

# Mineral Industry Surveys

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## PLATINUM-GROUP METALS IN FEBRUARY 2012

Engelhard's average February prices for platinum, palladium, and rhodium increased by 10%, 7%, and 9%, respectively, compared with average January prices. The average monthly price for iridium decreased slightly, and that for ruthenium increased by 14% during the same period. The platinum price increased steadily from the beginning to the end of the month, owing in part to a workers' strike at Impala Platinum Holdings Ltd. (Implats) (Johannesburg, South Africa) Rustenburg operations in South Africa. Palladium prices decreased midmonth in response to global economic concerns. Rhodium and ruthenium prices increased toward the middle of the month and then leveled off. Analysts believed that the increase in rhodium and ruthenium prices was caused by increased industrial purchasing, along with speculative purchasing for the rhodium exchange-traded fund. The ruthenium price rise may also have been caused by a new application for ruthenium in semiconductor capacitor electrodes (Jonson, 2012). The platinum price was below that for gold for the fifth straight month and above that for rhodium for the second straight month.

Stillwater Mining Co. (SMC) (Billings, MT) produced 2,730 kilograms (kg) of palladium and 812 kg of platinum during the fourth quarter of 2011, which were decreases of 5% and 7%, respectively, compared with production in the fourth quarter of 2010. Production for the fourth quarter 2011 included 1,980 kg of palladium and 591 kg of platinum from the Stillwater Mine and 756 kg of palladium and 221 kg of platinum from the East Boulder Mine. The decreased fourth quarter production was the result of SMC's reallocation of resources from production into mine development. Full-year 2011 production was 12,400 kg of palladium and 3,700 kg of platinum, which were each increases of 7% compared with production in 2010. Full-year 2011 production included 9,250 kg of palladium and 2,790 kg of platinum from the Stillwater Mine and 3,160 kg of palladium and 914 kg of platinum from the East Boulder Mine. About 15,100 kg of platinum, palladium, and rhodium was recovered from recycled catalytic converters in 2011, a 22% increase relative to that of 2010. SMC continued with the Blitz and

Graham Creek expansion projects in the Stillwater Complex and also continued with environmental assessment and permitting activities at the PGM Marathon project in Ontario, Canada. SMC planned to produce about 15,600 kg of platinum and palladium during 2012 from mining operations (Stillwater Mining Co., 2012).

Implats dismissed 17,200 workers as a result of an illegal strike that began in January and continued beyond monthend. Implats reported lost production of more than 3,100 kilograms of platinum as a result of the strike. The company planned to rehire about 15,000 workers if they applied for their jobs by February 29, and to resume production by early March. Implats indicated that scheduled platinum deliveries for April from the Rustenburg Mine would be cut by 50% (Johnson Matthey plc, 2012a, b).

Anglo American Platinum Ltd. (Amplats) (Johannesburg) produced 78,700 kg of refined platinum in 2011, which was a 2% decrease compared with 2010 production. The decrease in production was mainly the result of an increase in the number and length of safety stoppages. Amplats expected to produce 77,800 to 80,900 kg of platinum in 2012 (Anglo American Platinum Ltd., 2012, p. 1, 10).

## References Cited

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

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
<b>2011:</b>					
Low/date	1,356.00 Dec. 29	553.00 Oct. 5	1,400.00 Dec. <sup>2</sup>	780.00 Jan. 3 and 4	110.00 Dec. <sup>2</sup>
High/date	1,892.00 Aug. 22 and 23	851.00 Feb. 18	2,500.00 Jan. 31 and Feb. <sup>2</sup>	1,085.00 Sep.–Dec. <sup>2</sup>	180.00 Jan.–Aug. <sup>2</sup>
Average	1,724.51	738.51	2,024.35	1,035.87	165.85
<b>2012:</b>					
January:					
Low/date	1,410.00/9	620.00/9	1,350.00 <sup>2</sup>	1,085.00 <sup>2</sup>	110.00 <sup>2</sup>
High/date	1,628.00/31	702.00/26	1,475.00/31	1,085.00 <sup>2</sup>	120.00 <sup>2</sup>
Average	1,510.05	663.31	1,390.48	1,085.00	111.43
February:					
Low/date	1,615.00/6 and 16	688.00/16	1,475.00 <sup>2</sup>	1,075.00 <sup>2</sup>	120.00 <sup>2</sup>
High/date	1,731.00/29	727.00/29	1,540.00/14 and 15	1,085.00 <sup>2</sup>	130.00 <sup>2</sup>
Average	1,664.50	708.05	1,511.50	1,079.00	127.00
January–February:					
Low/date	1,410.00 Jan. 9	620.00 Jan. 9	1,350.00 Jan. <sup>2</sup>	1,075.00 Feb. <sup>2</sup>	110.00 Jan. <sup>2</sup>
High/date	1,731.00 Feb. 29	727.00 Feb. 29	1,540.00 Feb. 14 and 15	1,085.00 Jan.–Feb. <sup>2</sup>	130.00 Feb. <sup>2</sup>
Average	1,587.27	685.68	1,450.99	1,082.00	119.21

