

# Mineral Industry Surveys

---

## For information, contact:

Patricia J. Loferski, PGM Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-7708, Fax: (703) 648-7757  
E-mail: ploferski@usgs.gov

Mahbood Mahdavi (Data)  
Telephone: (703) 648-7778  
Fax: (703) 648-7792  
E-mail: mmahdavi@usgs.gov

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

## PLATINUM-GROUP METALS IN JULY 2009

According to Platts Metals Week (2009a-e), the average July price of platinum dropped by 5% compared with the average price in June. Average monthly prices of palladium and rhodium increased slightly during the same time period, whereas prices of ruthenium and iridium remained unchanged. Both palladium and rhodium reached their highest daily prices of 2009 in July. Prices of platinum and palladium fell from the beginning of the month until mid-month, and then increased until the end of the month, partly in response to the U.S. Government announcement of the “cash for clunkers” auto scrap incentive program in July, which improved the prospects of the auto market. The primary use of platinum and palladium is in catalytic converters for automobiles. Rhodium prices were steady in the first two-thirds of the month, and then surged upward toward the end of the month on increased buying as a result of positive news from the auto industry. A surge in Chinese purchasing of rhodium took place near the end of July, providing upward pressure on prices (Johnson Matthey Plc, 2009d).

As part of its bankruptcy filing, General Motors Corp. (Detroit, MI) was granted permission by a Federal bankruptcy court to cancel its precious metals contract with Stillwater Mining Co. (Billings, MT). General Motors had been receiving palladium and rhodium from Stillwater for the past 10 years, and the contract was set to continue for more than 2 years. General Motors planned to purchase palladium and rhodium from South Africa and Russia (Johnson Matthey, 2009c).

The United States instituted the “cash for clunkers” auto scrap plan to encourage consumers to scrap old vehicles and purchase new, more-fuel-efficient vehicles with as much as \$4,500 cash incentive from the Government. Analysts said the program could help platinum-group metals (PGM) demand in the short term by increasing auto sales, but in the long run may hurt PGM demand because of the recycling of the catalytic converters in the older model cars, which contain higher loadings of PGMS relative to current models (O’Connell, 2009).

Anglo Platinum Ltd. (Johannesburg, South Africa) increased its refined platinum production by 6% on a year-on-year basis

despite the global economic downturn. Production for the first half of 2009 was 32,600 kilograms (Johnson Matthey, 2009a). The Zimbabwe Government withdrew amendments to a mining bill that would have allowed the Government to take more than 51% ownership of foreign-owned mines. The legislation was abandoned as a result of lack of foreign investment in the Zimbabwe mining sector (Johnson Matthey, 2009e).

The United Kingdom began the hallmarking of palladium articles, thus officially recognizing palladium as a precious metal. Fineness standards for palladium were planned to be 500, 950, and 999 parts per thousand. Hallmarking was to be voluntary until January 2010, after which it was planned to be mandatory for all palladium items of greater than 1-gram weight (Johnson Matthey Plc, 2009b).

## References Cited

- Johnson Matthey Plc, 2009a, Anglo Platinum sees refined platinum output up six per cent in H1 2009: London, United Kingdom, Johnson Matthey Plc news release, July 27, 1 p.
- Johnson Matthey Plc, 2009b, Palladium given green light for hallmarking in the UK: London, United Kingdom, Johnson Matthey Plc news release, July 23, 1 p.
- Johnson Matthey Plc, 2009c, Stillwater’s GM palladium and rhodium contract terminated: London, United Kingdom, Johnson Matthey Plc news release, July 23, 1 p.
- Johnson Matthey Plc, 2009d, The platinum metals report, July, 2009: London, United Kingdom, Johnson Matthey Plc, 5 p.
- Johnson Matthey Plc, 2009e, Zimbabwe calls off mine ownership amendments: London, United Kingdom, Johnson Matthey Plc news release, July 28, 1 p.
- O’Connell, Rhonda, 2009, The auto scrappage incentive schemes; how do platinum and palladium fare?: Mineweb news release, July 10, 1 p.
- Platts Metals Week, 2009a, Daily prices: Platts Metals Week, v. 80, no. 27, July 6, p. 19.
- Platts Metals Week, 2009b, Daily prices: Platts Metals Week, v. 80, no. 28, July 13, p. 18.
- Platts Metals Week, 2009c, Daily prices: Platts Metals Week, v. 80, no. 29, July 20, p. 18.
- Platts Metals Week, 2009d, Daily prices: Platts Metals Week, v. 80, no. 30, July 27, p. 18.
- Platts Metals Week, 2009e, Daily prices: Platts Metals Week, v. 80, no. 31, August 3, p. 19.

