

# Mineral Industry Surveys

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## SILVER IN DECEMBER 2018

U.S. mines produced 87,400 kilograms (kg) of silver in December (table 1). Based on unrounded data, the average daily silver production in December was 2,820 kg, a 6% increase compared with 2,650 kg in November 2018, and 6% more than 2,660 kg in December 2017. The strike at Hecla Mining Co.'s Lucky Friday Mine in Idaho continued through December (Hecla Mining Co., 2019).

Preliminary annual silver production for U.S. mines was 923,000 kg in 2018, a 10% decrease compared with production in 2017. Six of the 11 States that produced silver had decreases in silver production in 2018. Most notable was Idaho, where there was a full year of limited production at the Lucky Friday Mine. In 2018, the mine produced 5,260 kg of silver, an 80% decrease compared with production in 2017 (Hecla Mining Co., 2019).

## Prices

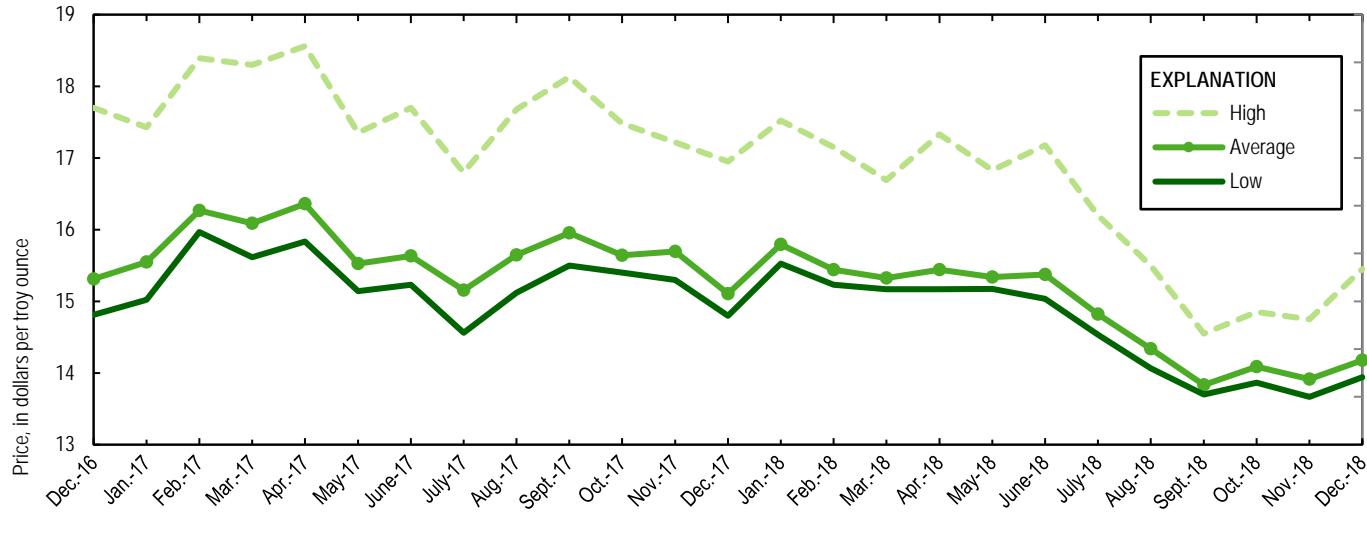


Figure 1. Engelhard monthly silver prices for December 2016 through December 2018. Source: Platts Metals Week.

