

# Mineral Industry Surveys

---

For information, contact:

Earle B. Amey, Gold Commodity Specialist  
Henry E. Hilliard, Silver and Platinum-Group Metals  
Commodity Specialist

U.S. Geological Survey

989 National Center

Reston, VA 20192

Telephone: (703) 648-4969 (Gold),

(703) 648-4970 (Silver and PGM)

Fax: (703) 648-7757

E-mail: [eamey@usgs.gov](mailto:eamey@usgs.gov) and [hhilliar@usgs.gov](mailto:hhilliar@usgs.gov)

Mahbood Mahdavi (Data)

Telephone: (703) 648-7778

Fax: (703) 648-7975

Deana M. Demichelis (Data)

Telephone: (703) 648-7943

Fax: (703) 648-7975

MINES FaxBack: (703) 648-4999

Internet: <http://minerals.usgs.gov/minerals>

## PRECIOUS METALS IN JANUARY 2001

U.S. mines produced 28,900 kilograms (kg) of gold and 150,000 kg of silver in January 2001. Compared with December 2000, production of gold was up 10% in California and down 4% in Nevada, and silver production was down 21% in Nevada.

### Gold

**Domestic.**—Newmont Mining Corp. completed its merger with Battle Mountain Gold Co. A delay in the approval of the merger was attributed to the Securities and Exchange Commission review process. Concerns were with the merger's "pooling" method, which combines the assets of the involved companies to form one large entity to avoid premium write-offs. The merger was fueled in part by Battle Mountain's attractive Phoenix gold project in Nevada. This low-grade deposit would create synergies with Newmont's vast gold-belt holdings (American Metal Market, 2001b).

Settlement was reached concerning the environmental cleanup of the Summitville gold mine located in Colorado. The settlement, which remained subject to approval by the Federal District Court in Denver, would end 4½ years of lawsuits and counterclaims. Summitville was owned and operated by a Galactic Resources Ltd. subsidiary that opened the gold mine in June 1986 and closed it in December 1992. During that time, more than 9,300 kg (300,000 troy ounces) of gold was produced. In the following year, Galactic filed for bankruptcy and abandoned the Summitville operation. Today, despite a \$150 million effort spent on remedial effort, the site does not meet the water standards set by the U.S. Environmental Protection Agency (Mining Journal, 2001).

Gannon & Scott Inc., a precious metal refiner based in Cranston, RI, purchased the Handy & Harman Refining Group's processing facility and equipment in Phoenix, AZ. The facility continued under the same management with no reduction

in staff. The acquisition greatly expanded Gannon & Scott's capacity and provided its customers with refiners on both coasts (American Metal Market, 2001c).

**International.**—The Bank of England (BoE) sold 25,000 kg of gold at \$268 per ounce on January 23. The auction, which was 4.8 times oversubscribed, was the tenth since July 1999. The sale was 90 cents above the January 23 London AM gold price (Platts Metals Week, 2001a).

The London Bullion Market Association's gold clearing statistics in December finished 2000 with an upturn. Gold transfers were up about 27% in comparison with those of November, rising to a daily average of 23.6 million ounces (734,000 kg). The daily average number of gold transfers during December rose from 721 to 833. In addition, the quantity of gold transferred in December 2000 was down about 17% from that of December 1999 (American Metal Market, 2001a).

### Silver

Silver prices fell to a 3-year low of \$4.49 per ounce during morning trading on January 4, 2001. Failure to recover with gold prices after U.S. interest rates were cut was the reason given by traders for the new low. The outlook is not particularly positive for silver given that it is primarily an industrial metal, especially with the concerns regarding the US economy. Not only is silver demand weak, but major producers such as Mexico's Industrias Peñoles S.A. de C.V. reported significant production increases at the end of 2000. In addition, it is anticipated that the flow of silver from China will continue in 2001 (Metal Bulletin, 2001b).

Canada-based Pan American Silver reported that it has started production at its La Colorada silver mine in Mexico and expects to achieve full-scale production of 131 tons per year in 2001. La Colorada, located north of Guadalajara in central Mexico, is

currently producing at only about 17 tons per year while the company completes construction work. About 3,500 tons of ore per month will be processed at the Torreon smelter 300 kilometers north of the mine (Metal Bulletin, 2001a).

Coeur d'Alene Mines has discovered a new area of high-grade gold and silver mineralization near its Fachinal Mine in southern Chile. Named Cerro Bayo, the area hosts multiple veins and veinlets and can be traced at least 250 meters along the strike and is up to 100 meters in width. The vein system includes the Lucero vein, which has a greater strike length, width, and grade than previously encountered in the district. The size and high-grade nature of Cerro reportedly gives it the potential to vastly improve the economics of the Fachinal Mine. Thus, Coeur d'Alene Mining has temporarily suspended operations at Fachinal while it formulates a detailed development plan for the new zone. The Cerro Bayo area is less than 15 kilometers east of Fachinal processing facilities (Engineering & Mining Journal, 2001).

