

# Mineral Industry Surveys

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## LEAD IN APRIL 2004

Domestic mine production, based on the net quantity of lead recovered from concentrate, decreased by 1.5% in April compared with production in March, according to the U.S. Geological Survey. Mine production for the first 4 months of 2004 was down by 10% compared with that of the same period in 2003. Secondary refinery production increased by 1.0% in April, and reported consumption remained essentially unchanged compared with that of the previous month. Secondary production and reported consumption through the first 4 months of 2004 were each up by about 3% compared with that of the same period in 2003.

According to the Platts Metals Week published quotations for April, the average North American producer price for lead increased by 3%, rising to 53.51 cents/pound, while the average London Metal Exchange Ltd. (LME) cash price (U.S. dollars) decreased by 15%, falling to \$753.21 per metric ton. These prices represent significant long term advances when compared to average April 2003 prices, which were up 23% and 72%, respectively. Despite averaging \$753.21 per ton in April, the LME price was volatile, falling below \$700 on April 21, before rebounding significantly the following day.

The slow decline in LME inventories continued, with stocks falling below 70,000 metric tons (t) April 30. In North America, the lead market continued to be tight in April. There was relatively strong consumer ordering activity during what typically would have been a quieter time of the year. When the scrap surge at the end of the winter battery-buying season was over, the scrap market began tightening in April. There continued to be shortfalls in primary lead supply due to the Doe Run Company's Herculaneum (Missouri) smelter shutdown for maintenance, the strike at Nova Pb Incorporated (Quebec), the closures earlier in the year of Doe Run Company's Glover (Missouri) smelter, and a short disruption (February 2 to March 31) at Teck Cominco Ltd.'s Trail (British Columbia) smelter. In Europe, April lead demand was lower on the mainland, while being higher in the United Kingdom. In Germany, battery producers were moving to reduce stocks of raw material and finished batteries after a disappointing winter battery season. In France, lead demand was reported as "quiet." Yuasa Battery

Sales Ltd, the last SLI battery maker in the UK, was working at capacity to keep up with demand. In Asia, China's refined lead surplus is predicted to remain at more than 400,000 t for the year. Chinese refined lead exports, up 16% year-on-year, showed no sign of slowing. Increased refined lead exports went to other Asian markets. Exports to Europe were down sharply, and no lead was being exported to the United States (CRU, International Ltd., 2004b).

In 2003, Western lead mine production was at its lowest level (down 0.6%) since the mid-1990s. Corresponding smelter closures should have reduced the demand for concentrates; however, increased Chinese smelter capacity has resulted in increased Chinese imports of lead concentrates, by more than 75% for 2003. In the resulting tight concentrate market, lower treatment charges (TC) were used to attract concentrates to the Chinese smelters. For 2004, some Chinese smelters have offered TCs in the \$40-\$50 range per ton flat (i.e., with no price participation) c.i.f. a main Chinese port. Chinese smelters imported almost 180% more concentrates from Western mines in the first 2 months of 2004 than in the first 2 months of 2003. Imports were down for March, but the first quarter is still up by 62% compared with imports in the first quarter of 2003. While low TCs would result in more profit for the concentrate traders, high freight costs on Trans Pacific routes were cutting into those profits (CRU, International Ltd., 2004b).

The National Defense Stockpile aggregated cash disposal (sale) of lead in April under the monthly Basic Ordering Agreement, DLA-Lead-005, was 3,500 t (3,858 short tons) for an approximate value of \$2,600,000. Sales of lead in the first 7 months of fiscal year 2004 (October 2003 through April 2004) totaled 31,416 t (34,630 short tons) (Defense National Stockpile Center, 2004).

## Update

LME lead inventories dropped with stocks, falling to 68,525 t on May 7, the lowest level since February of 1991 (CRU, International Ltd., 2004a). By the end of May, LME stocks were below 60,000 t, and lead prices had gone back up over \$900 per metric ton.

## References Cited

CRU International Ltd., 2004a, Market commentary: CRU Monitor—Lead, May, 12 p.

CRU International Ltd., 2004b, Market commentary: CRU Monitor—Lead & zinc concentrates, April, 12 p.  
Defense National Stockpile Center, 2004, Stockpile announces lead sales for April 2004: Fort Belvoir, VA, U.S. Defense National Stockpile Center news release, May 5, 1p.

