# Mineral Industry Surveys

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## U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES IN THE FOURTH QUARTER 2020

U.S. mine and plant production data for 14 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 fourth quarter of 2020 decreased by 14% compared with that in the third quarter of 2020 following the typical seasonal trend (fig.1, tables 1, 2). The combined production of construction-related materials during 2020 decreased slightly compared with production in 2019; production of cement was slightly higher, construction sand and gravel was essentially unchanged, crushed stone and gypsum were slightly lower (fig. 1, table 1). The global COVID-19 affected commercial construction and oil and gas drilling limiting construction of new infrastructure for those facilities.

### Base Metals

Production of copper, lead, and zinc decreased in the fourth quarter of 2020 compared with that in the third quarter of 2020 but production of secondary aluminum and iron ore increased in the fourth quarter of 2020 compared with that in the third quarter of 2020 (fig. 2, table 1). The following describes each base metal production change in the fourth quarter of 2020 compared with that in the third quarter of 2020: copper production was 7% lower, iron ore production increased by 17%, lead production decreased by 4%, secondary aluminum production increased by 7%, and zinc production decreased by 6%. During 2020, base metals, except lead, were negatively affected by the COVID-19 pandemic especially in the second quarter of 2020. Comparing full-year 2020 with full-year 2019, the largest decreases in production were for iron ore (18%), secondary aluminum (11%), zinc (7%), and copper (5%). Lead was the only base metal to have increased production (12%) in 2020 compared with that of 2019 (fig. 2, table 1).

### Precious Metals

During the fourth quarter of 2020, gold production increased by 12% and silver production increased slightly compared with production in the third quarter of 2020. Gold production in 2020 was 3% lower but silver production was essentially unchanged compared with production 2019 (fig. 3, table 1). A strike ended at a silver and lead mine in Idaho in January 2020 but some other mines experienced temporary closures owing to the COVID-19 pandemic.

### Other Mineral Materials

In the fourth quarter of 2020, production of molybdenum, phosphate rock, and soda ash were 5%, 8%, and 17% higher, respectively, than those in the third quarter of 2020. Molybdenum had a 28% increase in production in 2020 as compared with that of 2019, but phosphate rock and soda ash production were slightly lower and 15% lower, respectively, in 2020 compared with those of 2019 (table 1).

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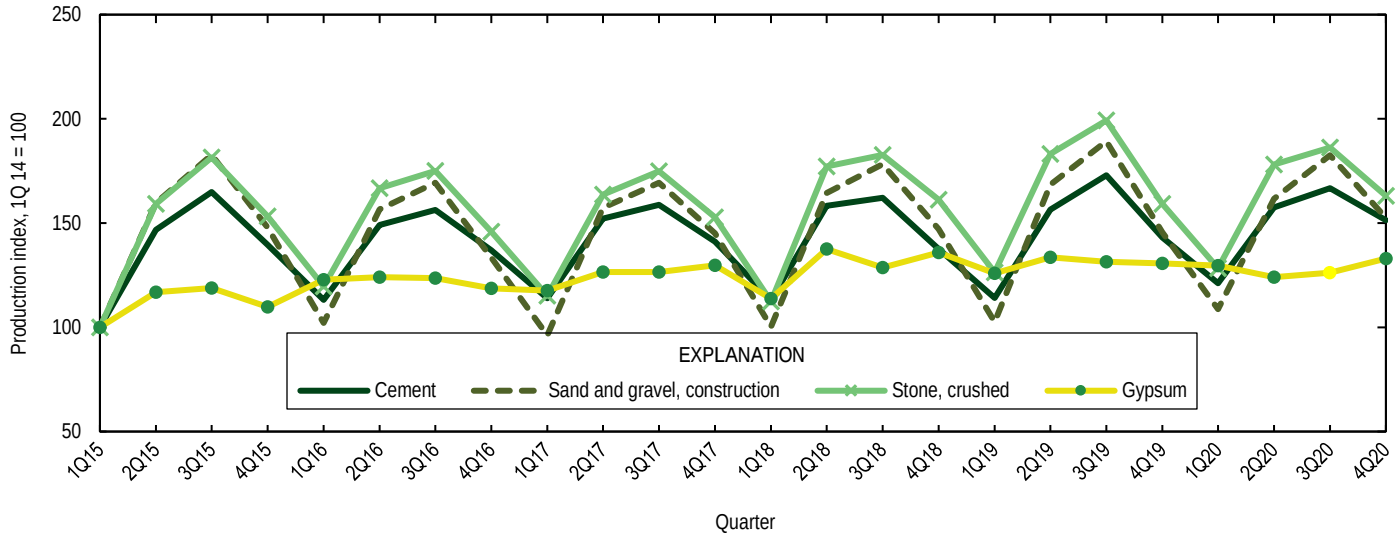


Figure 1. U.S. production of selected construction-related mineral commodities from the first quarter of 2015 through the fourth quarter of 2020, indexed to the first quarter of 2015.

