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Mineral Industry Surveys

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LEAD IN APRIL 2003

Domestic mine production, based on the net quantity of lead recovered from concentrate, decreased by 6% in April compared with production in March. Secondary refinery production decreased by 1% in April and reported consumption decreased by about 2% compared with that of the previous month. According to Platts Metals Week published quotations, the average North American producer price and the average London Metal Exchange cash price (U.S. dollars) decreased by 0.14% and 4.25%, respectively, in April.

Demand for lead in North America softened moderately in April as lead inventories of consumers remained at adequate levels, prompting a more cautious approach to further significant purchases. Lead producers and battery manufacturers remained optimistic, however, that last year's hot summer and the recent cold winter could generate higher replacement battery sales in the coming months. New auto production continued to be down, thus depressing the demand for original equipment batteries. In Europe, lead demand softened after a promising start in the first quarter of the year. Although demand was down, the supplies of refined lead remained tight, as inventories of lead held by European producers remained at very low levels. The flow of lead into Europe from Asia and the United States continued during the month, relieving, to some extent, the tightness in the European market (CRU International Ltd., 2003a).

Demand for industrial batteries in the telecommunications sector continued to be very soft in Europe, Asia, and Japan. According to industry analysts, the current demand in this sector is only 15% to 20% of its peak demand in the 1990s. Growth in the telecommunications sector is expected to be quite slow, in the short term (Platts Metals Week, 2003b).

The National Defense Stockpile aggregated cash disposal (sale) of lead in April under the monthly Basic Ordering Agreement, DLA-Lead-005, was 3,850 metric tons (t) (4,244 short tons). Sales in the first 7 months of fiscal year 2003 (October 2002 through April 2003) totaled 33,913 t (37,383 short tons).

The Consumer Product Safety Commission (CPSC), under the authority of the Federal Hazardous Substances Act, issued a final rule banning the use of lead-containing, metal-cored candlewicks and candles with such wicks. Under the CPSC ruling, wicks containing more than 0.06% lead by weight are prohibited. The metal cores are used to provide structural rigidity to the wick during candle production, and to provide an upright wick during burning of the candle. The CPSC's concerns with the wicks focused on the potential hazards associated with excessive emissions of lead into the air during burning. Cautionary labeling was deemed to be an inadequate measure to protect public health and safety; thus the CPSC has removed the wicks as a commercial good. The final rule will apply to all candlewick material and candles subject to the ban that are either manufactured or imported on or after October 15, 2003. Prior to this date, existing stocks may be commercially depleted (U.S. Consumer Product Safety Commission, 2003).

Apollo Gold Corporation resumed full production in early April at its Montana Tunnels polymetallic mine near Helena, Montana. The mine had been scheduled for closure as a result of the depletion of ore reserves prior to Apollo's acquisition of the mine in April 2002. During 2002, Apollo immediately began a three-phase waste-stripping program designed to redevelop the mine. Approximately 18 million metric tons (Mt) of waste was moved, allowing the mill to be restarted in October 2002 with the processing of development ore from the stripped area of the mine. The second stripping phase is continuing and is scheduled to be completed by the end of 2003. Apollo expects to mine about 4.6 Mt of ore this year, yielding an estimated 6,000 t of lead in concentrate. Proven and probable reserves at Montana Tunnels were about 17 Mt at the end of 2002, grading an estimated 0.2% lead (Apollo Gold Corporation, 2003; CRU International Ltd., 2003b).

Australia's Ausmelt Ltd. signed an agreement with India's Hindustan Zinc Ltd. (HZL) in mid-April to build a 60,000-metric-ton-per-year lead smelter at Chanderiya in Rajasthan, India. The new smelter is to be designed to process a mixture of concentrates from HZL's mines, as well as residues from the company's existing smelter. Construction of the smelter was to begin soon after the signing of the agreement (Platts Metals Week, 2003a).

Boliden AB has outlined a new zone of polymetallic mineralization at the Lappberget region of its Garpenberg base-

metals mine in Sweden. The zone was discovered about a year ago. Further underground drilling at Lappberget has intersected mineralization containing lead concentrations ranging from 3.0% to 4.7% (Mining Journal, 2003).

References Cited

Apollo Gold Corporation, 2003, Apollo Gold announces Montana Tunnels Mine resumes full commercial production: Denver, CO, Apollo Gold Corporation news release, April 10, 1 p.

CRU International Ltd., 2003a, Market commentary: CRU Monitor—Lead, May, p. 2.

CRU International Ltd., 2003b, Mine News: CRU Monitor—Lead, May, p. 7.

Mining Journal, 2003, Lappberget exploration: Mining Journal, v. 340, no. 8730, April 4, p. 236.

Platts Metals Week, 2003a, Ausmelt to build new lead smelter in India: Platts Metals Week, v. 74, no. 16, April 21, p. 15.

Platts Metals Week, 2003b, Lead demand down 350,000 mt on "telecom bubble"—CHR: Platts Metals Week, v. 74, no. 16, April 21, p. 14.

