

Mineral Industry Surveys

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LEAD IN MARCH 2016

Domestic mine production (recoverable) of lead in March was 27,500 metric tons (t). Average daily mine production in March was 888 t, essentially unchanged from that in the previous month. Lead mine production during the first quarter of 2016 was 12% less than that during the same period in 2015 owing primarily to decreased production in Missouri. The Doe Run Company (St. Louis, MO) announced that it was reducing production of lead in concentrate at its mines in southeastern Missouri in 2016 by about 10%. (See Lead in November 2015.) Secondary refinery production of lead in March was slightly more than that of the previous month, and year-to-date production was slightly more than that in the same period in 2015 (fig. 1).

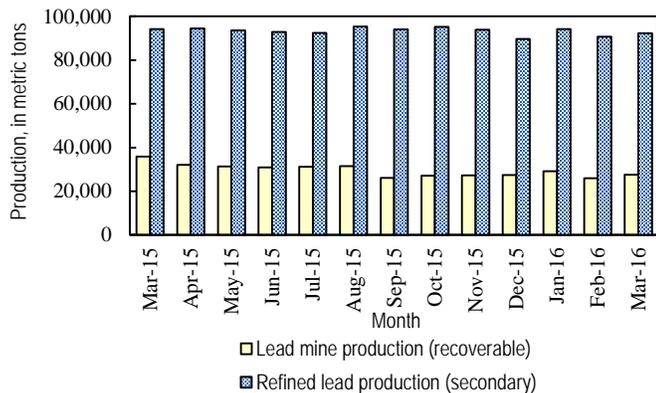


Figure 1. U.S. production of lead from March 2015 through March 2016. Source: U.S. Geological Survey.

Total imports of lead for consumption in March 2016 were 49% more than those in the previous month owing primarily to an increase in imports from the Republic of Korea. During the first quarter of 2016, imports were about 6% less than those during the same period of 2015. Decreases in imports of lead in in pigs and bars from Australia, Germany, India, and Mexico more than offset increases from the Brazil, Canada, and the Republic of Korea. Year to date, Canada (54%), the Republic of Korea (18%), and Mexico (12%) accounted for the majority of imports of lead in pigs and bars (fig. 2, table 7).

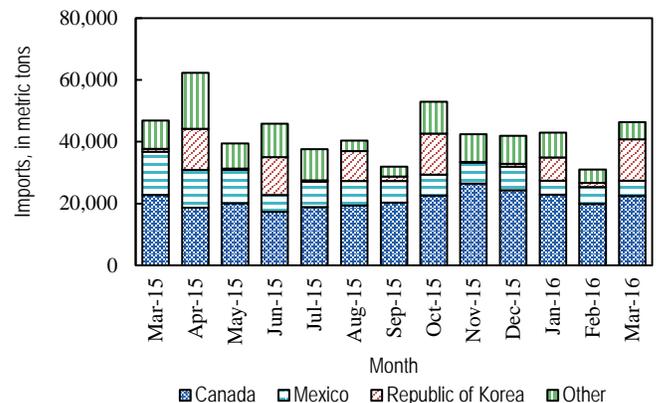


Figure 2. U.S. imports of lead in pigs and bars from March 2015 through March 2016. Source: U.S. Census Bureau.

Total exports of lead, exclusive of scrap, in March 2016 were 41% more than those in the previous month owing primarily to a 50% increase in exports of lead in ore and concentrates. Total lead exports during the first quarter of 2016 were 13% less than those in the same period of 2015. China (45%), the Republic of Korea (22%), and Canada (18%) were the leading destinations for ore and concentrates during the first quarter of 2016 (fig. 3).

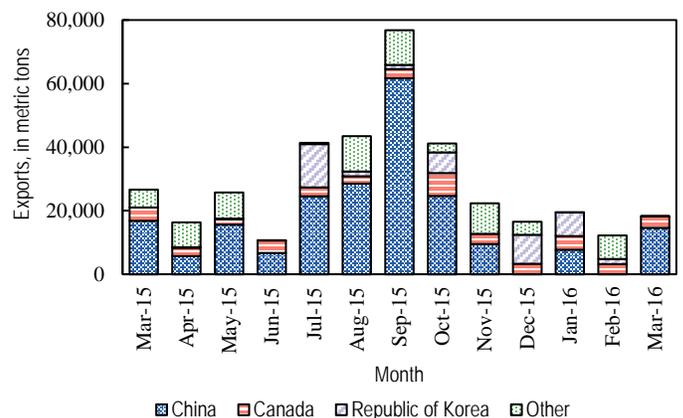


Figure 3. U.S. exports of lead in ore and concentrates from March 2015 through March 2016. Source: U.S. Census Bureau.

