GOLD

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Domestic gold mine production increased to a record level, nearly 9% above the all-time high reached in 1993. Primarily, this growth was the result of a significant amount of new capacity that had been in preparation during the previous 2 to 3 years before coming on-stream. The United States has been the second largest producer since 1991, when its production surpassed that of the former Soviet Union for the first time in nearly five decades. Nevada produced two-thirds of domestic production; the other one-third came from 12 other States. Although the majority of the Nation's gold mines were in the Western States, several were in operation in South Carolina and Wisconsin, east of the Mississippi River. Gold was produced at about 120 lode mines, a dozen or more large placer mines, nearly all in Alaska, and numerous small placer mines, mostly in Alaska and the Western States. In addition, a small amount of domestic gold was produced as a byproduct of processing base metals, principally copper. Of the gold produced in the United States, 30 mines yielded 90%. The value of U.S. gold mine production was about $4 billion.

Domestic gold exploration activity, which peaked during the late 1980's, continued to increase on a total dollar basis, while shrinking as a share of worldwide exploration as mining companies pursued opportunities overseas. Many countries have revised their mining laws, offering incentives for foreign investment, and in some cases, have opened up areas previously not available for exploration. In addition, technical advancements in ore processing by heap leaching have led to more gold exploration in developing countries where low-grade disseminated gold deposits can be exploited by bulk-mining methods. Africa, Latin America, and countries in the Pacific region have the potential for the occurrence of this type of deposit (Wilburn, 1998, p. 52).

Commercial-grade refined gold came from about two dozen domestic producers. A few dozen companies, out of several thousand companies and artisans, dominated the fabrication of gold into commercial products. U.S. jewelry manufacturing was heavily concentrated in the New York, NY, and Providence, RI, areas; with added concentrations of these businesses occurring in California, Florida, and Texas. In 1997, estimated uses were jewelry and arts, 55%; electronics, 4%; dental, 3%; and other industrial, 38%.

According to the World Gold Council, 1997 marked the sixth consecutive year of unit sales increases for gold jewelry in the United States. Total U.S. gold jewelry sales reached $12.6 billion, up 2% from sales in 1996 (World Gold Council, 1998).

Trade in refined bullion comprised 92% of U.S. gold imports and 82% of exports; net exports of bullion dropped to 198,000 tons, down about 25% from that of 1996. Canada provided more than one-half of the bullion imported, and Switzerland was the destination for more than one-half of the bullion exported. The Office of the United States Trade Representative, assisted by the U.S. Geological Survey (USGS), entered negotiations with 17 Asian and Pacific Rim governments to reduce barriers in gold trade. The negotiations, still underway at yearend, focused on tariffs as well as other barriers to international trade. Most imports of unwrought gold, including bullion and doré, enter the U.S. duty free.

The dollar price for gold decreased throughout the year. The Engelhard Industries' daily price of gold ranged from a low of about $298 per troy ounce[1] on November 26 to a high of nearly $368 on January 1. The average for the year was, to the nearest dollar, $332. The previous year's prices ranged from about $369 to $391 and averaged $389.

By the second quarter, gold easing rates dropped, presenting a good opportunity to make long-term structured deals. By the third quarter, 12-month lease rates were driven briefly above 3% by the demands made on liquidity by a combination of speculation, hedging, and withdrawal of lent gold (Murray and others, 1998, p. 29). Typically, lease rates were well below 1%, except in mid-November of 1995, when short-term lease rates reached a historical high.

Total world gold mine production increased to a record level, about 5% above the all-time high reached in 1996. Despite a fourth successive annual decline in production, South Africa remained the largest of more than 80 gold-producing nations, followed by the United States, Australia, Canada, and China. Identified world gold resources at yearend 1997 were estimated at 89,000 tons, of which 15% to 20% was byproduct resources; the world reserve base was estimated to be 72,000 tons and reserves 45,000 tons (Roger Ashley, Gold Resource Specialist, U.S. Geological Survey, oral commun., 1997). South Africa had about one-half of the resources and reserve base and 41% of the reserves. The United States had about 12% of world resources, 8% of the reserve base, and 12% of the reserves.

About 15% of all gold mined is thought to have been lost, used in dissipative industrial uses, or otherwise unaccounted for or unrecoverable (Thomas and Boyle, 1986). Therefore, of an estimated 123,000 tons of gold mined in historical times through 1997, 105,000 tons of gold remain, with about 34,000 tons held by central banks as official stocks and about 71,000 tons held privately as bullion, coin, and jewelry.

Production

Domestic mine production data for gold were derived by the USGS from two separate voluntary surveys of U.S. operations. One of these surveys is the production survey of copper, gold, lead, silver, and zinc lode mines. Of the 118 lode gold producers in operation to which a survey request was sent, 115 responded, representing 97% of the total gold shown in tables 1 and 2. The

[1]Where used by itself elsewhere in this report, ounce refers to troy ounce; 1 kilogram of gold is equivalent to 32.1507 troy ounces.

individual company production and performance data cited in this report were obtained from published sources, such as company annual reports.

Of the total domestic gold produced during 1997, 93% was extracted from gold ore, and the remainder was derived from base metal ores, other precious-metal ores, and placer deposits. By comparison, similar data assembled for 1980 indicated that gold ores provided 63% of the total gold produced and the remainder, 37%, was derived from base metal ores, other precious-metal ores, and placers. In both years, the contribution from placer mines amounted to less than 2% of the total gold produced.

Although most domestic gold mines were open pit mines, interest in underground methods continued to increase as more near-surface deposits reached depletion. Some of the deeper deposits, accessible only by underground methods, contain higher grade sulfide ores that require more extensive processing than the oxidized ores encountered in most near-surface operations. Along with this shift in ore types and the related maturing of the U.S. gold mining industry, there has also been a trend toward fewer but larger gold mines.

Alaska.—The State's Division of Geology and Geophysical Surveys reported that gold output increased significantly from an estimated 5 tons (160,000 ounces) worth $61 million in 1996 to 16.3 tons (524,000 ounces) worth $175.4 million in 1997, or an approximate increase in production of 225% and an increase in associated value of 185% (Swainbank and others, 1998). The new underground Fort Knox gold mine near Fairbanks, which began to produce gold during the first quarter, became Alaska's largest gold mine in 1997. Amax Gold, the owner and operator, reported that the mine produced almost 10,000 kilograms of gold (Amax Gold Inc., 1998). An estimated 144 placer mines were operating in 1997, about the same as in 1996. Placer production rose from 3,090 to 3,240 kilograms of gold.