Month

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TABLE 1  
MINE PRODUCTION OF RECOVERABLE SILVER  
IN THE UNITED STATES, BY STATE<sup>1</sup>

(Kilograms)

|                           | Nevada              | Other States <sup>2</sup> | Total               |
|---------------------------|---------------------|---------------------------|---------------------|
| <u>2017:</u> <sup>p</sup> |                     |                           |                     |
| December                  | 23,200              | 59,100                    | 82,400              |
| January–December          | 265,000             | 766,000                   | 1,030,000           |
| <u>2018:</u>              |                     |                           |                     |
| January                   | 18,800              | 55,900                    | 74,600 <sup>r</sup> |
| February                  | 18,400              | 48,800                    | 67,200              |
| March                     | 19,600 <sup>r</sup> | 49,700                    | 69,300              |
| April                     | 19,400              | 54,300                    | 73,700 <sup>r</sup> |
| May                       | 18,900 <sup>r</sup> | 57,600                    | 76,500              |
| June                      | 18,400              | 60,200                    | 78,600 <sup>r</sup> |
| July                      | 19,000 <sup>r</sup> | 53,700 <sup>r</sup>       | 72,800 <sup>r</sup> |
| August                    | 19,400              | 59,900 <sup>r</sup>       | 79,300 <sup>r</sup> |
| September                 | 19,600              | 58,300 <sup>r</sup>       | 77,900 <sup>r</sup> |
| October                   | 22,200 <sup>r</sup> | 64,400 <sup>r</sup>       | 86,500 <sup>r</sup> |
| November                  | 21,100 <sup>r</sup> | 58,400 <sup>r</sup>       | 79,500 <sup>r</sup> |
| December                  | 22,800              | 64,600                    | 87,400              |
| January–December          | 238,000             | 686,000                   | 923,000             |

<sup>p</sup>Preliminary. <sup>r</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 Alaska, Arizona, California, Colorado, Idaho, Missouri, Montana, New Mexico, South Dakota, and Utah.

TABLE 2  
SILVER PRICES

(Dollars per troy ounce)

|                                  | Price | Date    |
|----------------------------------|-------|---------|
| <u>Engelhard:</u>                |       |         |
| <u>2017:</u>                     |       |         |
| Low                              | 15.34 | Jul. 10 |
| High                             | 18.56 | Apr. 13 |
| Average                          | 17.07 | XX      |
| <u>2018:</u>                     |       |         |
| November                         |       |         |
| Low                              | 14.00 | Nov. 14 |
| High                             | 14.75 | Nov. 2  |
| Average                          | 14.37 | XX      |
| December                         |       |         |
| Low                              | 14.41 | Dec. 6  |
| High                             | 15.45 | Dec. 31 |
| Average                          | 14.76 | XX      |
| Year to date:                    |       |         |
| Low                              | 14.00 | Nov. 14 |
| High                             | 17.52 | Jan. 25 |
| Average                          | 15.75 | XX      |
| <u>Handy and Harman:</u>         |       |         |
| 2017, Average                    | 17.07 | XX      |
| <u>2018:</u>                     |       |         |
| November                         | 14.35 | XX      |
| December                         | 14.77 | XX      |
| Year to date                     | 15.71 | XX      |
| <u>London Final:<sup>1</sup></u> |       |         |
| 2017, Average                    | 17.05 | XX      |
| <u>2018:</u>                     |       |         |
| November                         | 14.37 | XX      |
| December                         | 14.70 | XX      |
| Year to date                     | 15.77 | XX      |

XX Not applicable.

<sup>1</sup>Reported as "London Spot/US Equiv."

Source: Platts Metals Week.