TABLE 1  
PLATINUM-GROUP METALS PRICES<sup>1</sup>

(Dollars per troy ounce)

|               | Platinum           | Palladium                | Rhodium                    | Iridium                       | Ruthenium                         |
|---------------|--------------------|--------------------------|----------------------------|-------------------------------|-----------------------------------|
| 2008:         |                    |                          |                            |                               |                                   |
| Low/date      | 760.00 Oct. 27     | 167.00 Dec. 5            | 1,000.00 Nov. <sup>2</sup> | 400.00 Dec. <sup>2</sup>      | 120.00 Dec. <sup>2</sup>          |
| High/date     | 2,275.00 Mar. 4    | 585.00 Mar. 4            | 10,100.00 Jun. 18          | 460.00 Aug. <sup>2</sup>      | 440.00 Feb. and Mar. <sup>2</sup> |
| Average       | 1,578.26           | 355.12                   | 6,533.57                   | 448.34                        | 324.60                            |
| 2009:         |                    |                          |                            |                               |                                   |
| June:         |                    |                          |                            |                               |                                   |
| Low/date      | 1,158.00/23        | 236.00/23                | 1,375.00/23 and 24         | 420.00 <sup>2</sup>           | 95.00 <sup>2</sup>                |
| High/date     | 1,275.00/5         | 263.00/10                | 1,520.00/15 and 16         | 420.00 <sup>2</sup>           | 95.00 <sup>2</sup>                |
| Average       | 1,220.41           | 247.18                   | 1,467.50                   | 420.00                        | 95.00                             |
| July:         |                    |                          |                            |                               |                                   |
| Low/date      | 1,097.00/10        | 235.00/13                | 1,440.00 <sup>2</sup>      | 420.00 <sup>2</sup>           | 95.00 <sup>2</sup>                |
| High/date     | 1,215.00/27 and 28 | 265.00/28                | 1,725.00/28                | 420.00 <sup>2</sup>           | 95.00 <sup>2</sup>                |
| Average       | 1,163.82           | 250.64                   | 1,496.82                   | 420.00                        | 95.00                             |
| Year-to-date: |                    |                          |                            |                               |                                   |
| Low/date      | 920.00 Jan. 15     | 182.00 Jan. <sup>2</sup> | 1,050.00 Jan. <sup>2</sup> | 420.00 Jan.–Jul. <sup>2</sup> | 75.00 Feb. <sup>2</sup>           |
| High/date     | 1,275.00 Jun. 5    | 265.00 Jul. 28           | 1,725.00 Jul. 28           | 430.00 Jan. <sup>2</sup>      | 100.00 Jan. 2                     |
| Average       | 1,108.76           | 222.57                   | 1,318.83                   | 420.68                        | 88.35                             |

<sup>1</sup>Quotes from Engelhard Industries.

<sup>2</sup>Occurred multiple days in month(s) listed.

Source: Platts Metals Week.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY<sup>1</sup>