Operations at the Greens Creek Mine on Admiralty Island, off Juneau, AK, restarted ahead of schedule. Grinding and flotation circuits at the silver-zinc-lead-gold mine were started the week of July 22, 1996, well ahead of the original schedule, and full production levels were achieved in January 1997. Hecla Mining reported that the mine produced more than 1,700 kilograms of gold (Hecla Mining Company, 1998, p. 15). Greens Creek is a joint venture between Kennecott Greens Creek Mining (70.3%) and Hecla (29.7%).

Nixon Fork Mining, the operating subsidiary for Consolidated Nevada Goldfields, reported that the underground Nixon Fork copper-gold mine near McGrath mined about 1,200 kilograms of gold (Consolidated Nevada Goldfields Company, 1998).

Dakota Mining's Illinois Creek gold mine in west-central Alaska started producing gold at a sustainable rate of about 40 kilograms per week in September (Swainbank and others, 1998).

Arizona.—Addwest Minerals International's Gold Road Mine, an underground mine in Mohave County, produced 1.1 tons (35,000 ounces) of gold (Addwest Minerals International, Limited, 1998).

California.—Gold production in California reportedly rose about 2% from that of 1996, as shown in table 2. California's largest gold mine, Newmont Gold's Mesquite Mine, near Brawley, yielded about 7.1 tons (228,000 ounces) of gold from oxide and sulfide ores that were mined by open pit methods (Newmont Gold Company, 1998, p. 8). In eastern Imperial County, Glamis Gold continued to produce gold by using heap-leaching methods at its Picacho Mine and continued exploration at its nearby Imperial project. Picacho produced more than 1 ton (33,200 ounces), close to its record production of 1.1 tons (34,600 ounces) in 1996, but after 16 years of gold production, reserves were exhausted during 1997 and mining ceased. Gold recovery from the last ore heap was expected to take 2 years, after which reclamation will begin. Glamis, through its wholly owned Rand Mining, also produced 2.9 tons of gold (94,000 ounces) at its Rand Mine near Randsburg. Almost all mining at the Rand Mine has been carried out at the Yellow Aster Pit (Glamis Gold Limited, 1998).

Glamis is continuing with the permitting process at its Imperial project. A Record of Decision is expected from the Bureau of Land Management by December 1998, with production possible in 1999. Reserves are 86.3 million tons grading 0.5 gram of gold per ton (diGesu and others, 1998, p. 6).

In eastern San Bernardino County near the Nevada-California State line, about 95 kilometers southwest of Las Vegas, NV, the Castle Mountain Mine of Viceroy Resource and MK Gold produced an estimated 3.8 tons (122,000 ounces) of gold (Viceroy Resource Corporation, 1998).

Siskon Gold's new San Juan Mine, north of Grass Valley, produced 0.1 ton (3,500 ounces) of gold. During the first week in April, unforeseen ground failures occurred in the area where mining operations were advancing in the eastern ore body, preventing any further progress from existing haulageways. Retreat mining was conducted back to the area of the underground plant. By early May, mining operations had been suspended (Siskon Gold Corporation, 1997).

Colorado.—Gold production in the State remained steady owing to an increase in production from Cresson Mine in the Cripple Creek District of Teller County. Golden Cycle Gold reported that this open pit mining operation produced 7.1 tons (228,000 ounces) of gold in 1997 (Golden Cycle Gold Corporation, 1998).

Idaho.—In spite of a full year of production from Meridian Gold's Beartrack Mine, near Salmon, total gold production for Idaho slipped by more than 15% (Meridian Gold Incorporated, 1998). Dakota Mining's wholly owned Stibnite Mine in Valley County decreased its gold production to 0.5 ton (15,000 ounces) in 1997 from 0.9 ton (29,000 ounces) in 1996 (Wilburn, 1998, p. 52).

Pegasus Gold's Black Pine Mine in Cassia County also produced less gold—1.4 tons (44,000 ounces) in 1997 versus 2.7 tons (88,000 ounces) in 1996. Black Pine reportedly was mined out during the fourth quarter of 1997 (Pegasus Gold Incorporated, 1998).

Gold production at the Grouse Creek gold mine near Challis declined about 65% to 0.8 ton (27,000 ounces) in 1997 from 2.4 tons (77,000 ounces) in 1996. During the year, mining ceased, the milling facilities were mothballed, and reclamation activities were undertaken as necessary to prevent degradation of the property (Hecla Mining Company, 1998, p. 29).

Montana.—According to the annual review of mining and mineral developments prepared by the Montana Bureau of Mines and Geology, exploration for gold fell as the last of the major companies closed its Montana exploration offices (McCulloch, R.B., 1998, p. 89).

Gold output rose to 10 tons (320,000 ounces) in 1997 from 9.1 tons (293,000 ounces) in 1996. Of the five mines producing gold in Montana during the year, four were owned and operated by Pegasus Gold— the new Diamond Hill Mine in Jefferson County; the Beal Mountain Mine in Silver Bow County; the Montana Tunnels Mine, a gold, lead, silver, and zinc mine in Jefferson County that was the State's second largest gold mine in 1997; and the Zortman Mine in Phillips County. The total gold production of these mines during the year amounted to about 5.1 tons (160,000 ounces) (Pegasus Gold Incorporated, 1998).

Placer Dome's wholly owned Golden Sunlight Mine near Whitehall is Montana's largest gold-producing mine with 4.9 tons (158,800 ounces) in 1997; production in 1996 had amounted to nearly 3.7 tons (117,900 ounces) of gold (Placer Dome Incorporated, 1998). The company indicated that it is working with the Montana Department of Environmental Quality to complete an environmental impact statement for an expanded Stage 5 pit that will extend the main pit life by 6 years.

Land near Cooke City, which is on the outskirts of Yellowstone National Park, was closed to hard rock mining for the next 20 years. The Department of the Interior withdrawal order for 22,065 acres became effective August 19. This decision was based on a comprehensive environmental impact statement released in July that examined potential impacts on surface and ground water, as well as on fish and other aquatic life (American Metal Market, 1997a).

Nevada.—Nevada maintained its long–standing position as the Nation's dominant gold-producing State. Of the Nation's top 30 gold-producing mines, 14 were in the Silver State. Primary gold production increased to 244 tons (7.8 million ounces).