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

<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			Other			Platinum			Platinum coins		
	grain and nuggets		Platinum sponge	unwrought platinum		Platinum, other	waste and scrap		Platinum	waste and scrap		Platinum coins
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2011:												
November	294	\$15,200	2,960	\$153,000	318	\$12,700	785	\$30,900	6,340	\$111,000	217	\$11,900
December	42	1,530	3,530	169,000	638	24,800	258	10,800	8,010	109,000	223	10,800
January–December	1,230	65,700	35,800	1,910,000	7,160	211,000	4,800	206,000	78,900	832,000	1,200	66,300
2012:												
January:												
Australia	—	—	—	—	—	—	—	156	7,200	36	1,330	121
Belgium	—	—	137	6,260	—	—	(2)	4	—	—	—	—
Brazil	—	—	—	—	—	—	(2)	4	88	3,640	—	—
Canada	2	80	16	713	(2)	5	11	570	50	2,330	(2)	13
Colombia	—	—	—	—	59	2,360	—	—	22	624	—	—
Czech Republic	5	290	—	—	—	—	2	87	—	—	—	—
France	—	—	—	—	—	—	4	65	71	3,750	—	—
Germany	—	—	158	7,950	98	2,910	231	7,190	316	16,500	—	—
Guatemala	—	—	—	—	—	—	—	—	4	117	—	—
India	—	—	35	1,670	—	—	—	—	—	27	1,240	—
Israel	—	—	—	—	—	—	—	—	7	235	—	—
Italy	—	—	99	4,860	—	—	16	713	134	4,370	—	—
Japan	—	—	—	—	2	12	10	268	146	4,700	—	—
Korea, Republic of	—	—	20	1,080	—	—	—	—	301	14,000	—	—
Malaysia	—	—	—	—	—	—	—	—	31	788	—	—
Mexico	—	—	—	—	4	212	—	—	23	1,270	—	—
Morocco	—	—	—	—	—	—	—	—	4	138	—	—
New Zealand	—	—	—	—	—	—	—	—	37	1,200	—	—
Norway	—	—	78	3,720	—	—	—	—	—	—	—	—
Peru	—	—	1	28	—	—	—	—	4	126	—	—
Philippines	—	—	—	—	—	—	1	42	3	104	—	—
Saudi Arabia	—	—	—	—	—	—	—	—	89	4,270	—	—
Singapore	—	—	—	—	55	2,930	—	—	9	282	—	—
South Africa	84	4,030	1,480	70,600	—	—	—	—	—	—	—	—
Switzerland	—	—	32	1,540	93	4,280	—	—	—	—	—	—
Taiwan	—	—	—	—	—	—	—	—	76	1,570	—	—
Thailand	—	—	—	—	—	—	—	—	14	299	—	—
United Kingdom	—	—	297	10,300	1	53	6	309	93	2,980	—	—
Other	—	—	—	—	—	—	3	137	8	164	—	—
Total	90	4,400	2,350	109,000	313	12,800	439	16,600	1,590	66,100	121	5,850

— Zero.

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

<sup>2</sup>Less than ½ unit.