Average monthly lead prices, which had been trending downward since peak levels in April and May 2015, increased in March for the second month in a row to their highest levels since June 2015 (fig. 4). The Platts Metals Week average North American Market price for lead in March 2016 was \$0.92 per pound, slightly more than that in the previous month and essentially unchanged from that in March 2015. The average North American Market price for lead during the first quarter of 2016 was \$0.89 per pound, 4% less than that during the same period of 2015. The London Metal Exchange, Ltd. (LME) cash price of lead in March 2016 averaged \$0.82 per pound, slightly more than that in the previous month and that in March 2015. The LME cash price for lead during the first quarter of 2016 was \$0.79 per pound, 4% less than that during the same period of 2015. The Platts average U.S. used lead-acid batteries (Midwest) price in March 2016 was \$0.30 per pound, slightly more than that in the previous month but 5% less than that in March 2015 (table 2). The majority of secondary lead is produced from used lead-acid batteries.

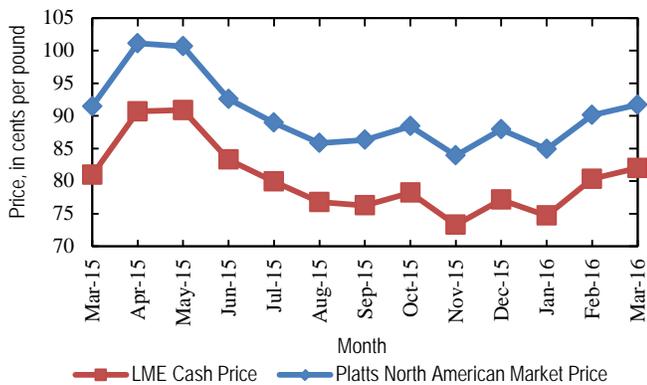


Figure 4. Average monthly prices for refined lead metal from March 2015 through March 2016. Source: Platts Metals Week.

Global LME lead stocks at the end of March 2016 were 155,975 t, a 26% decrease (55,500 t) from stocks at the end of February 2016 (owing primarily to a decrease in stocks held in the Netherlands) and 33% less than those at the end of March 2015 (fig. 5).

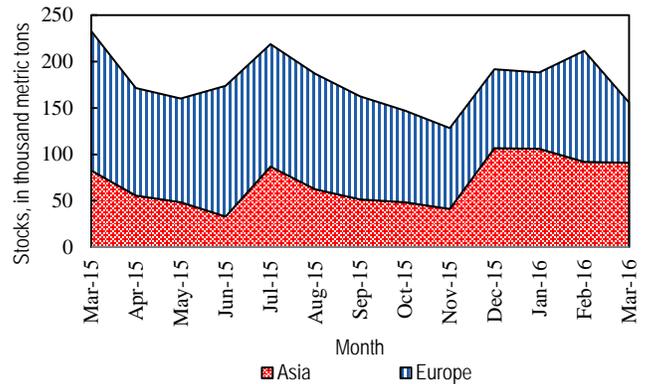


Figure 5. Global LME stocks of lead from March 2015 through March 2016. Source: London Metal Exchange, Ltd.

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2015 ^p		2016		
	January– December	January– March ²	February	March	January– March ²
Production:					
Mine (recoverable)	358,000	93,800	26,000	27,500	82,600
Secondary refinery:					
Reported by smelters/refineries	1,100,000	263,000	88,600	90,100	271,000
Estimated	11,100	2,660	895	911	2,740
Recovered from copper-base scrap ^e	15,000	3,750	1,250	1,250	3,750
Total secondary	1,120,000	270,000	90,800	92,300	277,000
Consumption of refined lead, apparent ^{e,3}	1,590,000	388,000	120,000	136,000	389,000
Stocks, end of period, consumers and secondary smelters	64,500	63,200	63,800	63,200	63,200
Imports for consumption:					
Base bullion	343	239	--	--	--
Pigs and Bars	523,000	128,000	31,000	46,300	120,000
Exports:					
Ore and concentrate	349,000	54,800	12,300	18,400	50,200
Bullion	596	--	195	129	451
Wrought and unwrought lead	58,800	13,400	3,210	3,670	8,410
TEL/TML preparations, based on lead compounds	724	66	37	24	131
Scrap (gross weight)	46,200	9,000	2,750	4,030	9,290
Platts Metals Week North American Market price (cents per pound)	91.20	92.90	90.12	91.70	88.91

^eEstimated. ^pPreliminary. -- Zero.

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

²May include revisions to previously published data.

³Smelter production plus imports for consumption minus domestic exports plus stock change.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North	London Metal Exchange		Used lead-acid
	American Market ¹	cash		batteries ²
	¢/lb	¢/lb	\$/t	¢/lb
2015:				
March	91.47	80.95	1,784.55	31.00
April	101.11	90.69	1,999.35	31.50
May	100.66	90.87	2,003.42	32.13
June	92.57	83.28	1,836.03	33.60
July	88.94	79.92	1,762.00	32.88
August	85.83	76.77	1,692.49	31.13
September	86.32	76.27	1,681.56	30.30
October	88.41	78.21	1,724.18	31.00
November	83.92	73.28	1,615.54	29.63
December	87.92	77.15	1,700.87	28.00
January–December	91.20	81.02	1,786.08	31.48
2016:				
January	84.91	74.69	1,646.54	28.00
February	90.12	80.34	1,771.20	29.00
March	91.70	81.99	1,807.48	29.60
January–March	88.91	79.01	1,741.74	28.87

¹Platts Metals Week North American Market price. Reflects the LME lead cash price plus the Platts premium for 99.97% lead.