Researchers at the Georgia Institute of Technology have discovered that individual silver nanoclusters can emit photoactivated fluorescence. The clusters are formed by the photo reduction of Ag<sub>2</sub>O (silver oxide) on the surface of extremely thin [less than 20 nanometers (nm)] silver films. Illumination of the thin films with wavelengths shorter than 520 nm results in multicolored fluorescence, with nanoparticles being activated individually. After the particles have been photoactivated, they fluoresce under both blue and green excitation. Continuous excitation with blue light results in "blinking" or intermittent fluorescence. The researchers report that, because each particle is individually photoactivated, the films could eventually be used for data storage. Data would be written with blue light and nondestructively read with green light (Science, 2001, p. 103-106).

### **Platinum-Group Metals**

The Engelhard unfabricated price of platinum reached a 13-year high of \$645 per ounce on January 11, 2001, before falling back to \$618 per ounce on January 18. Similarly the price of

palladium rose to a record high of \$1,090 per ounce before settling back to \$1,033 per ounce on January 17. Some traders suggested that, because the symbolic level of \$1,000 per ounce has been exceeded, the metal's rapid price increase could continue. Price increases are likely to continue until Russian palladium exports resume. In the absence of Russian exports, prices may increase to over \$1,200 per ounce (Platts Metals Week, 2001b).

Meanwhile, evidence of a global slump in the automobile sector, which uses more than 50% of the world's supply of palladium for catalytic converters, was apparent at the beginning of 2001, as General Motors announced that it will idle 12 of its 29 plants in the United States. With a fall in demand, the price of palladium could fall rapidly if Russia-based Norilsk Nickel, the world's largest supplier of palladium, decides to start exporting the metal again. A sudden increase in Russian exports could lead to fund selling, pushing prices down even further (Platts Metals Week, 2001b).

### **References Cited**

- American Metal Market, 2001a, London gold, silver trading finishes year with upturn: American Metal Market, v. 109, no. 11, January 17, p. 4.
- 2001b, Newmont Mining merger completed: American Metal Market, v. 109, no. 9, January 12, p. 6.
- 2001c, R.I. firm buys Handy & Harmon Ariz. unit: American Metal Market, v. 109, no. 10, January 15, p. 23.
- Engineering & Mining Journal, 2001, In Latin America: Engineering & Mining Journal, v. 202, no. 1, January, p. ww 16.
- Metal Bulletin, 2001a, Mexican silver project starts production: Metal Bulletin, no. 8542, January 18, p. 9.
- 2001b, Silver slides to new low: Metal Bulletin, no. 8539, January 8, p. 9.
- Mining Journal, 2001, Summitville settlement: Mining Journal, v. 336, no. 8615, January 5, p. 3.
- Platts Metals Week, 2001a, BoE gold auction oversubscribed: Platts Metals Week, v. 72, no. 5, January 29, p. 12.
- 2001b, Platinum volatile in 2001: Platts Metals Week, v. 72, no. 2, p. 11.
- Science, 2001, Photoactivated fluorescence from individual silver nanoclusters: Science, v. 291, no. 5501, January 5, 196 p.

TABLE 1  
MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

| Gold             | Alaska | California | Nevada  | Other States 2/ | Total   |
|------------------|--------|------------|---------|-----------------|---------|
| 2000:            |        |            |         |                 |         |
| January          | 1,200  | 1,470      | 23,200  | 4,200           | 30,000  |
| February         | 1,140  | 1,390      | 21,700  | 4,030           | 28,300  |
| March            | 1,200  | 1,390      | 22,600  | 4,400           | 29,600  |
| April            | 1,190  | 1,280      | 21,400  | 4,240           | 28,100  |
| May              | 1,190  | 1,360      | 19,500  | 4,540           | 26,600  |
| June             | 1,190  | 1,470      | 21,400  | 4,710           | 28,800  |
| July             | 1,460  | 1,470      | 18,900  | 4,410           | 26,300  |
| August           | 1,460  | 1,400      | 20,800  | 4,810           | 28,500  |
| September        | 1,510  | 1,460      | 22,200  | 3,900           | 29,100  |
| October          | 1,510  | 1,360      | 19,000  | 5,680           | 27,600  |
| November         | 1,020  | 1,170      | 19,100  | 5,900           | 24,700  |
| December         | 1,440  | 1,170      | 23,000  | 4,450           | 30,100  |
| January-December | 15,500 | 16,400     | 253,000 | 55,300          | 338,000 |
| 2001:            |        |            |         |                 |         |
| January          | 1,440  | 1,290      | 22,100  | 4,420           | 28,900  |

