

# Mineral Industry Surveys

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## ZINC IN SEPTEMBER 2014

Domestic mine production (recoverable) of zinc in September 2014 was 66,400 metric tons (t). Average daily mine production in September was 2,210 t, 5% more than that in August 2014 and essentially unchanged from that in September 2013. Mine production in the first 9 months of 2014 was 5% more than that in the same period of 2013. Zinc production at Teck Resources Ltd.'s (Vancouver, British Columbia, Canada) Red Dog Mine increased by 8% in the first 9 months of 2014 from that of the same period in 2013 owing to increased mill throughput from processing the softer ores in the Aqqaluk deposit (Teck Resources Ltd., 2014, p. 30). The production increase at Red Dog was partially offset by an 11% decrease in production at Nyrstar NV's (Balen, Belgium) East and Middle Tennessee Mines. Production decreased primarily as a result of a decline in the number of open mine faces at the Immel Mine at East Tennessee (Nyrstar NV, 2014, p. 13, 15).

Zinc smelter production in the first 9 months of 2014 decreased by 22% from that of 2013 owing to the shutdown of Horsehead Holding Corp.'s (Pittsburgh, PA) zinc smelter in Monaca, PA. Rampup efforts at the company's new secondary zinc plant in Mooresboro, NC, were adversely affected by a temporary closure and problems with the clarifier unit in the third quarter.

The Platts Metals Week average price for North American Special High Grade (SHG) zinc for September 2014 was 113.06 cents per pound, slightly less than the August 2014 average price but 21% more than the September 2013 average price. The average North American SHG zinc price for the third quarter of the year was 113.84 cents per pound, 10% more than the average price of the prior quarter. The average London Metal Exchange Ltd. (LME) cash price of SHG zinc for September 2014 was \$2,293.74 per metric ton, slightly less than the August 2014 average price and 24% more than the September 2013 average price. The average LME cash price of zinc for the third quarter of the year was \$2,311.10 dollars per metric ton, 12% more than the average price of the prior quarter. In September 2014, global LME stocks of SHG zinc increased by 10,150 t to 750,725 t.

### Update

In late October, U.S. Zinc Corp. (Houston, TX) announced that it had completed the last phase of an expansion program with the installation of a new furnace at its Millington, TN, zinc oxide (ZnO) production plant, increasing the plant's ZnO production rate by 8,000 metric tons per year (t/yr). The first phase, increasing the ZnO production rate at its Clarksville, TN, plant by 9,000 t/yr, was completed in early 2014. U.S. Zinc consumes both zinc metal and secondary materials to produce zinc oxide (U.S. Zinc Corp., 2014).

In late November, the U.S. Senate Permanent Subcommittee on Investigations released a report which found that several financial holding companies used their physical commodity activities to gain access to commercially valuable nonpublic information and thus gained unfair trading advantages in these markets. The report also stated that by participating in these activities, financial institutions incurred multiple risks normally absent from banking, such as catastrophic environmental and operational event risks. The Subcommittee made several recommendations to reaffirm the separation of banking and commerce as it relates to physical commodities, including—ensuring that large traders, including financial holding companies, are legally precluded from using nonpublic information gained from physical commodities activities to benefit their trading activities in the financial markets; limiting financial holding companies' involvement in physical commodity activities; and strengthening financial holding companies' disclosure requirements. The banks under investigation had participated in the following physical market activities—acquiring a natural gas pipeline company; operating coal mines, oil and gas pipelines, and power plants; planning to build a compressed natural gas facility; owning metal warehousing companies; selling jet fuel to airlines; stockpiling aluminum and copper; and trading uranium. Henry Bath & Sons Ltd. (previously owned by JP Morgan Chase & Co.) and Metro International Trade Services (owned by Goldman Sachs Group Inc.) operated a network of metal

warehouses in the U.S. which stored LME-registered metal, including zinc (U.S. Senate Permanent Subcommittee on Investigations, 2014, p. 1, 9–12).

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<http://www.hsgac.senate.gov/subcommittees/investigations/hearings/wall-street-bank-involvement-with-physical-commodities-day-one>.)

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<http://www.griffincommgroup.com/2014/10/27/u-s-zinc-completes-second-phase-zinc-oxide-expansion/>.)

TABLE 1  
SALIENT ZINC STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

	2013 <sup>p</sup>	2014		
	January– December	August	September	January– September
<b>Production:</b>				
Mine, zinc content of concentrate <sup>2</sup>	784,000	67,900 <sup>r</sup>	68,700	614,000
Mine, recoverable zinc <sup>2</sup>	758,000	65,600 <sup>r</sup>	66,400	593,000
Smelter, refined zinc <sup>e</sup>	233,000	11,000 <sup>r</sup>	11,000	138,000
<b>Consumption of refined zinc:</b>				
Apparent <sup>3</sup>	935,000	92,300 <sup>r</sup>	72,700	742,000
<b>Imports for consumption:</b>				
Ore and concentrate (zinc content)	2,550	--	--	--
Refined zinc	713,000	81,800	64,100	617,000
<b>Exports:</b>				
Ore and concentrate (zinc content)	669,000	114,000	177,000	546,000
Refined zinc	11,500	450	2,360	12,500
<b>Price:<sup>4</sup></b>				
London Metal Exchange cash, average, dollars per metric ton	1,910.04	2,328.88	2,293.74	2,137.47
Platts Metals Week North American, average, cents per pound	95.57	114.65	113.06	106.10

<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, except prices; may not add to totals shown.