²Platts 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 MARCH 2016¹

(Metric tons, gross weight)

Item	Stocks		Consumption	Stocks
	February 29, 2016	Net receipts		March 31, 2016
Battery-lead	41,800	84,700	84,900	41,600
Other ²	4,150	1,990	2,000	4,150
Total	45,900	86,700	86,900	45,800
Percent change from preceding month ³	XX	+3.8	+4.3	-0.4

XX Not applicable.

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

²Includes soft lead, solder, drosses and residues, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

³Based on unrounded data; preceding monthly data may have been revised.

TABLE 4
LEAD, TIN, AND ANTIMONY RECOVERED FROM
LEAD-BASE SCRAP IN MARCH 2016¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	69,300	--	--
Remelt lead	W	--	W
Antimonial lead	17,400	W	W
Other ²	3,350	165	316
Total lead-base	90,100	165	316

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

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

²Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5
U.S. APPARENT CONSUMPTION OF LEAD¹

(Metric tons)

Period	Production	Imports ^{2,3}	Exports ^{2,3}	Stock change during period	Apparent consumption ⁴
2015: ^P					
March	94,300	46,800	4,610	(506)	137,000
April	94,600	62,300	4,820	539	151,000
May	93,600	39,400	4,490	(1,360)	130,000
June	92,900	45,800	4,180	(326)	135,000
July	92,500	37,600	3,720	(1,640)	128,000
August	95,400	40,400	4,320	6,180	125,000
September	96,300	31,900	4,230	2,610	121,000
October	97,500	52,900	6,450	(933)	145,000
November	96,100	42,400	5,010	(702)	134,000
December	89,700	41,900	5,970	(3,450)	129,000
January–December	1,120,000	523,000	55,900	(2,050)	1,590,000
2016:					
January	94,300	42,900	1,420	2,560	133,000
February	90,800	31,000	2,980	(1,070)	120,000
March	92,300	46,300	3,500	(671)	136,000
January–March	277,000	120,000	7,900	820	389,000

^PPreliminary.

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

²Import 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.

³Source: U.S. Census Bureau.

⁴Smelter production plus imports for consumption minus domestic exports plus stock change.

TABLE 6
U.S. EXPORTS OF LEAD, BY CLASS¹

(Metric tons unless otherwise specified)

	2015		2016		
	Year	January–March ²	February	March	January–March ²
Lead content:					
Ore and concentrates	349,000	54,800	12,300	18,400	50,200
Bullion	596	--	195	129	451
Wrought and unwrought lead	58,800	13,400	3,210	3,670	8,410
TEL/TML preparations, based on lead compounds	724	66	37	24	131
Total	409,000	68,300	15,700	22,200	59,200
Gross weight, scrap	46,200	9,000	2,750	4,030	9,290
Spent lead-acid batteries, used for starting engines (units)	25,900,000	7,990,000	1,360,000	1,630,000	4,610,000

-- Zero.

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

²May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION BY TYPE OF MATERIALS AND BY
COUNTRY OF ORIGIN¹

(Metric tons, lead content)

Material and country of origin	2015		2016		
	Year	January– March ²	February	March	January– March ²
Base bullion:					
Mexico	203	100	--	--	--
Venezuela	46	139	--	--	--
Other	94	--	--	--	--
Total	343	239	--	--	--
Pigs and bars:					
Australia	4,750	3,610	--	--	2,480
Brazil	--	--	919	1,000	2,220
Canada	251,000	62,700	19,900	22,400	65,200
Chile	989	--	--	--	232
China	1,250	--	--	--	--
Dominican Republic	50	50	--	--	--
Ecuador	12,400	1,590	700	524	1,770
France	79	--	--	--	--
Germany	9,630	2,930	494	--	1,230
India	21,700	6,630	939	1,070	3,950
Indonesia	1,050	1,050	--	--	--
Israel	1,180	279	--	--	--
Kazakhstan	22,900	596	--	--	538
Korea, Republic of	57,300	5,610	1,270	13,300	22,200
Mexico	111,000	38,100	5,460	4,980	14,900
Netherlands	6,020	--	--	--	--
Nigeria	522	--	--	--	--
Panama	848	--	--	300	300
Russia	10,700	3,320	654	2,290	3,640
Spain	1,650	--	238	138	574
Sri Lanka	1,290	175	400	150	650
Ukraine	275	--	--	--	--
United Kingdom	2,560	644	--	94	94
Venezuela	3,930	787	--	--	236
Other	79	3	20	--	20
Total	523,000	128,000	31,000	46,300	120,000
Grand total	524,000	128,000	31,000	46,300	120,000

-- Zero.

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

²May include revisions to previously published data.

Source: U.S. Census Bureau.