  

| Silver           | Arizona | Idaho   | Nevada  | Other States 3/ | Total     |
|------------------|---------|---------|---------|-----------------|-----------|
| 2000:            |         |         |         |                 |           |
| January          | W       | 34,400  | 58,300  | 75,200          | 168,000   |
| February         | W       | 34,300  | 63,100  | 69,900          | 167,000   |
| March            | W       | 34,300  | 71,000  | 75,000          | 180,000   |
| April            | W       | 34,300  | 57,500  | 72,900          | 165,000   |
| May              | W       | 34,300  | 73,800  | 73,400          | 182,000   |
| June             | W       | 34,200  | 59,800  | 74,500          | 168,000   |
| July             | W       | 34,200  | 56,700  | 71,200          | 162,000   |
| August           | W       | 34,800  | 53,100  | 73,200          | 161,000   |
| September        | W       | 34,500  | 53,700  | 69,500          | 158,000   |
| October          | W       | 34,500  | 45,900  | 66,000          | 146,000   |
| November         | W       | 34,500  | 56,700  | 64,300          | 156,000   |
| December         | W       | 34,500  | 60,000  | 58,700          | 153,000   |
| January-December | W       | 413,000 | 710,000 | 844,000         | 1,970,000 |
| 2001:            |         |         |         |                 |           |
| January          | W       | 34,400  | 47,200  | 68,600          | 150,000   |

p/ Preliminary. W Withheld to avoid disclosing company proprietary data, included with "Other States."

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

2/ Includes Arizona, Colorado, Idaho, Montana, New Mexico, South Carolina, South Dakota, Utah, and Washington.

3/ Includes Alaska, California, Colorado, Missouri, Montana, New Mexico, New York, South Carolina, South Dakota, Tennessee, Utah, Washington, and State indicated by symbol W.

TABLE 2  
SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

|                              | Gold                 | Silver             | Platinum                       | Palladium             |
|------------------------------|----------------------|--------------------|--------------------------------|-----------------------|
| <b>Engelhard Industries:</b> |                      |                    |                                |                       |
| 2000:                        |                      |                    |                                |                       |
| Low/date                     | 264.90 (October 27)  | 4.59 (December 19) | 416.00 (January 6)             | 437.00 (January 6)    |
| High/date                    | 313.88 (February 7)  | 5.53 (February 7)  | 625.00 (December 13<br>and 28) | 985.00 (December 27)  |
| Average                      | 280.10               | 5.00               | 549.31                         | 691.84                |
| 2001:                        |                      |                    |                                |                       |
| January:                     |                      |                    |                                |                       |
| Low/date                     | 263.95/29            | 4.53/3             | 607.00/31                      | 973.30/2              |
| High/date                    | 272.21/2             | 4.87/30            | 645.00/10 and 15               | 1,100.00/26           |
| Average                      | 266.59               | 4.70               | 625.50                         | 1,054.60              |
| February:                    |                      |                    |                                |                       |
| Low/date                     | 257.34/20            | 4.44/21            | 596.00/12 and 13               | 850.00/28             |
| High/date                    | 269.41/27            | 4.79/1             | 615.00/28                      | 1,090.00/5            |
| Average                      | 263.09               | 4.57               | 604.84                         | 984.37                |
| Year to date:                |                      |                    |                                |                       |
| Low/date                     | 257.34 (February 20) | 4.44 (February 21) | 596.00 (February 12<br>and 13) | 850.00 (February 28)  |
| High/date                    | 272.21 (January 2)   | 4.87 (January 30)  | 645.00 (January 10<br>and 15)  | 1,100.00 (January 26) |
| Average                      | 264.84               | 4.63               | 615.17                         | 1,019.48              |
| <b>Handy and Harman:</b>     |                      |                    |                                |                       |
| 2000:                        |                      |                    |                                |                       |
| Average                      | 278.96               | 5.00               | XX                             | XX                    |
| 2001:                        |                      |                    |                                |                       |
| January                      | 265.58               | 4.70               | XX                             | XX                    |
| February                     | 261.99               | 4.57               | XX                             | XX                    |
| Average year to date         | 263.79               | 4.64               | XX                             | XX                    |
| <b>London Final: 1/</b>      |                      |                    |                                |                       |
| 2000:                        |                      |                    |                                |                       |
| Average                      | 279.04               | 4.95               | XX                             | XX                    |
| 2001:                        |                      |                    |                                |                       |
| January                      | 265.49               | 4.66               | XX                             | XX                    |
| February                     | 261.87               | 4.55               | XX                             | XX                    |
| Average year to date         | 263.67               | 4.61               | XX                             | XX                    |

XX Not applicable.

1/ Silver price reported as "London Spot/US Equiv."

Source: Platts Metals Week.

