

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN DECEMBER 2012

Engelhard's average December price for platinum increased slightly and that for palladium increased by 9% compared with average November prices. The average monthly prices for rhodium and ruthenium decreased by 4% and 10%, respectively, and that for iridium remained unchanged during the same period. The platinum price increased early in the month and then steadily decreased until monthend owing to a sell-off at yearend by investors. Rhodium prices decreased steadily throughout the month and ended the year at the lowest level since 2009. In contrast, the palladium price increased toward monthend, reportedly owing to speculative purchasing by investors. The 2012 annual averages prices for platinum, palladium, rhodium, and ruthenium were lower by 10%, 12%, 37%, and 32%, respectively from those of 2011. The 2012 average annual price for iridium was 3% higher than that of 2011.

Duluth Metals Ltd. (Toronto, Ontario, Canada) released an updated mineral resource estimate for its Twin Metals Minnesota copper-nickel-platinum-group metals (PGM) project in the Duluth Complex of northern Minnesota. The Twin Metals project, planned as an underground mine, was in the prefeasibility stage and included three deposits in close proximity: the Birch Lake, Maturi, and Spruce Road deposits. The updated estimates indicated that Twin Metals is one of the world's largest PGM deposits outside of South Africa and contains indicated resources of 174,000 kilograms (kg) and 392,000 kg of platinum and palladium, respectively, and inferred resources of 109,000 kg and 237,000 kg of platinum and palladium, respectively. The inferred resource estimate does not include the Spruce Road deposit. Twin Metals Minnesota LLC (St. Paul, MN) is a 60:40 joint venture between Duluth Metals and Antofagasta plc (London, United Kingdom). To date, Twin Metals has invested more than \$160 million in exploration and project development activities (Twin Metals Minnesota LLC, 2012).

Anglo American Platinum Ltd.'s (Johannesburg, South Africa) (Amplats) Amandelbult, Rustenburg, and Union Mines in South Africa were ramping up production slowly following the end of a workers' strike in mid-November. Amplats reported

that production at mid-December was at about 80% of the pre-strike level. Lost production as a result of safety stoppages and the strike, which began in September, totaled 7,309 kg of platinum through mid-December (Anglo American Platinum Ltd., 2012).

The South African Government decided against nationalization of the country's mines, ending years of speculation by the mining industry, and instead was considering raising taxes on the mining industry. The Government was also planning to introduce export limits on platinum by amending mining laws to require mining companies, as a condition of their mining license, to sell a certain percentage of production to local businesses at a reduced price. The goal was to increase domestic processing of platinum ore as well as to encourage growth of local downstream industries, such as fuel cells. Draft legislation was expected to be introduced in 2013 (Johnson Matthey plc, 2012a, b).

References Cited

- Anglo American Platinum Ltd., 2012, Anglo American Platinum update on lost production: Johannesburg, South Africa, Anglo American Platinum Ltd. news release, December 14, 2012. (Accessed December 19, 2012, at http://www.angloplatinum.com/investors/invest_sub/display.asp?Related=true&Id2=527.)
- Johnson Matthey plc, 2012, ANC rules out SA mine nationalisation: London, United Kingdom, Johnson Matthey plc news release, December 21. (Accessed January 9, 2013, at <http://www.platinum.matthey.com/news-archive/anc-rules-out-sa-mine-nationalisation/801511404.html>.)
- Johnson Matthey plc, 2012, South Africa "planning platinum export limits": London, United Kingdom, Johnson Matthey plc news release, December 19. (Accessed January 24, 2013, at <http://www.platinum.matthey.com/media-room/news-room/south-africa-planning-platinum-export-limits/801509798.html>.)
- Twin Metals Minnesota LLC, 2012, Duluth Metals announces an updated mineral resource estimate confirming large increases to Twin Metals contained metal, grade, and indicated tonnage: St. Paul, MN, Twin Metals Minnesota LLC news release, December 4. (Accessed January 24, 2013, at <http://www.twin-metals.com/duluth-metals-announces-an-updated-mineral-resource-estimate-confirming-large-increases-to-twin-metals-contained-metal-grade-and-indicated-tonnage/>.)