TABLE 3  
U.S. IMPORTS OF SILVER<sup>1</sup>

| Period and country or locality | Bullion                    |                   | Doré                       |                   | Ores and concentrates <sup>2</sup> |                   | Total                      |                   |
|--------------------------------|----------------------------|-------------------|----------------------------|-------------------|------------------------------------|-------------------|----------------------------|-------------------|
|                                | Silver content (kilograms) | Value (thousands) | Silver content (kilograms) | Value (thousands) | Silver content (kilograms)         | Value (thousands) | Silver content (kilograms) | Value (thousands) |
| 2017                           | 3,950,000                  | \$2,150,000       | 1,090,000                  | \$959,000         | 6,840                              | \$2,370           | 5,040,000                  | \$3,110,000       |
| 2018:                          |                            |                   |                            |                   |                                    |                   |                            |                   |
| October                        | 305,000                    | 144,000           | 117,000                    | 97,200            | 161                                | 34                | 422,000                    | 241,000           |
| November                       | 302,000                    | 140,000           | 126,000                    | 103,000           | 57                                 | 12                | 428,000                    | 243,000           |
| December:                      |                            |                   |                            |                   |                                    |                   |                            |                   |
| Argentina                      | --                         | --                | 18,700                     | 22,600            | --                                 | --                | 18,700                     | 22,600            |
| Bolivia                        | 8,740                      | 4,380             | --                         | --                | --                                 | --                | 8,740                      | 4,380             |
| Canada                         | 94,600                     | 45,200            | --                         | --                | --                                 | --                | 94,600                     | 45,200            |
| Chile                          | 24,200                     | 11,200            | --                         | --                | --                                 | --                | 24,200                     | 11,200            |
| Colombia                       | 1,410                      | 774               | 30                         | 14                | --                                 | --                | 1,440                      | 788               |
| Curacao                        | --                         | --                | 28                         | 13                | --                                 | --                | 28                         | 13                |
| Dominican Republic             | --                         | --                | 15                         | 7                 | --                                 | --                | 15                         | 7                 |
| Germany                        | 50                         | 27                | 315                        | 155               | --                                 | --                | 365                        | 182               |
| Italy                          | --                         | --                | 273                        | 179               | --                                 | --                | 273                        | 179               |
| Korea, Republic of             | 17,900                     | 8,420             | --                         | --                | --                                 | --                | 17,900                     | 8,420             |
| Mexico                         | 168,000                    | 78,400            | 62,900                     | 50,300            | --                                 | --                | 231,000                    | 129,000           |
| Panama                         | 5                          | 2                 | --                         | --                | --                                 | --                | 5                          | 2                 |
| Peru                           | 9,160                      | 4,170             | --                         | --                | --                                 | --                | 9,160                      | 4,170             |
| Switzerland                    | --                         | --                | 160                        | 80                | --                                 | --                | 160                        | 80                |
| Total                          | 324,000                    | 153,000           | 82,400                     | 73,400            | --                                 | --                | 406,000                    | 226,000           |
| January–December               | 3,750,000                  | 1,890,000         | 1,080,000                  | 956,000           | 7,790                              | 2,260             | 4,840,000                  | 2,850,000         |

-- Zero.

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

<sup>2</sup>Includes silver content of base metal ores and concentrates.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF REFINED SILVER<sup>1</sup>