<sup>2</sup>Reported zinc content in both zinc and lead concentrates.

<sup>3</sup>Smelter production plus imports for consumption minus domestic exports.

<sup>4</sup>Special High Grade Zinc.

TABLE 2  
MINE AND SMELTER PRODUCTION OF ZINC  
IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Mine <sup>2</sup>		Smelter <sup>e</sup>
	Zinc content	Recoverable	
<b>2013:</b>			
September	69,000	66,700	20,100
October	68,700	66,300	18,700
November	62,700	60,600	18,700
December	70,900	68,500	18,700
January–December	784,000	758,000	233,000
<b>2014:</b>			
January	77,100	74,500	18,000
February	65,400	63,100	18,000
March	70,500	68,200	18,000
April	69,200	66,800	17,100 <sup>3</sup>
May	65,500	63,300	17,100 <sup>3</sup>
June	63,400	61,200	17,100 <sup>3</sup>
July <sup>f</sup>	66,500	64,200	11,000
August <sup>f</sup>	67,900	65,600	11,000
September	68,700	66,400	11,000
January–September	614,000	593,000	138,000

<sup>e</sup>Estimated. <sup>f</sup>Revised.

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

<sup>2</sup>Includes the zinc content in both lead and zinc concentrates.

<sup>3</sup>Data are based partially on smelter shipments rather than production.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2013		2014			
	Quantity (metric tons)	Value (thousands)	September		January–September	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	2,550	\$4,420	--	--	--	--
Unwrought:						
Refined zinc	713,000	1,420,000	64,100	\$151,000	617,000	\$1,310,000
Zinc alloys	7,940	16,100	1,020	2,460	6,210	13,700
Wrought:						
Bars, rods, profiles, wire	2,540	7,360	257	821	1,990	6,220
Plates, sheets, strip, foil	3,570	13,900	291	1,260	3,040	10,900
Other:						
Dross, ashes, fume (zinc content)	13,000	16,400	1,150	1,430	7,110	10,200
Powders, flakes, dust	24,500	71,400	2,510	8,380	24,400	77,800
Waste and scrap	21,000	25,300	2,800	3,560	19,200	23,800
Chemicals:						
Oxide	97,400	192,000	10,200	24,000	95,900	203,000
Chloride	278	1,900	7	67	122	1,000
Sulfate	52,600	44,100	8,620	6,080	55,700	40,700
Compounds, other <sup>2</sup>	3,310	11,800	225	874	3,380	9,960

-- Zero.

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

<sup>2</sup>Includes zinc sulfide (HTS 2830.90.1000 and 2830.90.1500), chromates of zinc or of lead (HTS 2841.90.4500), and lithopone and other pigments and preparations based on zinc sulfide (HTS 3206.42.000).

Source: U.S. Census Bureau, U.S. International Trade Commission.

TABLE 4  
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Material and country	General imports			Imports for consumption		
	2013	2014		2013	2014	
		September	January–September		September	January–September
<b>Ore and concentrate (zinc content):</b>						
Canada	2,500	--	--	2,500	--	--
Malaysia	52	--	--	52	--	--
Russia	14	--	--	14	--	--
<b>Total</b>	<b>2,570</b>	<b>--</b>	<b>--</b>	<b>2,570</b>	<b>--</b>	<b>--</b>
<b>Refined zinc:</b>						
Argentina	1,000	--	--	1,000	--	--
Australia	--	--	46,000	55,100	5,680	111,000
Belgium	--	--	--	--	2,080	14,500
Brazil	9,390	--	--	2,800	--	--
Canada	480,000	40,800	323,000	480,000	40,800	324,000
China	81	35	59	467	35	661
Japan	--	--	--	74	--	--
Korea, Republic of	--	--	--	365	503	37,400
Mexico	97,800	8,370	74,800	97,800	8,370	76,200
Netherlands	--	--	--	--	184	1,310
Peru	75,200	3,610	33,600	75,200	3,610	33,600
Spain	--	--	--	23	2,860	17,900
Taiwan	81	5	63	81	5	63
Other	7	--	1	7	--	1
<b>Total</b>	<b>664,000</b>	<b>52,800</b>	<b>478,000</b>	<b>713,000</b>	<b>64,100</b>	<b>617,000</b>
<b>Oxide:</b>						
Australia	1,020	21	290	1,020	21	290
Belgium	265	145	607	265	145	604
Brazil	382	--	--	382	--	--
Canada	54,500	6,340	57,400	54,500	6,340	57,400
China	365	10	240	365	10	240
Congo (Brazzaville)	1,320	--	--	1,320	--	--
Congo (Kinshasa)	895	--	1,440	895	--	1,440
France	699	--	-2	699	--	-2
Germany	3,190	95	1,780	3,190	95	1,780
India	233	51	285	233	51	285
Indonesia	216	--	64	216	--	64
Israel	74	21	24	74	21	24
Italy	185	--	--	185	--	--
Japan	1,170	65	901	1,170	65	901
Malaysia	39	--	214	39	--	214
Mexico	28,000	2,640	26,400	28,000	2,640	26,400
Netherlands	3,280	436	3,760	3,280	436	3,760
Peru	928	286	2,040	928	286	2,040
Sri Lanka	--	--	60	--	--	60
Taiwan	7	--	16	7	--	16
Trinidad and Tobago	205	--	68	205	--	68
Turkey	405	38	309	405	38	309
United Kingdom	20	1	14	20	1	14
Other	15	1	4	15	1	4
<b>Total</b>	<b>97,400</b>	<b>10,200</b>	<b>95,900</b>	<b>97,400</b>	<b>10,200</b>	<b>95,900</b>

