

Mineral Industry Surveys

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U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES IN THE FIRST QUARTER 2023

U.S. mine and plant production data for 16 selected mineral commodities are provided on a monthly (or quarterly) basis by the U.S. Geological Survey to the Board of Governors, Federal Reserve System (FRS), for use in preparing its index of industrial production and the related capacity indexes and capacity utilization rates. These measures cover manufacturing, mining, and electric and gas utilities, and they are among the key economic indicators monitored by the FRS for guidance in determining national monetary policy.

Construction Materials

The combined production of construction-related materials (cement, construction sand and gravel, crushed stone, and gypsum) in the first quarter of 2023 decreased by 20% compared with that in the fourth quarter of 2022 following the typical seasonal trend (fig. 1, tables 1, 2). Production of construction sand and gravel and cement in the first quarter of 2023 were 9% and 3% lower, respectively, than that in the first quarter of 2022. Gypsum and crushed stone production were 10% and slightly higher, respectively, in the first quarter of 2023 compared with that in the first quarter of 2022 (fig. 1, table 1).

Base Metals

Production of base metals except for copper increased in the first quarter of 2023 compared with that in the fourth quarter of 2022 (fig. 2, table 1). Comparing first quarter of 2023 with the first quarter of 2022, production increased for iron ore (17%) and secondary aluminum (4%), but production decreased for copper (6%), lead slightly lower and zinc was essentially unchanged (fig. 2, tables 1, 2).

Precious Metals

During the first quarter of 2023, silver production increased by 3% compared with production in the fourth quarter of 2022,

gold production decreased by 14%, palladium production decreased by 5%, and platinum production was essentially unchanged compared with production in the fourth quarter of 2022. In the first quarter of 2023, silver production was 5% more compared with production in the first quarter of 2022, and gold production was essentially unchanged from that in the first quarter of 2022 (fig. 3, table 1). Palladium and platinum production were 19% and 14% lower, respectively, in the first quarter of 2023 compared with the same time period in 2022 (tables 1, 2).

Other Mineral Materials

Molybdenum production was 20% lower in the first quarter of 2023 than that in the fourth quarter of 2022 and was 8% lower in the first quarter of 2023 compared with that in the same time period in 2022. Phosphate rock production was an estimated 10% higher in the first quarter of 2023 than that in the fourth quarter of 2022 and was slightly higher in the first quarter of 2023 compared with that in the first quarter of 2022. Soda ash production was 14% lower in the first quarter of 2022 compared with that in the fourth quarter of 2022 and was 8% lower in the first quarter of 2023 compared with the same time period in 2022 (tables 1, 2).

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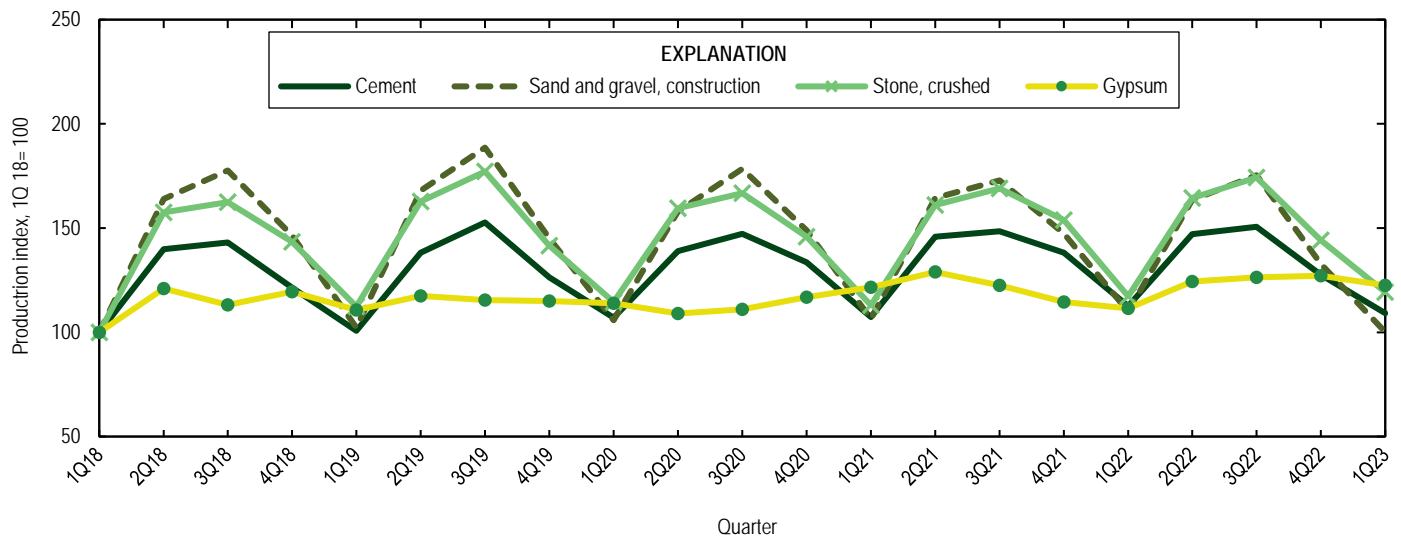


Figure 1. U.S. production of selected construction-related mineral commodities from the first quarter of 2018 through the first quarter of 2023, indexed to the first quarter of 2018.

