

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN NOVEMBER 2009

According to Platts Metals Week (2009a-e), the average November prices of platinum and palladium increased by 5% and 9%, respectively, compared with the average prices in October. The average monthly price of rhodium increased by 30% and that of ruthenium increased by 12% during the same time period. The price of iridium remained unchanged. Prices of platinum, palladium, and rhodium increased from the beginning to the end of the month in response to a variety of factors including encouraging news about increased sales levels from the auto industry, which led to increased industrial and speculative purchasing. The ruthenium price, which had been steady at around \$95 per troy ounce since April 2009, jumped to \$150 per troy ounce in late November in response to increased industrial and speculative demand. Platinum, palladium, rhodium, and ruthenium prices reached year-to-date highs in November.

Stillwater Mining Co. (SMC) (Billings, MT) reported third quarter production of 3,080 kilograms (kg) of palladium and 933 kg of platinum, increases of 6% and 11%, respectively, compared with production in the same quarter of 2008. The increased production was attributed to the company's restructuring in late 2008. SMC's production included 809 kg of palladium and 249 kg of platinum from the East Boulder Mine, a 7% decrease in palladium production compared with that of the third quarter of 2008, and the same amount of platinum production over the same period. Production at the Stillwater Mine included 2,270 kg of palladium and 684 kg of platinum, increases of 12% and 16%, respectively, compared with production in the same quarter of 2008. Recycling volumes were 1,890 kg of platinum-group metals (PGMs), a decrease of 52% compared with that of the third quarter of 2008. The sharp drop in metal prices in the fall resulted in fewer catalytic converters being recycled (Stillwater Mining Co., 2009).

Franconia Minerals Corp. (Spokane Valley, WA) began a waste characterization study of its Birch Lake copper-nickel-PGM deposit in the Duluth Complex of Minnesota. The study was expected to predict how natural waste materials would weather when exposed or stockpiled during the mining process, and results of the study were expected to be used in the design

of any future mine to minimize potential environmental impacts (Franconia Minerals Corp., 2009).

Colossus Minerals Inc. (Toronto, Ontario, Canada) began metallurgical test work on the high-grade central mineralized zone of its gold-PGM Serra Pelada project, Para State, Brazil. The deposit, which was at resource-delineation stage, contains sulfide-poor ores, in which the PGMs typically occur as metals and compositionally complex metal alloys. Testing was begun to determine if the ores would be amenable to hydro-gravity concentration (Colossus Minerals Inc., 2009).

Sylvania Resources Ltd. (Subiaco, Western Australia, Australia) and Jubilee Platinum Plc (London, United Kingdom) entered into a strategic partnership to provide processing of PGMs from tailings stockpiles of Sylvania as well as other companies, using Jubilee's ConRoast smelting technology. The ConRoast technology is capable of recovering PGM from high-chromium ores and tailings (Sylvania Resources Ltd., 2009a). Sylvania also planned to begin exploration and development of the properties in its Grass Valley project located in the Platreef of South Africa's Bushveld Complex. Drilling was expected to begin in late 2009, and a bankable feasibility study was begun with a targeted completion date of mid-2011 (Sylvania Resources Ltd., 2009b).

References Cited

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TABLE 1
 PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
2008:					
Low/date	760.00 Oct. 27	167.00 Dec. 5	1,000.00 Nov. ²	400.00 Dec. ²	120.00 Dec. ²
High/date	2,275.00 Mar. 4	585.00 Mar. 4	10,100.00 Jun. 18	460.00 Aug. ²	440.00 Feb. and Mar. ²
Average	1,578.26	355.12	6,533.57	448.34	324.60
2009:					
October:					
Low/date	1,270.00/2	294.00/2	1,650.00 ²	420.00 ²	95.00 ²
High/date	1,375.00/20 and 23	342.00/20	1,950.00 ²	420.00 ²	95.00 ²
Average	1,335.86	324.45	1,788.64	420.00	95.00
November:					
Low/date	1,329.00/3	322.00/3	1,950.00/2 and 3	420.00 ²	95.00 ²
High/date	1,473.00/25	377.00/25	2,790.00/25	420.00 ²	150.00 ²
Average	1,401.26	353.79	2,328.68	420.00	106.32
Year-to-date:					
Low/date	920.00 Jan. 15	182.00 Jan. ²	1,050.00 Jan. ²	420.00 Jan.–Nov. ²	75.00 Feb. ²
High/date	1,473.00 Nov. 25	377.00 Nov. 25	2,790.00 Nov. 25	430.00 Jan. ²	150.00 Nov. ²
Average	1,185.58	255.49	1,515.53	420.43	91.79

¹Quotes from Engelhard Industries.