(Kilograms 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 |                   |
|--------------------|----------------------------|-------------------|-----------------|-------------------|--------------------------|-------------------|-----------------|-------------------|--------------------------|-------------------|----------------|-------------------|
|                    | Quantity                   | Value (thousands) | Quantity        | Value (thousands) | Quantity                 | Value (thousands) | Quantity        | Value (thousands) | Quantity                 | Value (thousands) | Quantity       | Value (thousands) |
| 2008               | 212                        | \$7,210           | 45,700          | \$2,330,000       | 4,040                    | \$177,000         | 7,180           | \$282,000         | 92,200                   | \$593,000         | 734            | \$22,400          |
| 2009:              |                            |                   |                 |                   |                          |                   |                 |                   |                          |                   |                |                   |
| April              | 1                          | 20                | 3,090           | 116,000           | 231                      | 7,180             | 418             | 11,900            | 7,700                    | 17,400            | 1              | 64                |
| May                | 2                          | 35                | 3,630           | 132,000           | 263                      | 8,160             | 513             | 14,400            | 3,040                    | 20,700            | 10             | 327               |
| June:              |                            |                   |                 |                   |                          |                   |                 |                   |                          |                   |                |                   |
| Australia          | --                         | --                | --              | --                | --                       | --                | --              | --                | 12                       | 500               | --             | --                |
| Belgium            | --                         | --                | 24              | 948               | --                       | --                | --              | --                | --                       | --                | --             | --                |
| Brazil             | --                         | --                | --              | --                | --                       | --                | --              | --                | 31                       | 550               | --             | --                |
| Canada             | 3                          | 73                | --              | --                | --                       | --                | 27              | 1,080             | 2,840 <sup>2</sup>       | 2,460             | 253            | 10,300            |
| Colombia           | --                         | --                | --              | --                | 140                      | 3,790             | --              | --                | 27                       | 380               | --             | --                |
| Germany            | --                         | --                | --              | --                | 105                      | 4,370             | 223             | 5,130             | 268                      | 9,770             | --             | --                |
| India              | --                         | --                | 281             | 10,800            | --                       | --                | --              | --                | --                       | --                | --             | --                |
| Israel             | --                         | --                | --              | --                | 9                        | 227               | --              | --                | --                       | --                | --             | --                |
| Italy              | --                         | --                | 67              | 2,710             | --                       | --                | 39              | 1,650             | 102                      | 752               | --             | --                |
| Japan              | --                         | --                | 24              | 870               | (3)                      | 3                 | 3               | 139               | 4,950 <sup>2</sup>       | 1,980             | --             | --                |
| Korea, Republic of | --                         | --                | --              | --                | --                       | --                | --              | --                | 34                       | 493               | --             | --                |
| Norway             | --                         | --                | 47              | 1,840             | --                       | --                | --              | --                | --                       | --                | --             | --                |
| Philippines        | --                         | --                | --              | --                | --                       | --                | --              | --                | 10                       | 230               | --             | --                |
| Russia             | --                         | --                | 50              | 1,840             | --                       | --                | --              | --                | --                       | --                | --             | --                |
| South Africa       | (3)                        | 15                | 836             | 31,700            | --                       | --                | 6               | 188               | --                       | --                | --             | --                |
| Switzerland        | --                         | --                | --              | --                | 124                      | 4,850             | 371             | 14,100            | --                       | --                | --             | --                |
| United Kingdom     | --                         | --                | 1,480           | 56,900            | 1                        | 25                | 15              | 592               | --                       | --                | 4              | 245               |
| Venezuela          | --                         | --                | --              | --                | --                       | --                | --              | --                | 1,760 <sup>2</sup>       | 57                | --             | --                |
| Other              | (3)                        | 10                | 2               | 61                | --                       | --                | 3               | 60                | 15 <sup>2</sup>          | 177               | --             | --                |
| Total              | 3                          | 97                | 2,810           | 108,000           | 379                      | 13,300            | 687             | 22,900            | 10,100                   | 17,400            | 257            | 10,600            |
| Year to date       | 9                          | 220               | 15,100          | 529,000           | 1,670                    | 51,700            | 3,290           | 91,300            | 35,600                   | 138,000           | 291            | 11,600            |

-- Zero.