| Period and country or locality | Other unwrought silver<br>(gross weight) |                      | Metal powder<br>(gross weight) |                      | Silver nitrate<br>(gross weight) |                      | Semi manufactured forms <sup>2</sup><br>(gross weight) |                      | Waste and scrap<br>(gross weight) |                      |
|--------------------------------|--|----------------------|--------------------------------|----------------------|----------------------------------|----------------------|--|----------------------|-----------------------------------|----------------------|
|                                | Quantity<br>(kilograms)                  | Value<br>(thousands) | Quantity<br>(kilograms)        | Value<br>(thousands) | Quantity<br>(kilograms)          | Value<br>(thousands) | Quantity<br>(kilograms)                                | Value<br>(thousands) | Quantity<br>(kilograms)           | Value<br>(thousands) |
| 2017                           | 391,000                                  | \$182,000            | 429,000                        | \$59,800             | 4,600                            | \$647                | 462,000  | \$247,000            | 5,390,000                         | \$387,000            |
| 2018:                          |  |                      |                                |                      |                                  |                      |  |                      |                                   |                      |
| October                        | 49,100                                   | 20,700               | 30,400                         | 1,800                | (3)                              | 56                   | 35,100   | 13,400               | 558,000                           | 29,900               |
| November                       | 21,500                                   | 10,500               | 25,000                         | 1,930                | (3)                              | 9                    | 61,600   | 25,300               | 824,000                           | 71,300               |
| December:                      |  |                      |                                |                      |                                  |                      |  |                      |                                   |                      |
| Belgium                        | --                                       | --                   | --                             | --                   | (3)                              | 4                    | --   | --                   | 7,820                             | 54                   |
| Brazil                         | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 896                               | 16                   |
| Canada                         | 6,850                                    | 2,470                | 1,770                          | 78                   | --                               | --                   | 4  | 3                    | 30,900                            | 10,200               |
| Chile                          | --                                       | --                   | --                             | --                   | --                               | --                   | 5,450  | 2,510                | 2,150                             | 43                   |
| China                          | --                                       | --                   | 3,160                          | 120                  | --                               | --                   | --   | --                   | 4,040                             | 23                   |
| Colombia                       | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 22,800                            | 867                  |
| Costa Rica                     | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 166                               | 236                  |
| Dominican Republic             | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 1,500                             | 189                  |
| Ecuador                        | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 450                               | 16                   |
| Egypt                          | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 1,850                             | 292                  |
| France                         | --                                       | --                   | 115                            | 63                   | --                               | --                   | --   | --                   | 8,160                             | 33                   |
| Germany                        | --                                       | --                   | 195                            | 105                  | --                               | --                   | 95   | 44                   | 38,500                            | 10,300               |
| Honduras                       | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 2,140                             | 99                   |
| Hungary                        | --                                       | --                   | 2,040                          | 110                  | --                               | --                   | --   | --                   | --                                | --                   |
| Ireland                        | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 23,700                            | 64                   |
| Japan                          | --                                       | --                   | 20,800                         | 998                  | --                               | --                   | --   | --                   | --                                | --                   |
| Korea, Republic of             | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 291                               | 100                  |
| Malaysia                       | --                                       | --                   | 10                             | 6                    | --                               | --                   | --   | --                   | 46,900                            | 216                  |
| Mexico                         | 16,700                                   | 7,760                | 189                            | 112                  | --                               | --                   | 6,250  | 2,940                | 73,600                            | 1,280                |
| Peru                           | 10,600                                   | 4,970                | --                             | --                   | --                               | --                   | --   | --                   | --                                | --                   |
| Slovakia                       | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 178,000                           | 945                  |
| Taiwan                         | --                                       | --                   | 287                            | 13                   | --                               | --                   | 10,500   | 4,970                | 212                               | 96                   |
| United Kingdom                 | --                                       | --                   | --                             | --                   | (3)                              | 56                   | 300  | 222                  | 85,700                            | 5,130                |
| Vietnam                        | --                                       | --                   | --                             | --                   | --                               | --                   | --   | --                   | 17,700                            | 302                  |
| Other                          | --                                       | --                   | --                             | --                   | (3)                              | 3                    | 57   | 83                   | 71                                | 71                   |
| Total                          | 34,100                                   | 15,200               | 28,500                         | 1,610                | (3)                              | 63                   | 22,700   | 10,800               | 548,000                           | 30,600               |
| January–December               | 429,000                                  | 190,000              | 407,000                        | 64,300               | 3                                | 459                  | 361,000  | 169,000              | 6,710,000                         | 494,000              |

-- Zero.

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

<sup>2</sup>Containing 99.5% or more by weight of silver.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

