

GEMSTONES¹

(Data in million dollars, unless otherwise noted)

Domestic Production and Use: The combined U.S. natural and synthetic gemstone output increased by 46% in 2003 from that of 2002. Production of natural gemstones decreased by 13% during 2003, primarily owing to a decreased domestic production of pearls and opal. Domestic gemstone production included agates, amber, beryl, coral, garnet, jade, jasper, opal, pearl, quartz, sapphire, shell, topaz, tourmaline, turquoise, and many other gem materials. In decreasing order, Tennessee, Arizona, Oregon, California, Arkansas, Nevada, Idaho, and Montana produced 80% of U.S. natural gemstones. Production of synthetic gemstones increased by 88% during the year, owing to large increases in the production of moissanite. Reported output of synthetic gemstones was from five firms in North Carolina, New York, Florida, Michigan, and Arizona, in decreasing order of production. Major uses were jewelry, carvings, and gem and mineral collections.

Salient Statistics—United States:	1999	2000	2001	2002	2003^e
Production: ²					
Natural ³	16.1	17.2	15.1	12.6	10.9
Synthetic	47.5	37.1	24.7	18.1	33.9
Imports for consumption	10,700	12,900	11,400	12,900	11,800
Exports, including reexports ⁴	3,610	4,330	4,330	4,700	5,070
Consumption, apparent ⁵	7,150	8,620	7,110	8,230	6,770
Price	Variable, depending on size, type, and quality				
Employment, mine, number ^e	1,200	1,200	1,200	1,200	1,200
Net import reliance ⁶ as a percentage of apparent consumption	99	99	99	99	99

Recycling: Insignificant.

Import Sources (1999-2002 by value): Israel, 42%; India, 21%; Belgium, 19%; and other, 18%. Diamond imports accounted for 94% of the total value of gem imports.

Tariff: Item	Number	Normal Trade Relations 12/31/03
Diamonds, unworked or sawn	7102.31.0000	Free.
Diamond, ½ carat or less	7102.39.0010	Free.
Diamond, cut, more than ½ carat	7102.39.0050	Free.
Precious stones, unworked	7103.10.2000	Free.
Precious stones, simply sawn	7103.10.4000	10.5% ad val.
Rubies, cut	7103.91.0010	Free.
Sapphires, cut	7103.91.0020	Free.
Emeralds, cut	7103.91.0030	Free.
Other precious, cut but not set	7103.99.1000	Free.
Other precious stones	7103.99.5000	10.5% ad val.
Imitation precious stones	7018.10.2000	Free.
Synthetic cut, but not set	7104.90.1000	Free.
Pearls, natural	7101.10.0000	Free.
Pearls, cultured	7101.21.0000	Free.
Pearls, imitation, not strung	7018.10.1000	4.0% ad val.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: The National Defense Stockpile (NDS) does not contain an inventory of gemstones. However, a very small portion of the industrial diamond stone inventory is of near-gem quality. Additionally, the beryl and quartz crystal inventories contain some gem-quality materials that could be used by the gem industry. The U.S. Department of Defense is currently selling some NDS materials that may be near-gem quality.

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Events, Trends, and Issues: In 2003, the U.S. market for unset gem-quality diamonds was estimated to be more than \$12.1 billion, accounting for more than one-third of world demand. The domestic market for natural, unset nondiamond gemstones was estimated at about \$788 million. The United States is expected to dominate global gemstone consumption throughout this decade.

The United Nations mandated the Kimberley Process Certification Scheme for rough diamond shipments in 2001. This process was implemented during 2002. The U.S. Congress enacted the Clean Diamond Trade Act, and the President signed it into law on April 25, 2003. This law makes the United States a full participant in the Kimberley Process, and U.S. participation is critical to the scheme's success in excluding conflict diamonds from the legitimate supply chain.

Canada's Ekati Mine completed its fourth full year in 2002, with diamond production of 4.98 million carats. The Diavik Diamond Mine came onstream in January 2003 and will have production of 6 to 8 million carats per year. Canada's first entirely underground diamond mine, the Snap Lake project, is expected to come onstream in 2005. When Snap Lake begins production, Canada will be producing at least 15% to 20% of total world diamond output.

World Mine Production,⁷ Reserves, and Reserve Base: Mine production in 2003 for Canada, Central African Republic, Guinea, Namibia, Sierra Leone, and Tanzania were revised upward, while production for Angola, Botswana, Brazil, and Congo (Kinshasa) were revised downward based on submissions from official country sources.

	Mine production		Reserves and reserve base ⁸
	<u>2002</u>	<u>2003^e</u>	
United States	(9)	(9)	World reserves and reserve base of diamond-bearing deposits are substantial. No reserves or reserve base data are available for other gemstones.
Angola	5,400	5,000	
Australia	15,100	17,000	
Botswana	21,300	20,000	
Brazil	700	500	
Canada	4,980	8,000	
Central African Republic	375	500	
China	235	240	
Congo (Kinshasa)	9,100	4,000	
Ghana	770	800	
Guinea	270	370	
Namibia	1,350	1,400	
Russia	11,500	11,800	
Sierra Leone	450	650	
South Africa	4,350	4,720	
Tanzania	182	440	
Other countries ¹⁰	<u>420</u>	<u>420</u>	
World total (rounded)	<u>76,500</u>	<u>75,800</u>	

World Resources: Most diamond-bearing ore bodies have a diamond content that ranges from less than 1 carat per ton to about 6 carats per ton. The major gem diamond reserves are in southern Africa, Australia, Canada, and Russia.

Substitutes: Plastics, glass, and other materials are substituted for natural gemstones. Synthetic gemstones (manufactured materials that have the same chemical and physical properties as gemstones) are common substitutes. Simulants (materials that appear to be gems, but differ in chemical and physical characteristics) also are frequently substituted for natural gemstones.

^eEstimated.

¹Excludes industrial diamond and garnet. See Diamond (Industrial) and Garnet (Industrial).

²Estimated minimum production.

³Includes production of freshwater shell.

⁴Reexports account for about 66% of the totals.

⁵If reexports were not considered, apparent consumption would be significantly greater.

⁶Defined as imports – exports and reexports + adjustments for Government and industry stock changes.

⁷Data in thousands of carats of gem diamond.

⁸See Appendix C for definitions.

⁹Less than ½ unit.

¹⁰In addition to countries listed, Cote d'Ivoire, Gabon, Guyana, India, Indonesia, Liberia, and Venezuela are known to produce gem diamonds.