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 (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
<b>2011:</b>												
November	7,060	\$99,500	1,310	\$26,700	467	\$11,600	--	--	477	\$2,090	892	\$46,700
December	10,900	219,000	798	18,100	100	3,270	--	--	1,000	3,850	1,200	59,800
January–December	87,000	1,890,000	11,900	268,000	2,880	59,400	48	\$261	13,200	69,300	13,100	844,000
<b>2012:</b>												
January:												
Belgium	5	97	--	--	307	8,220	--	--	--	93	270	179
Canada	--	--	1,430	44	297	6	285	--	--	--	--	--
Germany	93	2,220	4	93	--	--	--	--	--	--	88	3,910
Italy	101	737	5	122	--	--	--	--	--	--	12	683
Japan	57	893	--	--	--	--	--	--	39	101	--	--
Korea, Republic of	38	9,740	--	--	--	--	--	--	--	--	--	--
Norway	471	13	267	--	--	--	--	--	--	--	5	203
Peru	--	2,680	328	7,130	--	--	--	--	--	--	--	--
Russia	150	26,900	16	314	54	1,790	--	--	--	687	2,070	31
South Africa	1,300	2,850	266	6,550	3	110	--	--	62	180	1,080	1,260
United Kingdom	121	--	6	87	2	12	--	--	--	--	323	51,300
Other	--	47,500	989	23,100	65	2,200	--	--	881	2,620	1,720	14,000
Total	2,340	--	--	--	--	--	--	--	--	--	--	--

--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.

Source: U.S. Census Bureau.

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

(Kilograms metal content, unless otherwise specified)

Period and country	Platinum				Iridium, osmium, and ruthenium <sup>2,3</sup>				Rhodium <sup>2</sup>	
	Platinum <sup>2</sup>		waste and scrap		Palladium <sup>2</sup>		Value		Value	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	(thousands)	Quantity	Value (thousands)
2011:										
November	975	\$44,100	12,400	\$101,000	1,750	\$20,300	52	\$677	17	\$1,280
December	812	36,600	2,220	68,000	2,320	27,300	164	2,290	74	3,440
January–December	11,300	552,000	118,000	1,440,000	32,000	416,000	1,150	18,000	1,370	71,700
2012:										
January:										
Australia	1	36	--	--	49	378	--	--	--	--
Austria	2	65	--	--	5	84	--	--	--	--
Belgium	1	12	6,310	2,210	(4)	5	--	--	--	--
Canada	12	550	4	114	312	5,340	1	7	(4)	11
China	1	29	15	818	102	1,760	5	110	10	801
Colombia	(4)	5	--	--	1	20	--	--	--	--
Costa Rica	--	--	--	--	2	14	1	10	--	--
Czech Republic	--	--	--	--	37	105	--	--	--	--
Denmark	--	--	--	--	35	339	--	--	--	--
France	2	44	--	--	44	354	--	--	--	--
Germany	101	4,450	314	5,710	545	10,200	--	--	--	--
Hong Kong	1	38	--	--	86	803	1	32	16	1,030
India	2	96	--	--	152	674	3	66	2	331
Ireland	16	667	--	--	12	94	3	16	--	--
Israel	2	69	--	--	57	215	15	62	--	--
Italy	2	72	28	758	62	858	--	--	--	--
Japan	227	9,300	142	4,290	281	3,950	(4)	5	6	279
Korea, Republic of	4	162	--	--	7	112	--	--	--	--
Mexico	64	2,610	--	--	9	76	--	--	(4)	9
Netherlands	(4)	17	--	--	1	27	--	--	--	--
Norway	--	--	--	--	51	143	--	--	--	--
Romania	(4)	4	--	--	(4)	7	--	--	--	--
Singapore	(4)	3	--	--	1	37	--	--	--	--
South Africa	--	--	93	2,780	--	--	--	--	--	--
Sweden	2	49	--	--	2	9	--	--	--	--
Switzerland	--	--	537	10,600	6	125	--	--	--	--
Taiwan	--	--	--	--	22	214	3	14	--	--
United Arab Emirates	(4)	7	--	--	1	31	--	--	--	--
United Kingdom	38	1,670	1,170	43,000	143	1,620	8	97	(4)	9
Other	3	127	--	--	39	199	--	3	(4)	5
Total	483	20,100	8,610	70,300	2,060	27,800	40	421	35	2,480

-- 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>Less than ½ unit.

Source: U.S. Census Bureau.