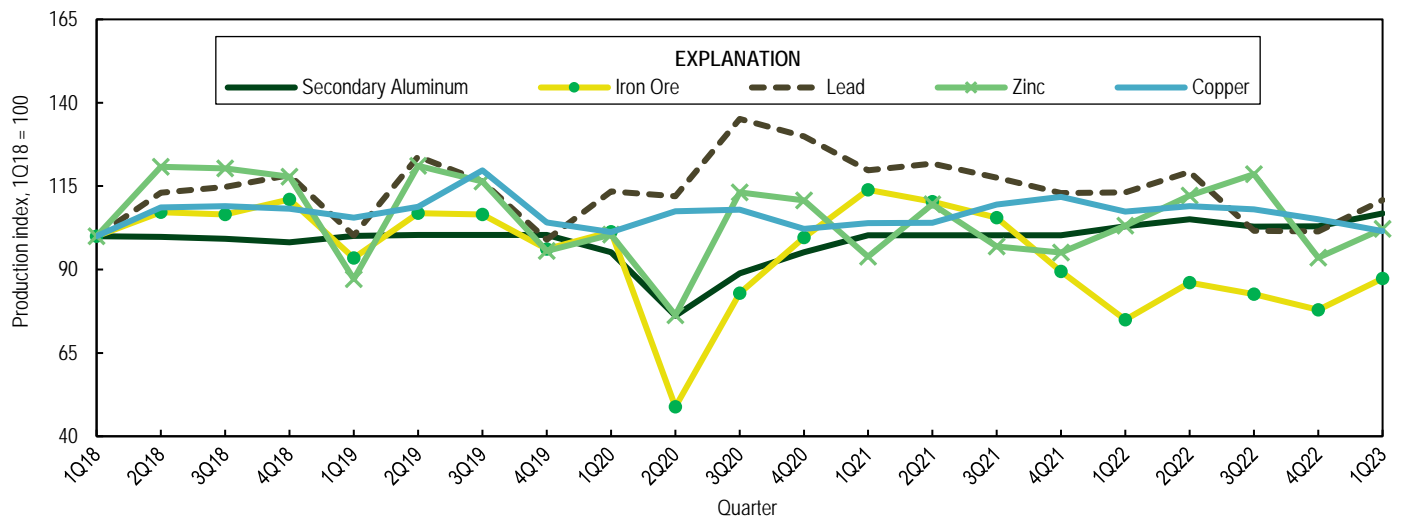


Figure 2. U.S. production of selected base metals from the first quarter of 2018 through the first quarter of 2023, indexed to the first quarter of 2018.