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

| Period and country or locality | Bullion                    |                   | Doré                       |                   | Ores and concentrates <sup>2</sup> |                   | Total                      |                   |
|--------------------------------|----------------------------|-------------------|----------------------------|-------------------|------------------------------------|-------------------|----------------------------|-------------------|
|                                | Silver content (kilograms) | Value (thousands) | Silver content (kilograms) | Value (thousands) | Silver content (kilograms)         | Value (thousands) | Silver content (kilograms) | Value (thousands) |
| 2017                           | 91,600                     | \$54,000          | 49,400                     | \$34,700          | 16,300                             | \$26,800          | 157,000                    | \$115,000         |
| 2018:                          |                            |                   |                            |                   |                                    |                   |                            |                   |
| October                        | 115,000                    | 53,400            | 4,470                      | 3,260             | --                                 | --                | 120,000                    | 56,700            |
| November                       | 23,000                     | 11,500            | 3,090                      | 2,000             | 2                                  | 3                 | 26,100                     | 13,500            |
| December:                      |                            |                   |                            |                   |                                    |                   |                            |                   |
| Australia                      | 503                        | 285               | --                         | --                | --                                 | --                | 503                        | 285               |
| Austria                        | --                         | --                | 326                        | 172               | --                                 | --                | 326                        | 172               |
| Canada                         | 2,410                      | 1,250             | --                         | --                | --                                 | --                | 2,410                      | 1,250             |
| China                          | --                         | --                | 300                        | 143               | --                                 | --                | 300                        | 143               |
| Czechia                        | 528                        | 248               | --                         | --                | --                                 | --                | 528                        | 248               |
| Germany                        | 21                         | 13                | 25                         | 13                | --                                 | --                | 46                         | 26                |
| India                          | 195,000                    | 95,200            | 186                        | 88                | --                                 | --                | 195,000                    | 95,300            |
| Mexico                         | 175                        | 87                | 1,250                      | 1,120             | --                                 | --                | 1,420                      | 1,210             |
| Norway                         | --                         | --                | 29                         | 19                | --                                 | --                | 29                         | 19                |
| Panama                         | 306                        | 290               | --                         | --                | --                                 | --                | 306                        | 290               |
| Singapore                      | 4                          | 4                 | 95                         | 48                | --                                 | --                | 99                         | 52                |
| Switzerland                    | 14                         | 13                | 58                         | 27                | --                                 | --                | 72                         | 40                |
| Taiwan                         | 53                         | 28                | --                         | --                | --                                 | --                | 53                         | 28                |
| United Kingdom                 | 171                        | 88                | --                         | --                | --                                 | --                | 171                        | 88                |
| Other                          | 34                         | 26                | --                         | --                | 6                                  | 4                 | 40                         | 30                |
| Total                          | 199,000                    | 97,500            | 2,260                      | 1,630             | 6                                  | 4                 | 201,000                    | 99,200            |
| January–December               | 557,000                    | 311,000           | 37,600                     | 24,900            | 9,640                              | 4,730             | 604,000                    | 341,000           |

-- Zero.

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

<sup>2</sup>Includes silver content of base metal ores and concentrates.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF REFINED SILVER<sup>1</sup>