TABLE 3  
U.S. IMPORTS AND EXPORTS OF GOLD 1/

(Kilograms of gold content, unless otherwise specified)

| Period and country              | Ores and concentrates 2/ | Doré and precipitates | Refined bullion 3/ | Ash and residues | Total 4/ | Waste and scrap (gross weight) | Metal powder (gross weight) | Gold compounds (gross weight) |
|---------------------------------|--------------------------|-----------------------|--------------------|------------------|----------|--------------------------------|-----------------------------|-------------------------------|
| <b>Imports for consumption:</b> |                          |                       |                    |                  |          |                                |                             |                               |
| 1999                            | 117                      | 24,700                | 196,000            | 133              | 221,000  | 30,500                         | 5,500                       | 9,400                         |
| <b>2000:</b>                    |                          |                       |                    |                  |          |                                |                             |                               |
| October                         | 15                       | 1,330                 | 16,900             | 20               | 18,300   | 1,040                          | 562                         | 157                           |
| November                        | 1                        | 5,220                 | 18,200             | 24               | 23,500   | 1,650                          | 1,170                       | 208                           |
| <b>December:</b>                |                          |                       |                    |                  |          |                                |                             |                               |
| Brazil                          | --                       | --                    | 6,250              | --               | 6,250    | 2                              | --                          | 112                           |
| Canada                          | --                       | 5,630                 | 7,080              | --               | 12,700   | 127                            | 610                         | --                            |
| Chile                           | --                       | 47                    | 679                | --               | 726      | --                             | --                          | --                            |
| Colombia                        | --                       | 102                   | 252                | --               | 355      | --                             | --                          | --                            |
| Dominican Republic              | --                       | --                    | 3                  | --               | 3        | 858                            | 2                           | --                            |
| Honduras                        | --                       | 241                   | --                 | --               | 241      | --                             | --                          | --                            |
| Mexico                          | --                       | 169                   | 39                 | 1                | 209      | 380                            | --                          | --                            |
| Nicaragua                       | --                       | 95                    | --                 | 1 5/             | 96       | --                             | --                          | --                            |
| Peru                            | --                       | 604                   | --                 | --               | 604      | 6                              | --                          | --                            |
| United Kingdom                  | --                       | --                    | 62                 | --               | 62       | 11,300                         | 3                           | --                            |
| Other                           | 1                        | 39                    | 276                | --               | 316      | 152                            | --                          | 11                            |
| Total                           | 1                        | 6,920                 | 14,600             | 1                | 21,600   | 12,900                         | 614                         | 123                           |
| Year to date                    | 65                       | 39,000                | 184,000            | 60               | 223,000  | 29,800                         | 6,720                       | 7,970                         |
| <b>Exports:</b>                 |                          |                       |                    |                  |          |                                |                             |                               |
| 1999                            | 117                      | 87,300                | 435,000            | --               | 523,000  | 40,000                         | 270                         | 561,000                       |
| <b>2000:</b>                    |                          |                       |                    |                  |          |                                |                             |                               |
| October                         | 13                       | 7,890                 | 36,100             | --               | 44,000   | 9,180                          | 28                          | 28,900                        |
| November                        | 41                       | 8,900                 | 46,100             | --               | 55,100   | 5,140                          | 16                          | 183,000                       |
| <b>December:</b>                |                          |                       |                    |                  |          |                                |                             |                               |
| Belgium                         | --                       | --                    | --                 | --               | --       | 256                            | --                          | --                            |
| Canada                          | --                       | 493                   | 17                 | --               | 511      | 2,580 5/                       | 4                           | 7,940 5/                      |
| Dominican Republic              | --                       | --                    | --                 | --               | --       | --                             | --                          | 245 5/                        |
| France                          | --                       | --                    | --                 | --               | --       | --                             | 1                           | 16 5/                         |
| Germany                         | --                       | --                    | 4                  | --               | 4        | 371                            | 3                           | --                            |
| Israel                          | --                       | --                    | 1                  | --               | 1        | --                             | --                          | 23,600 5/                     |
| Jamaica                         | --                       | --                    | --                 | --               | --       | --                             | 9                           | --                            |
| Japan                           | --                       | 1                     | 2                  | --               | 3        | --                             | 1                           | --                            |
| Mexico                          | --                       | --                    | 2,090              | --               | 2,090    | --                             | 1                           | --                            |
| Peru                            | --                       | --                    | 336                | --               | 336      | --                             | --                          | --                            |
| Switzerland                     | --                       | 8,090                 | 39,600             | --               | 47,600   | --                             | --                          | --                            |
| United Arab Emirates            | --                       | --                    | --                 | --               | --       | 1                              | 1                           | --                            |
| United Kingdom                  | --                       | --                    | 7,970              | --               | 7,970    | 1,960                          | 10                          | 82 5/                         |
| Other                           | --                       | 2                     | 87                 | --               | 89       | 112                            | (5/)                        | 14                            |
| Total                           | --                       | 8,580                 | 50,100             | --               | 58,600   | 5,270                          | 29                          | 31,900                        |
| Year to date                    | 745                      | 106,000               | 440,000            | --               | 547,000  | 64,100                         | 1,130                       | 1,390,000                     |

-- Zero.

