

# Mineral Industry Surveys

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# **PRECIOUS METALS IN DECEMBER 2000**

U.S. mines produced 30,100 kilograms (kg) of gold and 153,000 kg of silver in December 2000. Compared with November, production of gold was up 41% in Alaska and 20% in Nevada, and silver production was up 6% in Nevada.

## Gold

**Domestic.**—Itronics Metallurgical, Inc., headquartered in Reno, NV, improved its refining process for photographic waste to permit the recovery of gold-bearing materials. The process also extracted silver and other heavy metals from liquid photographic waste and recovered materials to make fertilizers (American Metal Market, 2000e).

*International.*—Dayton Mining Corp. decided to close its Andacollo gold mine in Chile. The mine was shut down permanently, and its assets will be liquidated. The closure decision followed the September 29 suspension of mining, crushing, and stacking operations. Heap-leaching pads containing residual gold will be used to produce an estimated 780 kg (25,000 troy ounces) of gold in 2001 (Mining Journal, 2000a).

Barrick Gold Corp. delayed the construction of its Pascua-Lama gold project in Chile and Argentina. Work will continue, however, on the site's development plan. The mine had been scheduled to produce 800,000 ounces of gold in 2003. A tailings facility design, the last step in obtaining a permit, was submitted prior to Barrick's decision to delay work (American Metal Market, 2000d).

South Africa's AngloGold, the world's largest gold producer, sold its Elandsrand and Deelkraal gold mines to Harmony Gold Mining Company. Employees of both mines retained their jobs. The acquisition boosted Harmony's annual gold output to 84,000 kg (2.7 million ounces) from 68,000 kg (2.2 million ounces) and provided an extra 310,000 kg (10 million ounces) of gold reserves. Harmony is South Africa's third largest gold producer (American Metal Market, 2000b).

Australia's gold production was 75,000 kg (2.4 million ounces) in the third quarter of 2000. There has been a decline in the number of gold-producing operations but no significant reduction in gold output. Smaller gold treatment operations have been placed on care-and-maintenance and could be brought back into service. Kalgoorlie Super Pit remained Australia's largest gold mine; the Jundee/Nimary operation was the second largest, followed by the Granny Smith gold mine (Platt's Metals Week, 2000a).

The San Martin gold mine in Honduras made its first shipment of gold. The 125 kg (4,000 ounces) gold shipment came 2 months after mining began by Minerales Entre Mares de Honduras, a wholly-owned subsidiary of Glamis Gold Ltd. Gold production is projected at 3,500 kg (13,000 ounces) for 2001 at a total cash cost of \$113 per ounce of gold (American Metal Market, 2000f).

Gold lease rates began rising slowly early in October 2000. The 1-month gold lease rate rose from 0.61% in early October, to 0.7% in early November, and to 0.95% on December 8. The 6-month gold lease rate fluctuated between 0.85% and 1.1% during the same period. The 1-year gold lease rate in 2000 remained in the 1.3% to 1.5% range, but rose from 1.2% on December 4 to 1.45% on December 8 (Platt's Metals Week, 2000c).

The London Bullion Market Association's gold clearing statistics fell to new lows during November. Gold transfers were down about 1.5% in comparison with those of October, falling to a daily average of 18.6 million ounces (579,000 kg). The daily average number of gold transfers fell from 792 to 721. In addition, the quantity of gold transferred in November 2000 was 26% greater than that of November 1999 (American Metal Market, 2000c).

The gold e-business known as GoldAvenue launched its gold information center on www.goldavenue.com. The information center is divided into four sections: gold encyclopedia, gold diary, fashion, and arts and culture. GoldAvenue was formed in April 2000 by AngloGold Ltd., J.P. Morgan & Company (the financial services company and precious metals trader), and Produits Artistiques de Metaux Precieux (the world's largest private gold refiner) (American Metal Market, 2000a).