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

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

| Period and country | Unwrought palladium |                      | Palladium, other |                      | Iridium <sup>2</sup> |                      | Osmium <sup>2</sup> |                      | Ruthenium <sup>2</sup> |                      | Rhodium <sup>2</sup> |                      |
|--------------------|---------------------|----------------------|------------------|----------------------|----------------------|----------------------|---------------------|----------------------|------------------------|----------------------|----------------------|----------------------|
|                    | Quantity            | Value<br>(thousands) | Quantity         | Value<br>(thousands) | Quantity             | Value<br>(thousands) | Quantity            | Value<br>(thousands) | Quantity               | Value<br>(thousands) | Quantity             | Value<br>(thousands) |
| 2008               | 114,000             | \$1,270,000          | 6,810            | \$85,500             | 2,550                | \$36,600             | 11                  | \$101                | 49,800                 | \$426,000            | 12,600               | \$2,470,000          |
| 2009:              |                     |                      |                  |                      |                      |                      |                     |                      |                        |                      |                      |                      |
| April              | 4,560               | 32,300               | 232              | 1,660                | 162                  | 2,770                | 8                   | 56                   | 1,820                  | 4,530                | 923                  | 31,700               |
| May                | 2,970               | 22,400               | 421              | 3,280                | 104                  | 1,300                | --                  | --                   | 2,070                  | 4,140                | 940                  | 38,400               |
| June:              |                     |                      |                  |                      |                      |                      |                     |                      |                        |                      |                      |                      |
| Belgium            | --                  | --                   | --               | --                   | --                   | --                   | --                  | --                   | --                     | --                   | 67                   | 2,940                |
| Canada             | 143                 | 1,960                | --               | --                   | --                   | --                   | --                  | --                   | --                     | --                   | --                   | --                   |
| Germany            | 284                 | 2,070                | 8                | 85                   | 1                    | 16                   | --                  | --                   | 663                    | 1,810                | 61                   | 2,710                |
| Israel             | --                  | --                   | 1                | 14                   | --                   | --                   | --                  | --                   | --                     | --                   | --                   | --                   |
| Italy              | 75                  | 640                  | --               | --                   | --                   | --                   | --                  | --                   | --                     | --                   | 3                    | 135                  |
| Japan              | 4                   | 9                    | 5                | 82                   | --                   | --                   | --                  | --                   | 35                     | 91                   | 8                    | 352                  |
| Mexico             | --                  | --                   | 5                | 26                   | --                   | --                   | --                  | --                   | --                     | --                   | --                   | --                   |
| Netherlands        | --                  | --                   | (3)              | 5                    | --                   | --                   | --                  | --                   | --                     | --                   | --                   | --                   |
| Norway             | 218                 | 1,700                | --               | --                   | --                   | --                   | --                  | --                   | --                     | --                   | 5                    | 227                  |
| Russia             | 281                 | 2,170                | --               | --                   | 13                   | 174                  | --                  | --                   | 82                     | 218                  | 38                   | 1,690                |
| South Africa       | 1,200               | 9,010                | 16               | 110                  | 86                   | 1,060                | 60                  | 495                  | 442                    | 1,150                | 588                  | 24,900               |
| Switzerland        | --                  | --                   | 445              | 3,760                | --                   | --                   | --                  | --                   | --                     | --                   | --                   | --                   |
| United Kingdom     | 7                   | 54                   | 85               | 728                  | 6                    | 85                   | --                  | --                   | 208                    | 536                  | 1                    | 60                   |
| Total              | 2,210               | 17,600               | 566              | 4,810                | 106                  | 1,340                | 60                  | 495                  | 1,430                  | 3,810                | 771                  | 33,000               |
| Year to date       | 20,300              | 139,000              | 4,280            | 30,800               | 653                  | 8,930                | 68                  | 551                  | 10,800                 | 25,500               | 5,130                | 190,000              |

-- Zero.

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

<sup>2</sup>Unwrought and other forms.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY<sup>1</sup>

(Kilograms of metal content, unless otherwise specified)