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

2/ Includes gold content of base metal ores, concentrates, and matte imported for refining.

3/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

4/ "Waste and scrap," "Metal powder," or "Gold compounds" not included in "Total."

5/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS AND EXPORTS OF SILVER, REFINED AND AS NITRATE 1/

(Kilograms)

| Period and country              | Bullion<br>(silver content) | Doré<br>(silver content) | Total<br>(silver content) | Other<br>unwrought<br>silver<br>(gross weight) | Metal<br>powder<br>(gross weight) | Silver<br>nitrate<br>(gross weight) |
|---------------------------------|-----------------------------|--------------------------|---------------------------|--|-----------------------------------|-------------------------------------|
| <b>Imports for consumption:</b> |                             |                          |                           |  |                                   |                                     |
| 1999                            | 2,660,000                   | 407,000                  | 3,070,000                 | 126,000  | 120,000                           | 4,480                               |
| 2000:                           |                             |                          |                           |  |                                   |                                     |
| October                         | 338,000                     | --                       | 338,000                   | 6,650  | 8,490                             | 9,320                               |
| November                        | 227,000                     | 810                      | 228,000                   | 30,200   | 14,000                            | 4,460                               |
| December:                       |                             |                          |                           |  |                                   |                                     |
| Canada                          | 133,000 2/                  | --                       | 133,000                   | 17,500   | --                                | 153                                 |
| Chile                           | 3,500                       | 3,700                    | 7,200                     | 633 2/   | --                                | --                                  |
| Germany                         | --                          | --                       | --                        | --   | 507                               | --                                  |
| Japan                           | --                          | --                       | --                        | --   | 10,800 2/                         | --                                  |
| Mexico                          | 74,900                      | --                       | 74,900                    | 357  | --                                | --                                  |
| Peru                            | --                          | --                       | --                        | --   | 5,770                             | --                                  |
| Russia                          | 20,000                      | --                       | 20,000                    | --   | --                                | --                                  |
| Switzerland                     | 386                         | --                       | 386                       | --   | --                                | --                                  |
| United Kingdom                  | --                          | --                       | --                        | --   | --                                | 500                                 |
| Other                           | --                          | 15                       | 15                        | --   | 21                                | 30                                  |
| Total                           | 232,000                     | 3,720                    | 235,000                   | 18,500   | 17,100                            | 683                                 |
| Year to date                    | 3,810,000                   | 73,900                   | 3,880,000                 | 204,000  | 235,000                           | 24,200                              |
| <b>Exports:</b>                 |                             |                          |                           |  |                                   |                                     |
| 1999                            | 481,000                     | 64,400                   | 545,000                   | 75,100   | 324,000                           | 62,500                              |
| 2000:                           |                             |                          |                           |  |                                   |                                     |
| October                         | 11,600                      | 593                      | 12,200                    | 6,120  | 51,200                            | 23,100                              |
| November                        | 21,900                      | 1,160                    | 23,100                    | 3,930  | 37,500                            | 16,400                              |
| December:                       |                             |                          |                           |  |                                   |                                     |
| Brazil                          | --                          | --                       | --                        | --   | --                                | 575                                 |
| Canada                          | 16                          | --                       | 16                        | 125  | 1,110                             | 7,740                               |
| China                           | --                          | --                       | --                        | --   | 4,890                             | 2,690                               |
| Dominican Republic              | --                          | --                       | --                        | 115  | --                                | --                                  |
| Finland                         | --                          | --                       | --                        | --   | 53                                | --                                  |
| France                          | --                          | --                       | --                        | 14   | 990                               | --                                  |
| Germany                         | --                          | --                       | --                        | 1,060  | 5,810                             | --                                  |
| Hong Kong                       | --                          | --                       | --                        | 71   | 1,060                             | --                                  |
| India                           | --                          | --                       | --                        | --   | 105                               | --                                  |
| Italy                           | --                          | --                       | --                        | 28   | 66                                | --                                  |
| Japan                           | --                          | --                       | --                        | --   | 2,230                             | --                                  |
| Korea, Republic of              | --                          | --                       | --                        | 28   | 1,050                             | --                                  |
| Lebanon                         | --                          | --                       | --                        | --   | 120                               | --                                  |
| Mexico                          | 4,670                       | --                       | 4,670                     | 68   | --                                | 345                                 |
| Netherlands                     | --                          | --                       | --                        | 20   | 123                               | --                                  |
| Singapore                       | --                          | --                       | --                        | --   | 336                               | --                                  |
| Sweden                          | --                          | --                       | --                        | --   | 1,650                             | --                                  |
| Switzerland                     | --                          | 543                      | 543                       | --   | --                                | --                                  |
| Taiwan                          | --                          | --                       | --                        | --   | 8,030 2/                          | --                                  |
| Thailand                        | --                          | --                       | --                        | --   | 177                               | --                                  |
| United Kingdom                  | --                          | 480                      | 480                       | --   | 766                               | --                                  |
| Uruguay                         | 1,660                       | --                       | 1,660                     | --   | --                                | --                                  |
| Other                           | --                          | --                       | --                        | 14   | 28 2/                             | --                                  |
| Total                           | 6,350                       | 1,020                    | 7,370                     | 1,550  | 28,600                            | 11,400                              |
| Year to date                    | 279,000                     | 36,000                   | 315,000                   | 57,500   | 424,000                           | 217,000                             |

