

# Mineral Industry Surveys

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## LEAD IN JANUARY 2013

Domestic mine production (recoverable) of lead in January was 27,000 metric tons (t). Average daily mine production in January was 872 t, 7% lower than that in December 2012 and 6% less than that in January 2012. Secondary refinery production of lead in January increased 5% from that of the previous month and was slightly more than January 2012.

Total imports of lead for consumption in January 2013 were slightly greater than those in the previous month and 63% more than imports in January 2012. Imports of lead in pigs and bars (inclusive of refined lead metal) increased substantially in December 2012 and January 2013 compared to monthly imports earlier in 2012, partially owing to a surge in shipments from Australia. About 114,000 t of lead in pigs and bars was imported during the 2-month period compared with 63,000 t from December 2011 to January 2012. Imports of pigs and bars in February 2013 was almost 50,000 t.

The increase in lead imports may be the result of consumers seeking alternative sources of supply in response to a new cost-plus pricing plan that some domestic secondary lead producers have attempted to implement for certain lead transactions. The new secondary refined lead pricing mechanism is based on the market price for the scrap (mostly spent lead-acid batteries) purchased by secondary producers and not tied to the London Metal Exchange (LME) price of lead, as was the traditional basis. The idea for the cost-plus pricing structure for lead emerged during a period in 2012 when domestic scrap prices increased owing to supply tightness but LME lead prices declined. Secondary producers could not pass on increases in their raw material costs to consumers that were purchasing under the LME-based pricing system; hence their profit margins were reduced. Many lead consumers prefer purchasing lead tied to the LME because the price is transparent, and the LME provides a means for consumers to hedge against price fluctuations. Some of these consumers might have shifted to purchasing imported lead from suppliers that were using LME-based pricing. Some consumers might have started boosting their lead stocks with imports in anticipation of Doe Run Resources Corp. (St. Louis, MO) closing its primary lead smelter-refinery in Herculaneum, MO, at yearend (CRU International Ltd., 2012, p. 43–45; Ryan's Notes, 2013).

Total exports of lead, exclusive of scrap, in January 2013 increased by 152% from those in the previous month owing to an increase in exports of lead contained in ore and concentrates, the majority of which went to China.

The Platts Metals Week average North American producer price for lead in January 2013 was \$1.16 per pound, up slightly from that of the previous month and from that in January 2012. The LME cash price of lead in January 2013 averaged \$2,340 per metric ton, up by 3% from that of the previous month and 12% greater than that in January 2012. The Platts average U.S. used lead-acid batteries price in January 2013 was \$0.38 per pound, slightly greater than that in the previous month. Global LME lead stocks at the end of January 2013 were 290,125 t, 9% less than those at the end of December 2012 and 21% less than those at month-end January 2012. At the end of January, there were cancelled warrants for about 97% of the 51,650 t of lead in LME warehouses in the United States.

In January, Doe Run Peru (Lima, Peru) partially restarted the lead circuit at its La Oroya metallurgical complex in Peru. Doe Run suspended operations at the plant in early 2009 owing to ongoing environmental and financial issues. The plant had the capacity to produce 122,000 metric tons per year (t/yr) of refined lead but would be limited to 115,000 t/yr until more environmental controls are added (Ryan's Notes, 2013).

### Update

In February, Glencore International AG (Baar, Switzerland) restarted lead operations at its Portovesme lead and zinc smelter in Sardinia, Italy. The smelter has the capacity to produce about 80,000 t/yr of refined lead when fully operational. The lead production line at the smelter was placed on care-and-maintenance status in 2009 (Metal Bulletin, 2013).

### References Cited

- CRU International Ltd., 2012, Quarterly lead industry and market outlook: London, United Kingdom, CRU International Ltd., August, 200 p.  
Metal Bulletin, 2013, Complex lead concentrate market will tighten on La Oroya, Portovesme restart: Metal Bulletin, no. 9295, March 25, p. 9.  
Ryan's Notes, 2013, Lead and zinc notes: Ryan's Notes, v. 19, no. 2, January 14, p. 4.