#### Silver

The Defense Logistics Agency (DLA) delivered all of the remaining 466,600 kg of silver in the National Defense Stockpile to the United States Mint for use in its coinage program. Under an agreement with the U.S. Treasury Department, the metal will continue to be carried as DLA stocks until the metal is consumed by the Mint. This marks the end of the silver stockpile era, which at times was a hotly debated issue between silver users and producers. The stockpile has been managed by the Defense National Stockpile Center, a branch of the DLA since the late 1960s. Part of the original 5,132 metric tons (t) of silver in the stockpile was auctioned in 1981, and the remainder has been used in the Mint's American Eagle coinage program. With the silver about to be exhausted, the Washington-based Silver Institute turned bullish on the metal. The Institute concluded that when the Mint depletes its silver reserves, it must purchase silver for its coinage program on the open market, and thereby boost silver demand by up to 1%. The Silver Users Association (SUA) disagreed, stating that the metal has been merely moved from one government warehouse to another and that the Mint has been using only about 218 metric tons per year. At that rate, it would take about 6 years to use up the remaining Mint silver, which the SUA estimates at about 1,400 t (Platt's Metals Week, 2000b).

**Update.**—On February 16, 2001, Sunshine Mining and Refining Company announced that the Sunshine silver mine in Idaho was closed. The closing came shortly after Sunshine was notified by its primary customer that it was closing the smelter to which the Sunshine Mine shipped concentrates, and that the smelter would no longer accept deliveries. Prior to the announcement, the mine's management sought alternative economic markets for the mine's production; however, the company was not able to secure an alternate and economically viable contract for its concentrates. The mine was placed on care-and-maintenance and Sunshine was forced to initiate a mass layoff of its employees. The mine produced 40,400 kg of silver in the first quarter of 2000 (Sunshine Mining Company, 2001).

#### **Platinum-Group Metals**

Prices for PGM were on the rise in the first week of December, with prices for palladium, platinum, and rhodium making significant gains. Based on the London fix, palladium rose \$36 to reach \$828 per ounce on December 1, and platinum rose \$18 to reach \$607 per ounce during the same period. Similar price increases occurred on the NYMEX (New York Mercantile Exchange). Quotes for rhodium in the dealer market were as high as \$2,025 per ounce, up \$50 for the first week in December. Some market sources cited pent-up demand and concerns about supplies from Russia for the upswing. Others cited speculators for the rally, claiming that some hedge funds were buying PGM in the physical market. This triggered some short-covering on TOCOM (Tokyo Commodities Exchange), which further fueled the rally (Platt's Metals Week, 2000d). According to Johnson Matthey, available platinum supply in 2000 was 168,960 kg, up from 151,470 kg in 1999. While Russian exports of platinum in 2000 increased by 49% to 34,200 kg, palladium exports were estimated by Johnson Matthey to have decreased from 167,960 kg in 1999 to 161,740 kg in 2000 (Johnson Matthey, 2000).

Anglo American Platinum has begun development of its Waterval project, which is expected to increase annual production of platinum by 12,300 kg at its Rustenburg Section. The Waterval project will mine the UG2 seam, utilizing infrastructure at the Brakspruit, Bleskop, and Paardekraal vertical shafts initially established to mine the Merensky Reef. Also, a new Waterval mine will be developed to produce 207,000 tons of UG2 ore per month, with access via declines from the surface. A new 400,000-ton-per-month concentrator will be constructed to treat the metallurgically difficult UG2 ore (Engineering & Mining Journal, 2000).