| Period and country | Platinum <sup>2</sup> |                   | Platinum waste and scrap |                   | Palladium <sup>2</sup> |                   | Iridium, osmium, and ruthenium <sup>2, 3</sup> |                   | Rhodium <sup>2</sup> |                   |
|--------------------|-----------------------|-------------------|--------------------------|-------------------|------------------------|-------------------|------------------------------------------------|-------------------|----------------------|-------------------|
|                    | Quantity              | Value (thousands) | Quantity                 | Value (thousands) | Quantity               | Value (thousands) | Quantity                                       | Value (thousands) | Quantity             | Value (thousands) |
| 2008               | 15,600                | \$570,000         | 54,700                   | \$1,190,000       | 26,400                 | \$197,000         | 6,450                                          | \$80,600          | 1,980                | \$302,000         |
| 2009:              |                       |                   |                          |                   |                        |                   |                                                |                   |                      |                   |
| April              | 1,880                 | 61,500            | 2,740                    | 35,500            | 1,860                  | 15,400            | 150                                            | 2,370             | 90                   | 3,510             |
| May                | 1,070                 | 34,900            | 2,300                    | 40,900            | 2,740 <sup>r</sup>     | 20,300            | 103                                            | 1,920             | 156                  | 5,910             |
| June:              |                       |                   |                          |                   |                        |                   |                                                |                   |                      |                   |
| Australia          | 1                     | 83                | --                       | --                | 54                     | 597               | --                                             | --                | --                   | --                |
| Austria            | 4                     | 54                | --                       | --                | --                     | --                | 33                                             | 312               | --                   | --                |
| Belarus            | --                    | --                | --                       | --                | 100 <sup>4</sup>       | 261               | --                                             | --                | --                   | --                |
| Belgium            | 3                     | 40                | 25                       | 942               | 1                      | 16                | --                                             | --                | --                   | --                |
| Brazil             | 7                     | 253               | --                       | --                | --                     | --                | --                                             | --                | --                   | --                |
| Cambodia           | (5)                   | 8                 | --                       | --                | --                     | --                | --                                             | --                | --                   | --                |
| Canada             | 41                    | 1,670             | 4 <sup>4</sup>           | 13                | 312                    | 1,750             | --                                             | --                | (5)                  | 4                 |
| China              | 145                   | 2,390             | --                       | --                | 232                    | 1,820             | --                                             | --                | 3                    | 292               |
| Colombia           | --                    | --                | --                       | --                | 6                      | 74                | --                                             | --                | --                   | --                |
| Costa Rica         | 5                     | 67                | --                       | --                | 1                      | 5                 | 2                                              | 47                | --                   | --                |
| Cyprus             | 9                     | 342               | --                       | --                | --                     | --                | --                                             | --                | --                   | --                |
| Czech Republic     | --                    | --                | --                       | --                | 101 <sup>4</sup>       | 90                | --                                             | --                | --                   | --                |
| Denmark            | (5)                   | 8                 | --                       | --                | 19                     | 193               | --                                             | --                | --                   | --                |
| France             | 3                     | 121               | --                       | --                | 14                     | 175               | (5)                                            | 4                 | --                   | --                |
| Germany            | 286                   | 8,910             | 862 <sup>4</sup>         | 4,580             | 136                    | 1,070             | --                                             | --                | 3                    | 140               |
| Hong Kong          | 7                     | 541               | --                       | --                | 78                     | 972               | --                                             | --                | 3                    | 150               |
| India              | 30                    | 1,010             | --                       | --                | 3                      | 10                | --                                             | --                | --                   | --                |
| Ireland            | 7                     | 204               | --                       | --                | 4                      | 22                | 1                                              | 6                 | --                   | --                |
| Israel             | 6                     | 82                | --                       | --                | 136 <sup>4</sup>       | 274               | --                                             | --                | --                   | --                |
| Italy              | 231                   | 9,370             | --                       | --                | 292                    | 2,850             | 5                                              | 85                | 6                    | 286               |
| Japan              | 130                   | 4,880             | 50                       | 1,370             | 283                    | 2,240             | --                                             | --                | 36                   | 1,860             |
| Korea, Republic of | 13                    | 302               | --                       | --                | 3                      | 77                | --                                             | --                | --                   | --                |
| Mexico             | 5                     | 185               | --                       | --                | 108 <sup>4</sup>       | 145               | 28                                             | 807               | (5)                  | 7                 |
| New Zealand        | (5)                   | 6                 | --                       | --                | 7                      | 131               | --                                             | --                | --                   | --                |
| Norway             | --                    | --                | --                       | --                | 15                     | 251               | --                                             | --                | --                   | --                |
| Singapore          | 1                     | 39                | --                       | --                | 4                      | 32                | 46                                             | 1,100             | --                   | --                |
| South Africa       | 1                     | 53                | 513                      | 2,330             | 1                      | 10                | 1                                              | 12                | --                   | --                |
| Switzerland        | 328                   | 12,100            | --                       | --                | 36                     | 323               | --                                             | --                | --                   | --                |
| Taiwan             | 2                     | 105               | --                       | --                | 91                     | 509               | 4                                              | 104               | --                   | --                |
| United Kingdom     | 56                    | 1,750             | 3,000                    | 62,900            | 276                    | 2,750             | 6                                              | 96                | --                   | --                |
| Other              | 4 <sup>4</sup>        | 319               | --                       | --                | 73 <sup>4</sup>        | 360               | --                                             | --                | --                   | --                |
| Total              | 1,330                 | 44,900            | 4,450                    | 72,100            | 2,390                  | 17,000            | 126                                            | 2,580             | 52                   | 2,740             |
| Year to date       | 9,740                 | 307,000           | 17,000                   | 267,000           | 15,400                 | 91,400            | 823                                            | 13,700            | 433                  | 17,900            |

<sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>Unwrought and other forms.

<sup>3</sup>Gross weight.

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

<sup>5</sup>Less than ½ unit.

Source: U.S. Census Bureau.