Newmont Mining merged with Santa Fe Pacific Gold, creating Newmont Gold, the largest gold mining company in North America (American Metal Market, 1997b). Newmont Gold produced 84.9 tons (2.8 million ounces) of gold from 17 open pit operations and 5 underground mines centered in Humboldt, Pershing, Eureka and Elko Counties (Newmont Gold Company, 1998). In May, Newmont marked 32 years of production on the Carlin Trend, which it discovered in the mid-1960's. The company's extensive operations along the Carlin Trend included open pit mines from which nearly 369 million tons of ore and waste was mined during the year, accounting for more than 80% of Newmont's Carlin Trend production. Mining began at its new Rosebud underground mine, located in Pershing County, in April (Newmont Gold Company, 1998). To recover gold from the widely varying grades and many types of ore it is currently mining along the Carlin Trend, Newmont uses several processing methods. The company's $350 million refractory (sulfidic and carbonaceous) ore treatment plant, or roaster, which is reported to be the largest facility of its kind in the world, processed almost one-third of the company's production in Nevada—21.8 tons (700,000 ounces) of gold during the year, a 30% increase from 1996. On May 5, the first sulfidic ore was processed through the first of two new autoclaves at Twin Creek's Sage Mill. The second autoclave was commissioned in October. The twin autoclaves, the industry's largest, have a combined capacity of 4,000 tons per day.

Barrick Gold was the Nation's second largest gold mining company and reportedly recovered 50 tons (1.61 million ounces) of gold at its Betze-Post Mine in Eureka County. In nearby Elko County, Barrick continued development of its Meikle Mine, an underground operation that produced 17.9 tons (574,000 ounces) of gold. These Barrick operations on the Carlin Trend are developed within a 2,800-hectare landholding known as the Goldstrike property. In addition, Barrick's wholly owned Bullfrog Mine near Beatty produced nearly 6.4 tons (206,600 ounces) of gold (Barrick Gold Corporation, 1998).

Northwest of Elko, Independence Mining and Meridian Gold produced about 10 tons (320,000 ounces) of gold at its Jerritt Canyon Mine (Meridian Gold Incorporated, 1998). At the Getchell Mine, in Humboldt County, FirstMiss Gold produced 5.6 tons (180,000 ounces) of gold from its underground operations (Getchell Gold Corporation, 1998). Other gold mines in Humboldt County include the Hycroft (formerly the Crofoot/Lewis), the Marigold, and the Pinson.

South of and parallel to the Carlin Trend, the Battle Mountain/Eureka Trend runs from southeastern Humboldt County and southeast through Lander and Eureka Counties. Gold mining operations along this trend in Lander County include the Battle Mountain Complex, which produced 2.4 tons (78,000 ounces) (Battle Mountain Gold Company, 1998); the McCoy/Cove gold and silver mine, which produced 5.8 tons (187,000 ounces) (Echo Bay Mines Limited, 1998); and the Cortez Mine (Placer Dome 60% and Kennecott Mining 40%) which produced 12.7 tons (408,000 ounces) (Placer Dome Incorporated, 1998). Mining permits for the Cortez joint venture's South Pipeline project are expected by the end of 1998, and development is tentatively planned for 2002. With a 20% royalty held by Royal Gold and lower ore grades than at the Pipeline project, the owners appear to be in no hurry to develop the South Pipeline (diGesu and others, 1998, p. 6).

At Round Mountain, about 95 kilometers north of Tonopah, the Round Mountain Mine property of Echo Bay Mines produced about 14.9 tons (478,000 ounces) of gold during the year (Echo Bay Mines Limited, 1998).

The largest reserve studied in the United States is Newmont Gold/Barrick Gold's High Desert joint venture in the Carlin Trend. The mine plan and environmental impact statement have been submitted to the Bureau of Land Management and a permit is expected by mid-1998 with a full annual production of more than 15 tons of gold in 1999 (diGesu and others, 1998, p. 5).

South Dakota.—Gold production remained largely unchanged. Homestake Mining's 120-year-old Homestake Mine at Lead was again the Nation's largest underground gold mine, the largest gold-producing mine in South Dakota, and the seventh largest gold-producing mine in the country. During the year, the mine, a nearly 2.5-kilometer-deep operation with associated surface mining, yielded about 12.3 tons (400,000 ounces) of gold at a reported cash production cost of $335 per ounce (Homestate Mining Company, 1998).

Wharf Resources operated an open pit gold mine near Lead, the wholly owned Wharf Mine, which produced about 3.2 tons (103,000 ounces) of gold (Goldcorp Incorporated, 1998).

On May 29, the State of South Dakota obtained a temporary restraining order against Brohm Mining that requires Brohm to continue to operate water treatment systems at the Gilt Edge Mine in accordance with State mine permits. Brohm said it intends to comply with this order. The Gilt Edge Mine operation has been discontinued with the exception of these activities (Dakota

Mining Corporation, 1998).

Utah.—Rio Tinto's Bingham Canyon Mine, which is operated by Kennecott-Utah Copper, produced about 18.8 tons (603,000 ounces) of gold as a byproduct of its copper mining operations near Salt Lake City. Long ranked as one of the Nation's principal gold-producing mines, Bingham Canyon was the third largest gold producer in 1997. Kennecott also operated the nearby Barney's Canyon Mine, an open pit and heap-leaching operation that produced 4.2 tons (135,000 ounces) of gold (Rio Tinto Limited, 1998).

Barrick Gold's open pit Mercur Mine in Tooele County yielded about 1.3 tons (40,000 ounces) of gold. Mercur began closure activities in early 1997. Mill processing of tailings from earlier mining operations is expected to continue into late 1998, when the mill will close (Barrick Gold Corporation, 1998).

Washington.—Echo Bay Mines' Kettle River Mine, located in the scenic mountains of northeastern Washington State, produced a record 4 tons (130,000 ounces) of gold in its seventh year of production (Echo Bay Mines Limited, 1998).

The State Department of Ecology approved certain key water rights for the Crown Jewel project in November, but additional State and Federal permits and approvals are required. In addition, legal appeals by special interest groups remain outstanding. If favorable rulings are assumed and no further legal delays occur, construction could begin in early 1999, with projected annual production of 5.4 tons (175,000 ounces) of gold to follow about 14 months later (diGesu and others, 1998, p. 6).

Wisconsin.—Rio Tinto's Flambeau Mine completed mining 0.4 ton (12,000 ounces) of gold by March, and site reclamation began. The small pit has been back filled and final grading will be completed in 1998 (Rio Tinto Limitted, 1998).

World Review

World gold mine production rose significantly in 1997 for the second consecutive year. Increasing production from mines in Australia, North America, and South America has been enough to help offset a continuing sharp decline in gold output from South Africa. According to its annual review of world gold supply and demand, Gold Fields Mineral Services calculated that the total global supply of gold in 1997 was 4,254 tons (137 million ounces) compared with the previous year's total supply of 3,510 tons (113 million ounces) in 1996 (Murray and others, 1998, p. 5). Gold Fields reported that apart from old gold scrap, every component of supply showed an increase in 1997, from a surprising 4.6% increase in mine production, to an order-of-magnitude jump in supply from forward sales (Murray and others, 1998, p. 5).