-- Zero.

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

2/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS AND EXPORTS OF SILVER, RAW, SEMIMANUFACTURED, AND WASTE AND SCRAP 1/

(Kilograms of silver content, unless otherwise specified)

| Period and country              | Silver ores and concentrates | Base metal ores and concentrates | Ash and residues | Total   | Semimanufactured form 2/ 3/ (gross weight) | Waste and scrap (gross weight) |
|---------------------------------|------------------------------|----------------------------------|------------------|---------|--|--------------------------------|
| <b>Imports for consumption:</b> |                              |                                  |                  |         |  |                                |
| 1999                            | 10,800                       | 2,750                            | 101,000          | 115,000 | 137,000                                    | 1,640,000                      |
| 2000:                           |                              |                                  |                  |         |  |                                |
| October                         | --                           | --                               | 10,200           | 10,200  | 9,180                                      | 132,000                        |
| November                        | --                           | --                               | 3,940            | 3,940   | 6,050                                      | 45,800                         |
| December:                       |                              |                                  |                  |         |  |                                |
| Australia                       | --                           | --                               | 97               | 97      | --   | --                             |
| Brazil                          | --                           | --                               | --               | --      | 421  | 5                              |
| Canada                          | --                           | --                               | 1,500            | 1,500   | 14,000                                     | 27,000                         |
| China                           | --                           | --                               | --               | --      | --   | 1,490                          |
| Dominican Republic              | --                           | --                               | --               | --      | --   | 1,030                          |
| Estonia                         | --                           | --                               | --               | --      | 56   | --                             |
| France                          | --                           | --                               | --               | --      | 1,220                                      | --                             |
| Germany                         | --                           | --                               | --               | --      | 5,240 4/                                   | 373                            |
| Israel                          | --                           | --                               | --               | --      | 6 4/                                       | 6,450                          |
| Italy                           | --                           | --                               | --               | --      | 86 4/                                      | --                             |
| Japan                           | --                           | --                               | --               | --      | 351  | 7,430                          |
| Korea, Republic of              | --                           | --                               | --               | --      | --   | 99                             |
| Malaysia                        | --                           | --                               | --               | --      | --   | 9,870                          |
| Mexico                          | --                           | --                               | 395              | 395     | 230  | 2,170                          |
| Philippines                     | --                           | --                               | --               | --      | --   | 2,940                          |
| Singapore                       | --                           | --                               | --               | --      | --   | 534                            |
| Taiwan                          | --                           | --                               | --               | --      | 341  | 22                             |
| United Kingdom                  | --                           | --                               | 6,890            | 6,890   | 525  | 949                            |
| Other                           | --                           | --                               | --               | --      | (5/) 4/                                    | 56                             |
| Total                           | --                           | --                               | 8,890            | 8,890   | 22,500                                     | 60,400                         |
| Year to date                    | 1,420                        | --                               | 55,800           | 57,200  | 139,000                                    | 1,130,000                      |
| <b>Exports:</b>                 |                              |                                  |                  |         |  |                                |
| 1999                            | 70,800                       | --                               | --               | 70,800  | 122,000                                    | 1,310,000                      |
| 2000:                           |                              |                                  |                  |         |  |                                |
| October                         | --                           | --                               | --               | --      | 9,090                                      | 152,000                        |
| November                        | --                           | --                               | --               | --      | 6,680                                      | 162,000                        |
| December:                       |                              |                                  |                  |         |  |                                |
| Argentina                       | --                           | --                               | --               | --      | 134  | --                             |
| Armenia                         | --                           | --                               | --               | --      | --   | 5,740                          |
| Belgium                         | --                           | --                               | --               | --      | 425  | 25,500                         |
| Brazil                          | --                           | --                               | --               | --      | 341  | --                             |
| Canada                          | 809                          | --                               | --               | 809     | 3,830                                      | 24,000                         |
| China                           | --                           | --                               | --               | --      | 677  | 23,800                         |
| France                          | 13                           | --                               | --               | 13      | 376 4/                                     | --                             |
| Germany                         | --                           | --                               | --               | --      | 60 4/                                      | 18,300                         |
| Hong Kong                       | --                           | --                               | --               | --      | 33   | 155                            |
| Italy                           | --                           | --                               | --               | --      | 350  | 23,600                         |
| Japan                           | --                           | --                               | --               | --      | 5,220 4/                                   | 1,960                          |
| Korea, Republic of              | --                           | --                               | --               | --      | 5 4/                                       | 335                            |
| Mexico                          | --                           | --                               | --               | --      | 707 4/                                     | --                             |
| Netherlands                     | --                           | --                               | --               | --      | 355  | --                             |
| Singapore                       | --                           | --                               | --               | --      | 399  | --                             |
| Spain                           | --                           | --                               | --               | --      | 627 4/                                     | --                             |
| Taiwan                          | --                           | --                               | --               | --      | 149  | --                             |
| United Kingdom                  | --                           | --                               | --               | --      | 93 4/                                      | 15,300                         |
| Other                           | --                           | --                               | --               | --      | 29 4/                                      | 43                             |
| Total                           | 823                          | --                               | --               | 823     | 13,800                                     | 139,000                        |
| Year to date                    | 65,100                       | --                               | --               | 65,100  | 148,000                                    | 1,670,000                      |