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#### TABLE 1

#### MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

				Other	
Gold	Alaska	California	Nevada	States 2/	Total
1999: p/	_				
December	1,260	1,810	21,900	4,620	29,600
January-December	15,700	17,500	257,000	51,300	341,000
2000:	_				
January	1,200	1,470	23,200	4,200	30,000
February	1,140	1,390	21,700	4,030	28,300
March	1,200	1,390	22,600	4,400	29,600
April	1,190	1,280	21,400	4,240	28,100
May	1,190	1,360	19,500	4,540	26,600
June	1,190	1,470	21,400	4,710	28,800
July	1,460	1,470	18,900	4,410	26,300
August	1,460	1,400	20,800	4,810	28,500
September	1,510	1,460	22,200	3,900	29,100
October	1,510	1,360	19,000	5,680	27,600
November	1,020	1,170	19,100	5,900	24,700
December	1,440	1,170	23,000	4,450	30,100
January-December	15,500	16,400	253,000	55,300	338,000
				Other	
Silver	Arizona	Idaho	Nevada	States 3/	Total
1999: p/	_				
December	14,700	34,400	75,100	61,800	187,000
January-December	183,000	417,000	577,000	769,000	1,950,000
2000:					
January	W	34,400	58,300	75,200	168,000
February	W	34,300	63,100	69,900	167,000
March	W	34,300	71,000	75,000	180,000
April	W	34,300	57,500	72,900	165,000
May	W	34,300	73,800	73,400	182,000
June	W	34,200	59,800	74,500	168,000
July	W	34,200	56,700	71,200	162,000
August	W	34,800	53,100	73,200	161,000
September	W	34,500	53,700	69,500	158,000
October	W	34,500	45,900	66,000	146,000
November	- W	34,500	56,700	64,300	156,000
December	- W	34,500	60,000	58,700	153,000
January-December	W	413,000	710,000	844,000	1,970,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data, included with "Other States."

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

2/ Includes Arizona, Colorado, Idaho, Montana, New Mexico, South Carolina, South Dakota, Utah, and Washington.3/ Includes Alaska, California, Colorado, Missouri, Montana, New Mexico, New York, South Carolina, South

Dakota, Tennessee, Utah, Washington, and State indicated by symbol W.

# TABLE 2SELECTED PRECIOUS METAL PRICES

## (Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
Engelhard Industries:				
1999:				
Low/date	253.88 (July 20)	4.91 (January 4, April 14,		
		May 28, June 4)	344.00 (January 28)	293.00 (May 4)
High/date	326.70 (October 5)	5.75 (September 28)	457.00 (November 16)	456.00 (December 29)
Average	279.91	5.25	378.94	363.20
2000:				
November:				
Low/date	265.20/8	4.66/29	589.00/1 and 22	779.00/1
High/date	271.06/28	4.81/2	610/30	818.00/30
Average	267.15	4.72	599.30	792.55
December:				
Low/date	270.41/14	4.59/19	601.00/6	838.00/1
High/date	276.17/27	4.76/7	625.00/13 and 28	985.00/27
Average	272.92	4.67	614.95	928.55
Year to date:				
Low/date	264.90 (October 27)	4.59 (December 19)	416.00 (January 6)	437.00 (January 6)
High/date	313.88 (February 7)	5.53 (February 7)	625.00 (December 13 and 28)	985.00 (December 27)
Average	280.10	5.00	549.31	691.84
2001:				
January:				
Low/date	263.95/29	4.53/3	607.00/31	973.30/2
High/date	272.21/02	4.87/30	645.00/10 and 15	1100.00/26
Average	266.59	4.70	625.50	1054.60
Handy and Harman:				
1999	278.81	5.25	XX	XX
2000:				
November	266.05	4.72	XX	XX
December	271.68	4.66	XX	XX
Average year to date	278.96	5.00	XX	XX
2001:				
January	265.58	4.70	XX	XX
London Final: 1/				
1999	278.77	5.22	XX	XX
2000:				
November	266.01	4.68	XX	XX
December	271.54	4.64	XX	XX
Average year to date	279.04	4.95	XX	XX
2001:				
January	265.49	4.66	XX	XX

XX Not applicable.

1/ Silver price reported as "London Spot/US Equiv."

Source: Platt's Metals Week.

