

# Mineral Industry Surveys

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## LEAD IN JULY 2004

Domestic mine production, based on the net quantity of lead recovered from concentrate, was 33,800 metric tons (t) in July, according to the U.S. Geological Survey. This was an increase of 2% compared with that of June. Mine production for the first 7 months of 2004 was 237,000 t, down by 11% compared with that of the same period in 2003. Secondary refinery production, 97,400 t, increased by 1% in July, and reported consumption, 111,000 t, decreased by about 3% compared with levels of the previous month. Secondary production for the first 7 months of 2004 was up by a fraction of a percent compared with production in the first 7 months of 2003, and reported consumption rose by about 2% for the same period.

According to the Platts Metals Week published quotations for July, the average North American producer price increased to 54.09 cents per pound, a 0.4% increase above the June price, and the average London Metal Exchange Ltd. (LME) cash price (U.S. dollars) increased to \$938.85 per metric ton, an 8% advance from the June price. These are significantly higher prices compared with July 2003 averages, up about 24% and 82%, respectively. The LME July prices ranged from a low of \$895 per ton (July 14) to a high of \$1,039 per ton (July 30).

LME lead stocks continued to fall, dropping by about 8,000 t in July and finishing the month at 37,450 t.

In the United States, the lead market continued to be tight in July. Producers were struggling to meet consumer orders. Producers' stocks were depleted, and there were indications that consumer stocks were also low. Low stocks in combination with a constrained transportation system, and any expected or unexpected supply disruptions (maintenance at smelters/refiners), would result in longer lead times to get lead to consumers. The U.S. spot premiums on lead were 5 cents to 7 cents per pound (\$110 to \$155 per metric ton). Contracts between producers and consumers for 2005 deliveries were being negotiated earlier this year, with some small contracts for 2005 already concluded (CRU International Ltd., 2004a).

Lead demand in Europe for July was lackluster; however, reports from southern Europe indicated August lead orders were at a higher level than in previous years. Consumers were generally holding low levels of stocks, and demand was expect

to be strong going into September-October, as the battery business enters its peak season. As slow as business was, European spot premiums moved up slightly to about \$130-\$140 per metric ton (about 6 cents per pound). News of more lead coming from Glencore's Porto Vesme smelter in Italy was partially offset by the continued problems at Société des Fonderies de Plomb de Zellidja's lead smelter in Morocco, so the net rise in lead supplies to the region was only minimal (CRU International Ltd., 2004a).

Chinese consumption of refined lead remained robust, but the rate of growth slowed. Manufacturers of Starting-Lighting-Ignition (SLI) lead-acid batteries were being squeezed by the higher prices for lead. In the first half of 2004, the Chinese spot lead prices averaged \$1,036 per metric ton, with highs pushing above the \$1,208 level. It is likely that high July prices continued to squeeze the battery producers' margins. According to an industry source, battery prices rose by only 10% to 15%, when about 40% was needed to offset the higher lead prices. Exports of SLI batteries from China for the first 6 months of the year were nearly the same as those of 2003. Battery makers in South Korea reportedly were also struggling to make a profit (CRU International Ltd., 2004a). Chinese smelters continued to import greater quantities of lead concentrates than in previous years (CRU International Ltd., 2004b).

The Red Dog Mine, located in Alaska, intended to ship 200,000 t of lead concentrates in 2004, down from 218,000 t in 2003 (CRU International Ltd., 2004b).

Yuguang Gold-Lead Group's Jiyuan smelter in Henan Province, China, expected to produce 200,000 to 210,000 t of refined lead in 2004. The company reported that, because lead production requires less electricity than aluminum and zinc, the tight power situation in China had less impact on its production. In the first half of the year, the company produced about 100,000 t of refined lead, of which 50,000 t was exported (Platts Metals Week, 2004a). Nanfang Nonferrous Smelting Company in Guangxi Province, China, was having more trouble dealing with power shortages. The company was forecasting a 20% drop in refined lead production for 2004, or 40,000 t, compared

with 50,000 t for 2003. The company is smelter has a 60,000-metric-ton-per-year (t/yr) capacity (Platts Metals Week, 2004b).

