

# Mineral Industry Surveys

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## LEAD IN JUNE 2014

Domestic mine production (recoverable) of lead in June was 29,600 metric tons (t). Average daily mine production in June was 986 t, 7% less than that in May. Year-to-date lead mine production was 10% greater than during the same period in 2013 owing to increased production in all of the lead-producing States—Alaska, Idaho, and Missouri. Hecla Mining Co. (Coeur d'Alene, ID) produced a combined 18,000 t of lead at its Greens Creek Mine (AK) and Lucky Friday Mine (ID) during the first half of 2014, a 56% increase compared with production in the same period in 2013. The increase was attributable to the Lucky Friday Mine that produced 9,070 t of lead through June compared with 1,930 t during the same period in 2013 when the mine was ramping up operations. The mine was restarted in mid-February 2013 after having been closed for maintenance in early 2012 (Hecla Mining Co., 2014).

Secondary refinery production of lead in June was essentially unchanged from that of the previous month, and year-to-date production was 5% less than that in the same period in 2013. The decline in secondary production during the first half of the year was partially owing to the temporary shutdown of Exide Technologies' lead refinery in Vernon, CA (90,000-metric-ton-per-year capacity), in mid-March 2014 owing to environmental concerns from State regulators. The company was making required improvements to the plant and intended to restart operations by yearend 2014 or early 2015 (CRU International Ltd., 2014, p. 87, 184–185).

Total imports of lead for consumption increased by 6% in June 2014 from those in the previous month, and imports during the first half of 2014 were 17% greater than those in the same period of 2013. Imports of refined lead during the second quarter of 2014 were about 22% higher than those in the first quarter and were thought to be partially due to traders holding increased inventory (CRU International Ltd., 2014, p. 43).

Total exports of lead, exclusive of scrap, decreased by 16% in June from those of the previous month; however exports increased by 90% in the first half of 2014 compared with those in the same period in 2013. The increase was primarily owing to increased exports of lead contained in concentrates, the majority of which went to China, and correlated with the closure of Doe

Run Resources Corp.'s (St. Louis, MO) primary lead smelter in Herculaneum, MO, at yearend 2013.

The Platts Metals Week average North American Market price for lead in June 2014 was \$1.07 per pound, essentially unchanged from that of the previous month and that in June 2013. The London Metal Exchange Ltd. (LME) cash price for lead in June 2014 averaged \$2,103 per metric ton, essentially unchanged from that in the previous month and that in June 2013. The Platts average U.S. used lead-acid batteries price in June 2014 was \$0.393 per pound, essentially unchanged from that in May and slightly more than that in June 2013. Global LME lead stocks at the end of June 2014 were 193,700 t, slightly more than those at the end of May 2014, but slightly less than those at the end of June 2013.

### Update

In mid-October, the International Lead and Zinc Study Group (ILZSG) released its lead market projections for 2014 and 2015. ILZSG forecast that lead mine production would increase slightly in 2014 to 5.56 million metric tons (Mt) owing to increased production in Australia, China, and the United States that would more than offset a decrease in Canada. In 2015, mine production was expected to increase by 6% to 5.87 Mt owing to increases in Australia and China. Global refined lead metal production was expected to increase slightly in both 2014 (to 11.29 Mt) and 2015 (to 11.54 Mt) owing to increased production in Belgium, China, India, Italy, and the Republic of Korea, partially offset by declines in Australia and Japan.

ILZSG forecast lead metal consumption would increase slightly in 2014 to 11.33 Mt and to 11.56 Mt in 2015 owing to increased usage of lead for batteries in China. It was noted that the annual increases in lead consumption in China were expected to be lower than increases in recent years owing to a slowdown in the production of battery-powered electric bicycles. Outside of China, global consumption was expected to be essentially unchanged in 2014 and increase slightly in 2015. ILZSG forecast that global lead metal consumption would exceed production by 38,000 t in 2014 and by 23,000 t in 2015 (International Lead and Zinc Study Group, 2014).