#### TABLE 3 U.S. IMPORTS AND EXPORTS OF GOLD 1/

## (Kilograms of gold content, unless otherwise specified)

	Ores and	Doré and	Refined	Ash and		Waste and scrap	Metal powder	Gold compounds
Period and country	concentrates 2/	precipitates	bullion 3/	residues	Total 4/	(gross weight)	(gross weight)	(gross weight)
Imports for consumption:								
1999	117	24,700	196,000	133	221,000	30,500	5,500	9,400
2000:								
September	8	1,570	17,600	(5/)	19,100	1,720	1,320	178
October	15	1,330	16,900	20	18,300	1,040	562	157
November:								
Brazil			4,790		4,790	(5/)		201
Canada			12,100	10	12,100	130	894	
Chile		82	525	13	620			
Colombia		45	189		233			
Dominican Republic						1,020		
Honduras		183			183	12	115	
Mexico		253	84	1	338	326	3	
Peru		815			815			
Sierra Leone							150	
Switzerland			210		210		4	
United Kingdom		3,760	3		3,770			
Other	1	86	276		359	156	4	76
Total	1	5,220	18,200	24	23,500	1,650	1,170	208
Year to date	64	32,100	169,000	59	202,000	16,900	6,110	7,840
Exports:		,			,		-,	.,
1999	117	87,300	435,000		523,000	40,000	270	561,000
2000:		0,,000	100,000		020,000	10,000	270	201,000
September		6,120	42,300		48,400	7,850	441	20,200
October	13	7,890	36,100		44,000	9,180	28	28,900
November:		,,070	20,100		1,000	>,100	20	20,700
Belgium						282		
Brazil			402		402			
British Virgin Islands							1	
Canada		457	7		464	3,250	7	150,000
Dominican Republic		+57	,			5,250	,	326
Germany	 38		5		43	220		520
Hong Kong	58				45		3	
India							1	
Israel								26,800
Italy			1			109		20,800
							3	
Japan K. D. I.V. G			4		4		3	1
Korea, Republic of			535		535			
Mexico			1,700		1,700	(5/)		5,120
Netherlands Antilles			1		1		1	
Peru			493		493			
Philippines	3				3			
Switzerland		8,440	30,500		39,000			
United Arab Emirates			790		790			
United Kingdom			11,600		11,600	1,220	1	371
Other		(5/)	69		69	61	(5/)	58
Total	41	8,900	46,100		55,100	5,140	16	183,000
Year to date	745	97,000	390,000		488,000	58,800	1,100	1,360,000

<sup>--</sup> Zero.

 $1/\operatorname{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes gold content of base metal ores, concentrates, and matte imported for refining.

3/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

4/ "Waste and scrap," "Metal powder," or " Gold compounds" not included in "Total."

5/ Less than 1/2 unit.

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

# TABLE 4 U.S. IMPORTS AND EXPORTS OF SILVER, REFINED AND AS NITRATE 1/

## (Kilograms)

	Bullion	Doré	Total	Other unwrought silver	Metal powder	Silver nitrate
Period and country	(silver content)	(silver content)	(silver content)	(gross weight)	(gross weight)	(gross weight)
Imports for consumption:						
1999	2,660,000	407,000	3,070,000	126,000	120,000	4,480
2000:						
September	235,000	1,110	236,000	20,700	15,800	1,520
October	338,000		338,000	6,650	8,490	9,320
November:						
Belgium	859		859			4,320
Canada	116,000 2/		116,000	20,500 2/		59
Chile	2,500 2/	810	3,310			
Dominican Republic					113	
Germany					1,290	
Japan					12,600	80 2
Mexico	88,600		88,600	9,330		
Panama	95		95			
Peru				353 2/		
United Kingdom	18,600		18,600			
Other					16 2/	
Total	227,000	810	228,000	30,200	14,000	4,460
Year to date	3,580,000	70,200	3,650,000	185,000	217,000	23,500
Exports:						
1999	481,000	64,400	545,000	75,100	324,000	62,500
2000:						
September	64,500	662	65,100	4,730	37,700	11,400
October	11,600	593	12,200	6,120	51,200	23,100
November:	_					
Canada	1,120		1,120	82	1,820	11,300
China					2,900	4,860
Dominican Republic				262		
France					2,930 2/	
Germany				1,080	4,990	
Guatemala	97		97			
Hong Kong				35 2/		
Israel					292 2/	
Japan	18,900		18,900	49	11,200	
Korea, Republic of				882	1,620	
Lebanon					119	
Mexico	72		72	30	1,190	280
Netherlands				26 2/		
Singapore		27	27		131	
Switzerland		763	763			
Taiwan				871	7,870 2/	
United Kingdom		364	364	551	1,380 2/	
Uruguay	1,730		1,730			
Other				65		
Total	21,900	1,160	23,100	3,930	37,500	16,400
Year to date	272,000	35,000	307,000	56,000	396,000	205,000

-- Zero.

