

## GEMSTONES<sup>1</sup>

(Data in million dollars, unless otherwise noted)

**Domestic Production and Use:** Total U.S. gemstone output has decreased in recent years owing to a decline in foreign demand for freshwater shell, a major component of the domestic industry. Domestic gemstone production also included agates, amber, beryl, coral, garnet, jade, jasper, opal, pearl, quartz, sapphire, topaz, turquoise, and many other gem materials. Output of natural gemstones was primarily from Tennessee, North Carolina, Arizona, Oregon, California, Arkansas, and Utah, in decreasing order. Reported output of synthetic gemstones was from four firms in North Carolina, New York, California, and Arizona, in decreasing order of production. There was notable production of freshwater pearl in Tennessee, turquoise in Arizona, and beryl in North Carolina and Utah. Major uses were jewelry, carvings, and gem and mineral collections.

<b>Salient Statistics—United States:</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000<sup>e</sup></b>
Production: <sup>2</sup> Natural <sup>3</sup>	43.6	25.0	14.3	16.1	16.6
Synthetic	24.0	21.6	24.2	47.5	<sup>4</sup> 50
Imports for consumption	7,240	8,380	9,250	10,700	12,900
Exports, including reexports <sup>5</sup>	2,660	2,760	2,980	3,610	4,080
Consumption, apparent <sup>6</sup>	4,650	5,670	6,310	7,150	8,890
Price	Variable, depending on size, type, and quality				
Employment, mine, number <sup>e</sup>	1,200	1,200	1,200	1,200	1,200
Net import reliance <sup>7</sup> as a percent of apparent consumption	98	99	99	99	99

**Recycling:** Insignificant.

**Import Sources (1996-99 by value):** Israel, 38%; India, 21%; Belgium, 20%; and other, 21%. Diamond imports accounted for 93% of the total value of gem imports.

<b>Tariff:</b>	<b>Item</b>	<b>Number</b>	<b>Normal Trade Relations 12/31/00</b>
	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, portions of the industrial diamond inventory are of near-gem or gem quality. Additionally, the beryl and quartz 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 gemstone quality.

## GEMSTONES

**Events, Trends, and Issues:** Canada's first commercial diamond mine, the Ekati Mine, completed its first full year in 1999, with production of 2.5 million carats valued at \$422 million. During the first 6 months of 2000, Ekati production was another 1.35 million carats of diamond. Canada's second commercial diamond mine, the Diavik project, is expected to come on-stream in 2003 with production of 6 to 8 million carats per year worth about \$65 per carat.

The Kelsey Lake Diamond Mine, which straddles the Colorado-Wyoming State line, began production again in September 2000. Kelsey Lake is now owned by McKenzie Bay International, Ltd., a Canadian mining company, and is operated by McKenzie's local subsidiary, Great Western Diamond Co. Kelsey Lake is the United States' only commercial producing diamond mine.

In 2000, the U.S. gemstone market is expected to be about \$8.9 billion, accounting for at least one-third of world demand. The United States is expected to dominate global gemstone consumption during the next decade. Synthetic gemstones will gain a larger share of domestic jewelry sales.

### **World Mine Production,<sup>8</sup> Reserves, and Reserve Base:**

	Mine production		Reserves and reserve base <sup>9</sup>
	1999	2000 <sup>e</sup>	
United States	(10)	(10)	World reserves and reserve base of gem diamond are substantial. No reserves or reserve base data are available for other gemstones.
Angola	1,080	1,080	
Australia	13,400	14,000	
Botswana	15,000	15,000	
Brazil	300	300	
Canada	2,000	2,300	
Central African Republic	400	400	
China	230	230	
Congo (Kinshasa)	3,500	3,500	
Ghana	649	650	
Namibia	2,000	2,000	
Russia	11,500	11,500	
South Africa	4,000	4,000	
Venezuela	100	100	
Other countries	<u>1,440</u>	<u>1,440</u>	
World total	55,600	56,500	

**World Resources:** Natural gem-quality diamonds are among the world's rarest mineral materials. Most diamond-bearing ore bodies have a diamond content that ranges from less than 1 carat per ton to only about 6 carats per ton. The major gem diamond reserves are in southern Africa, western Australia, Canada, and Russia. Estimation of a reserve base is difficult because of the changing economic evaluation of near-gem materials and recent discoveries in 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.

<sup>e</sup>Estimated.

<sup>1</sup>Excludes industrial diamond and garnet. See Diamond (Industrial) and Garnet (Industrial).

<sup>2</sup>Estimated minimum production.

<sup>3</sup>Includes production of freshwater shell.

<sup>4</sup>Estimated by rounding the 1999 synthetic production figure, because the 2000 synthetic production figure was withheld; synthetic production in 2000 was at least as high as that of 1999.

<sup>5</sup>Reexports account for more than 90% of the totals.

<sup>6</sup>If reexports were not considered, apparent consumption would be significantly greater.

<sup>7</sup>Defined as imports - exports and reexports + adjustments for Government and industry stock changes.

<sup>8</sup>Data in thousands of carats of gem diamond.

<sup>9</sup>See Appendix C for definitions.

<sup>10</sup>Less than ½ unit.