

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN SEPTEMBER 2008

According to Platts Metals Week, the average September prices of platinum, palladium, and rhodium dropped by 18%, 22%, and 29%, respectively, as compared with the average prices in August. The average price of ruthenium dropped slightly and that of iridium rose slightly over the same time period. The prices of platinum, palladium, and rhodium decreased from early- to mid-month, then rose slightly as a result of return of investors to precious metals following financial turmoil on Wall Street. The prices then resumed their downward trend to the end of the month. Over the course of the single month of September, the prices of platinum, palladium, and rhodium plummeted by 27%, 29%, and 23%, respectively. Prices of all three metals were affected by the continuing global economic deterioration as well as by dismal reports from the U.S. automobile industry, which reported a tenth straight month of decreasing sales (Johnson Matthey Plc, 2008c). The platinum-group metals (PGMs) were sold off as a result of fears of decreased demand from the automobile sector, in which PGMs are used in catalytic converters to reduce harmful emissions. Platinum dropped to its lowest price in more than 2 years.

Following a large sell-off in August, the amounts of platinum and palladium in exchange traded funds (ETFs) stabilized in September. At the end of September, the total amounts of the metals held in ETFs were 9,230 kilograms (kg) of platinum and 21,500 kg of palladium (CPM Group, 2008).

North American Palladium Ltd. (Toronto, Ontario, Canada) decided to terminate the Arctic Platinum Project in Finland, a joint-venture with Gold Fields Ltd. (Johannesburg, South Africa). The project was begun in 2005 by the two companies and focused on exploration and mine development at a series of PGM as well as copper and nickel deposits. North American Palladium cited high steel and diesel prices as well as the strong euro against the dollar as factors in its decision. Gold Fields decided to shelve the project for the time being because of falling metal prices (Seccombe, 2008).

Anglo Platinum Ltd. (Johannesburg, South Africa) withdrew from the Booyendal project as a result of South Africa's mining laws which require 26% of every project to be owned by black economic empowerment groups. Anglo's

withdrawal is expected to allow Northam Platinum Ltd. (Johannesburg, South Africa) to begin construction of a mine as early as 2010 (Johnson Matthey Plc, 2008b). Anglo Platinum also sold its 37% stake in the Western Bushveld Joint Venture to Wesizwe Platinum Ltd. (Johannesburg, South Africa) (Wesizwe Platinum Ltd., 2008). Anglo American plc (London, United Kingdom) took a 12 % stake in Magma Metals Ltd. (West Perth, Australia) which has a PGM exploration project in progress near Thunder Bay, Ontario, Canada. A drilling program has been underway, and a resource estimate for the project was expected in the first quarter of 2009 (Williams, 2008).

Impala Platinum Holdings Ltd. (Johannesburg, South Africa) planned to increase production at its two mines in Zimbabwe over the next few years. Zimbabwe Platinum Mines Ltd. (Harare, Zimbabwe), in which Impala has a controlling stake, planned to increase production at the Ngezi Mine to 5,600 kilograms per year (kg/yr) from 2,960 kg/yr of PGMs by 2011. Production at the Mimosa Mine was expected to increase to 3,110 kg/yr from 2,640 kg/yr of PGMs (Johnson Matthey Plc, 2008a).

PolyMet Mining Corp. (Vancouver, British Columbia, Canada) entered into a strategic partnership with Glencore AG (Baar, Switzerland) such that Glencore will purchase PolyMet's production of copper, nickel and PGMs from PolyMet's NorthMet Mine in Minnesota for a period of 5 years. PolyMet was seeking environmental and operating permits for its NorthMet Mine, and production was anticipated to begin in 2010 (PolyMet Mining Corp., 2008).

Braemore Resources plc (London, United Kingdom) completed installation of a new 3.2-megawatt (MW) smelter at the state-run minerals research and development institution, Mintek, in Johannesburg, South Africa. The smelter was designed to process high-chromium ore, and capacity was expected to be 2,000 metric tons of ore per month. PGM production, in an iron-nickel alloy, was planned to be as much as 2,180 kg/yr. Braemore completed a feasibility study for a 10-MW smelter, and finalization of the project was expected in the fourth quarter of 2008 (Braemore Resources plc, 2008).

