20,800 <sup>r</sup>
September	5,460 <sup>r</sup>	15,300 <sup>r</sup>
October	1,900 <sup>r</sup>	13,400 <sup>r</sup>
November	NA <sup>3</sup>	15,500
January-November	32,700	XX

<sup>r</sup>Revised. NA Not available. 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 excess material and material committed for sale/pending shipment.

<sup>3</sup>Monthly shipments are not reflected by changes in inventory due to an inventory adjustment or shipment delays.

Source: Defense National Stockpile Center.

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		
	2005	2006		2005	2006	
		October	Year to date		October	Year to date
<b>Ore and concentrate (zinc content):</b>						
Australia	8,590	--	2,850	8,590	--	2,850
Ireland	13,000	4,440	17,000	13,000	4,440	17,000
Mexico	27,300	141	55,600	27,300	141	55,600
Peru	104,000	--	141,000	104,000	--	141,000
Other	2,900	43	2,750	2,900	43	2,750
<b>Total</b>	<b>156,000</b>	<b>4,630</b>	<b>219,000</b>	<b>156,000</b>	<b>4,630</b>	<b>219,000</b>
<b>Blocks, pigs, or slab:</b>						
Australia	1	--	10,000	24,600	853	42,000
Brazil	43,700	1,010	8,130	43,800	1,770	12,400
Canada	439,000	47,600	448,000	439,000	47,600	448,000
China	15	--	3	2,140	4,660	52,000
Japan	--	--	251	1,210	--	6,150
Korea, Republic of	5,030	--	--	8,710	16,600	63,200
Mexico	147,000	13,300	83,700	147,000	13,300	84,000
Norway	--	--	--	--	--	1,160
Peru	235	240	563	834	240	841
Other	1,320	6,990	13,000	1,770	6,990	14,800
<b>Total</b>	<b>636,000</b>	<b>69,100</b>	<b>563,000</b>	<b>668,000</b>	<b>92,000</b>	<b>724,000</b>
<b>Dross, ashes, fume (zinc content)</b>						
<b>Grand total</b>	<b>807,000</b>	<b>76,000</b>	<b>811,000</b>	<b>840,000</b>	<b>98,900</b>	<b>971,000</b>
<b>Oxide (gross weight):</b>						
Canada	62,000	4,180	42,700	62,000	4,180	42,700
China	173	20	197	173	20	197
Italy	15,400	5,050	24,500	15,400	5,050	24,500
Japan	1,080	52	1,040	1,080	52	1,040
Mexico	24,100	3,120	26,000	24,100	3,120	26,000
Netherlands	4,450	1,130	7,000	4,450	1,130	7,000
Other	2,040	436	9,690	2,040	436	9,690
<b>Total</b>	<b>109,000</b>	<b>14,000</b>	<b>111,000</b>	<b>109,000</b>	<b>14,000</b>	<b>111,000</b>
<b>Other (gross weight):</b>						
Waste and scrap	9,580	1,090	11,400	9,580	1,090	11,400
Sheets	3,630	144	1,900	3,630	144	1,900
Powders, flakes, dust (zinc content)	23,400	2,980	25,300	23,400	2,980	25,300

-- 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 November 2006 were not available at time of publication.

Source: U.S. Census Bureau.