-- Zero.

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

2/ Containing 99.5% or more by weight of silver. Imports only.

3/ Semimanufactured (including silver plated with gold or platinum) forms of silver.

4/ All or part of these data have been referred to the U.S. Census Bureau for verification.

5/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS 1/

(Kilograms of metal content, unless otherwise specified)

| Period and country | Platinum grain and nuggets | Platinum sponge | Other unwrought platinum | Platinum, other | Platinum waste and scrap | Platinum coins | Unwrought palladium | Palladium, other | Iridium 2/ | Unwrought osmium | Unwrought ruthenium | Rhodium 3/ |
|--------------------|----------------------------|-----------------|--------------------------|-----------------|--------------------------|----------------|---------------------|------------------|------------|------------------|---------------------|------------|
| 1999               | 6,100                      | 74,300          | 7,820                    | 16,500          | 19,700                   | 171            | 165,000             | 24,100           | 2,250      | 23               | 11,400              | 10,300     |
| 2000:              |                            |                 |                          |                 |                          |                |                     |                  |            |                  |                     |            |
| October            | 116                        | 5,730           | 539                      | 975             | 208                      | 8              | 14,700              | 1,160            | 373        | --               | 729                 | 2,180      |
| November           | 46                         | 4,670           | 366                      | 434             | 315                      | (4/)           | 19,500              | 319              | 180        | --               | 606                 | 996        |
| December:          |                            |                 |                          |                 |                          |                |                     |                  |            |                  |                     |            |
| Belgium            | --                         | 273             | --                       | --              | --                       | --             | 982                 | --               | --         | --               | --                  | 108 5/     |
| Brazil             | --                         | --              | --                       | --              | 66                       | --             | --                  | --               | --         | --               | --                  | --         |
| Canada             | 6                          | 20              | 1                        | 61              | 22                       | --             | 306                 | --               | --         | --               | --                  | --         |
| China              | --                         | --              | --                       | --              | --                       | --             | 236                 | --               | --         | --               | --                  | --         |
| Colombia           | --                         | --              | 22                       | --              | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Estonia            | --                         | --              | 6                        | --              | --                       | --             | 32                  | --               | --         | --               | --                  | 12         |
| France             | --                         | --              | --                       | --              | (4/)                     | --             | --                  | --               | --         | --               | --                  | --         |
| Germany            | 16                         | 443             | 85                       | 236             | 97                       | --             | 268                 | 129 5/           | --         | --               | --                  | 22 5/      |
| India              | --                         | --              | --                       | 3               | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Israel             | --                         | --              | 76                       | --              | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Italy              | --                         | 37              | --                       | --              | --                       | --             | 4                   | 22               | (4/)       | --               | --                  | --         |
| Japan              | --                         | --              | --                       | 15              | 2                        | --             | 820                 | 37               | --         | --               | --                  | --         |
| Korea, Republic of | --                         | --              | --                       | --              | 21                       | --             | --                  | --               | --         | --               | --                  | --         |
| Malaysia           | --                         | --              | --                       | 13              | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Mexico             | --                         | --              | --                       | (4/)            | 19                       | --             | --                  | --               | --         | --               | --                  | --         |
| Norway             | --                         | 31              | --                       | --              | --                       | --             | 780                 | --               | --         | --               | --                  | --         |
| Russia             | --                         | 311             | --                       | --              | --                       | --             | 3,850               | 374 5/           | --         | --               | 607                 | 1,380      |
| South Africa       | 30                         | 3,340           | 32                       | 94              | 4                        | --             | 983                 | 48               | 67         | 31               | 419                 | 640        |
| Spain              | --                         | --              | --                       | 24              | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Sweden             | 1                          | --              | --                       | --              | --                       | --             | --                  | --               | --         | --               | --                  | --         |
| Switzerland        | --                         | --              | --                       | 164             | --                       | --             | 3,270               | 29               | --         | --               | --                  | --         |
| United Kingdom     | 8                          | 385             | 1                        | 77 5/           | 33                       | --             | 1,380               | --               | 240        | --               | --                  | 38         |
| Total              | 60                         | 4,840           | 222                      | 687             | 264                      | --             | 12,900              | 639              | 307        | 31               | 1,030               | 2,200      |
| Year to date       | 2,550                      | 68,000          | 3,870                    | 7,480           | 12,100                   | 27             | 154,000             | 27,900           | 2,700      | 133              | 20,800              | 18,200     |