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

(Metric tons, lead content, unless otherwise specified)

	2011	2012		2013 January	
		January	December		
<b>Production:</b>					
Mine (recoverable)	334,000	28,700	29,100	336,000	27,000
<b>Secondary refinery:</b>					
Reported by smelters/refineries	1,130,000	99,600	97,000	1,170,000	102,000
Estimated	--	996	970	11,700	1,020
Recovered from copper-base scrap <sup>e</sup>	--	1,250	1,250	15,000	1,250
Total secondary	1,130,000	102,000	99,200	1,190,000	104,000
<b>Consumption:</b>					
Reported	1,440,000	119,000	119,000	1,470,000	123,000
Undistributed <sup>c</sup>	--	3,560	3,570 <sup>r</sup>	38,600 <sup>r</sup>	3,690
Total	1,440,000	122,000	123,000	1,510,000 <sup>r</sup>	127,000
Stocks, end of period, consumers and secondary smelters	46,600	58,700	57,500 <sup>r</sup>	57,500 <sup>r</sup>	69,900
<b>Imports for consumption:</b>					
Base bullion	434	101	251	1,020	679
Refined metal	313,000	35,400	57,100	349,000	57,200
<b>Exports:</b>					
Ore and concentrate	223,000	1,680	4,400	214,000	16,900
Bullion	70	27	--	72	--
Wrought and unwrought lead	47,200	3,430	3,570	53,300	3,270
TEL/TML preparations, based on lead compounds	6,270	140	113	1,730	207
Scrap (gross weight)	31,100	2,600	2,250	25,900	2,620
Platts Metals Week North American producer price (cents per pound)	121.70	114.17	115.26	114.16	115.51

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

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

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American producer price ¢/lb	London Metal Exchange cash		Sterling exchange rate \$/£
		\$/metric ton	£/metric ton	
<b>2012:</b>				
January	114.17	2,093.74	1,349.68	1.551290
February	114.29	2,125.79	1,345.68	1.579710
March	114.03	2,061.01	1,302.73	1.582068
April	114.03	2,062.67	1,287.68	1.601844
May	113.81	1,998.51	1,283.48	1.557100
June	113.26	1,854.42	1,190.94	1.557100
July	113.34	1,875.97	1,203.77	1.558400
August	113.42	1,895.42	1,205.06	1.572889
September	114.63	2,168.91	1,378.93	1.572889
October	114.81	2,152.96	1,338.53	1.608449
November	114.91	2,179.08	1,364.27	1.597245
December	115.26	2,274.83	1,408.66	1.614895
Year	121.70	2,401.20	1,548.94	1.550217
2013, January	115.51	2,339.84	1,465.86	1.596224

Source: Platts Metals Week.

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

(Metric tons, gross weight)

Item	Stocks		Consumption	Stocks
	December 31, 2012	Net receipts		January 31, 2013
Battery-lead	39,400	87,600	92,100	34,900
Other <sup>2</sup>	4,290	2,610	2,620	4,280
Total	43,700	90,200	94,700	39,200
Percent change from preceding month <sup>3</sup>	XX	-1.5	+3.7	-10.2

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

<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 JANUARY 2013<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	83,300	--	--
Remelt lead	W	--	--
Antimonial lead	16,900	W	W
Other <sup>2</sup>	1,460	154	342
Total lead-base	102,000	154	342

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

(Metric tons, lead content)

Use	2011	2012			2013 January
		January	December	January– December <sup>2</sup>	
<b>Metal products:</b>					
Ammunition, shot and bullets	69,200	5,900	4,700	69,100	5,700
Brass and bronze, billet and ingots	1,620	283	283	3,400	283
Cable covering, power and communication and caulking lead, building construction	W	764	231	3,800	268
Casting metals	11,100	1,230	873	11,600	992
Sheet lead, pipes, traps and other extruded products	24,200	2,030	2,110	27,600	1,980
Solder	6,370	532	531	6,370	534
Storage batteries, including oxides	1,270,000	105,000	107,000	1,300,000	110,000
Terne metal, type metal, and other metal products <sup>3</sup>	26,000	1,230	1,230	14,800	1,170
Total metal products	1,410,000	116,000	117,000	1,440,000	121,000
Other oxides and miscellaneous	24,100	2,210	2,600 <sup>r</sup>	31,700	2,390
Total reported	1,440,000	119,000	119,000	1,470,000	123,000
Undistributed <sup>c</sup>	--	3,560	3,570 <sup>r</sup>	38,600 <sup>r</sup>	3,690
Grand total	1,440,000	122,000	123,000	1,510,000 <sup>r</sup>	127,000

<sup>c</sup>Estimated. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data. -- Zero.

