

# Mineral Industry Surveys

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## PLATINUM-GROUP METALS IN JANUARY 2011

Engelhard's average January prices of platinum, palladium, and rhodium increased by 4%, 5%, and 3%, respectively, compared with the average December prices. Platinum reached its highest price since mid-2008. The average monthly price of iridium increased by 6% from that of December 2010, and that of ruthenium remained unchanged during the same period. The iridium price increased steadily from the beginning to the end of the month, and reached its highest level in at least 18 years as the result of strong industrial purchasing, largely from Asia. Iridium crucibles are used for the production of sapphire crystals for LED displays for televisions and handheld devices. Iridium is used increasingly in the chloralkali industry in China, where environmental legislation required transition from mercury-based chloralkali production (Johnson Matthey plc, 2011a).

Stillwater Mining Co. (Billings, MT) produced 15,100 kilograms (kg) of platinum and palladium during 2010 from its mines in Montana. Production included 4,150 kg of platinum and palladium from the East Boulder Mine and 10,900 kg of platinum and palladium from the Stillwater Mine. Production was 8% less than that of 2009 owing to lower ore grade at the Stillwater Mine. Mining productivity in terms of mill feed was similar to that of 2009, at 2,130 metric tons per day (t/d) at the Stillwater Mine and 1,100 t/d at the East Boulder Mine. In 2011, Stillwater planned to resume mining on the east side of the Stillwater Mine, which has higher ore grades. In addition, infrastructure development was planned at both mines in 2011 (Stillwater Mining Co., 2011).

OJSC MMC Norilsk Nickel (Moscow, Russia) produced 89,000 kg of palladium and 21,600 kg of platinum in 2010, a slight increase for palladium and a 5% increase for platinum compared with 2009 production. In 2011, Norilsk planned to produce 88,600 to 89,300 kg of palladium and 21,600 to 22,400 kg of platinum (OJSC MMC Norilsk Nickel, 2011).

North American Palladium Ltd. (Toronto, Ontario, Canada) produced 2,960 kg of palladium in 2010 from its Lac des Iles Mine and planned to expand the mine and increase production by 75% during 2011 to 5,130 to 5,440 kg of palladium. North American Palladium resumed mining in April 2010 after having placed the mine on care-and-maintenance status in October 2008 in response to low metal prices (North American Palladium Ltd., 2011).

Heavy rains in South Africa led to a decrease in coal mining, which caused the state-run power company, Eskom, to face the possibility of power shortages. Power shortages in early 2008 resulted in platinum mines being shut down for 1 week, which led to supply fears and soaring prices of platinum-group metals. Eskom was buying high-quality coal for affected power stations and was taking measures to improve coal handling in wet weather in an effort to avoid power outages (Johnson Matthey plc, 2011b).

### **References Cited**

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 $\label{eq:table1} \textbf{TABLE 1}$  PLATINUM-GROUP METALS PRICES  $^1$ 

# (Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium		
2010:							
Low/date	1,482.00 Feb. 8	397.00 Feb. 5	2,120.00 Aug. <sup>2</sup>	420.00 Jan. <sup>2</sup>	170.00 Jan. <sup>2</sup>		
High/date	1,790.00 Nov. 9	800.00 Dec. 30 and 31	2,975.00 Apr. 15 and 16	780.00 Dec. <sup>2</sup>	245.00 Apr.–Jun. <sup>2</sup>		
Average	1,615.56	530.61	2,459.07	642.15	198.45		
2011, January:							
Low/date	1,718.00/5	755.00/10	$2,425.00^2$	780.00/3 and 4	$180.00^2$		
High/date	1,848.00/19	828.00/19	2,500.00/31	865.00/28 and 31	180.00 <sup>2</sup>		
Average	1,790.62	797.48	2,437.62	815.95	180.00		

<sup>&</sup>lt;sup>1</sup>Quotes from Engelhard.

Source: Platts Metals Week.

<sup>&</sup>lt;sup>2</sup>Occurred multiple days in month(s) listed.

 $\label{eq:table 2} \textbf{U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY}^{\textbf{I}}$ 

(Kilograms metal content, unless otherwise specified)

	Pla	tinum			C	Other			Pla	itinum		
	grain and nuggets		Platinum sponge		unwrought platinum		Platinum, other		waste and scrap		Platinum coins	
	<del></del>	Value		Value		Value		Value		Value		Value
Period and country	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)
2009	16	\$474	37,100	\$1,420,000	3,770	\$129,000	5,910	\$174,000	136,000	\$334,000	512	\$20,500
2010:	=											
October	16	821	2,190	114,000	322	11,200	238	9,520	8,570	59,100	(2)	12
November	16	802	3,660	192,000	356	13,200	212	7,890	16,100	37,900	(2)	7
December:	= -											
Argentina	 				3	200						
Belgium	 		102	5,420								
Brazil									93	2,690		
Canada	1	25					9	524	1,510	2,600	(2)	3
China	 						10	196	7	356		
Colombia					139	6,410			8	89		
Czech Republic	 						3	130				
France									30	769		
Germany	48	2,160	17	569	2	40	202	7,670	10,500	27,000		
Israel					3	81			7	255		
Italy			119	4,800			(2)	23				
Japan					5	152	2	125	461	7,350		
Korea, Republic of			112	6,130					28	1,240		
Mexico					5	220						
Norway			164	9,010								
Philippines									7	181		
Qatar									28	868		
Russia	15	802	100	5,380								
Singapore							8	437	7	381		
South Africa			1,140	62,600	8	392						
Switzerland			1	35			11	604				
Taiwan	- 				4	216	2	32	173	9,840		
United Kingdom			84	4,450	1	42	6	292	135	6,360	10	771
Other	<del></del> _				(2)	15	1	34	77	249	(2)	8
Total	65	2,990	1,840	98,400	170	7,770	254	10,100	13,000	60,200	10	782
Year to date	644	16,700	31,700	1,590,000	3,790	151,000	4,650	183,000	111,000	565,000	46	2,760