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 (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:												
August	1	30	4,740	181,000	679	26,100	404	11,300	24,900	25,100	125	5,190
September	1	27	3,220	132,000	264	8,610	325	6,470	24,600	39,200	2	80
October:												
Australia	--	--	--	--	--	--	280	12,300	6 ²	285	1	20
Belgium	--	--	187	7,820	--	--	--	--	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	587	622	--	--
Canada	1	26	--	--	--	--	27	803	46 ²	2,650	1 ²	51
China	--	--	--	--	--	--	--	--	79	864	--	--
Colombia	--	--	--	--	147	4,450	--	--	15 ²	192	--	--
Czech Republic	--	--	--	--	--	--	--	--	20	167	--	--
France	--	--	--	--	--	--	1	20	28	1,030	--	--
Germany	(3)	4	93	4,970	42	1,660	173	4,250	367	13,300	--	--
Indonesia	--	--	--	--	--	--	--	--	331 ²	112	--	--
Israel	--	--	--	--	4	104	--	--	5	120	--	--
Italy	--	--	200	8,740	--	--	52	2,210	--	--	--	--
Japan	--	--	--	--	(3)	20	3	122	89	2,780	--	--
Mexico	--	--	--	--	6	213	--	--	167 ²	6,810	--	--
Norway	--	--	48	1,950	--	--	--	--	--	--	--	--
Philippines	--	--	--	--	--	--	--	--	4	185	--	--
Russia	--	--	49	2,120	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	--	--	--	--	3 ²	330	--	--
South Africa	--	--	5,390	217,000	--	--	84	3,670	--	--	--	--
Switzerland	--	--	--	--	150	6,350	60	2,590	--	--	--	--
Taiwan	--	--	--	--	--	--	--	--	126	3,210	--	--
United Kingdom	--	--	184	7,800	24	766	18	635	38	1,800	--	--
Other	--	--	--	--	(3)	7	2	12	3,460 ²	201	--	--
Total	1	30	6,150	250,000	373	13,600	700	26,600	5,370	34,700	2	71
Year to date	12	309	31,800	1,190,000	3,210	107,000	5,130	146,000	99,000	282,000	500	20,000

-- Zero.

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

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

³Less 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)
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:												
August	3,060	25,800	1,550	13,900	202	2,990	--	--	1,290	3,460	974	46,700
September	8,000	74,700	187	1,860	106	1,370	--	--	1,630	4,360	853	43,300
October:												
Belgium	6	54	--	--	7	33	--	--	--	--	44	2,490
Canada	347	5,370	4	49	--	--	--	--	--	--	--	--
Germany	19	196	13	112	4	48	--	--	171	457	28	1,490
Italy	154	1,490	1	12	--	--	--	--	--	--	7	495
Japan	120	872	23 ³	88	--	--	--	--	20	51	(4)	21
Norway	321	3,230	--	--	--	--	--	--	--	--	21	1,190
Russia	2,190	21,300	--	--	--	--	--	--	--	--	85	2,400
South Africa	1,480	13,600	16	138	65	816	--	--	1,040	3,080	790	42,000
Switzerland	497	5,120	271 ³	3,050	--	--	--	--	--	--	--	--
Taiwan	--	--	--	--	--	--	--	--	--	--	73	3,870
United Kingdom	3,610	37,500	5	89	21	286	--	--	457	1,330	148	8,090
Other	(4)	4	2	5	1	30	--	--	--	--	--	--
Total	8,750	88,800	334	3,540	99	1,210	--	--	1,690	4,910	1,200	62,000
Year to date	43,000	352,000	6,580	52,100	1,130	15,400	68	551	17,900	44,900	8,860	375,000

-- Zero.

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

²Unwrought and other forms.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

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

(Kilograms of 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 (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:										
August	826	28,300	1,670	23,400	2,260	15,700	450	2,870	57	3,850
September	2,080	83,500	1,950	35,300	2,490	19,800	84	1,040	253	6,800
October:										
Australia	2	81	--	--	62	640	1	8	(4)	38
Austria	2	72	--	--	(4)	4	--	--	--	--
Belgium	194	8,450	18	802	1	3	--	--	--	--
Canada	36	1,450	(4)	5	468 ⁵	2,390	--	--	--	--
China	9	347	--	--	64 ⁵	894	69	583	40	2,200
Czech Republic	(4)	3	--	--	61 ⁵	132	--	--	--	--
Denmark	19	793	--	--	8	131	--	--	--	--
France	10	114	--	--	30	320	--	--	--	--
Germany	180	6,370	408 ⁵	2,920	182	2,170	713	2,240	28 ⁵	553
Hong Kong	6	402	--	--	63	972	--	--	--	--
India	22	898	--	--	7 ⁵	22	--	--	--	--
Ireland	12	427	--	--	2	6	2	13	--	--
Israel	4	58	--	--	311 ⁵	925	--	--	--	--
Italy	13	580	--	--	309	3,400	--	--	--	--
Japan	257	8,890	54	1,660	577	5,360	22	96	11	853
Korea, Republic of	5	123	--	--	116	740	--	--	--	--
Kuwait	--	--	--	--	6	121	--	--	--	--
Malaysia	(4)	7	--	--	1	4	--	--	--	--
Mexico	6	248	--	--	53 ⁵	106	--	--	(4)	25
Netherlands	(4)	87	--	--	6	22	--	--	--	--
New Zealand	(4)	7	--	--	7	122	--	--	--	--
Norway	11	218	--	--	2	41	--	--	--	--
Philippines	(4)	30	--	--	1	13	--	--	--	--
Poland	1	16	--	--	1	4	--	--	--	--
Singapore	1	49	--	--	23 ⁵	55	2	50	--	--
South Africa	(4)	3	987 ⁵	3,230	9 ⁵	12	--	--	--	--
Sweden	3	81	--	--	1	7	--	--	--	--
Switzerland	68	2,770	--	--	22	344	--	--	9	480
Taiwan	4	82	--	--	303 ⁵	1,120	21	496	--	--
Thailand	(4)	68	--	--	7	106	--	--	--	--
United Kingdom	41	1,350	2,570 ⁵	67,400	210	1,770	4	35	(4)	5
Other	2 ⁵	60	--	--	24 ⁵	163	--	--	--	--
Total	908	34,100	4,040	76,000	2,940	22,100	833	3,520	89	4,150
Year to date	14,300	477,000	27,100	434,000	24,900	180,000	2,530	24,500	1,050	42,300

-- 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 1/2 unit.

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

Source: U.S. Census Bureau.