TABLE 1
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
2011:					
Low/date	1,356.00 Dec. 29	553.00 Oct. 5	1,400.00 Dec. ²	780.00 Jan. 3 and 4	110.00 Dec. ²
High/date	1,892.00 Aug. 22 and 23	851.00 Feb. 18	2,500.00 Jan. 31 and Feb. ²	1,085.00 Sep.–Dec. ²	180.00 Jan.–Aug. ²
Average	1,724.51	738.51	2,024.35	1,035.87	165.85
2012:					
November:					
Low/date	1,544.00/8	603.00/5	1,110.00/21 and 26	1,050.00 ²	90.00 ²
High/date	1,620.00/29	690.00/29 and 30	1,170.00/14	1,050.00 ²	110.00 ²
Average	1,578.55	639.20	1,141.50	1,050.00	99.50
December:					
Low/date	1,524.00/31	685.00 ²	1,080.00 ²	1,050.00 ²	90.00 ²
High/date	1,641.00/12	707.00/28	1,125.00/3 and 4	1,050.00 ²	90.00 ²
Average	1,585.53	695.79	1,096.84	1,050.00	90.00
January–December:					
Low/date	1,393.00 Aug. 2 and 3	570.00 July 23 and 25	1,075.00 Sep. ²	1,050.00 Aug.–Dec. ²	90.00 Nov.–Dec. ²
High/date	1,731.00 Feb. 29	727.00 Feb. 29	1,540.00 Feb. 14 and 15	1,085.00 Jan.–Feb. ²	130.00 Feb.–Mar. ²
Average	1,555.39	649.27	1,274.98	1,066.23	112.26

¹Quotes from Engelhard.

²Occurred multiple days in month(s) listed.

Source: Platts Metals Week.

TABLE 2
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY¹

(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	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)
2011	1,230	\$65,700	35,800	\$1,910,000	7,160	\$211,000	4,660	\$206,000	78,900	\$832,000	1,200	\$66,300
2012:												
September	22	1,110	3,180	161,000	897	37,000	263	11,700	6,860	47,500	11	600
October	82	3,710	3,100	166,000	299	12,300	214	8,060	27,800	87,800	31	1,670
November:												
Australia	--	--	--	--	--	--	--	--	44	1,740	(2)	6
Belgium	--	--	167	7,940	--	--	--	--	12	1,410	--	--
Brazil	--	--	--	--	--	--	(2)	3	25	1,210	--	--
Canada	11	545	--	--	--	--	16	662	187	2,860	50	1,940
Chile	--	--	--	--	--	--	--	--	3	148	--	--
China	--	--	--	--	53	2,770	--	--	--	--	--	--
Colombia	--	--	--	--	156	6,470	--	--	7	125	--	--
Czech Republic	--	--	--	--	--	--	2	133	--	--	--	--
France	--	--	--	--	8	466	--	--	189	12,800	--	--
Germany	--	--	220	8,960	95	5,160	134	3,760	544	28,800	--	--
India	--	--	--	--	--	--	--	--	120	6,060	--	--
Italy	--	--	288	14,600	--	--	--	--	101	3,300	--	--
Japan	--	--	--	--	5	187	3	78	194	7,930	--	--
Korea, Republic of	--	--	37	1,860	--	--	--	--	35	692	--	--
Malaysia	--	--	--	--	--	--	--	--	46	982	--	--
Mexico	--	--	--	--	--	--	--	--	47	1,850	--	--
Norway	--	--	282	14,400	--	--	--	--	--	--	--	--
Philippines	--	--	--	--	--	--	--	--	6	193	--	--
Russia	17	848	--	--	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	26	678	--	--	31	1,130	--	--
South Africa	--	--	1,550	79,500	--	--	--	--	--	--	--	--
Switzerland	--	--	--	--	16	786	1	42	--	--	--	--
Taiwan	--	--	--	--	--	--	--	--	64	1,260	--	--
Turkey	--	--	--	--	3	91	--	--	7	259	--	--
United Kingdom	--	--	312	16,000	(2)	5	8	377	1,130	17,500	--	--
Venezuela	--	--	--	--	--	--	--	--	33	1,060	--	--
Other	--	--	--	--	(2)	2	(2)	20	16	248	--	--
Total	28	1,390	2,850	143,000	362	16,600	165	5,070	2,840	91,700	50	1,950
January–November	1,040	49,900	32,000	1,580,000	4,240	176,000	3,660	146,000	109,000	851,000	704	35,200

-- Zero.