| Period and country or locality | Other unwrought silver<br>(gross weight) |                      | Metal powder<br>(gross weight) |                      | Silver nitrate<br>(gross weight) |                      | Semi manufactured forms <sup>2</sup><br>(gross weight) |                      | Waste and scrap<br>(gross weight) |                      |
|--------------------------------|--|----------------------|--------------------------------|----------------------|----------------------------------|----------------------|--|----------------------|-----------------------------------|----------------------|
|                                | Quantity<br>(kilograms)                  | Value<br>(thousands) | Quantity<br>(kilograms)        | Value<br>(thousands) | Quantity<br>(kilograms)          | Value<br>(thousands) | Quantity<br>(kilograms)                                | Value<br>(thousands) | Quantity<br>(kilograms)           | Value<br>(thousands) |
| 2017                           | 135,000                                  | \$71,100             | 874,000                        | \$545,000            | 51                               | \$5,170              | 508,000  | \$292,000            | 13,000,000                        | \$1,770,000          |
| 2018:                          |  |                      |                                |                      |                                  |                      |  |                      |                                   |                      |
| October                        | 14,700                                   | 7,040                | 57,000                         | 36,500               | 3                                | 469                  | 26,400   | 14,400               | 1,490,000                         | 216,000              |
| November                       | 7,670                                    | 3,430                | 41,400                         | 23,700               | 8                                | 846                  | 26,400   | 14,300               | 1,230,000                         | 140,000              |
| December:                      |  |                      |                                |                      |                                  |                      |  |                      |                                   |                      |
| Belgium                        | --                                       | --                   | 735                            | 423                  | --                               | --                   | --   | --                   | 99,800                            | 2,310                |
| Canada                         | 2,250                                    | 1,150                | 785                            | 698                  | 1                                | 36                   | 11,000   | 5,770                | 6,320                             | 12,200               |
| China                          | --                                       | --                   | 4,800                          | 2,850                | (3)                              | 8                    | 1,730  | 991                  | 479                               | 13                   |
| France                         | 45                                       | 16                   | 2,820                          | 1,460                | --                               | --                   | 364  | 218                  | --                                | --                   |
| Germany                        | 17                                       | 33                   | 1,690                          | 864                  | (3)                              | 9                    | 157  | 121                  | 316,000                           | 27,100               |
| Hong Kong                      | 291                                      | 78                   | 1,910                          | 1,070                | --                               | --                   | 128  | 100                  | 140                               | 77                   |
| India                          | 2,990                                    | 905                  | 5                              | 12                   | --                               | --                   | 604  | 323                  | --                                | --                   |
| Ireland                        | --                                       | --                   | --                             | --                   | --                               | --                   | 216  | 126                  | --                                | --                   |
| Italy                          | 1,520                                    | 795                  | 50                             | 27                   | --                               | --                   | 73   | 37                   | 242,000                           | 47,500               |
| Japan                          | 1  | 4                    | 5,430                          | 3,110                | --                               | --                   | 71   | 62                   | 257,000                           | 13,200               |
| Korea, Republic of             | 85                                       | 11                   | 2,410                          | 1,400                | --                               | --                   | 944  | 505                  | 17,900                            | 1,220                |
| Malaysia                       | --                                       | --                   | 356                            | 203                  | --                               | --                   | 265  | 171                  | 217                               | 115                  |
| Mexico                         | 96                                       | 255                  | 1,260                          | 858                  | (3)                              | 81                   | 4,830  | 2,640                | 17,100                            | 2,250                |
| Netherlands                    | --                                       | --                   | 1,500                          | 840                  | --                               | --                   | 4  | 3                    | 373                               | 246                  |
| Philippines                    | --                                       | --                   | --                             | --                   | --                               | --                   | 123  | 72                   | --                                | --                   |
| Singapore                      | 104                                      | 65                   | 10,800                         | 5,570                | 1                                | 458                  | 677  | 350                  | 14                                | 10                   |
| Spain                          | 12                                       | 3                    | 7                              | 4                    | --                               | --                   | 991  | 495                  | --                                | --                   |
| Sweden                         | --                                       | --                   | --                             | --                   | --                               | --                   | 1,080  | 562                  | 271,000                           | 6,110                |
| Switzerland                    | 36                                       | 17                   | --                             | --                   | --                               | --                   | 86   | 76                   | --                                | --                   |
| Taiwan                         | 3  | 11                   | 4,480                          | 2,460                | --                               | --                   | 41   | 44                   | --                                | --                   |
| Thailand                       | 208                                      | 66                   | --                             | --                   | --                               | --                   | 220  | 127                  | --                                | --                   |
| Turkey                         | 5  | 3                    | --                             | --                   | --                               | --                   | 166  | 83                   | --                                | --                   |
| United Arab Emirates           | 80                                       | 11                   | --                             | --                   | --                               | --                   | 77   | 39                   | --                                | --                   |
| United Kingdom                 | 10                                       | 4                    | 2,950                          | 1,670                | --                               | --                   | 878  | 449                  | 29,200                            | 33,900               |
| Vietnam                        | 154                                      | 53                   | --                             | --                   | --                               | --                   | 37   | 20                   | --                                | --                   |
| Other                          | 109                                      | 80                   | 105                            | 103                  | (3)                              | 11                   | 524  | 306                  | --                                | --                   |
| Total                          | 8,020                                    | 3,560                | 42,000                         | 23,600               | 2                                | 603                  | 25,300   | 13,700               | 1,260,000                         | 146,000              |
| January–December               | 113,000                                  | 55,900               | 917,000                        | 534,000              | 50                               | 6,690                | 423,000  | 236,000              | 16,200,000                        | 2,410,000            |

-- Zero.

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

<sup>2</sup>Containing 99.3% or more by weight of silver.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.