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

 $\label{eq:table 3} \text{U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY}^1$ 

(Kilograms metal content, unless otherwise specified)

	Unwrought palladium		Palladium, other		Iridium <sup>2</sup>		Osmium <sup>2</sup>		Ruthenium <sup>2</sup>		Rhodium <sup>2</sup>	
		Value		Value		Value	-	Value		Value		Value
Period and country	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)
2009	62,300	\$568,000	7,350	\$62,300	1,520	\$20,800	68	\$551	21,200	\$55,700	11,200	\$530,000
2010:	_											
October	5,810	107,000	1,140	22,200	257	5,690			378	2,060	1,150	80,300
November	4,220	82,800	588	15,700	389	8,690			830	4,730	869	61,900
December:	_											
Belgium	153	3,290									28	1,860
Canada			207	5,740								
China	60	1,360										
Germany	94	1,640	6	159	1	20			284	1,620	67	4,350
Italy	208	5,060	160	3,470							6	228
Japan	177	1,470	1	10					20	217		
Netherlands					(3)	17						
Norway	354	7,000									18	1,240
Russia	766	17,000	412	9,780							75	5,450
South Africa	1,990	44,500	92	1,700	434	6,800			663	3,490	526	38,500
Switzerland	- 		12	387								
United Kingdom	430	9,820	10	232	13	325			268	1,520	3	236
Total	4,230	91,100	899	21,500	448	7,160			1,240	6,840	723	51,800
Year to date	64,400	990,000	6,310	122,000	3,530	65,900	76	612	14,100	82,500	12,800	914,000

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

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

<sup>&</sup>lt;sup>2</sup>Unwrought and other forms.

<sup>3</sup>Less than ½ unit.

 $\label{eq:table 4} \textbf{U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY}^1$ 

(Kilograms of metal content, unless otherwise specified)

		Platinum					Iridium, osmium,				
	Platinum <sup>2</sup>		waste and scrap		Pal	ladium <sup>2</sup>	and ru	thenium <sup>2, 3</sup>	Rhodium <sup>2</sup>		
		Value		Value		Value		Value		Value	
Period and country	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	
2009	15,600	\$522,000	31,600	\$523,000	30,300	\$229,000	4,020	\$34,400	1,220	\$48,400	
2010:	=										
October	1,550	73,600	5,290	149,000	2,350	27,200	98	1,080	149	8,600	
November	1,430	71,100	2,020	75,700	3,230	31,900	159	1,840	181	12,500	
December:	=										
Australia	1	53			95	759					
Austria	4	82			3	33					
Belgium	6	261	189	691	8	197			22	1,480	
Brazil	(4)	9			113	2,610					
Canada	29	1,070			602	5,760			(4)	5	
China	13	647	27	1,370	594	10,500	31	190	81	6,550	
Czech Republic					89	174					
Denmark					34	527					
France	5	100	1	4	40	401					
Germany	448	19,500	339	7,710	379	3,110	2	15	31	2,330	
Hong Kong	12	525			141	1,850	22	89	74	5,060	
India	43	2,320			3	64			(4)	47	
Ireland	12	514			(4)	3	1	3			
Israel	1	45			156	849					
Italy	134	7,450			38	589					
Japan	61	1,170	155	5,230	157	2,530	18	138	7	460	
Korea, Republic of	4	185			51	408	2	23			
Mexico	42	1,170			87	258	1	16			
Netherlands	(4)	14			2	21					
New Zealand	(4)	7			6	75					
Norway	_ 2	51			2	32					
Philippines	3	149			3	75					
Romania	(4)	5			1	3					
Singapore	50	2,940			12	65	3	67	(4)	5	
South Africa	-	·	133	1,800	2	29					
Sweden	1	37		, 	1	5					
Switzerland	- 6	237	2,170	91,200	138	3,100	1	3			
Taiwan	5	192			80	1,700	4	24			
Thailand	(4)	81			51	246			(4)	9	
United Kingdom	38	1,990	1,730	69,800	603	2,930					
Other	- 4	144			19	270					
Total	924	41,000	4,740	178,000	3,510	39,100	84	567	215	15,900	
Year to date	16,900	775,000	38,200	1,100,000	38,100	419,000	3,720	36,800	2,320	136,000	

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Unwrought and other forms.

<sup>&</sup>lt;sup>3</sup>Gross weight.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.