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

<sup>2</sup>May include revisions to previous months' data.

<sup>3</sup>Includes lead consumed in bearing metals, foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

U.S. Consumption of Lead

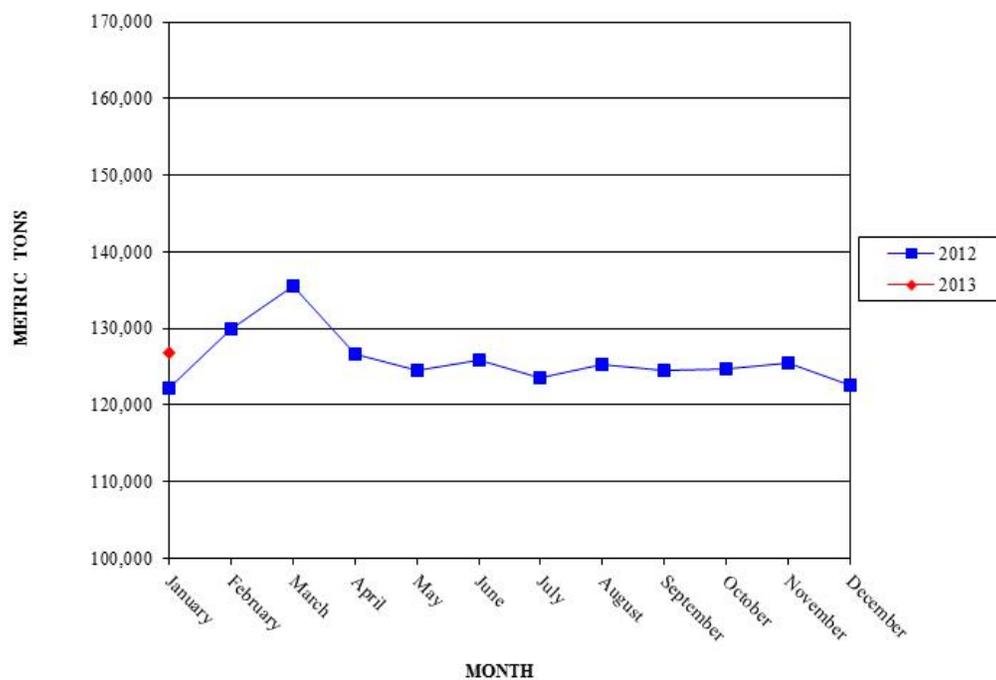


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons, lead content)

Type of material	Stocks		Consumption	Stocks
	December 31, 2012	Net receipts		January 31, 2013
Soft lead	32,700 <sup>r</sup>	95,400	82,900	45,200
Antimonial lead	23,300	31,100	31,300	23,200
Other <sup>2</sup>	1,490	8,960	8,950	1,500
Total	57,500 <sup>r</sup>	135,000	123,000	69,900

<sup>r</sup>Revised.

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

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

(Metric tons unless otherwise specified)

	2012			2013
	Year	January	December	January
Lead content:				
Ore and concentrates	214,000	1,680	4,400	16,900
Bullion	72	27	--	--
Wrought and unwrought lead	53,300	3,430	3,570	3,270
TEL/TML preparations, based on lead compounds	1,730	140	113	207
Total	269,000	5,280	8,080	20,400
Gross weight, scrap	25,900	2,600	2,250	2,620
Spent lead-acid batteries, used for starting engines (units)	22,700,000	2,410,000	1,470,000	2,250,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 8  
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	2012			2013
	Year	January	December	January
Ore, matte, etc; Canada	1,530	--	--	--
Base bullion:				
Canada	--	--	--	--
Mexico	695	101	--	148
Venezuela	327	--	251	531
Total	1,020	101	251	679
Pigs and bars:				
Australia	24,300	--	24,300	23,600
Canada	240,000	23,200	18,700	20,700
China	5,000	5,000	--	--
Mexico	56,100	4,270	6,890	8,400
Other	23,200	2,870	7,240	4,440
Total	349,000	35,400	57,100	57,200
Grand total	352,000	35,500	57,400	57,900

-- 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.