Dongfang Gold-Lead Company's Jiaozuo project in Henan Province, China, was put into production in early July. The new production line cost \$21.7 million and had a production capacity of 60,000 t/yr of lead. Construction on the second stage of the project had already started (June 2004), and when completed in February 2005, the facility was to be able to produce 120,000 t of lead, 300 t of silver, 1 t of gold and 70,000 t of sulfuric acid per year (Antaika, 2004).

Zinifex Limited of Australia reported profits and mine production for the quarter ending June 30. After-tax profits were \$36 million, and mine production of contained lead for the quarter was 34,339 t. Zinifex was recently created (April 5) to hold the assets of bankrupt Pasmaico Ltd. (Platts Metals Week, 2004c).

The European Parliament on April 20 approved legislation that would effectively ban lead in batteries, with some possible exceptions. The European Commission recommended in a directive in November 2003 that the recycling of spent batteries and the recovery of lead be required. In response to a vote of the European Parliament, the Commission stated it would not endorse a ban on lead in batteries and affirmed its original proposal for close-loop recycling regulations (Ryan's Notes, 2004). The next step is for the European Commission to introduce a modified proposal, accepting some of the amendments and rejecting others. The European Council would then issue its opinion on the proposed directive. The codecision procedure will end when the Parliament and the Council reach agreement and formally adopt the directive. After publication in the Official Journal and its entry into force, Member States will have 18 months to transpose the obligations of this directive into national legislation (European Union, 2004§<sup>1</sup>).

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<sup>1</sup>A reference that includes a section mark (§) is found in the Internet Reference Cited section.

The National Defense Stockpile aggregated cash disposal (sale) of lead in July, under the monthly Basic Ordering Agreement, DLA-Lead-005, was 4,897 t (5,397 short tons) for an approximate value of \$4.8 million. Sales of lead in the first 10 months of fiscal year 2004 (October 1, 2003, through July 31, 2004) totaled 44,013 t (48,515 short tons) (Defense National Stockpile Center, 2004).

### Update

At the end of July, LME stocks had dropped to 35,625 t, decline of only 1,825 t, the smallest 1-month drop of 2004, to date. LME lead prices in August ranged from a low on August 9 of \$873 per metric ton to a high on August 5 of \$980 per metric ton; in August the lead prices were below \$900 only 4 days while above \$900 a total of 17 days.

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

(Metric tons, lead content, unless otherwise specified)

	2003		2004		
	Year <sup>p</sup>	January - July	June	July	January - July
<b>Production:</b>					
Mine (recoverable)	449,000	266,000	33,100	33,800	237,000
Primary refinery	245,000	NA	NA	NA	NA
<b>Secondary refinery:</b>					
Reported by smelters/refineries	1,140,000	648,000 <sup>r</sup>	94,400	95,100	650,000
Estimated	--	6,550 <sup>r</sup>	954	961	6,560
Recovered from copper-base scrap <sup>c</sup>	11,400	8,750	1,250	1,250	8,750
Total secondary	1,150,000	664,000 <sup>r</sup>	96,600	97,400	665,000
<b>Stocks, end of period:</b>					
Primary refineries	NA	NA	NA	NA	NA
Secondary smelters and consumers	107,000	82,400 <sup>r</sup>	66,900	66,700	66,700
<b>Imports for consumption:</b>					
Ore and concentrates	6	1	--	NA	1 <sup>2</sup>
Refined metal	175,000	120,000	17,200	NA	93,500 <sup>2</sup>
<b>Consumption:</b>					
Reported	1,390,000	780,000 <sup>r</sup>	115,000 <sup>r</sup>	111,000	799,000
Undistributed <sup>c</sup>	--	24,100 <sup>r</sup>	3,560 <sup>r</sup>	3,530	24,800
Total	1,390,000	804,000 <sup>r</sup>	119,000 <sup>r</sup>	114,000	824,000
<b>Exports:</b>					
Ore and concentrates	253,000	93,700	4,220	NA	81,600 <sup>2</sup>
Bullion	593	369	9	NA	53 <sup>2</sup>
Wrought and unwrought lead	123,000	47,000	5,690	NA	47,400 <sup>2</sup>
TEL/TML preparations, based on lead compounds	517	409	365	NA	541 <sup>2</sup>
Exports (gross weight): Scrap	92,800	56,000	3,360	NA	30,100 <sup>2</sup>
Platts Metals Week North American producer price (cents per pound)	43.76	43.61	53.88	54.09	51.91