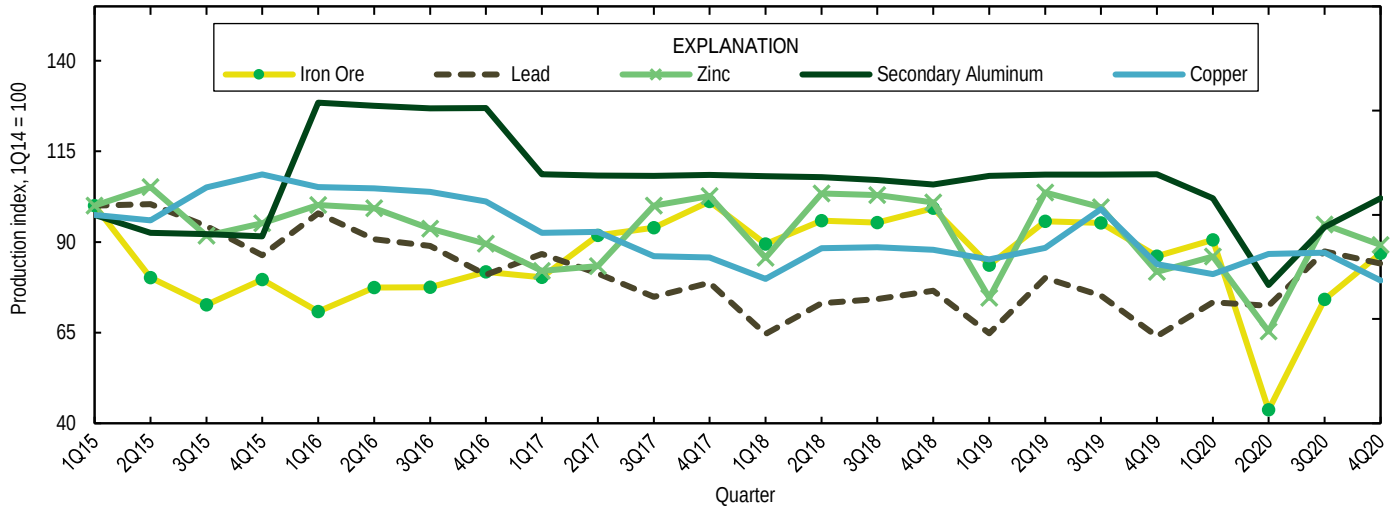


Figure 2. U.S. production of selected base metals from the first quarter of 2015 through the fourth quarter of 2020, indexed to the first quarter of 2015.

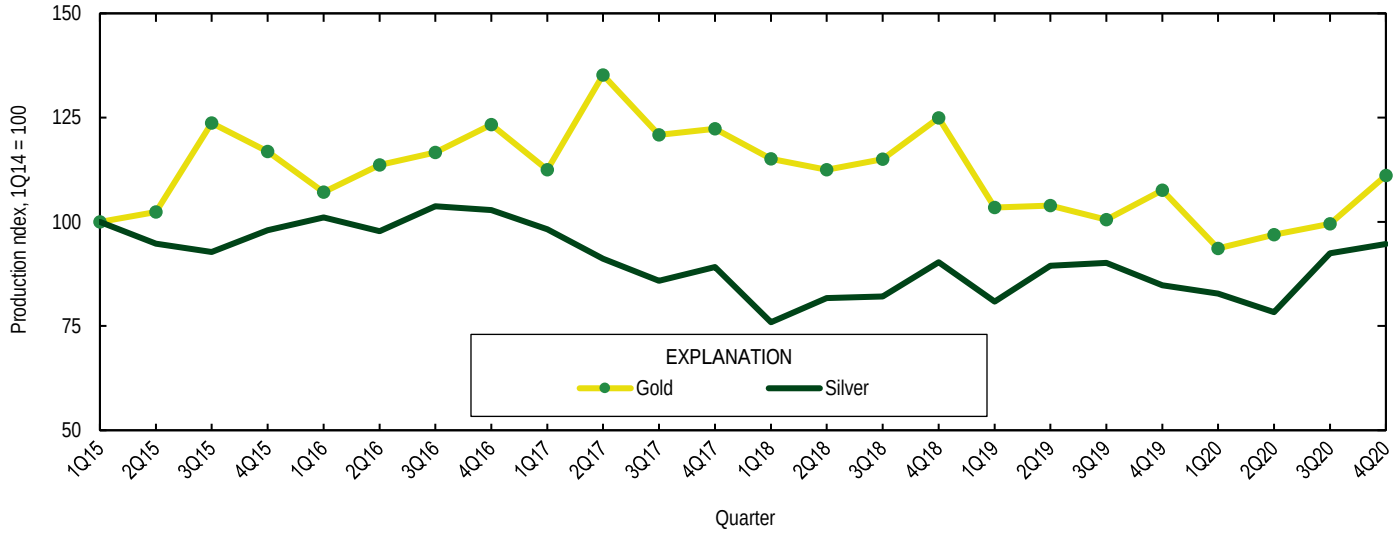


Figure 3. U.S. mine production of gold and silver from the first quarter of 2015 through the fourth quarter of 2020, indexed to the first quarter of 2015.