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

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

#### TABLE 5

## U.S. IMPORTS AND EXPORTS OF SILVER, RAW, SEMIMANUFACTURED, AND WASTE AND SCRAP 1/

## (Kilograms of silver content, unless otherwise specified)

Period and country         concentrates         residues         Total         (gross weight)         (gross weight)           Inposts for consumption:         10,800         2,750         101,000         115,000         137,000           2000:         -         -         10,100         10,100         32,500           October         -         -         10,200         10,200         9,180           November:         -         -         10,200         10,200         9,180           Australia         -         -         -         -         -           Brazia         -         -         -         -         -         -           Comada         -         -         -         -         -         -         -           Conada         -		Silver ores and	Base metal ores and	Ash and		Semimanu- factured form 2/ 3/	Waste and scrap
1999         10,800         2,750         101,000         115,000         137,000           2000:         -         -         1,010         1,010         32,500           October         -         -         1,010         1,010         32,500           November:         -         -         1,88         8         -           Australia         -         -         1,800         2,750         101,000         115,000         1,800           November:         -         -         1,810         1,810         37,400         -		concentrates	concentrates	residues	Total	(gross weight)	(gross weight)
2000:							
		. 10,800	2,750	101,000	115,000	137,000	1,640,000
November:         -         -         188         188         -           Brazil         -							183,000
Australia         -         -         188         188         -           Brazil         -         -         -         -         -         -         622           Canada         -         -         1,510         871         4/           China         -         -         -         -         -         622           Costa Rica         -         -         -         -         -         -         -           Dominican Republic         - </td <td></td> <td></td> <td></td> <td>10,200</td> <td>10,200</td> <td>9,180</td> <td>132,000</td>				10,200	10,200	9,180	132,000
Belgium         -         -         -         -         -         -         -         -         622           Canada         -         -         1,510         1,510         871 4/         -         622           Conada         -         -         -         -         -         -         622           Costa Rica         -<		-					
Brazil         -         -         -         -         622           Canada         -         -         1.510         1571         4/           China         -         -         -         -         -           Dominican Republic         -         -         -         -         -           France         -         -         -         -         -         -           Germany         -         -         -         1.300         4/           India         -         -         -         1.300         4/           Mainsia         -         -         -         1.300         4/           Mainsia         -         -         -         1.300         4/           Mexico         -         -         -         1.00         853           Panama         -				188			2
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							20,800
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France         -         -         -         -         -         824           Germany         -         -         -         -         1,390 $4/$ Japan         -         -         -         -         128 $4/$ Japan         -         -         -         -         128 $4/$ Maximum         -         -         -         -         120 $128$ $4/$ Maximum         -         -         -         -         -         1100 $4/$ $533$ $7/$ <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4,130</td>							4,130
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$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$				1,540	1,540	853	91
United Kingdom           699         699         114 4/           Other            53 4/           Total           3,940         3,940         6,050           Year to date         1,420          46,900         48,300         117,000           Exports:           70,800           70,800           2000:            70,800         122,000           2000:            9,090           November:            9,090           November:            9,090           November:            313           Brazil            3,310           China            3,310           China            258           Italy            72           Japan							228
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$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Total						45,800
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Year to date	1,420		46,900	48,300	117,000	1,070,000
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		_					
September         2,290           2,290         9,530           October           9,090           November:           9,090           Belgium            9,090           Canada            313           China            3,310           China            3,310           China            3,310           Germany            3,310           Hong Kong            258           Italy            494 4/           Korea, Republic of            494 4/           Singapore            494 4/           South Africa               Sweden                Switzerland	1999	70,800			70,800	122,000	1,310,000