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TABLE 1
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
2007:					
Low/date	1,122.00 Jan. 8	322.00 Aug. 22	5,550.00 Jan. ²	400.00 Jan. and Feb. ²	375.00 Jul. ²
High/date	1,547.00 Dec. 27	385.00 Apr. 20	6,850.00 Dec. ²	450.00 Feb.—Dec. ²	870.00 Feb. ²
Average	1,308.40	357.34	6,203.09	444.43	573.74
2008:					
August:					
Low/date	1,328.00/19	283.00/19	3,950.00 ²	450.00 ²	300.00 ²
High/date	1,680.00/01	370.00/01	8,050.00/01	460.00 ²	305.00 ²
Average	1,492.52	318.29	6,245.24	451.90	302.62
September:					
Low/date	1,010.00/30	204.00/30	4,025.00/30	450.00 ²	290.00 ²
High/date	1,420.00/04	292.00/04	5,200.00/01	460.00 ²	300.00 ²
Average	1,217.43	248.81	4,459.52	458.10	298.10
Year-to-date:					
Low/date	1,010.00 Sept. 30	204.00 Sept. 30	3,950.00 Aug. ²	450.00 Jan.—Sept.. ²	290.00 Sept. ²
High/date	2,275.00 Mar. 4	585.00 Mar. 4	10,100.00 June 18	460.00 Sept. ²	440.00 Feb. and Mar. ²
Average	1,815.14	408.64	8,147.39	451.11	362.21

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	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)
2007	621	\$20,100	65,900	\$2,620,000	3,940	\$145,000	10,200	\$330,000	206,000	\$504,000	58	\$964
2008:												
June	1	66	3,420	203,000	167	8,190	598	27,900	4,700	53,000	6	255
July	2	87	3,860	245,000	319	15,500	590	27,600	9,450	99,400	1	61
August:												
Australia	--	--	--	--	--	--	--	--	9	500	(2) ³	6
Austria	--	--	--	--	--	--	--	--	--	--	652 ³	20,400
Belgium	--	--	65	3,460	--	--	--	--	--	--	--	--
Bolivia	--	--	--	--	--	--	--	--	3,360 ³	292	--	--
Brazil	--	--	--	--	--	--	(2)	5	3,780 ³	2,640	--	--
Canada	(2)	14	--	--	--	--	65	3,510	38	2,120	62 ³	903
Chile	--	--	--	--	--	--	--	--	4,900 ³	334	--	--
China	--	--	--	--	--	--	3	138	15	848	--	--
Colombia	--	--	--	--	133	5,140	--	--	32	890	--	--
Czech Republic	--	--	--	--	--	--	17 ³	198	19 ³	231	--	--
Germany	--	--	--	--	95 ³	5,030	198 ³	3,560	266	17,700	--	--
Greece	--	--	--	--	--	--	--	--	9	427	--	--
Hong Kong	--	--	--	--	--	--	--	--	11	694	--	--
Ireland	--	--	--	--	--	--	--	--	13 ³	162	--	--
Israel	--	--	--	--	27	713	--	--	6	400	--	--
Italy	--	--	32	1,830	--	--	51	2,790	--	--	--	--
Japan	--	--	--	--	7	293	7 ³	85	7	416	--	--
Korea, Republic of	--	--	--	--	--	--	--	--	402	22,700	--	--
Mexico	--	--	--	--	6	219	--	--	385	8,900	--	--
Norway	--	--	47	2,590	--	--	--	--	--	--	--	--
Philippines	--	--	--	--	--	--	--	--	(2)	120	--	--
Russia	--	--	49	3,020	93	5,390	--	--	--	--	--	--
Saudi Arabia	--	--	--	--	--	--	--	--	14	500	--	--
South Africa	--	--	2,660	159,000	--	--	11	384	--	--	--	--
Switzerland	--	--	63	3,200	(2) ³	17	2	66	--	--	--	--
Taiwan	--	--	--	--	--	--	--	--	138	6,190	--	--
United Kingdom	--	--	1,310	64,500	1 ³	68	72	4,240	--	--	--	--
Venezuela	--	--	--	--	--	--	--	--	940 ³	51	--	--
Other	--	--	--	--	(2)	6	--	--	2 ³	15	--	--
Total	(2)	14	4,230	237,000	362	16,900	424	15,000	14,300	66,200	714	21,300
Year to date	179	5,660	33,800	1,970,000	2,320	124,000	5,280	234,000	75,100	484,000	729	22,100

-- Zero.