-- Zero.

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

2/ Unwrought and other forms of iridium.

3/ Unwrought and other forms of rhodium.

4/ Less than 1/2 unit.

5/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.



TABLE 7  
U.S. EXPORTS OF PLATINUM GROUP METALS 1/

(Kilograms of metal content, unless otherwise specified)

| Period and country | Palladium 2/ | Platinum 2/ | Platinum waste and scrap | Iridium, osmium and ruthenium 2/ 3/ | Rhodium 2/ |
|--------------------|--------------|-------------|--------------------------|-------------------------------------|------------|
| 1999               | 43,800       | 19,400      | 7,660                    | 851                                 | 114        |
| 2000:              |              |             |                          |                                     |            |
| October            | 6,400        | 1,150       | 821                      | 193                                 | 25         |
| November           | 6,360        | 1,690       | 630                      | 137                                 | 58         |
| December:          |              |             |                          |                                     |            |
| Australia          | 12           | 17          | --                       | --                                  | --         |
| Austria            | --           | 4           | --                       | --                                  | --         |
| Belgium            | 39           | 3           | 7                        | --                                  | --         |
| Brazil             | --           | 2           | --                       | --                                  | --         |
| Canada             | 2,310        | 154         | 36                       | 5                                   | --         |
| Chile              | --           | 29          | --                       | --                                  | --         |
| China              | 104          | --          | 1                        | --                                  | --         |
| Colombia           | --           | 1           | --                       | --                                  | --         |
| El Salvador        | 2            | --          | --                       | --                                  | --         |
| France             | 58           | 41          | --                       | --                                  | --         |
| Germany            | 433          | 171         | 208                      | --                                  | --         |
| Hong Kong          | 54           | 125         | --                       | --                                  | (4/)       |
| Hungary            | (4/)         | --          | --                       | --                                  | --         |
| Iceland            | 1            | --          | --                       | --                                  | --         |
| India              | 2            | --          | --                       | --                                  | (4/)       |
| Ireland            | --           | 6           | --                       | --                                  | --         |
| Italy              | 24           | --          | 2                        | --                                  | (4/)       |
| Japan              | 1,290        | 15          | --                       | 80                                  | 16         |
| Korea, Republic of | 210          | 40          | --                       | --                                  | 60         |
| Malaysia           | 1            | 28          | --                       | --                                  | --         |
| Mexico             | 3            | 1           | --                       | --                                  | (4/)       |
| Netherlands        | 1            | 1           | --                       | 1                                   | --         |
| New Zealand        | 11           | (4/)        | --                       | --                                  | --         |
| Philippines        | 2            | --          | --                       | --                                  | --         |
| Romania            | --           | 1           | --                       | --                                  | --         |
| Saudi Arabia       | --           | 1           | --                       | --                                  | (4/)       |
| Singapore          | 3            | --          | --                       | --                                  | --         |
| Slovenia           | 40           | --          | --                       | --                                  | --         |
| South Africa       | --           | --          | 6                        | --                                  | --         |
| Spain              | 7            | --          | --                       | --                                  | --         |
| Sweden             | 1            | 8           | (4/)                     | --                                  | --         |
| Switzerland        | 7            | (4/)        | --                       | --                                  | --         |
| Taiwan             | 809          | 1           | (4/)                     | --                                  | --         |
| Thailand           | 1            | 5           | --                       | --                                  | (4/)       |
| Turkey             | 1            | --          | --                       | --                                  | (4/)       |
| United Kingdom     | 1,290 5/     | 195         | 426                      | 53                                  | --         |
| Total              | 6,710        | 850         | 685                      | 139                                 | 77         |
| Year to date       | 58,600       | 25,000      | 7,360                    | 1,480                               | 797        |

-- Zero.

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

2/ Unwrought and other forms.

3/ Gross weight.

4/ Less than 1/2 unit.

5/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.