TABLE 1  
SALIENT LEAD STATISTICS IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content, unless otherwise specified)

	2003		2004		
	January - December	January - April	March	April	January - April
<b>Production:</b>					
Mine (recoverable)	449,000	149,000	33,500 <sup>r</sup>	33,000	134,000
Primary refinery	NA	NA	NA	NA	NA
<b>Secondary refinery:</b>					
Reported by smelters/refineries	1,120,000	364,000 <sup>r</sup>	94,100	95,000	375,000
Estimated	11,400	3,670 <sup>r</sup>	950	960	3,780
Recovered from copper-base scrap <sup>e</sup>	15,000	5,000	1,250	1,250	5,000
Total secondary	1,150,000	372,000 <sup>r</sup>	96,300	97,200	384,000
<b>Stocks, end of period:</b>					
Primary refineries	NA	NA	NA	NA	NA
Secondary smelters and consumers	85,800	80,600 <sup>r</sup>	66,300	66,500	66,500
<b>Imports for consumption:</b>					
Ore and concentrates	6	--	1	NA	1 <sup>2</sup>
Refined metal	175,000	61,900	13,600	NA	41,100 <sup>2</sup>
<b>Consumption:</b>					
Reported	1,350,000	448,000 <sup>r</sup>	115,000	115,000	461,000
Undistributed <sup>e</sup>	41,800	13,800 <sup>r</sup>	3,560	3,560	14,300
Total	1,390,000	462,000 <sup>r</sup>	119,000	119,000	475,000
<b>Exports:</b>					
Ore and concentrates	253,000	51,900	40,900	NA	57,300 <sup>2</sup>
Bullion	593	343	16	NA	24 <sup>2</sup>
Wrought and unwrought lead	123,000	25,200	7,650	NA	32,100 <sup>2</sup>
TEL/TML preparations, based on lead compounds	517	187	99	NA	159 <sup>2</sup>
Exports (gross weight): Scrap	92,800	33,100	7,410	NA	17,600 <sup>2</sup>
Platts Metals Week North American producer price (cents per pound)	43.76	43.57	51.94	53.51	50.43

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. -- 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>Includes data for January - March only; April data were not available at time of publication.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate \$/£
		\$/metric ton	£/metric ton	
<b>2003:</b>				
April	43.52	436.98	277.65	1.573873
December	44.30	691.69	394.89	1.751605
Year	43.76	514.62	313.88	1.634750
<b>2004:</b>				
February	49.41	887.99	475.54	1.867295
March	51.94	885.98	485.18	1.826100
April	53.51	753.21	418.05	1.801710

Source: Platts Metals Week.

TABLE 3  
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP<sup>1</sup>

(Metric tons, gross weight)

Item	Stocks	Net	Consumption	Stocks
	March 31, 2004			receipts
Battery-lead	13,300	103,000	103,000	12,900
Soft lead	W	W	W	W
Drosses and residues	2,030	2,050	2,020	2,060
Other <sup>2</sup>	1,580	1,960	2,030	1,500
Total	16,900	107,000	108,000	16,500
Percent change from preceding month	XX	+3.3	+0.9	-2.7

W Withheld to avoid disclosing company proprietary data; included with "Other." 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 solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 4  
LEAD, TIN, AND ANTIMONY RECOVERED  
FROM LEAD-BASE SCRAP IN APRIL 2004<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	63,000	--	--
Remelt lead	W	W	W
Antimonial lead	31,600	W	W
Other <sup>2</sup>	W	W	--
Total	95,000	40	355

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

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

<sup>2</sup>Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5  
CONSUMPTION OF LEAD IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content)

Uses	2003		2004		
	January - December	January - April <sup>f</sup>	March	April	January - April
Metal products:					
Ammunition, shot and bullets	51,600	17,200	4,200	4,780	18,800
Brass and bronze, billet and ingots	3,400	963	360	317	1,350
Cable covering, power and communication and cabling lead, building construction	4,990	2,020	434	328	1,490
Casting metals	33,300	11,100	2,790	2,780	11,100
Sheet lead, pipes, traps and other extruded products	23,800	7,850	2,000	1,930	7,170
Solder	1,650	538	146	105	1,040
Storage batteries, including oxides	1,130,000	375,000	97,800	97,600	391,000
Terne metal, type metal, and other metal products <sup>2</sup>	15,200	5,080	1,270	1,270	5,080
Total metal products	1,270,000	420,000	109,000	109,000	437,000
Other oxides and miscellaneous uses	83,900	28,000	6,130	6,120	24,000
Total reported	1,350,000	448,000	115,000	115,000	461,000
Undistributed consumption <sup>c</sup>	41,800	13,800	3,560	3,560	14,300
Grand total	1,390,000	462,000	119,000	119,000	475,000

<sup>c</sup>Estimated. <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>Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