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#### **References Cited**

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

(Metric tons, lead content, unless otherwise specified)

	2013 <sup>P</sup>		2014		
	January– December	January June	May	June	January– June
Production:					
Mine (recoverable)	331,000	164,000	32,800 <sup>r</sup>	29,600	180,000
Secondary refinery:					
Reported by smelters/refineries	1,170,000	583,000 <sup>r</sup>	92,400	92,300	554,000
Estimated	11,700	5,830	933	932	5,600
Recovered from copper-base scrape	15,000	7,500	1,250	1,250	7,500
Total secondary	1,190,000	597,000 <sup>r</sup>	94,500	94,500	568,000
Consumption of refined lead, apparente, 2	1,750,000	864,000 <sup>r</sup>	148,000	146,000	857,000
Stocks, end of period, consumers and secondary smelters	69,300	93,400	64,000	66,600	66,600
Imports for consumption:					
Base bullion	1,900	1,350	--	48	217
Refined metal	500,000	278,000	56,200	59,800	325,000
Exports:					
Ore and concentrate	215,000	53,100	29,600	23,000	120,000
Bullion	349	349	413	198	612
Wrought and unwrought lead	48,200	25,400	5,370	6,450	30,000
TEL/TML preparations, based on lead compounds	1,610	939	34	77	535
Scrap (gross weight)	34,900	18,300	2,710	3,260	16,500
Platts Metals Week North American Producer price (cents per pound)	114.77	114.90	NA	NA	NA
Platts Metals Week North American Market price (cents per pound)	NA	NA	106.62	106.91	106.57

<sup>Q</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>Smelter production plus imports for consumption minus domestic exports plus stock change.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American Producer <sup>1</sup>	North American Market <sup>2</sup>	London Metal Exchange cash		Used lead-acid batteries <sup>3</sup>
	¢/lb	¢/lb	¢/lb	\$/t	¢/lb
2013:					
June	114.62	NA	95.41	2,103.44	38.75
July	114.42	NA	92.89	2,047.90	37.80
August	114.88	NA	98.56	2,172.86	37.75
September	114.56	NA	94.71	2,088.00	36.63
October	114.65	NA	95.75	2,111.03	36.40
November	114.58	NA	94.80	2,089.77	37.25
December	114.73	NA	96.74	2,132.66	37.40
January–December	114.77	NA	97.15	2,141.84	38.00
2014:					
January	114.78	108.39	97.45	2,148.47	39.75
February	114.65	107.15	95.71	2,110.05	39.63
March	114.45	104.67	93.27	2,056.24	39.25
April	105.67	105.67	94.60	2,085.56	38.70
May	NA	106.62	95.11	2,096.71	39.00
June	NA	106.91	95.39	2,102.92	39.25
January–June	NA	106.57	95.26	2,099.99	39.26

NA Not available.

<sup>1</sup>Platts Metals Week North American producer price.

<sup>2</sup>Platts Metals Week North American Market price. Reflects the LME lead cash price plus the Platts premium for 99.97% lead.

<sup>3</sup>Platts Metals Week assessment for used lead-acid automotive batteries (50% lead) picked up in U.S. Midwest, suitable for delivery to secondary smelters within 30 days.

Source: Platts Metals Week.

TABLE 3  
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN JUNE 2014<sup>1</sup>

(Metric tons, gross weight)

Item	Stocks May 31, 2014	Net receipts	Consumption	Stocks June 30, 2014
Battery-lead	46,100	82,100	81,800	46,400
Other <sup>2</sup>	4,440	2,460	2,330	4,580
Total	50,600	84,600	84,100	51,000
Percent change from preceding month <sup>3</sup>	XX	-0.3	+0.3	+0.9

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 soft lead, solder, drosses and residues, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

<sup>3</sup>Based on unrounded data; preceding monthly data may have been revised.