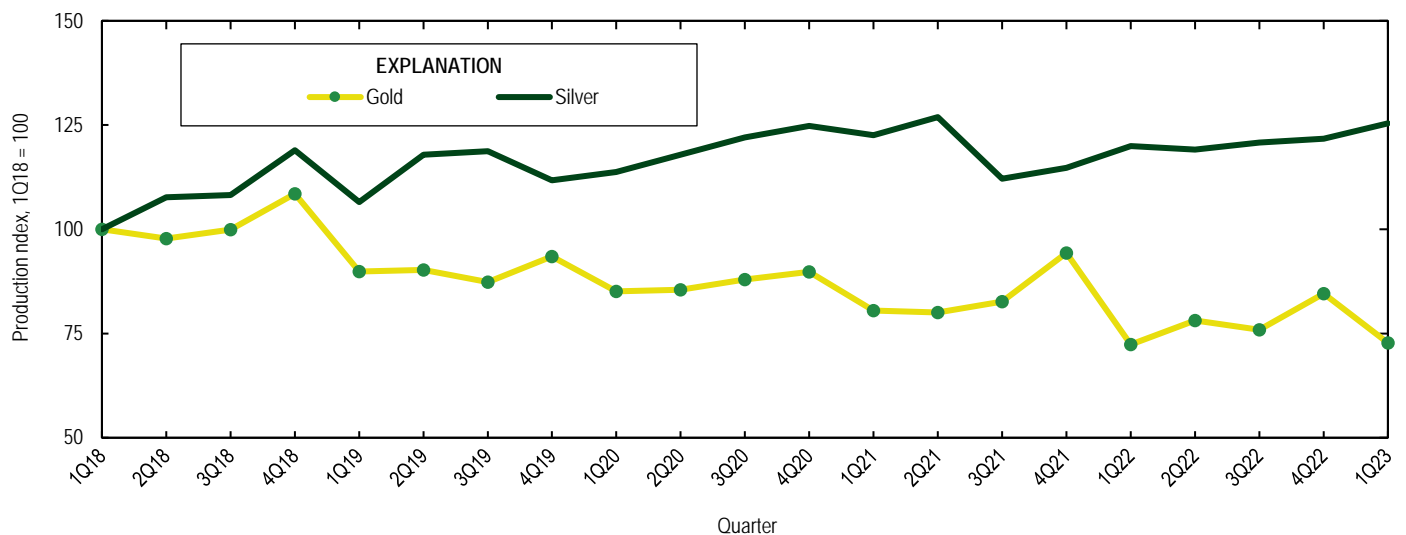


Figure 3. U.S. mine production of gold and silver from the first quarter of 2018 through the first quarter of 2023, indexed to the first quarter of 2018.

TABLE 1
PRODUCTION TRENDS FOR SELECTED MINERAL COMMODITIES¹

Mineral commodity	Percent change, 1st quarter 2023 vs. 4th quarter 2022	Percent change, 1st quarter 2023 vs. 1st quarter 2022
Aluminum (secondary)	4	4
Cement ^c	-14	-3
Copper	-3	-6
Gold	-14	1
Gypsum	-4	10
Iron ore	12	17
Lead	9	-2
Molybdenum	-20	-8
Palladium	-5	-19
Phosphate rock ^c	10	2
Platinum	-1	-14
Sand and gravel, construction	-25	-9
Silver	3	5
Soda ash	-14	-8
Stone, crushed	-17	2
Zinc	9	-1

^cEstimated.

¹Based on data available through May 30, 2023.

TABLE 2
U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES, BY QUARTER^{1,2}

Commodity		2022					2023		
		1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	1st quarter	
								2022	2023
Aluminum ^{6,3}	thousand metric tons	215	219	215	215	864	223	215	223
Cement ^{6,4}	million metric tons	19.0	24.8	25.4	21.5	90.6 [†]	18.4	19.0	18.4
Copper ⁵	thousand metric tons	308	313	310	302	1,230	291	308	291
Gold ⁵	metric tons	40.2 [†]	43.4 [†]	42.2 [†]	47.0 [†]	173 [†]	40.4	40.2 [†]	40.4
Gypsum ⁶	million metric tons	4.3	4.7	4.8	4.9	18.7	4.7	4.3	4.7
Iron ore ⁷	do.	8.7 [†]	10.0 [†]	9.6 [†]	9.0 [†]	37.3 [†]	10.1	8.7 [†]	10.1
Lead ⁵	thousand metric tons	68.6	72.3	61.6 [†]	61.5 [†]	264 [†]	67.2	68.6	67.2
Molybdenum ⁵	do.	8.8 [†]	7.7 [†]	7.9 [†]	10.2 [†]	34.6 [†]	8.1	8.8 [†]	8.1
Palladium ⁵	metric tons	2.9	2.6	2.0	2.5 [†]	10.1 [†]	2.4	2.9	2.4
Phosphate rock, marketable ⁸	million metric tons	4.6	5.3	5.5	4.2	19.6 [†]	4.6 [†]	4.6	4.6 [†]
Platinum ⁵	metric tons	0.9	0.8	0.6	0.7 [†]	3.0 [†]	0.7	0.9	0.7
Sand and gravel, construction ⁹	million metric tons	175 [†]	261 [†]	279 [†]	212 [†]	927 [†]	160	175 [†]	160
Silver ⁵	metric tons	258 [†]	256 [†]	259 [†]	261 [†]	1,030 [†]	269	258 [†]	269
Soda ash ⁷	million metric tons	2.8	2.7	2.7	3.0	11.3	2.6	2.8	2.6
Stone, crushed ⁹	do.	295 [†]	413 [†]	438 [†]	362 [†]	1,510 [†]	300	295 [†]	300
Zinc ⁵	thousand metric tons	180	195	206	163	744	178	180	178

[†]Estimated. [†]Revised. do. Ditto.

¹Based on data available through May 30, 2023.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Aluminum alloys produced at secondary smelters in the United States, less primary aluminum consumed, primary silicon consumed, and other alloying ingredients consumed.

⁴Shipments of domestically produced portland and blended cement, including cement made from imported clinker, as a proxy for actual domestic cement production.

⁵Recoverable mine production.

⁶Calcined production.

⁷Mine production.

⁸Marketable mine production. First to fourth quarter total may not add to quarterly data owing to annual adjustments that are not broken out by quarter.

⁹Sold or used; quarterly survey based on sample survey.