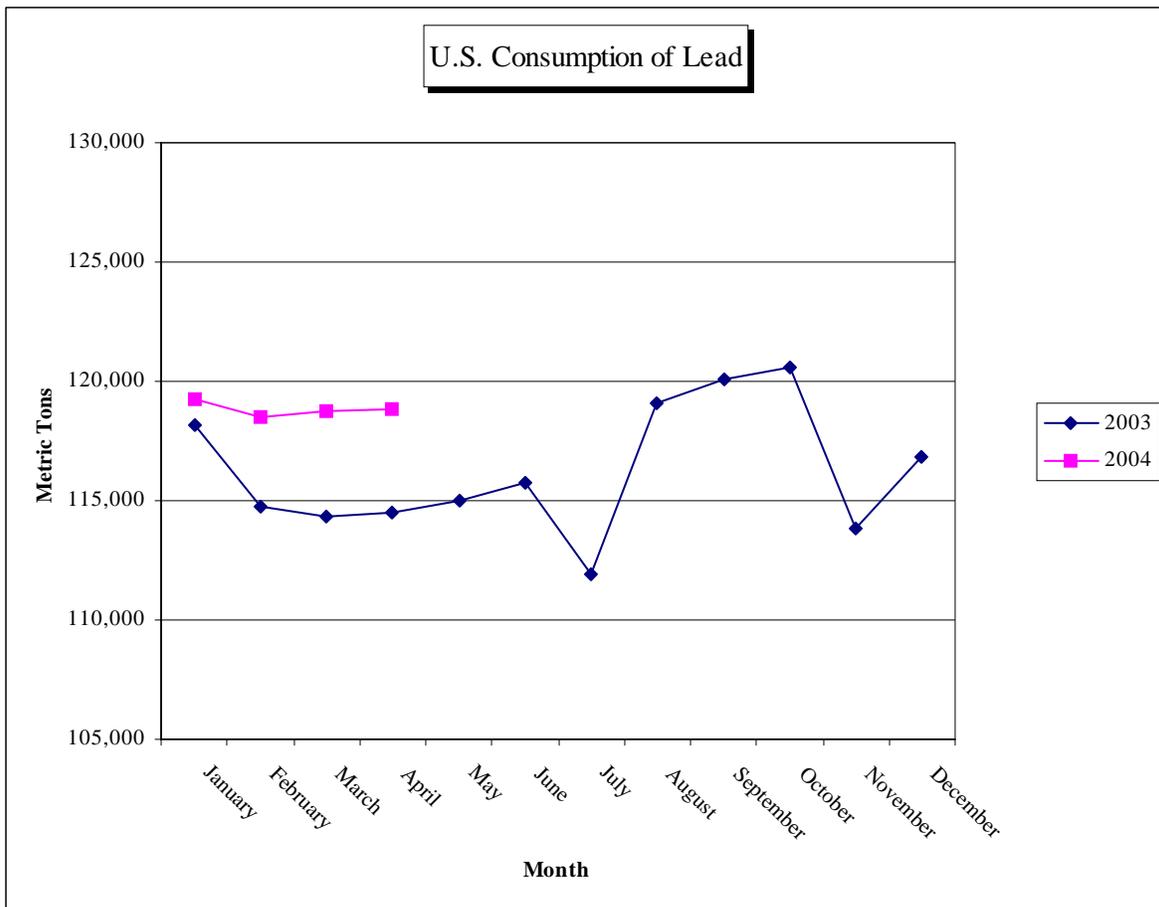


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS,  
AND CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons, lead content)

Type of material	Stocks		Consumption	Stocks
	March 31, 2004	Net receipts		April 30, 2004
Soft lead	35,000	63,700	63,500	35,200
Antimonial lead	16,300	32,200	32,100	16,400
Lead alloys	W	19,400	19,400	W
Copper-base scrap	W	67	72	W
Total	66,300	115,000	115,000	66,500

W Withheld to avoid disclosing company proprietary data; included in "Total."

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

TABLE 7  
U.S. EXPORTS OF LEAD, BY CLASS<sup>1</sup>

(Metric tons)

	2003		2004		
	Year	March	February	March	January -
					March
Lead content:					
Ore and concentrates	253,000	2,190	14,600	40,900	57,300
Bullion	593	208	--	16	24
Materials excluding scrap	123,000	4,020	11,300	7,650	32,100
TEL/TML preparations, based on lead compounds	517	66	26	99	159
Total	377,000	6,480	25,900	48,700	89,600
Gross weight: Scrap	92,800	9,500	5,770	7,410	17,600

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 8  
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN<sup>1</sup>

(Metric tons, lead content)

Country of origin	General imports					Imports for consumption				
	2003		2004			2003		2004		
	Year	January - March	February	March	January - March	Year	January - March	February	March	January - March
<b>Base bullion:</b>										
Argentina	5	--	--	--	--	5	--	--	--	--
Mexico	--	--	--	1	1	--	--	--	1	1
Germany	1	--	--	--	--	1	--	--	--	--
Total	6	--	--	1	1	6	--	--	1	1
<b>Pigs and bars:</b>										
Australia	10,100	10,100	--	--	--	107	1,100	--	--	--
Canada	167,000	42,600	12,500	12,300	37,100	167,000	35,800	12,500	12,300	37,100
China	1	--	--	--	2	1	19,400	--	--	2
Germany	--	--	44	43	87	--	49	44	43	87
Mexico	8,270	4,430	1,990	1,160	3,480	8,270	723	1,990	1,160	3,480
Other	259	17	8	56	445	259	3	8	56	445
Total	186,000	57,100	14,500	13,600	41,100	175,000	57,000	14,500	13,600	41,100
Grand total	186,000	57,100	14,500	13,600	41,100	175,000	57,000	14,500	13,600	41,100

-- Zero.

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

Source: U.S. Census Bureau.