<sup>c</sup>Estimated. <sup>p</sup>Preliminary. <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 - June only; July data were not available at time of publication.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate dollars/£
		\$/metric ton	£/metric ton	
<b>2003:</b>				
July	43.76	514.38	317.10	1.622100
December	44.30	691.69	394.89	1.751605
Year	43.76	514.62	313.88	1.634750
<b>2004:</b>				
May	53.68	808.45	452.66	1.785995
June	53.88	869.66	475.77	1.827909
July	54.09	938.85	509.19	1.843800

Source: Platts Metals Week.

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

(Metric tons, gross weight)

Item	Stocks	Net	Consumption	Stocks
	June 30, 2004	receipts		July 31, 2004
Battery-lead	12,400	98,000	98,500	12,000
Soft lead	W	W	W	W
Drosses and residues	1,850	1,410	1,430	1,840
Other <sup>2</sup>	1,270	1,830	1,810	1,280
Total	15,600	101,000	102,000	15,100
Percent change from preceding month	XX	+0.4	+1.2	-2.8

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 JULY 2004<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	70,400	--	--
Remelt lead	W	W	W
Antimonial lead	24,300	W	W
Other <sup>2</sup>	W	W	--
Total lead-base	95,100	42	364

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		
	Year <sup>p</sup>	January - July <sup>f</sup>	June	July	January - July
Metal products:					
Ammunition, shot and bullets	48,800	30,400	4,750	4,030	31,700
Brass and bronze, billet and ingots	2,810	1,900	158 <sup>r</sup>	130	2,030
Cable covering, power and communication and cabling lead, building construction	4,790	3,350	421	617	2,910
Casting metals	31,700	19,400	2,780	2,780	19,500
Sheet lead, pipes, traps and other extruded products	25,900	13,900	2,040	1,940	13,600
Solder	6,310	935	152	117	941
Storage batteries, including oxides	1,170,000	653,000	98,000	94,500	681,000
Terne metal, type metal, and other metal products <sup>2</sup>	23,200	8,880	1,260	1,260	8,870
Total metal products	1,310,000	732,000	110,000 <sup>r</sup>	105,000	760,000
Other oxides and miscellaneous uses	78,300	48,300	5,630	5,630	38,700
Total reported	1,390,000	780,000	115,000 <sup>r</sup>	111,000	799,000
Undistributed consumption <sup>e</sup>	--	24,100	3,560 <sup>r</sup>	3,530	24,800
Grand total	1,390,000	804,000	119,000 <sup>r</sup>	114,000	824,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

<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.