On the demand side, Gold Fields reported some dramatic increases. Bar hoarding almost doubled to reach the highest level since the late 1980's; the use of gold in the electronics industry rose to a new record level; and jewelry fabrication reached the highest level ever, surpassing the previous year's record demand by more than 17%. In addition, the coin sector showed a robust recovery, with offtake rising to a 5-year high (Murray and others, 1998, p. 7).

With regard to gold exploration, the Metals Economics Group of Halifax, Canada, determined from its annual survey of worldwide exploration budgets for 251 companies that the percentage of mineral exploration expenditures directed to gold targets rose to 64.9% in 1997, the highest level devoted to gold since 1989 (Beamish and others, 1997). For the fourth consecutive year, the most money for exploration for hard-rock minerals of all kinds was spent in Latin America, about 30% of the world exploration budget of $5.1 billion. This was a result primarily of mining legislation reform and favorable geology (Mining Journal, 1997b).

Australia.—Australian gold mine production increased by 8% in 1997, to reach its highest level ever, helping Australia retain its position as the world's third largest gold-producing nation. Of the 311 tons (10 million ounces) of gold mined in 1997, Western Australia, Queensland, and the Northern Territory accounted for about 76%, 9%, and 8%, respectively (Australian Bureau of Agricultural and Resource Economics, 1998); Western Australia's production was derived principally from mining operations near Kalgoorlie. Other Australian gold-producing States were, in descending order of output, New South Wales, Victoria, Tasmania, and South Australia.

Although a number of Australian mines were exhausted, were shut down, or were placed on care-and-maintenance, the losses were more than compensated for by new production from the Sunrise Dam, Vera-Nancy, and Earnest Henry Mines and increased production from existing mines (Murray and others, 1998, p. 18). The largest gold producer was the Super Pit lode mine in Western Australia (Mining Journal, 1998a).

The Western Australian Government Court offered the State's gold miners some respite on gold royalties. The first phase of the royalties on gold production was delayed by 9 months; the 1.25% flat royalty charge on production will be levied in July 1998 instead of October 1997. In addition, the threshold for exemption from payment of the royalty was raised from 1,000 ounces of gold per year to 2,500 ounces. Full royalties of 2.5% will be effective July 1, 2000—a 12-month deferral. The Government has promised that the higher rate will be applicable only if the gold price is more than A$435 per ounce (Metal Bulletin, 1997).

The Reserve Bank of Australia sold 167 tons of gold, or more than two-thirds of its total reserves, over the first 6 months of 1997. Widespread gold mine closures were said to be feared in Australia, which is rated as the world's second highest-cost gold producer behind South Africa. Mines considered most vulnerable included Telfer, Big Bell, Wiluna, Paddington, and Meekatharra. According to Sydney-based AME Mineral Economics, Australia's cost of gold production was $271 per ounce in 1996, up from $253 per ounce in 1995 (Platt's Metals Week, 1997a).

Brazil.—During 1997, Brazilian production fell for the ninth consecutive year, to drop below the 60–ton level for the first time since 1983. Output from the informal mining sector was estimated to have dropped to as low as 19 tons (610,000 ounces). Although there are still regions in the Brazilian jungle where informal mining is actively, and even profitably, accomplished, local miners tell stories of hundreds of abandoned workings and destroyed airstrips that are rapidly being reclaimed by the rainforest. By contrast, the formal mining sector has adjusted well with only marginally less gold production in 1997, at about 40 tons (1.3 million ounces) of gold. Additional capacity is expected in 1998 as the Brasilia/Paracatu and Serra Grande Mines are brought on-stream. In addition, with the successful privatization of Brazil's largest gold producer, the State-owned mining giant

Companhia Vale do Rio Doce (CVRD), CVRD could see substantial increases in May at its five operating gold mines (Murray and others, 1998, p. 21).

Canada.—In 1997, gold production continued to rebound, reversing the downward trend from 1992 through 1994. Canada retained its position as the world's fourth largest gold producer. Gold was produced at about 42 lode gold mines, which accounted for 90.4% of the total gold output. Base metal mines and placer mines accounted for 7.2% and 2.4%, respectively, of the total. During the year, 3 gold mines began operation and 11 mines shut down. Canada's principal gold-producing regions were, in descending order of output, Ontario, Quebec, British Columbia, and the Northwest Territories. Gold was also produced in Manitoba, New Brunswick, Newfoundland, Saskatchewan, and Yukon Territory (Giles Couturier, Natural Resources Canada, 1998, written commun./unpub. data).

Chile.—Gold production in Chile, because of the depletion of reserves at some older mines, extreme weather conditions caused by El Niño, and operational difficulties at Bema Gold's Refugio Mine in Maricunga, declined 7% to 50 tons (1.6 million ounces) (Murray and others, 1998, p. 21).

India.—India, which consumes 16% of the world's gold, more gold than any other country, eased import restrictions on gold, allowing its overseas residents, effective April 2, to bring 10 kilograms of gold into India as part of their baggage, double the quantity allowed previously. Residents must have been abroad for 6 months or more before they can qualify, and they will be required to pay a "nominal" import duty on the gold they bring. The easing of gold import rules did not apply to imports under other schemes, such as gold jewelry export promotions (Platt's Metals Week, 1997b).

India reported gold jewelry exports of more than $800 million in the fiscal year ending March 31, 1998. Although about 7% more than in 1997, the amount of gold jewelry exported was short of the official target of $850 million (Platt's Metals Week, 1998).

Starting in January 1998, the Indian Government was expected to authorize all agencies importing gold and silver into the country to sell gold on the domestic market. This latest move is aimed at boosting exports of gold and jewelry, and bringing into legal channels much of the present illegal financing of gold imports. Imports will be subject to duty at only 5%, hence, the authorization, over time, will have a major effect on gold and silver prices (Mining Journal, 1997a).

Indonesia.—Gold output was estimated to have risen by 4.6% in 1997 and by more than 160% since 1993. Freeport Indonesia again improved its output of byproduct gold at its Grasberg/Ertsberg copper-gold mine in West Irian, and PT Kelian Equatorial Mining increased its production of gold at the Kelian Mine in East Kalimantan. A fourth concentrator, mine, and mill expansion is planned at Grasberg, which would further increase its gold output to an estimated 62 tons (2,000,000 ounces) per year. The first gold was poured in January at the Rawas Mine, where gold output reached close to 2 tons (64,000 ounces) (Murray and others, 1998, p. 24).