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

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY¹

(Kilograms metal content, unless otherwise specified)

Period and country	Unwrought palladium		Palladium, other		Iridium ²		Osmium ²		Ruthenium ²		Rhodium ²	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2011	87,000	\$1,890,000	11,900	\$268,000	2,790	\$59,000	48	\$261	13,300	\$69,700	13,100	\$844,000
2012:												
September	6,630	134,000	1,120	25,500	39	1,380	--	--	423	1,450	976	34,900
October	4,320	89,000	1,040	21,900	76	2,430	--	--	492	1,710	1,420	53,700
November:												
Belgium	27	575	--	--	--	--	--	--	--	--	32	1,110
Canada	--	--	210	5,710	--	--	--	--	--	--	--	--
China	--	--	--	--	--	--	--	--	--	--	6	243
Germany	271	5,570	73	1,660	3	73	--	--	129	498	62	2,530
Italy	284	5,770	5	122	--	--	--	--	--	--	19	682
Japan	185	1,420	18	116	--	--	--	--	--	--	24	906
Korea, Republic of	102	1,990	--	--	--	--	--	--	--	--	--	--
Norway	766	15,600	--	--	--	--	--	--	--	--	7	230
Russia	1,020	20,600	342	6,770	1	27	--	--	--	--	65	2,280
South Africa	2,190	44,500	47	958	25	825	75	434	199	623	805	29,200
Switzerland	--	--	9	286	--	--	--	--	--	--	--	--
United Kingdom	1,040	21,100	330	6,800	104	3,640	--	--	110	386	35	1,470
Other	--	--	(3)	8	--	--	--	--	--	--	--	--
Total	5,880	117,000	1,030	22,400	132	4,560	75	434	438	1,510	1,060	38,700
January–November	62,300	1,270,000	10,900	234,000	1,160	38,300	130	737	9,110	32,200	11,900	497,000

-- Zero.

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

²Unwrought and other forms.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY¹

(Kilograms metal content, unless otherwise specified)

Period and country	Platinum ²		Platinum waste and scrap		Palladium ²		Iridium, osmium, and ruthenium ^{2,3}		Rhodium ²	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)
2011	11,300	\$552,000	118,000	\$1,440,000	32,000	\$416,000	1,150	\$18,000	1,370	\$71,700
2012:										
September	943	43,200	3,440	84,900	1,960	31,400	200	1,330	49	1,830
October	937	44,200	32,300	87,600	2,420	43,600	93	770 ^r	123	5,210
November:										
Australia	6	241	--	--	75	1,250	1	19	--	--
Austria	2	34	--	--	5	72	--	--	--	--
Belgium	122	4,910	19	443	1	16	1	5	14	556
Brazil	(4)	10	--	--	5	73	--	--	--	--
Canada	8	419	(4)	6	491	9,150	1	9	--	--
China	3	80	--	--	60	1,090	6	121	1	56
Costa Rica	3	82	--	--	1	6	2	37	--	--
Czech Republic	--	--	--	--	2	3	--	--	(4)	8
Denmark	--	--	--	--	17	206	--	--	--	--
Dominican Republic	1	26	--	--	2	6	--	--	--	--
France	5	222	--	--	32	292	2	51	--	--
Germany	34	1,640	147	4,940	377	7,220	1	3	(4)	3
Hong Kong	3	132	--	--	49	776	(4)	5	43	1,420
India	25	1,330	--	--	9	90	(4)	12	--	--
Ireland	29	1,110	--	--	15	132	--	--	--	--
Israel	--	--	--	--	156	554	--	--	--	--
Italy	(4)	30	81	2,330	59	959	--	--	4	119
Japan	71	2,350	6,480	8,120	38	350	--	--	23	991
Korea, Republic of	6	232	--	--	568	11,300	1	6	--	--
Malaysia	(4)	5	--	--	1	14	--	--	--	--
Mexico	16	500	--	--	39	263	3	20	(4)	9
Netherlands	(4)	8	--	--	5	36	--	--	--	--
New Zealand	(4)	15	--	--	8	126	--	--	--	--
Norway	3	58	--	--	1	37	--	--	--	--
Philippines	(4)	20	--	--	(4)	4	--	--	--	--
Singapore	(4)	11	--	--	2	34	17	79	--	--
South Africa	--	--	51	150	31	42	--	--	--	--
Spain	--	--	--	--	8	35	1	9	--	--
Sweden	--	--	--	--	1	16	1	6	--	--
Switzerland	3	140	752	14,600	8	89	--	--	--	--
Taiwan	4	138	--	--	214	1,920	1	14	--	--
Thailand	4	202	--	--	13	317	--	--	--	--
United Arab Emirates	1	15	--	--	1	19	--	--	--	--
United Kingdom	57	2,160	1,220	38,700	157	2,350	22	576	--	--
Other	2	94	--	--	5	46	--	--	1	38
Total	407	16,200	8,760	29,200	2,460	38,900	59	971	86	3,200
January–November	8,100	353,000	71,600	753,000	30,800	447,000	1,600	15,900	1,010	42,300

^rRevised. -- Zero.

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

²Unwrought and other forms.

³Gross weight.

⁴Less than ½ unit.

Source: U.S. Census Bureau.