TABLE 1

PRODUCTION TRENDS FOR SELECTED MINERAL COMMODITIES[1]

| Mineral commodity | Percent change, 4th quarter 2020 vs. 3d quarter 2020 | Percent change, 2020 Total vs. 2019 Total |
|---|---|---|
| Aluminum (secondary) | 7 | -11 |
| Cement | -9 | 2 |
| Copper | -7 | -5 |
| Gold | 12 | -3 |
| Gypsum | 5 | -2 |
| Iron ore | 17 | -18 |
| Lead | -4 | 12 |
| Molybdenum | 5 | 28 |
| Phosphate rock | 8 | -2 |
| Sand and gravel, construction | -17 | (2) |
| Silver | 2 | 1 |
| Soda ash | 17 | -15 |
| Stone, crushed | -12 | -2 |
| Zinc | -6 | -7 |

[1]Based on data available through February 17, 2021,

[2]Less than 0.5 percent

TABLE 2

U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES, BY QUARTER[1, 2]

| Commodity | | 2019 | | | | 2020 | | | | 1st quarter–4th quarter | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1st quarter | 2d quarter | 3d quarter | 4th quarter | 1st quarter | 2d quarter | 3d quarter | 4th quarter | 2019 | 2020 |
| Aluminum[e, 3] | thousand metric tons | 209 | 210 | 210 | 210 | 199 [r] | 159 [r] | 185 [r] | 199 | 838 | 742 |
| Cement[4] | million metric tons | 17.0 | 23.3 | 25.7 | 21.3 | 18.0 | 23.4 | 24.8 | 22.5 | 87.3 | 88.8 |
| Copper[5] | thousand metric tons | 303 | 312 | 344 | 299 | 291 | 307 | 308 [r] | 286 | 1,260 | 1,190 |
| Gold [5] | metric tons | 49.9 | 50.1 | 48.5 | 51.9 | 45.2 | 46.8 | 48.0 [r] | 53.6 | 200 | 194 |
| Gypsum[6] | million metric tons | 4.2 | 4.5 | 4.4 | 4.4 | 4.4 | 4.2 | 4.2 | 4.5 | 17.5 | 17.2 |
| Iron ore[7] | do. | 10.8 | 12.4 | 12.4 | 11.2 | 11.8 | 5.7 | 9.6 | 11.3 | 46.8 | 38.3 |
| Lead[5] | thousand metric tons | 60.7 | 75.1 | 70.6 | 60.0 | 68.8 | 67.9 | 82.0 [r] | 78.8 | 266 | 297 |
| Molybdenum[5] | do. | 10.3 | 11.4 | 10.2 | 11.7 | 13.1 | 16.5 [r] | 12.8 [r] | 13.3 [p] | 43.6 | 55.7 [p] |
| Phosphate rock, marketable | million metric tons | 5.4 | 6.0 | 6.0 | 6.0 | 6.1 [r] | 6.0 [r] | 5.2 [r] | 5.6 | 23.3 | 22.9 |
| Sand and gravel, construction[8] | do. | 163 | 268 [r] | 301 | 231 | 173 | 257 | 290 | 242 | 962 | 961 |
| Silver[5] | metric tons | 229 | 253 | 255 | 240 | 234 [r] | 222 [r] | 262 [r] | 268 | 977 | 986 |
| Soda ash[7] | million metric tons | 2.9 | 2.9 | 2.9 | 3.0 | 2.9 | 2.1 [r] | 2.3 | 2.7 | 11.7 | 10.0 |
| Stone, crushed[8] | do. | 282 | 409 | 445 | 356 | 287 [r] | 398 [r] | 416 | 364 | 1,490 | 1,460 |
| Zinc[5] | thousand metric tons | 152 | 211 | 203 | 166 | 175 | 133 | 193 | 181 | 731 | 682 |

[p]Preliminary. [r]Revised. do. Ditto.

[1]Based on data available through February 17, 2021.

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

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

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

[5]Recoverable mine production.

[6]Calcined production.

[7]Mine production.

[8]Sold or used; quarterly survey based on sample survey. Includes all 50 States.