U.S. Consumer Product Safety Commission, 2003, Metal-cored candlewicks containing lead and candles with such wicks: Federal Register, v. 68, no. 75, April 18, p. 19142-19148.

TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES[1]

(Metric tons, lead content, unless otherwise specified)

	2002		2003		
	January - December	January - April	March	April	January - April
Production:					
Mine (recoverable)	440,000	152,000	38,500 r	36,200	149,000
Primary refinery	NA	NA	NA	NA	NA
Secondary refinery:					
Reported by smelters/refineries	1,090,000	338,000	84,100	82,600	342,000
Estimated	11,000	3,410	849	834	3,450
Recovered from copper-base scrap e	15,000	5,000	1,250	1,250	5,000
Total secondary	1,110,000	347,000	86,200	84,700	350,000
Stocks, end of period:					
Primary refineries	NA	NA	NA	NA	NA
Secondary smelters and consumers	88,000	82,700	80,600 r	82,900	82,900
Imports for consumption:					
Ore and concentrates	6	--	--	NA	-- 2
Refined metal	210,000	78,500	17,800	NA	47,000 2
Consumption:					
Reported	1,520,000	489,000	114,000 r	113,000	467,000
Undistributed e	150,000	48,400	11,300 r	11,200	46,100
Total	1,670,000	538,000	126,000 r	124,000	513,000
Exports:					
Ore and concentrates	241,000	29,000	2,190	NA	30,700 2
Bullion	256	95	208	NA	331 2
Wrought and unwrought lead	43,200	9,020	4,020	NA	17,200 2
TEL/TML preparations, based on lead compounds	516	108	66	NA	127 2
Exports (gross weight): Scrap	106,000	34,500	9,500	NA	23,300 2
Platt's Metals Week North American producer price (cents per pound)	43.56	43.67	43.58	43.52	43.57

eEstimated. rRevised. NA Not available. -- Zero.

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

[2]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	LME		Sterling exchange rate
	cents/lb	$/metric ton	£/metric ton	dollars/£
2002:				
April	43.63	471.99	327.11	1.442909
December	43.54	443.22	279.41	1.586295
Year	43.56	452.29	301.96	1.503145
2003:				
February	43.63	475.40	295.66	1.607947
March	43.58	456.36	288.38	1.582471
April	43.52	436.98	277.65	1.573873

Source: Platts Metals Week.

TABLE 3
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP[1]

(Metric tons, gross weight)

Item	Stocks March 31, 2003	Net receipts	Consumption	Stocks April 30, 2003
Battery-lead	17,100	82,800	82,400	17,500
Soft lead	W	W	W	W
Drosses and residues	1,550	3,840	3,860	1,530
Other[2]	1,840	1,970	2,190	1,620
Total	20,500	88,600	88,500	20,700
Percent change from preceding month	XX	+1.9	+0.3	+0.6

W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]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 MARCH 2003[1]

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	59,400	--	--
Remelt lead	W	W	W
Antimonial lead	22,500	W	W
Other[2]	W	W	--
Total lead-base	82,600	42	337

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits.
[2]Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5
CONSUMPTION OF LEAD IN THE UNITED STATES[1]

(Metric tons, lead content)

Uses	2002		2003		
	January - December	January - April	March	April	January - April
Metal products:					
Ammunition, shot and bullets	39,300	14,800	2,530	3,170	11,500
Brass and bronze, billet and ingots	1,610	1,170	280 r	238	903
Cable covering, power and communication and calking lead, building construction	2,920	1,260	400	516	1,640
Casting metals	6,270	2,610	523	523	2,090
Sheet lead, pipes, traps and other extruded products	19,700	5,980	1,660	1,690	6,690
Solder	1,880	574	178	178	720
Storage batteries, including oxides	1,360,000	435,000	103,000 r	101,000	418,000
Terne metal, type metal, and other metal products[2]	1,030	778	5	9	25
Total metal products	1,440,000	462,000	109,000 r	108,000	441,000
Other oxides and miscellaneous uses	83,800	27,000	5,620 r	5,620	25,500
Total reported	1,520,000	489,000	114,000 r	113,000	467,000
Undistributed consumption[e]	150,000	48,400	11,300 r	11,200	46,100
Grand total	1,670,000	538,000	126,000 r	124,000	513,000

[e]Estimated. [r]Revised.