Mexico.—Gold production in Mexico rose to more than 26 tons (840,000 ounces) in 1997 compared with 24 tons (775,000 ounces) in 1996. During the year, production at Santa Cruz Gold's Lluvia de Oro Mine was only 0.2 ton (7,000 ounces), but is expected to produce almost 1 ton (30,000 ounces) as startup problems are resolved. Santa Cruz Gold was formed by the merger of Great Lakes Minerals and Newmex Mining. Eldorado's La Trinidad Mine enjoyed its first full year of operation, producing 1 ton (30,000 ounces). The country's mining sector has been revitalized by the introduction of new legislation that encourages investment and exploration. The latest set of regulations is to come into effect early in 1998 (Mining Journal, 1998b).

Papua New Guinea.—Gold production in Papua New Guinea declined for the fifth consecutive year. Water levels in the Fly River dropped too low, due to one of the worst droughts in history, to allow transportation of copper concentrates from the Ok Tedi Mine. Hence, the mill at Porgera was forced to shut down, and mining was suspended at both Ok Tedi and Porgera for several weeks. Lihir Gold's gold mine, on Lihir Island, in the Bismark Archipelago, experienced a smooth startup in August and produced more than 7 tons (225,000 ounces) of gold during its first year of operation (Murray and others, 1998, p. 24).

Peru.—For the second consecutive time since the 1960's, production in Peru exceeded that in Brazil, making it the largest gold producer in Latin America at just under 77 tons (2.5 million ounces) of gold. The growth of the Peruvian mining industry has been quite phenomenal, with gold production increasing 300% in the last 5 years. The main impetus for this increase came from the large-scale, open pit, low-cost, heap-leach Yanacocha Mine in northern Peru, where owners Newmont Gold and Cia. de Minas Buenaventura extracted more than 33 tons (1.1 million ounces) of gold in 1997. The Yanacocha Mine, which was the largest gold mining operation in Latin America for the third consecutive year, yielded gold at cash costs of $98 an ounce, making it the lowest-cost gold mine in the world in 1997. In addition, production began at Hochschild's Sipan Mine, where gold output is expected to reach about 3 tons (96,500 ounces) per year during 1998 (Murray and others, 1998, p. 19).

Russia and the former Soviet Union.—Of the independent gold-producing countries resulting from the dissolution of the U.S.S.R. in late 1991, Russia is by far the largest producer in terms of output and number of operations, as well as a real distribution. The majority of Russia's production derives from formerly State-owned enterprises and workers' cooperatives, known as artels, which principally exploit placer deposits scattered throughout Siberia and the Russian Far East.

Production in Russia fell 6.5% to 115 tons (3.7 million ounces) of gold. This was the third consecutive year of declining production, and reflects the continued financial crisis prevailing in the country, which affected all of the 30 gold-producing regions. In contrast to the poor performance in Russia, production in Uzbekistan increased by 4%. This modest increase was said to be largely as a result of Newmont Gold's efforts at Zarafshan, where about 218 million tons of low-grade stockpiled material had accumulated over 27 years of mining at the Muruntau Mine, the largest open pit gold mine in the world. Processing of the enormous stockpiles of low-grade rock dumps began late in 1995 and resulted in the production in 1997 of 13 tons (420,000 ounces) of gold (Murray and others, 1998, p. 22).

South Africa.—In 1970, the continent of Africa was the source of 81.8% of the world's gold output, but with the increase in production in Australia and North America, Africa's share had declined to only 20% in 1997. Gold production in South Africa,

the world's largest gold-producing nation, declined for the fourth consecutive year to 483 tons (15.5 million ounces) of gold, more than 3% lower than in 1996. Extensive high-grading was evident; this contributed to production, keeping declines from being greater. Progress related to labor relations had a positive impact on productivity; however, the gold mining industry was faced with cost pressures that intensified to such an extent that, by the third quarter, more than 50% of all mines were operating at a loss (Murray and others, 1998, p. 18).

The tonnage and grade of ore milled during 1997 by the nearly three dozen mines composing the membership of the Chamber of Mines of South Africa amounted to more than 93 million tons at a grade of 4.95 grams per ton of gold; this compares with a similar total tonnage of 94 million tons, which was at a slightly lower grade of 4.91 grams per ton, milled by Chamber members in 1996.

Of the top 15 gold-producing companies in the world in 1997, 6 were South African. Anglo American Corp. of South Africa Ltd. (AAC) remained the leading gold-producing company in the world. AAC owns the Freegold and the Vaal Reefs Mines. Gold Fields of South Africa (GFSA) remained at third in the world. GFSA owns the Driefontein and Kloof Mines. The other four companies were Gencor (9th); Johannesburg Consolidated Investment (10th); Anglovaal (13th); and Harmony (15th). Harmony made its first appearance as a top producer with acquisitions of the Grootvlei and the Consolidated Modderfontein gold mines (Murray and others, 1997, p. 19).

Outlook

The traditional role of gold as a store of value has not been able to lift the gold price out its 18-year-low trading range. The market continues to be concerned about the future role of gold in the reserves of the European Central Bank (ECB), which will commence operation on January 1, 1999. It appears that gold will account for 10% to 15% of the bank's foreign reserves. This would leave significant quantities of gold with European Monetary Union (EMU) national central banks, and there is uncertainty about the degree of control those banks will retain over its reserves. The final make-up of the ECB and the determination of its relationship to national central banks will influence the gold market far beyond the member countries of the EMU.

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TABLE 1
SALIENT GOLD STATISTICS 1/

		1993	1994	1995	1996	1997
United States:						
Mine production	kilograms	331,000	327,000	317,000	326,000 r/	360,000
Value	thousands	$3,840,000	$4,050,000	$3,950,000	$4,090,000 r/	$3,850,000
Gold recovered by cyanidation:						
Extracted in vats, tanks, and closed containers 2/	kilograms	185,000 r/	169,000	157,000 r/	168,000 r/	196,000
Leached in open heaps or dumps 3/	do.	120,000 r/	119,000	121,000 r/	125,000 r/	133,000
Refinery production:						
Ores, concentrates and dore	do.	243,000	241,000 4/	(4/)	(4/)	270,000
Recycled materials (new and old scrap)	do.	152,000	148,000 4/	(4/)	(4/)	100,000
Imports for consumption:						
Refined	do.	130,000	96,400	111,000	143,000	194,000
Exports:						
Refined	do.	658,000	334,000	277,000	406,000	391,000
Net deliveries from foreign stocks in Federal Reserve Bank of New York	do.	582,000	217,000	244,000	373,000	143,000
Stocks, December 31:						
Industry 5/	do.	34,400	32,700 4/	(4/)	(4/)	(4/)
Commodity Exchange (Comex) 6/	do.	78,500	49,100	45,400	20,700	15,200
Department of the Treasury 7/	metric tons	8,140	8,140	8,140	8,140	8,140
Volume of U.S. Gold Futures Trading 8/	do.	25,500	26,400	24,200	14,300	29,700
Department of the Treasury: 9/						
American Eagle gold coin	kilograms	21,800	10,900	13,900	10,700	20,000
Other Numismatic gold coins	do.	2,250	852	1,150	1,190	500
Consumption in industry and the arts	do.	91,400	76,100 4/	(4/)	(4/)	137,000
Apparent demand, refined 10/	do.	363,000	294,000 4/	(4/)	(4/)	265,000
Price: Average per troy ounce 11/		$361.00	$385.00	$386.00	$389.00	$332.00
Employment, mine and mill only 12/		14,700	14,100	14,700	16,900	16,300
World:						
Production, mine	kilograms	2,280,000 r/	2,270,000 r/	2,250,000 r/	2,310,000 r/	2,420,000 e/
Official bullion reserves 13/	metric tons	34,900	34,800	34,600	34,400	34,000

e/ Estimated. r/ Revised.

