

# Mineral Industry Surveys

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## PLATINUM-GROUP METALS IN MAY 2008

According to Platts Metals Week, the average May prices of platinum and rhodium increased by 3% and 5%, respectively, as compared with average prices in April. The average prices of palladium and ruthenium decreased by 2% and 12%, respectively, over the same time period. The iridium price has held steady at \$450 per troy ounce since February 13, 2007. Prices of platinum and palladium rose nearly continuously from early May until May 27, when they both plunged in response to softer oil prices and a stronger dollar. Rhodium prices rose steadily throughout the month as a result of strong buying interest, and reached an alltime high of \$9,900.00 per troy ounce in late May. Ruthenium prices dropped continuously throughout the month, continuing the downward trend started in April, as a result of decreased buying interest as well as increased availability of recycled material.

Stillwater Mining Co. (Billings, MT) released its first quarter results, and reported production of 4,010 kilograms (kg) of platinum-group metals (PGM), a 10% drop from first quarter production in 2007. Production from the East Boulder Mine was 2,680 kg of PGM, and that from the Stillwater Mine was 1,340 kg of PGM for the first quarter of 2008, compared with 1,430 kg of PGM from the East Boulder Mine and 3,050 kg of PGM from the Stillwater Mine during the first quarter of 2007. Palladium production for the first quarter of 2008 was 3,170 kg; production of platinum was 871 kg. The lower production was attributed to a loss of experienced workers as a result of a new work schedule implemented in 2007. Since then, Stillwater has put a training program in place for new miners and was beginning to see increases in the mining proficiency of the new workers (Stillwater Mining Co., 2008).

Beartooth Platinum Corp. (Toronto, Ontario, Canada) announced that it had obtained the U.S. Forest Service's approval to continue its drilling program on the joint-venture property held with Premium Exploration Inc. (Vancouver, British Columbia, Canada) in the Stillwater Complex, MT. Beartooth Platinum encountered high-grade PGM mineralization associated with chromitite layers in the Stillwater Complex as a result of its drilling program in 2007 (Marketwire, 2008).

North American Palladium Ltd. (Toronto, Ontario, Canada) announced that it would begin a feasibility study to expand its Lac des Iles PGM mine in Ontario because of a positive preliminary economic assessment. Production was expected to be 7,780 kilograms per year of palladium and could start in 2010 (North American Palladium Ltd., 2008).

United Company RUSAL (Moscow, Russia), the world's leading aluminum and alumina producer, announced that it had acquired a 25% plus two shares stake in MMC Norilsk Nickel (Moscow, Russia), one of the world's leading producers of PGM (Johnson Matthey plc, 2008).

The power crisis in South Africa continued and mines were still without full power, operating at 90% to 95% of normal supply levels. Eskom Holdings, Ltd., the state-owned power company, announced that it may have to double its prices over the next 2 years, possibly in the form of gradual increases. Mining companies continued talks with Eskom over security of their power supplies. Few new projects had firm agreements with Eskom, and mining companies had to incorporate much more expensive self-generated power into their operating costs (Williams, 2008).

Anglo American Platinum Corp. Ltd. (Johannesburg, South Africa) announced that it will proceed with its plans for a new mine in Zimbabwe, the Unki Platinum Mine. The project, which has been planned for the past few years, was expected to be the second ranked platinum mine in Zimbabwe with production forecast at 3,730 kilograms per month of ore by the fourth quarter of 2010 (Karombo, 2008). Other mining companies had put their mining plans in Zimbabwe on hold as a result of the continuing political turmoil in that country.

New investment vehicles for platinum-group metals, exchange traded notes (ETNs), were launched for platinum and palladium and are the first such PGM-trading product available to U.S. investors. Unlike exchange-traded funds, ETNs do not hold physical metal, and instead allow either long or short exposure of the investor to the futures market (Spence, 2008).

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

(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. <sup>2</sup>	400.00 Jan. and Feb. <sup>2</sup>	375.00 Jul. <sup>2</sup>
High/date	1,547.00 Dec. 27	385.00 Apr. 20	6,850.00 Dec. <sup>2</sup>	450.00 Feb.—Dec. <sup>2</sup>	870.00 Feb. <sup>2</sup>
Average	1,308.40	357.34	6,203.09	444.43	573.74
2008:					
April:					
Low/date	1,895.00/01	423.00/30	8,925.00 <sup>2</sup>	450.00 <sup>2</sup>	390.00 <sup>2</sup>
High/date	2,050.00/17	472.00/11	9,175.00/30	450.00 <sup>2</sup>	425.00 <sup>2</sup>
Average	1,991.32	449.05	9,068.18	450.00	408.18
May:					
Low/date	1,880.00/02	408.00/01	9,200.00 <sup>2</sup>	450.00 <sup>2</sup>	330.00/30
High/date	2,185.00/23	456.00/22	9,900.00 <sup>2</sup>	450.00 <sup>2</sup>	390.00 <sup>2</sup>
Average	2,053.57	438.29	9,553.57	450.00	360.48
Year-to-date:					
Low/date	1,534.00 Jan. 7	368.00 Jan. 22	6,850.00 Jan. 2	450.00 Jan.—May <sup>2</sup>	330.00 May 30
High/date	2,275.00 Mar. 4	585.00 Mar. 4	9,900.00 May <sup>2</sup>	450.00 Jan.—May <sup>2</sup>	440.00 Feb. and Mar. <sup>2</sup>
Average	1,935.88	445.76	8,692.73	450.00	409.78