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

[2]Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

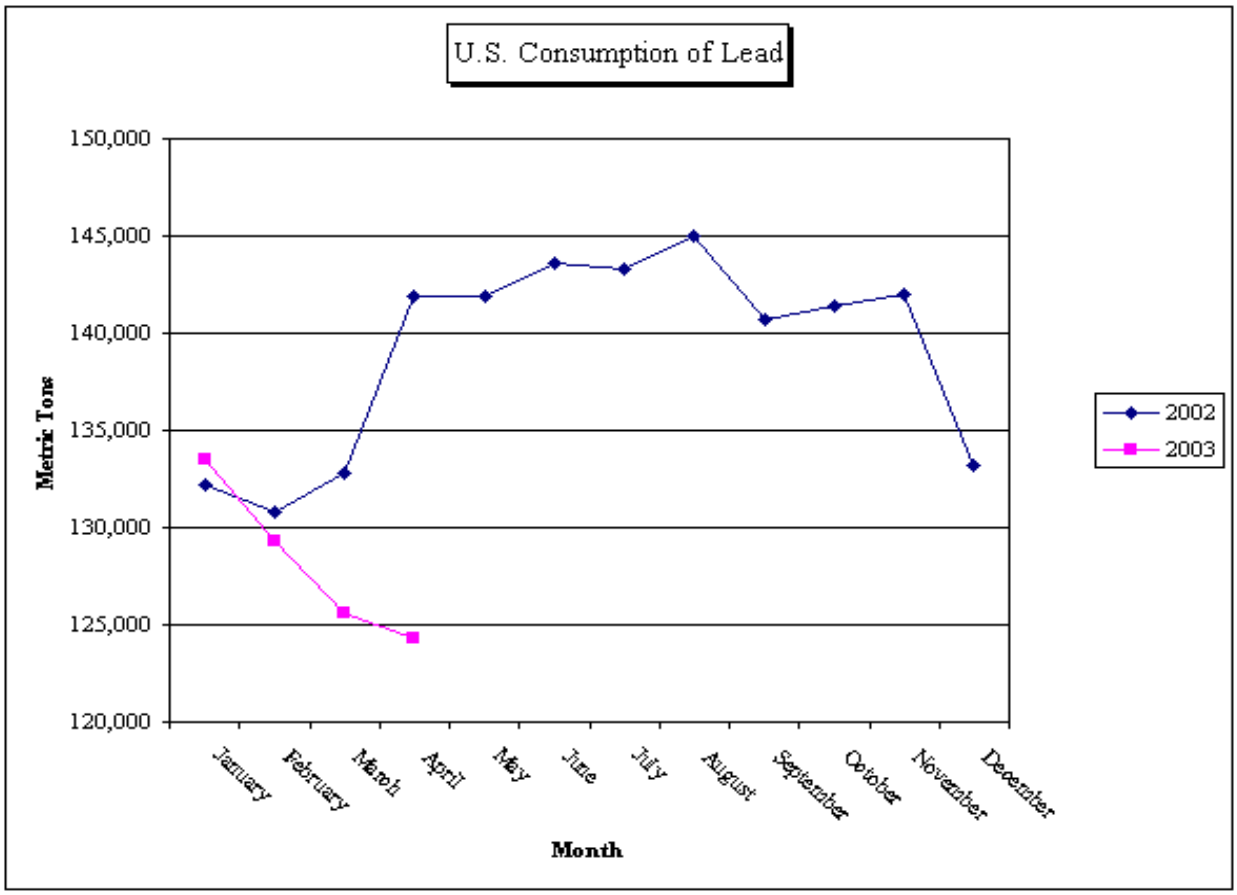

TABLE 6
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD[1]

(Metric tons, lead content)

Type of material	Stocks March 31, 2003	Net receipts	Consumption	Stocks April 30, 2003
Soft lead	38,400 [r]	65,500	63,400	40,500
Antimonial lead	28,400 [r]	26,400	26,100	28,600
Lead alloys	W	23,400	23,400	W
Copper-base scrap	W	5	5	W
Total	80,600 [r]	115,000	113,000	82,900

[r]Revised.
W Withheld to avoid disclosing company proprietary data; included in "Total."
[1]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[1]

(Metric tons)

	2002		2003		
	Year	March	February	March	January - March
Lead content:					
Ore and concentrates	241,000	7,280	15,100	2,190	30,700
Bullion	256	--	--	208	331
Materials excluding scrap	43,200	2,330	6,430	4,020	17,200
TEL/TML preparations, based on lead compounds	516	19	22	66	127
Total	285,000	9,630	21,600	6,480	48,400
Gross weight: Scrap	106,000	9,150	5,890	9,500	23,300

-- Zero.
[1]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[1]

(Metric tons, lead content)

	General imports					Imports for consumption				
	2002		2003			2002		2003		
Country of origin	Year	January - March	February	March	January - March	Year	January - March	February	March	January - March
Ore, matte, etc.:										
Other	6	--	--	--	--	6	--	--	--	--
Total	6	--	--	--	--	6	--	--	--	--
Pigs and bars:										
Australia	43,700	7,720	10,100	--	10,100	2,630	1,100	--	--	--
Canada	172,000	35,800	12,400	16,200	42,600	172,000	35,800	12,400	16,200	42,600
China	28,200	19,400	--	--	--	28,200	19,400	--	--	--
Germany	185	49	--	--	--	185	49	--	--	--
Mexico	7,460	723	2,020	1,550	4,430	7,460	723	2,020	1,550	4,430
Other	246	3	1	13	17	94	3	1	13	17
Total	251,000	63,600	24,600	17,800	57,100	210,000	57,000	14,500	17,800	47,000
Reclaimed scrap, including ash and residues	--	--	--	--	--	--	--	--	--	--
Grand total	251,000	63,600	24,600	17,800	57,100	210,000	57,000	14,500	17,800	47,000

-- Zero.

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

Source: U.S. Census Bureau.