1/ Data are rounded to three significant digits, except prices.

2/ May include small quantities recovered by gravity methods.

3/ May include tailings, waste-ore dumps, and previously mined ore at some inactive mines.

4/ Data under review.

5/ Unfabricated refined gold held by refiners, fabricators, dealers, and the U.S. Department of Defense.

6/ Comex Division of the New York Mercantile Exchange.

7/ Includes gold in Exchange Stabilization Fund.

8/ Comex only.

9/ Sales to market in fiscal year 1990; thereafter, bullion disbursements to U.S. Mint coin programs. Fiscal year begins October 1, of year prior to year indicated.

10/ Defined as refinery production from primary materials + refinery production from old scrap + net bullion flow to market from foreign stocks at the New York Federal Reserve Bank + net imports of bullion. Assumed to include gold held for investment purposes. Excludes gold contained in fabricated items, imported coins, and official monetary gold.

11/ Engelhard Industries quotation.

12/ Data from Mine Safety and Health Administration.

13/ Held by central banks and governments and international monetary organizations. Data from International Monetary Fund.

TABLE 2
MINE PRODUCTION OF GOLD IN THE UNITED STATES, BY STATE 1/

(Kilograms)

State	1996	1997
Alaska 2/	5,020	16,300
Arizona	2,990 r/	2,140
California	24,200 r/	24,400
Idaho	10,800 r/	7,490
Montana	9,440 r/	10,200
Nevada	215,000 r/	243,000
South Dakota	W	16,400
Washington	W	4,040
Other States 3/	58,400 r/	36,200
Total	326,000 r/	360,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other States."
1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Production data collected by the State.
3/ Includes Colorado, New Mexico, South Carolina, Utah, Wisconsin, and States indicated by symbol "W."

TABLE 3
LEADING GOLD-PRODUCING MINES IN THE UNITED STATES IN 1997, IN ORDER OF OUTPUT 1/

(Kilograms)

Rank	Mine	County and State	Operator	Gold produced 1/
1	Carlin Mines Complex	Eureka and Elko, NV	Newmont Gold Co.	84,900
2	Betze-Post/Goldstrike	Eureka, NV	Barrick Gold Corp.	49,900
3	Bingham Canyon	Salt Lake, UT	Kennecott Utah Copper	18,800
4	Meikle/Goldstrike	Eureka, NV	Barrick Gold Corp.	17,900
5	Round Mountain	Nye, NV	Round Mountain Gold Corp.	14,900
6	Cortez	Lander, NV	Placer Dome (U.S.) Inc.	12,700
7	Homestake	Lawrence, SD	Homestake Mining Co.	12,300
8	Fort Knox	Fairbanks North Star, AK	Amax Gold Inc.	9,970
9	Jerritt Canyon	Elko, NV	Independence Mining Co.	9,950
10	Cresson	Teller, CO	Cripple Creek & Victor	7,100
11	Mesquite	Imperial, CA	Santa Fe Pacific Gold Corp.	7,090
12	Bullfrog	Nye, NV	Barrick Gold Corp.	6,430
13	McCoy/Cove	Lander, NV	Echo Bay Mines	5,820
14	Getchell	Humboldt, NV	FirstMiss Gold Inc.	5,590
15	Florida Canyon	Lander, NV	Pegasus Gold Inc.	5,080
16	Golden Sunlight	Jefferson, MT	Placer Dome (U.S.) Inc.	4,940
17	Barney's Canyon	Salt Lake, UT	Kennecott Corp.	4,200
18	Kettle River	Ferry, WA	Echo Bay Mines	4,040
19	Castle Mountain	San Bernardino, CA	Viceroy Gold Co.	3,810
20	Ridgeway	Fairfield, SC	Kennecott Ridgeway Mining Co.	3,760
21	Denton-Rawhide	Mineral, NV	Kennecott Rawhide Mining Co.	3,700
22	McLaughlin	Napa, CA	Homestake Mining Co.	3,670
23	Hycroft	Humboldt, NV	Vista Gold Corp.	3,650
24	Bald Mountain	White Pine, NV	Placer Dome (U.S.) Inc.	3,530
25	Hayden Hill	Lassen, CA	Amax Gold Inc.	3,490
26	Beartrack	Lemhi, ID	Meridian Gold Inc.	3,340
27	Wharf	Lawrence, SD	Wharf Resources Ltd.	3,210
28	Rand	Kern, CA	Rand Mining Co.	2,930
29	Rochester	Pershing, NV	Coeur Rochester Inc.	2,800
30	Montana Tunnels	Jefferson, MT	Pegasus Gold Inc.	2,440

1/ Data are rounded to three significant digits.

Sources: Company annual reports, company news releases, or U.S. Securities and Exchange Commission's 10K and 6K reports.