October            9,090           November:            9,090           Belgium            313           Brazil            313           Canada            496 4/           Canada            3,310           China            3,310           China            3,310           China            3,310           China            3,64/           Hong Kong            258           Italy            72           Japan            494/           Korea, Republic of            449           Singapore               Switzerland               Sw							
November:            313           Brazil            313           Canada            496 4/           Canada            3,310           China            3,310           China            3,310           Germany            36 4/           Hong Kong            258           Italy            72           Japan            49 4/           Korea, Republic of            49 4/           Singapore            849 4/           Switzerland               Switzerland            20 4/           Taiwan            448           United Kingdom            139 4/ <td></td> <td>2,290</td> <td></td> <td></td> <td>2,290</td> <td>9,530</td> <td>111,000</td>		2,290			2,290	9,530	111,000
Belgium          313         Brazil          496 4/         Canada          3,310         China          3,310         Germany          3,310         Hong Kong          36 4/         Hung Kong         258         Italy         72         Japan            Korea, Republic of            Mexico          849 4/         Singapore             Sweden             Switzerland          20 4/         Taiwan          448         United Kingdom          139 4/	October					9,090	152,000
Brazil          496 4/         Canada         3,310         China         3,310         Germany            Hong Kong         36 4/         Hung Kong         258         Italy         72         Japan         49 4/         Korea, Republic of            Mexico         849 4/         Singapore            Sweden            Switzerland            Taiwan          448         United Kingdom	November:						
Canada          3,310         China           3,310         Germany              Hong Kong          258         Italy          72         Japan          49 4/         Korea, Republic of          49 4/         Singapore          414         South Africa             Switzerland          20 4/         Taiwan          448         United Kingdom          139 4/	Belgium					313	16,400
China                 36 4/         Hong Kong           258        258         Italy           258         Japan          72         Mexico          49 4/         Singapore          849 4/         South Africa          414         South Africa             Switzerland          20 4/         Taiwan          448         United Kingdom          139 4/	Brazil					496 4/	
Germany          36 4/         Hong Kong          258         Italy          72         Japan          49 4/         Korea, Republic of          49 4/         Mexico          849 4/         Singapore          414         South Africa             Sweden          20 4/         Taiwan          448         United Kingdom          139 4/	Canada					3,310	36,500
Hong Kong          258         Italy          72         Japan          49 4/         Korea, Republic of          49 4/         Mexico          849 4/         Singapore          414         South Africa             Sweden             Switzerland          20 4/         Taiwan          448         United Kingdom          139 4/	China						34,900
Italy          72         Japan         49 4/         Korea, Republic of            Mexico          849 4/         Singapore          414         South Africa             Sweden             Switzerland          20 4/         Taiwan          448         United Kingdom          139 4/	Germany					36 4/	22,800
Japan          49 4/         Korea, Republic of             Mexico          849 4/         Singapore          414         South Africa          414         Sweden             Switzerland          20 4/         Taiwan          448         United Kingdom         139 4/	Hong Kong					258	118
Korea, Republic of              Mexico          849 4/         Singapore         414         South Africa            Sweden            Switzerland            Taiwan         20 4/         United Kingdom         139 4/	Italy					72	16,800
Korea, Republic of               Mexico          849 4/         Singapore          414         South Africa          414         Sweden             Switzerland          20 4/         Taiwan          448         United Kingdom         139 4/	Japan					49 4/	153
Singapore            414           South Africa                Sweden                 Switzerland            20 4/          448           United Kingdom            139 4/							11,400
South Africa                Sweden                 Switzerland             20 4/           Taiwan            448           United Kingdom           139 4/	Mexico					849 4/	
Sweden                 20 4/           Switzerland            20 4/         448           United Kingdom            448	Singapore					414	185
Sweden                 20 4/           Switzerland            20 4/         448           United Kingdom            448	· · ·						1,130
Switzerland            20 4/           Taiwan           448           United Kingdom           139 4/							9,840
Taiwan            448           United Kingdom           139 4/						20 4/	1,480
United Kingdom 139 4/							,
<u>0</u>							10,400
200 4/							
Total 6,680							162,000
$\frac{1000}{1000}$ Year to date $64,300$ $64,300$ 134,000		-					1,530,000

-- Zero.

 $1/\operatorname{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

2/ Containing 99.5% or more by weight of silver. Imports only.3/ Semimanufactured (including silver plated with gold or platinum) forms of silver.