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

<sup>2</sup>Occured 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	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:												
February	49	1,500	6,980	375,000	541	32,100	862	44,600	10,200	46,300	1	281
March	81	2,870	4,410	248,000	133	7,710	815	41,200	5,740	30,900	3	93
April:												
Australia	--	--	--	--	--	--	187	12,100	--	--	(2)	8
Belgium	--	--	288	17,900	--	--	--	--	--	--	--	--
Bolivia	--	--	--	--	--	--	--	--	951 <sup>3</sup>	108	--	--
Brazil	--	--	--	--	--	--	--	--	2,310 <sup>3</sup>	4,100	--	--
Canada	1	67	--	--	(2)	7	37	2,070	57 <sup>3</sup>	4,440	1 <sup>3</sup>	10
Chile	--	--	--	--	--	--	--	--	4,900 <sup>3</sup>	248	--	--
Colombia	--	--	--	--	52	2,210	--	--	41 <sup>3</sup>	967	--	--
France	--	--	--	--	--	--	--	--	12	556	--	--
Germany	--	--	159	10,300	82	5,950	283 <sup>3</sup>	5,750	157 <sup>3</sup>	21,800	--	--
Greece	--	--	--	--	--	--	--	--	6	370	--	--
Hong Kong	--	--	--	--	--	--	--	--	1,770 <sup>3</sup>	2,640	--	--
India	(2)	19	--	--	--	--	(2) <sup>3</sup>	6	--	--	--	--
Italy	2	115	107	6,850	--	--	81	5,290	(2)	3	--	--
Japan	--	--	--	--	(2)	25	2 <sup>3</sup>	33	--	--	--	--
Jordan	--	--	--	--	--	--	--	--	26 <sup>3</sup>	230	--	--
Korea, Republic of	--	--	--	--	--	--	--	--	1,790 <sup>3</sup>	952	--	--
Mexico	--	--	--	--	4	206	--	--	(2)	6	--	--
Norway	--	--	41	2,630	--	--	--	--	--	--	--	--
Philippines	--	--	--	--	--	--	--	--	19 <sup>3</sup>	445	--	--
Russia	--	--	66	4,060	49	3,020	--	--	--	--	--	--
South Africa	1	34	1,620	104,000	--	--	87 <sup>3</sup>	1,280	--	--	--	--
Switzerland	--	--	--	--	--	--	5 <sup>3</sup>	137	--	--	3 <sup>3</sup>	86
Taiwan	--	--	--	--	--	--	--	--	19	1,100	--	--
Thailand	1	45	--	--	--	--	--	--	281	19,000	--	--
United Kingdom	--	--	1,100	70,200	(2)	29	43	2,550	102 <sup>3</sup>	1,520	--	--
Venezuela	--	--	--	--	--	--	--	--	95 <sup>3</sup>	102	--	--
Other	--	--	--	--	--	21	3	60	9	151	--	--
Total	5	281	3,380	216,000	188	11,500	727	29,300	12,500	58,700	4	104
Year to date	174	5,430	17,500	975,000	991	56,400	3,140	140,000	40,200	174,000	8	486

-- 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.

<sup>3</sup>All 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 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)
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:												
February	9,870	125,000	1,080	17,800	189	2,820	--	--	4,520	53,900	1,140	239,000
March	8,120	121,000	524	13,300	356	5,300	--	--	4,210	50,600	1,350	296,000
April:												
Belgium	350	5,640	18	279	--	--	--	--	31	448	28	6,190
Canada	175	4,120	--	--	--	--	--	--	--	--	--	--
China	--	--	--	--	(3) <sup>4</sup>	3	--	--	--	--	--	--
Germany	50	796	9	161	28	408	--	--	3,650	34,200	132	9,250
Italy	100	1,490	3	64	--	--	--	--	--	--	16	4,440
Japan	400 <sup>4</sup>	307	3	50	--	--	--	--	46	474	1	54
Mexico	--	--	--	--	7	132	--	--	--	--	--	--
Netherlands	--	--	--	--	1	14	--	--	--	--	--	--
Norway	368	5,380	--	--	--	--	--	--	--	--	--	--
Russia	1,940	28,900	236	3,430	--	--	--	--	15	211	114	32,600
South Africa	1,850	28,200	16	235	67	909	--	--	461	5,790	335	84,300
Switzerland	--	--	21	426	--	--	--	--	--	--	--	--
Taiwan	27 <sup>4</sup>	694	--	--	--	--	--	--	--	--	--	--
United Arab	--	--	--	--	--	--	--	--	--	--	(3)	10
United Kingdom	1,600	22,400	10	219	74	1,150	--	--	66	903	218	63,900
Total	6,850	98,000	315	4,870	178	2,610	--	--	4,270	42,100	845	201,000
Year to date	36,300	480,000	2,930	49,000	877	13,000	4	46	15,400	172,000	4,730	947,000

-- 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.