TABLE 4
U.S. EXPORTS OF GOLD, BY COUNTRY 1/ 2/

Year and country	Ore and concentrates 3/ Quantity (kilograms)	Ore and concentrates 3/ Value (thousands)	Dore and precipitates Quantity (kilograms)	Dore and precipitates Value (thousands)	Refined bullion Quantity (kilograms)	Refined bullion Value (thousands)	Total Quantity (kilograms)	Total Value (thousands)	Waste and scrap Quantity (kilograms)	Waste and scrap Value (thousands)
1996	375	$3,730	65,100	$696,000	406,000	$5,010,000	471,000	5,710,000	89,900	$853,000
1997:										
Belgium	--	--	--	--	--	--	--	--	1,580	17,100
Canada	242	2,470	9,760	91,400	35,100	414,000	45,100	508,000	31,000	207,000
China	--	--	--	--	1,120	11,300	1,120	11,300	--	--
France	--	--	--	--	--	--	--	--	14,300	155,000
Germany	176	2,050	5	27	4,280	45,100	4,460	47,200	1,800	33,900
Hong Kong	--	--	1,000	5,390	17,000	175,000	18,000	180,000	2	17
Italy	--	--	(4/)	(4/)	61	594	61	594	1,380	11,400
Japan	1	12	10	65	1,030	10,400	1,040	10,500	15	152
Korea, Republic of	--	--	--	--	9,180	99,100	9,180	99,100	--	--
Mexico	1	12	--	--	12,800	126,000	12,800	126,000	--	--
Netherlands	--	--	2	15	157	1,680	159	1,690	--	--
Peru	--	--	42	277	2,440	26,200	2,480	26,500	--	--
Singapore	1	7	--	--	596	5,940	597	5,950	--	--
South Africa	--	--	--	--	760	7,780	760	7,780	--	--
Sweden	--	--	--	--	1	5	1	5	1,210	13,100
Switzerland	--	--	44,000	381,000	215,000	2,370,000	259,000	2,750,000	101	920
Taiwan	2	5	--	--	5,770	61,900	5,770	61,900	--	--
Turkey	--	--	--	--	375	3,890	375	3,890	--	--
United Kingdom	1	9	30,500	260,000	84,600	909,000	115,000	1,170,000	9,100	99,800
Other	3	32	7	58	737	7,290	747	7,380	19	218
Total	427	4,600	85,300	738,000	391,000	4,270,000	477,000	5,020,000	60,500	538,000

1/ Data are rounded to three significant digits; may not add to totals shown.

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

3/ Includes base metal ores, concentrates, and matte destined for refining.

4/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF GOLD, BY COUNTRY 1/ 2/

Year and country	Ores and concentrates 3/		Dore and precipitates		Refined bullion		Total		Waste and scrap	
	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)
1996	3,460	$42,200	11,900	$117,000	143,000	$1,780,000	159,000	$1,940,000	13,000	$102,000
1997:										
Antigua and Barbuda	--	--	--	--	--	--	--	--	75	1,040
Argentina	--	--	62	517	--	--	62	517	(4/)	(4/)
Australia	247	2,560	878	7,290	125	2,410	1,250	12,300	14	34
Austria	(4/)	(4/)	(4/)	(4/)	535	2,870	535	2,870	(4/)	(4/)
Belgium	--	--	--	--	3,280	37,000	3,280	37,000	11	41
Bolivia	--	--	--	--	143	1,550	143	1,550	81	440
Brazil	--	--	--	--	32,600	351,000	32,600	351,000	--	--
Canada	31	216	2,260	17,000	106,000	1,170,000	108,000	1,190,000	1,710	6,070
Chile	54	531	1,690	7,020	5,920	64,500	7,670	72,000	15	254
China	(4/)	(4/)	--	--	--	--	(4/)	(4/)	87	1,140
Colombia	--	--	--	--	5,140	54,700	5,140	54,700	663	4,330
Costa Rica	--	--	--	--	80	682	80	682	883	5,360
Dominican Republic	--	--	--	--	334	3,340	334	3,340	4,480	25,500
Ecuador	--	--	35	337	615	6,420	650	6,760	285	1,440
France	--	--	--	--	25	266	25	266	186	989
Germany	--	--	--	--	26	168	26	168	67	354
Guyana	--	--	--	--	326	3,240	326	3,240	426	794
Korea, Republic of	--	--	--	--	1,910	21,400	1,910	21,400	158	1,610
Malaysia	--	--	50	276	--	--	50	276	595	4,020
Mexico	1,380	15,100	8,500	83,300	2,030	21,200	11,900	120,000	2,500	14,000
Netherlands Antilles	--	--	--	--	2,350	25,500	2,350	25,500	322	3,370
Nicaragua	--	--	--	--	1,470	13,800	1,470	13,800	--	--
Norway	--	--	--	--	401	4,380	401	4,380	--	--
Panama	--	--	85	883	350	3,440	435	4,320	128	867
Peru	--	--	132	1,150	7,350	75,500	7,480	76,600	89	634
Philippines	--	--	--	--	12	220	12	220	103	436
Russia	--	--	--	--	31	380	31	380	--	--
South Africa	--	--	4	40	514	4,790	518	4,830	--	--
Switzerland	--	--	--	--	13,300	143,000	13,300	143,000	(4/)	(4/)
Taiwan	--	--	--	--	--	--	--	--	172	1,430
Trinidad and Tobago	--	--	--	--	113	1,240	113	1,240	17	174
United Kingdom	--	--	--	--	4,540	50,400	4,540	50,400	4	48
Uruguay	--	--	21	323	3,850	42,600	3,870	42,900	--	--
Venezuela	--	--	--	--	38	438	38	438	--	--
Other	(4/)	7	30	291	365	3,790	395	4,090	1,100	4,190
Total	1,710	18,400	13,700	118,000	194,000	2,110,000	209,000	2,250,000	14,100	78,600

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.
3/ Includes base metal ores, concentrates, and matte destined for refining.
4/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 6
GOLD: WORLD MINE PRODUCTION, BY COUNTRY 1/ 2/

(Kilograms)