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

# TABLE 6 U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS 1/

#### (Kilograms of metal content, unless otherwise specified)

	Platinum		Other		Platinum							
	grain and	Platinum	unwrought	Platinum,	waste and	Platinum	Unwrought	Palladium,		Unwrought	Unwrought	
Period and country	nuggets	sponge	platinum	other	scrap	coins	palladium	other	Iridium 2/	osmium	ruthenium	Rhodium 3/
1999	6,100	74,300	7,820	16,500	19,700	171	165,000	24,100	2,250	23	11,400	10,300
2000:												
September	290	5,520	218	896	225	(4/)	18,800	1,660	254		650	913
October 5/	116	5,730	539	975	208	8	14,700	1,160	373		729	2,180
November:												
Australia					20							
Austria												40
Belgium		149					555					86
Brazil					75							
Canada	2		1	47	54	(4/) 6/	250					(4/)
Chile								35				
China							589					
Colombia			26									
Estonia			5				24					
France					13							
Germany	32	324	(4/)	177	69		688	116 6/	9		40	16
Honduras							9 6/					
Hong Kong					31							
Israel			50		5							
Italy		29						72				(4/)
Japan		5	9	4			556	9 6/				
Korea, Republic of					20							
Malaysia					3							
Mexico					21							
Netherlands				2								
Norway		16					16					
Russia		247					8,770				126	495
Saudi Arabia											60	
Slovakia					2							
South Africa	13	3,550	265	10 6	/		1,030	48	43		371	352
Spain				15								
Switzerland			2 6	/ 77			320	37				
Taiwan				1	3							
Thailand			6									
United Kingdom		344		100			6,640	2	128		9.6	/ 6
Total	46	4,670	366	434	315	(4/)	19,500	319	180		606	996
Year to date	2,490	63,100	3,650	6,800	11,800	27	141,000	27,200	2,390	102	19,800	16,000

-- Zero.

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

2/ Unwrought and other forms of iridium.

3/ Unwrought and other forms of rhodium.

4/ Less than 1/2 unit.

5/ Data were erroneously reported as September's.

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

# TABLE 7 U.S. EXPORTS OF PLATINUM GROUP METALS 1/

## (Kilograms of metal content, unless otherwise specified)

			Platinum waste and	Iridium, osmium and	
Period and country	Palladium 2/	Platinum 2/	scrap	ruthenium 2/3/	Rhodium 2/
1999	43,800	19,400	7,660	851	114
2000:	_				
September	3,100	1,200	574	7	55
October	6,400	1,150	821	193	25
November:	_				
Australia	16	13			(4/)
Austria		4			
Belarus	10				
Belgium	16		10		
Brazil		200			
Canada	561 5/	121 5/	42	1	(4/)
Cayman Islands	2 5/	17			
China	1		(4/)		
Denmark	6	1			
Finland		3 5/			
France	29 5/	18 5/		1	
Germany	- 667	270	381	8	
Greece	1 5/				
Hong Kong		56	(4/)		(4/)
Iceland		2 5/			
India				1	(4/)
Ireland		5			
Israel	126 5/				
Italy	- 5	7	16		
Japan	1,140	366	39	96	18
Korea, Republic of	1,980	9			23
Malaysia	- 2	13			
Mexico	5	6			(4/)
Netherlands	- 111	7 5/		(4/)	
New Zealand	6				
Philippines	6_5/				
Romania		1			
Saudi Arabia		1			
Singapore	4 5/	2			
South Africa		202			
Spain	- 15 5/	72			
Sweden	- 4	1	1		
Switzerland	8	1			
Taiwan		6			
Thailand	- 407	11			(4/)
Turkey	1				(4/)
United Arab Emirates	- 1				
United Arab Emirates	- 1,130	271	 141	31	
Total	6,360	1,690	630	137	16
Year to date	_			137	
Zero.	51,800	24,100	6,680	1,350	720

-- Zero.

 $1/\operatorname{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

2/ Unwrought and other forms.

3/ Gross weight.

4/ Less than 1/2 unit.

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