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

²Less than ½ unit.

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

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)
2007	101,000	\$1,120,000	11,600	\$129,000	3,410	\$41,900	23	\$192	48,700	\$655,000	16,600	\$2,650,000
2008:												
June	8,740	116,000	598	8,100	271	3,910	--	--	5,340	41,500	1,420	398,000
July	5,910	83,500	93	1,320	154	2,250	--	--	4,320	33,400	767	214,000
August:												
Belgium	32 ³	3,010	--	--	--	--	--	--	--	--	44	12,900
Germany	2	12	20	232	4	106	--	--	2,250	16,000	49	10,100
Italy	58	685	17	239	20	277	--	--	--	--	20	2,640
Japan	110	657	6	97	--	--	--	--	25	249	2	628
Netherlands	--	--	--	--	--	--	--	--	--	--	--	--
Norway	342	4,230	--	--	--	--	--	--	--	--	74	4,410
Russia	3,010	40,800	--	--	--	--	--	--	--	--	148	43,000
South Africa	1,650	24,300	43	600	414	5,290	--	--	1,170	9,830	775	198,000
Switzerland	61	743	14	253	--	--	--	--	--	--	--	--
United Kingdom	1,400	21,800	14	223	130	2,080	--	--	316	3,000	25	5,800
Total	6,660	96,200	114	1,640	568	7,750	--	--	3,760	29,100	1,140	278,000
Year to date	65,400	884,000	3,830	61,400	1,990	28,600	11	101	32,300	308,000	9,180	2,120,000

-- 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.

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)
2007	28,900	\$763,000	54,400	\$924,000	41,800	\$298,000	8,190	\$145,000	2,210	\$401,000
2008:										
June	1,270	63,200	6,830	278,000	3,070	26,100	436	5,140	205	57,900
July	867	43,800	4,800	123,000	1,980	13,800	723	9,280	331	40,900
August:										
Australia	(4) ⁵	48	--	--	47	472	--	--	--	--
Austria	4	119	--	--	(4)	9	--	--	--	--
Canada	48 ⁵	1,300	75	2,480	167	1,810	--	--	(4)	16
China	4 ⁵	162	26 ⁵	95	16	151	109	1,750	--	--
Costa Rica	6	157	--	--	4	15	12	45	--	--
France	1	44	1 ⁵	4	24	109	--	--	--	--
Georgia	--	--	3 ⁵	173	--	--	--	--	--	--
Germany	120	3,570	532	9,290	192	950	1	15	--	--
Hong Kong	1 ⁵	265	--	--	64	777	--	--	--	--
India	2 ⁵	120	--	--	8	130	--	--	--	--
Ireland	17 ⁵	505	--	--	14	100	--	--	--	--
Israel	(4)	3	--	--	144 ⁵	373	--	--	--	--
Italy	--	--	--	--	36 ⁵	135	--	--	--	--
Japan	300 ⁵	7,850	368	22,300	50	288	374 ⁵	6,030	31	8,800
Korea, Republic of	6	156	61 ⁵	216	77 ⁵	387	--	--	1	156
Mexico	3 ⁵	87	(4)	25	2	31	16 ⁵	455	(4) ⁵	90
New Zealand	(4)	22	--	--	8	126	--	--	--	--
Norway	8 ⁵	133	--	--	1	18	--	--	1	--
Russia	--	--	--	--	--	--	526	8,480	--	--
Singapore	(4) ⁵	4	--	--	4 ⁵	30	458	4,470	--	--
Spain	--	--	--	--	8	100	--	--	--	--
Switzerland	45	2,540	--	--	9	112	122	1,970	--	--
Taiwan	20 ⁵	975	--	--	348 ⁵	1,280	62	1,000	--	--
Thailand	3	194	--	--	22	263	--	--	--	--
United Kingdom	36	1,230	739	24,900	471 ⁵	2,410	--	--	--	--
Other	5 ⁵	229	--	--	41 ⁵	441	5 ⁵	57	(4)	20
Total	633	19,700	1,810	59,400	1,760	10,500	1,690	24,300	33	9,080
Year to date	9,120	393,000	40,200	951,000	20,000	157,000	5,020	67,300	1,790	287,000

-- 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.

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

Source: U.S. Census Bureau.