Country	1993	1994	1995	1996	1997 e/
Argentina	937	937	837	723 r/	725 p/
Armenia e/	200	100	300	244 r/ 3/	500
Australia	247,196	256,188	253,504	289,530 r/	311,360 3/
Belize e/	2	5	5	5	5
Bolivia	10,423	12,838	14,405	12,634 r/	11,400
Botswana	192	234 r/	86	5 r/	10
Brazil 4/	69,894 r/	70,535	64,424 r/	60,011 r/	59,000
Bulgaria e/	2,000	2,000	3,100 r/	3,390 r/	3,400
Burkina Faso e/ 5/	5,000	4,000	3,000	4,000	4,000
Burundi e/	20	1,000 r/	2,000 r/	2,200 r/	1,500
Burma	63	70	90	160	100 3/
Cameroon e/	1,000 r/	1,000 r/	1,000	1,000	1,000
Canada	152,929	146,428	152,032 r/	166,378 r/	169,050 p/
Central African Republic	153	138	120 e/	90 e/	90
Chile	33,638	38,786	44,585 r/	53,174 r/	49,500
China e/	130,000	132,000	140,000	145,000	175,000
Colombia	27,471	20,762	21,165 r/	22,073 r/	18,810 3/
Congo (Brazzaville) e/	5	12 r/	12 r/	10 r/	10
Congo (Kinshasa) e/ 6/	8,700 r/	11,100 r/	10,000 r/	8,200 r/	8,000 p/
Costa Rica e/	260 r/	358 3/	400 r/	500	500
Cote d'Ivoire	1,500 r/ e/	1,860	1,983	1,000 r/ e/	1,000
Cuba	--	45	184	250 e/	250
Czech Republic	512	75	--	--	-- 3/
Dominican Republic	247 r/	1,538 r/	3,281 r/	3,659 r/	2,349 3/
Ecuador e/ 5/	12,500	13,000	15,500	17,700 r/ 3/	17,000
Eritrea	XX	78	59	98	100
Ethiopia 7/	3,387	2,370	4,500	2,500 r/ e/	2,500
Fiji	3,713 r/	4,111 r/	3,511 r/	4,554 r/	4,200
Finland	1,385	1,372	2,061 r/	3,070 r/	3,000
France	3,034 r/	5,078 r/	4,615	5,651 r/	5,700
French Guiana (Guyane) e/	2,800	2,270	3,000 3/	3,000	3,000
Gabon 8/	120	72	70 e/	70 e/	70
Georgia e/	1,000	600	500	500	700
Ghana	38,911 r/	43,478 r/	53,087 r/	49,211 r/	52,000
Guatemala e/	30	30	30	30	30
Guinea	3,864 r/	5,617	7,863 r/	6,838 r/	7,000
Guyana	9,614	11,811	9,331	12,441	12,500
Honduras	111	106	110 e/	142	150
India 9/	2,003	2,244	2,203 r/	2,449 r/	2,500
Indonesia 10/	42,097	42,600	62,909 r/	65,000 e/	68,000
Iran	417	723	370 r/	242 r/	250 p/
Japan	9,352	9,551	9,185	8,627	8,166 3/
Kazakstan e/	20,000 r/	14,483 r/ 3/	18,200 r/	12,000 r/	12,000
Kenya e/	154 3/	155	170	300 r/	300
Korea, North e/	5,000	5,000	5,000	5,000	5,000
Korea, Republic of 9/	25,000 e/	12,332	13,418	14,096	14,872 3/
Kyrgyzstan e/	1,000	838 r/	850 r/	1,500 r/	17,400
Liberia e/	700	700 r/	800 r/	700	700
Madagascar e/	500	500	38 r/ 3/	50 r/	50
Malaysia	4,462	4,085	3,161	2,830	4,488 3/
Mali e/	5,500	6,200 r/	7,800	8,400 r/	8,500
Mauritania	1,264	1,738	1,196	1,200 e/	1,200
Mexico	9,792 r/	13,888	20,292	24,477 r/	26,001 3/
Mongolia e/	1,200	2,000	4,800	5,300	8,451 3/
Morocco	600	565	580	580 e/	600
Mozambique	149	6,804 r/	6,800 r/	6,000 r/ e/	6,000
Namibia	1,954	2,445 r/	2,394 r/	2,145 r/	2,433 3/
New Zealand	11,161	10,118	12,132	11,571 r/	11,500
Nicaragua	1,188 r/	1,241 r/	1,316 r/	1,500 r/ e/	1,800
Niger e/	1	1	1	1	1
Nigeria	1	5	5 e/	6 e/	6
Norway	800	200	--	--	-- 3/

See footnotes at end of table.

TABLE 6--Continued
GOLD: WORLD MINE PRODUCTION, BY COUNTRY 1/ 2/

(Kilograms)

Country	1993	1994	1995	1996	1997 e/
Oman	90	137	591	576	575 p/
Panama e/	255	245	1,100	807 r/ 3/	1,550
Papua New Guinea	61,671 r/	59,286 r/	53,405 r/	51,119 r/	47,500
Peru 11/	30,318	47,799 r/	57,744	64,788 r/	76,822 3/
Philippines	21,155	27,059	27,144	31,800 r/	33,800 3/
Poland	450	628	510	598	600 3/
Romania e/	4,000 3/	4,000	4,000	4,000	4,000
Russia	149,500	146,600	132,170	123,000 r/	115,000
Rwanda e/	1,000	100	26 r/	25 r/	25
Saudi Arabia	7,519	7,630	8,080	8,302 r/	8,500
Senegal e/	550 r/	550 r/	550 r/	600 r/	550
Serbia and Montenegro	3,325	2,504	3,040	3,000 e/	3,000
Sierra Leone 12/	157	125	4	16	20
Slovakia	100	372	518	540	458 3/
Solomon Islands	30 r/	31 r/	25 r/	25 r/ e/	25
South Africa	619,201	580,201	523,809	497,583	483,443 3/
Spain	6,083	5,852	4,131 r/	3,128 r/	3,200
Sudan e/	1,600	3,000	3,700	4,500 r/	5,000
Suriname e/	300	300	300	300	300
Sweden	6,548	6,364	6,528	6,500 e/	6,500
Taiwan 9/	1 r/	5	11 r/	11 r/	11
Tajikistan e/	1,000 r/	1,000 r/	1,000 r/	1,100 r/	2,550
Tanzania	3,264 r/	2,861 r/	320 r/	318 r/	300 p/
Turkey e/ 13/	1,110 3/	996	1,200 r/	1,200 r/	1,200
Uganda	291	1,627	1,506	2,954	3,000
United States	331,000	327,000	317,000	326,000 r/	360,000 3/
Uruguay e/	300	300	900	1,000 r/	2,000
Uzbekistan e/	70,000	70,000	70,000	72,000	75,000
Venezuela	8,985 r/	10,094	7,110 r/	11,719 r/	19,661 3/
Vietnam e/	10,000 3/	10,000	10,000	10,000	10,000
Zambia 14/	235	124	91 r/	100 r/ e/	100
Zimbabwe	18,916	20,512	23,959	24,772	25,000
Total	2,280,000 r/	2,270,000 r/	2,250,000 r/	2,310,000 r/	2,420,000

e/ Estimated. p/ Preliminary. r/ Revised. XX Not applicable.
1/ World totals, U.S. data, and estimated data are rounded to three significant digits; may not add to totals shown.
2/ Table includes data available through July 15, 1998.
3/ Reported figure.
4/ Officially reported figures are as follows, in kilograms: Major companies: 1993--39,894; 1994--40,188; 1995--40,951; 1996--41,142; and 1997--41,000 (estimated). Garimpos 1993--30,000; 1994--30,347; 1995--23,473 (revised); 1996--18,869 (revised); and 1997--18,000 (estimated).
5/ Includes undocumented artisanal production.
6/ Formerly Zaire.
7/ Year ending July 7 of that stated.
8/ Undocumented artisanal production.
9/ Refinery output.
10/ Excludes production from so-called people's mines, which may be as much as 18,000 kilograms per year, but includes gold recovered as byproduct of copper mining.
11/ Includes documented production from placer artisanal production.
12/ Data are based on official exports and do not reflect gold moved through undocumented channels.
13/ Indicates byproduct of base metals.
14/ Year beginning April 1 of that stated. Byproduct of copper production by Zambia Consolidated Copper Mines Ltd. only. Some additional artisanal production was reported, but data are insufficient to make reliable estimates.