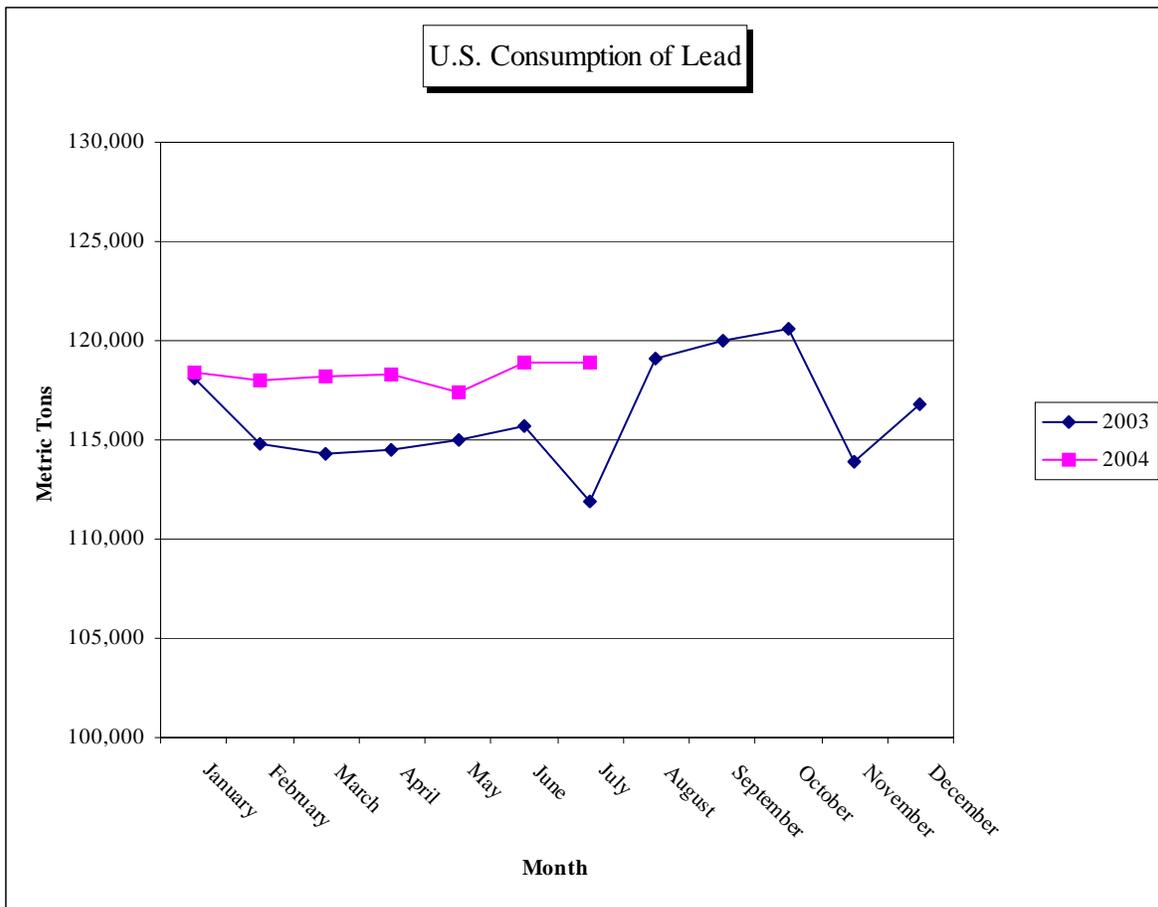


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS,  
AND CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons, lead content)

Type of material	Stocks	Net receipts	Consumption	Stocks
	June 30, 2004			July 31, 2004
Soft lead	35,000	63,300	63,500	34,700
Antimonial lead	16,300	32,200	31,400	17,100
Lead alloys	W	19,000	19,000	W
Copper-base scrap	W	48	50	W
Total	66,900	115,000	114,000	67,500

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	June	May	June	January -
					June
Lead content:					
Ore and concentrates	253,000	9,040	13,100	4,220	81,600
Bullion	593	--	20	9	53
Materials excluding scrap	123,000	6,890	5,620	5,690	47,400
TEL/TML preparations, based on lead compounds	517	23	5	365	541
Total	377,000	16,000	18,700	10,300	130,000
Gross weight: Scrap	92,800	7,720	3,970	3,360	30,100

-- 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.

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 - June	May	June	January - June	Year	January - June	May	June	January - June
<b>Base bullion:</b>										
Argentina	5	--	--	--	--	5	--	--	--	--
Germany	1	--	--	--	--	1	--	--	--	--
Mexico	--	--	--	--	1	--	--	--	--	1
Total	6	--	--	--	1	6	--	--	--	1
<b>Pigs and bars:</b>										
Australia	10,100	10,100	--	--	--	107	--	3,520	1,880	7,290
Canada	167,000	102,000	13,600	14,000	76,600	167,000	102,000	13,600	14,000	76,600
China	1	1	--	--	2	1	1	--	--	2
Germany	--	--	40	42	211	--	--	40	42	211
Mexico	8,270	5,850	1,210	663	6,770	8,270	5,850	1,210	663	6,770
Other	259	82	1,340	599	2,460	259	82	1,340	599	2,590
Total	186,000	118,000 <sup>r</sup>	16,200	15,300	86,100	175,000	108,000	19,700	17,200	93,500
Grand total	186,000	118,000 <sup>r</sup>	16,200	15,300	86,100	175,000	108,000	19,700	17,200	93,500

<sup>r</sup>Revised. -- 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.