<sup>4</sup>All 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 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	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)
2007	28,900	\$763,000	54,400	\$924,000	41,800	\$298,000	8,190	\$145,000	2,210	\$401,000
2008:										
February	1,640	72,000	6,370	108,000	2,980	25,600	158	2,260	320	48,500
March	474	19,700	5,690	99,600	2,360	22,900	394	6,080	389	50,400
April:										
Australia	1 <sup>4</sup>	102	--	--	41	450	--	--	--	--
Austria	17 <sup>4</sup>	231	--	--	--	--	--	--	--	--
Belgium	11 <sup>4</sup>	410	58 <sup>4</sup>	1,740	40	644	--	--	--	--
Brazil	30 <sup>4</sup>	1,110	--	--	49	635	--	--	13	3,780
Bulgaria	(5) <sup>4</sup>	7	--	--	6 <sup>4</sup>	6	--	--	--	--
Canada	47 <sup>4</sup>	1,230	84 <sup>4</sup>	2,520	292	2,130	(5) <sup>4</sup>	3	(5)	29
China	218 <sup>4</sup>	9,640	--	--	23	261	22	439	14	4,100
Colombia	--	--	--	--	2	39	--	--	--	--
Cyprus	20	1,330	--	--	1 <sup>4</sup>	3	(5) <sup>4</sup>	4	--	--
Denmark	(5) <sup>4</sup>	9	--	--	4	74	--	--	--	--
Egypt	7 <sup>4</sup>	62	--	--	--	--	--	--	--	--
France	43 <sup>4</sup>	1,730	--	--	45	364	--	--	--	--
Germany	477 <sup>4</sup>	19,100	2,890 <sup>4</sup>	28,000	368 <sup>4</sup>	2,100	4 <sup>4</sup>	22	--	--
Hong Kong	4 <sup>4</sup>	660	--	--	69	705	39	463	--	--
India	5 <sup>4</sup>	265	--	--	4	30	--	--	--	--
Ireland	32 <sup>4</sup>	1,150	--	--	8 <sup>4</sup>	29	--	--	--	--
Israel	--	--	--	--	241 <sup>4</sup>	948	--	--	--	--
Italy	77 <sup>4</sup>	4,850	2 <sup>4</sup>	6	182	1,480	16 <sup>4</sup>	226	7	130
Japan	355	20,000	252	17,700	55	638	137 <sup>4</sup>	1,810	16	4,510
Korea, Republic of	10 <sup>4</sup>	251	--	--	9 <sup>4</sup>	15	--	--	--	--
Kuwait	--	--	--	--	7	100	--	--	--	--
Mexico	7 <sup>4</sup>	179	--	--	6	62	11 <sup>4</sup>	305	1	140
Morocco	1 <sup>4</sup>	10	--	--	1	13	--	--	--	--
Netherlands	(5) <sup>4</sup>	59	--	--	3	33	(5) <sup>4</sup>	11	--	--
New Zealand	(5) <sup>4</sup>	7	--	--	8	157	--	--	--	--
Norway	3 <sup>4</sup>	75	--	--	4	90	--	--	--	--
Philippines	(5) <sup>4</sup>	56	--	--	(5) <sup>4</sup>	9	--	--	--	--
Poland	1 <sup>4</sup>	35	--	--	--	--	--	--	--	--
Romania	(5) <sup>4</sup>	9	--	--	4	51	--	--	--	--
Russia	--	--	--	--	5	34	--	--	--	--
Saudi Arabia	--	--	--	--	2	31	--	--	--	--
Singapore	11 <sup>4</sup>	218	--	--	2	36	129	1,300	--	--
Spain	(5) <sup>4</sup>	5	--	--	7	99	--	--	--	--
Sweden	1 <sup>4</sup>	54	--	--	2 <sup>4</sup>	19	--	--	--	--
Switzerland	7 <sup>4</sup>	416	2	138	18	166	(5) <sup>4</sup>	5	--	--
Taiwan	93 <sup>4</sup>	3,360	--	--	58	769	--	--	4	1,060
Thailand	(5) <sup>4</sup>	60	--	--	7	92	--	--	--	--
United Kingdom	70 <sup>4</sup>	2,600	2,260 <sup>4</sup>	55,900	243	2,980	635 <sup>4</sup>	8,020	4	576
Other	(5) <sup>4</sup>	19	--	--	9 <sup>4</sup>	123	--	--	(5)	7
Total	1,550	69,400	5,540	106,000	1,830	15,400	993	12,600	58	14,300
Year to date	4,090	177,000	23,000	408,000	9,970	85,000	1,870	24,400	1,080	144,000

-- 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>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.