TABLE 4  
LEAD, TIN, AND ANTIMONY RECOVERED FROM  
LEAD-BASE SCRAP IN JUNE 2014<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	71,400	--	--
Remelt lead	W	--	--
Antimonial lead	20,100	W	W
Other <sup>2</sup>	744	155	355
Total lead-base	92,300	155	355

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

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

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

TABLE 5  
U.S. APPARENT CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons)

Period	Production <sup>2</sup>	Imports <sup>3,4</sup>	Exports <sup>3,4</sup>	Stock change during period	Apparent consumption <sup>5</sup>
2013: <sup>p</sup>					
June	107,000	33,500	4,060	(4,630)	141,000
July	106,000	34,300	4,210	(9,830)	146,000
August	109,000	32,900	3,480	(2,120)	141,000
September	108,000	41,300	4,180	(4,060)	150,000
October	112,000	39,300	3,820	(8,080)	156,000
November	111,000	38,700	2,940	(4,200)	151,000
December	104,000	35,900	1,650	4,270	134,000
January–December	1,300,000	500,000	41,600	11,800	1,750,000
2014:					
January	92,700	66,600	1,430	(1,280)	159,000
February	91,700	30,200	2,360	4,390	115,000
March	97,900	49,800	5,440	5,410	137,000
April	96,300	62,500	6,650	(417)	152,000
May	94,500	56,200	4,970	(1,700)	148,000
June	94,500	59,800	6,010	2,630	146,000
January–June	568,000	325,000	26,900	9,040	857,000

<sup>p</sup>Preliminary.

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

<sup>2</sup>Monthly data include secondary refined lead and a estimate for primary refined lead.

<sup>3</sup>Import and export data are for Harmonized Tariff Schedule of the United States (HTS) codes 7801.10.0000, 7801.91.0000, 7801.99.9030, 7801.99.9050.

<sup>4</sup>Source: U.S. Census Bureau.

<sup>5</sup>Smelter production plus imports for consumption minus domestic exports plus stock change.

TABLE 6  
U.S. EXPORTS OF LEAD, BY CLASS<sup>1</sup>

(Metric tons unless otherwise specified)

	2013		2014		
	Year	January–June	May	June	January–June
Lead content:					
Ore and concentrates	215,000	53,100	29,600	23,000	120,000
Bullion	349	349	413	198	612
Wrought and unwrought lead	48,200	25,400	5,370	6,450	30,000
TEL/TML preparations, based on lead compounds	1,610	939	34	77	535
Total	265,000	79,800	35,400	29,700	151,000
Gross weight, scrap	34,900	18,300	2,710	3,260	16,500
Spent lead-acid batteries, used for starting engines (units)	26,300,000	12,900,000	2,130,000	2,130,000	14,300,000

<sup>1</sup>Data are rounded to more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION BY TYPE OF MATERIALS AND BY  
COUNTRY OF ORIGIN<sup>1</sup>

(Metric tons, lead content)

Material and country of origin	2013		2014		
	Year	January– June	May	June	January– June
Ore, matte, etc; Canada	18	--	--	--	--
Base bullion:					
Canada	--	--	--	--	45
Mexico	148	148	--	48	48
Venezuela	1,750	1,200	--	--	124
Total	1,900	1,350	--	48	217
Pigs and bars:					
Australia	46,800	46,600	--	--	--
Belgium	1,440	1,440	--	--	--
Brazil	887	887	--	--	--
Canada	257,000	135,000	24,900	24,300	133,000
China	441	--	--	--	23
Chile	4,220	2,500	773	--	2,930
Dominican Republic	440	390	--	--	125
Ecuador	2,020	218	1,190	1,110	5,820
France	11,900	11,600	46	69	136
Guatemala	639	419	--	--	--
India	1,020	774	2	223	9,440
Israel	4,190	1,750	292	290	880
Kazakhstan	4,980	--	10,900	11,900	36,000
Korea, Republic of	2,200	--	--	4,500	12,800
Mexico	111,000	55,500	11,200	8,480	65,600
Nigeria	400	400	--	--	--
Peru	39,600	11,700 <sup>r</sup>	4,000	5,800	45,300
Russia	5,220	5,220	2,110	2,650	10,200
Sri Lanka	1,030	525	175	--	323
United Kingdom	2,370	2,130	573	377	1,580
Venezuela	980	--	71	92	405
Other	383	190 <sup>r</sup>	1	--	114
Total	500,000	278,000	56,200	59,800	325,000
Grand total	502,000	279,000	56,200	59,800	325,000

<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.