-- Zero.

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

<sup>2</sup>Less than ½ unit.

Source: U.S. Census Bureau, U.S. International Trade Commission.

TABLE 5  
U.S. EXPORTS OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2013		2014			
	Quantity (metric tons)	Value (thousands)	September		January–September	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	669,000	\$868,000	177,000	\$282,000	546,000	\$962,000
Unwrought:						
Refined zinc	11,500	11,000	2,360	5,060	12,500	39,100
Zinc alloys	23,200	58,600	2,780	7,530	22,700	58,500
Wrought:						
Bars, rods, profiles, wire	8,580	16,400	720	1,380	7,690	14,800
Plates, sheets, strip, foil	6,520	22,700	522	1,950	5,180	18,400
Other:						
Dross, ashes, fume (zinc content)	18,600	25,600	2,510	5,110	18,200	30,600
Powders, flakes, dust	10,700	28,900	912	3,090	7,210	21,900
Waste and scrap	88,000	105,000	6,830	8,760	52,200	70,200
Chemicals:						
Oxide	17,500	32,000	399	1,360	4,560	15,800
Chloride	776	1,070	94	163	603	879
Sulfate	525	660	37	48	368	385
Compounds, other <sup>2</sup>	6,720	21,000	130	1,560	1,510	17,700

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

<sup>2</sup>Includes zinc sulfide (Schedule B 2830.90.1000 and 2830.90.1500), chromates of zinc or of lead (Schedule B 2841.90.4500), and lithopone and other pigments and preparations based on zinc sulfide (Schedule B 3206.42.0000).

Source: U.S. Census Bureau, U.S. International Trade Commission.

TABLE 6  
AVERAGE PRICES FOR SPECIAL HIGH GRADE ZINC

Period	North American <sup>1</sup> ¢/lb.	London Metal Exchange cash <sup>2</sup>	
		¢/lb.	\$/t
2013:			
September	93.09	83.83	1,848.17
October	94.65	85.39	1,882.50
November	94.01	84.75	1,868.36
December	98.80	89.53	1,973.88
January–December	95.57	86.64	1,910.04
2014:			
January	101.71	92.45	2,038.11
February	101.57	92.31	2,035.01
March	100.62	91.36	2,014.07
April	101.36	92.09	2,030.28
May	102.65	93.44	2,060.01
June	105.47	96.45	2,126.46
July	113.83	104.81	2,310.69
August	114.65	105.64	2,328.88
September	113.06	104.04	2,293.74
January–September	106.10	96.95	2,137.47

<sup>1</sup>Platts Metals Week North American price. Based on the London Metal Exchange cash price plus premium.

<sup>2</sup>Average of the cash buyer price and the cash seller and settlement price.

Source: Platts Metals Week.

TABLE 7  
LONDON METAL EXCHANGE (LME) STOCKS OF SPECIAL HIGH GRADE ZINC, END OF PERIOD

(metric tons)

Period	United States			Total	Europe	Other	Total LME
	Detroit, MI	New Orleans, LA	Other				
2013:							
September	112,675	643,075	5,450	761,200	231,225	31,600	1,024,025
October	112,375	659,850	4,975	777,200	218,675	31,500	1,027,375
November	112,375	619,550	4,350	736,275	192,775	31,200	960,250
December	109,025	635,575	3,750	748,350	151,925	30,900	931,175
2014:							
January	102,175	594,950	3,025	700,150	119,125	30,825	850,100
February	92,250	543,625	2,250	638,125	92,100	27,725	757,950
March	84,275	643,000	2,000	729,275	76,725	27,575	833,575
April	82,025	590,525	1,550	674,100	70,950	26,425	771,475
May	71,325	555,825	1,100	628,250	54,575	25,600	708,425
June	64,100	537,625	750	602,475	40,600	24,875	667,950
July	59,225	539,400	450	599,075	31,550	24,650	655,275
August	52,350	634,900	200	687,450	28,825	24,300	740,575
September	48,400	651,150	--	699,550	27,475	23,700	750,725

-- Zero.

Source: London Metal Exchange, Ltd.