

## GEMSTONES<sup>1</sup>

(Data in million dollars, unless otherwise noted)

**Domestic Production and Use:** Domestic commercial gemstone production includes amber, agates, beryls, coral, freshwater pearls, garnets, jade, jasper, mother-of-pearl, opals, quartz, sapphire, topaz, turquoise, and many other gem materials. Output of natural gemstones was primarily from Tennessee, Alabama, Arkansas, Oregon, North Carolina, and Arizona. Reported output of synthetic gemstones was from nine firms in California, New York, Michigan, Arizona, and New Jersey. There was considerable production of freshwater pearls in Tennessee; turquoise in Arizona and Nevada; beryl, tourmaline, and amethyst in Maine; tourmaline, beryl, kunzite, and garnet in California; and sapphire in Montana. Major uses were jewelry, carvings, and gem and mineral collections.

| <b>Salient Statistics—United States:</b>                              | <b>1992</b>                                    | <b>1993</b> | <b>1994</b> | <b>1995</b> | <b>1996<sup>e</sup></b> |
|---|--|-------------|-------------|-------------|-------------------------|
| Production: <sup>2</sup> Natural <sup>3</sup>                         | 66.2   | 57.7        | 50.5        | 60.0        | 62.0                    |
| Synthetic   | 18.9   | 18.1        | 22.2        | 26.0        | 26.0                    |
| Imports for consumption   | 4,950  | 5,850       | 6,440       | 6,540       | 7,140                   |
| Exports, including reexports  | 1,450  | 1,630       | 2,240       | 2,520       | 2,660                   |
| Consumption, apparent   | 3,480  | 4,300       | 4,270       | 4,110       | 4,570                   |
| Price   | Variable, depending on size, type, and quality |             |             |             |                         |
| Stocks, yearend <sup>4</sup>  | NA   | NA          | NA          | NA          | NA                      |
| Employment, mine, <sup>5</sup> number                                 | 800  | 1,000       | 1,000       | 850         | 850                     |
| Net import reliance <sup>6</sup> as a percent of apparent consumption | 98   | 98          | 98          | 98          | 98                      |

**Recycling:** Insignificant.

**Import Sources (1992-95 by value):** Israel, 30%; Belgium, 22%; India, 21%; United Kingdom, 4%; and other, 23%. Diamond imports were about 90% of the total value of gem imports.

| <b>Tariff:</b> | <b>Item</b>                     | <b>Number</b> | <b>Most favored nation (MFN)</b> | <b>Non-MFN<sup>7</sup></b> |
|----------------|---------------------------------|---------------|----------------------------------|----------------------------|
|                |                                 |               | <b>12/31/96</b>                  | <b>12/31/96</b>            |
|                | Diamonds, unworked or sawn      | 7102.31.0000  | Free                             | Free.                      |
|                | Diamond, ½ carat or less        | 7102.39.0010  | Free                             | 10% ad val.                |
|                | Diamond, cut, more than ½ carat | 7102.39.0050  | Free                             | 10% ad val.                |
|                | Precious stones, unworked       | 7103.10.2000  | Free                             | Free.                      |
|                | Precious stones, simply sawn    | 7103.10.4000  | 16.8% ad val.                    | 50% ad val.                |
|                | Rubies, cut                     | 7103.91.0010  | Free                             | 10% ad val.                |
|                | Sapphires, cut                  | 7103.91.0020  | Free                             | 10% ad val.                |
|                | Emeralds, cut                   | 7103.91.0030  | Free                             | 10% ad val.                |
|                | Other precious, cut but not set | 7103.99.1000  | 1.3% ad val.                     | 10% ad val.                |
|                | Other precious stones, other    | 7103.99.5000  | 16.8% ad val.                    | 50% ad val.                |
|                | Imitation precious stones       | 7018.10.2000  | 1.7% ad val.                     | 20% ad val.                |
|                | Synthetic cut, but not set      | 7104.90.1000  | 1.9% ad val.                     | 10% ad val.                |
|                | Pearls, natural                 | 7101.10.0000  | Free                             | 10% ad val.                |
|                | Pearls, cultured                | 7101.21.0000  | 1.3% ad val.                     | 10% ad val.                |
|                | Pearls, imitation not strung    | 7018.10.1000  | 6.4% ad val                      | 60% ad val.                |

**Depletion Allowance:** 14% (Domestic), 14% (Foreign).

**Government Stockpile:** The National Defense Stockpile (NDS) does not contain an inventory of gemstones per se. 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, and the inventory of synthetic ruby and sapphire could be used by the gem industry. The Defense Logistics Agency is currently disposing of materials from the NDS.

## GEMSTONES

**Events, Trends, and Issues:** A notable change in U.S. gem diamond production may be developing. Except for a few gem diamonds found each year in Arkansas, U.S. diamond output has been negligible. However, test mining for diamonds has been conducted near the Colorado-Wyoming border, and a plant with the capacity to produce 100,000 carats per year was completed in the area during 1996. Exploration for diamonds also has been underway in other States (e.g., Alaska, Arkansas, Michigan, Minnesota, and Wisconsin).

Demand for gemstones, including synthetics and simulants, is expected to increase in the United States and other industrialized nations as personal disposable income rises. A survey conducted by a domestic jewelry retailers association indicates that (in decreasing order of preference) diamonds, emeralds, sapphires, and rubies were the favorite gemstone jewelry of U.S. consumers.

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

|                              | Mine production |                   | Reserves and reserve base <sup>9</sup>  |
|------------------------------|-----------------|-------------------|---|
|                              | 1995            | 1996 <sup>e</sup> |   |
| United States                | —               | —                 | World reserves and reserve base of gem diamond are substantial. No reserves or reserve base data are available for other gemstones. |
| Angola                       | 450             | 650               |   |
| Australia                    | 18,300          | 20,000            |   |
| Botswana                     | 11,500          | 11,500            |   |
| Brazil                       | 600             | 600               |   |
| Central African Republic     | 400             | 400               |   |
| China                        | 230             | 250               |   |
| Ghana                        | 580             | 600               |   |
| Namibia                      | 1,380           | 1,300             |   |
| Russia                       | 9,000           | 9,000             |   |
| Sierra Leone                 | 113             | 200               |   |
| South Africa                 | 4,300           | 4,500             |   |
| Venezuela                    | 229             | 200               |   |
| Zaire                        | 4,000           | 4,000             |   |
| Other countries              | 820             | 800               |   |
| World total (may be rounded) | 51,900          | 54,000            |   |

**World Resources:** Most of the world gem diamond reserves are in southern Africa, Russia, and Western Australia. Estimation of a reserve base is difficult to determine because of the changing economic evaluation of near-gem materials and new discoveries in Australia, Canada, and Russia.

**Substitutes:** Plastics, glass, metals, wood, paper, and other materials are substituted for gemstones. Synthetic materials that have the same appearance and chemical and physical properties are substituted for natural gemstones. Simulants, materials with a similar appearance but with different chemical and physical properties, also are substituted for natural gemstones.

<sup>e</sup>Estimated. NA Not available.

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

<sup>2</sup>Reported and estimated minimum production only.

<sup>3</sup>Natural includes production of freshwater pearls, natural and cultured.

<sup>4</sup>Stock data are not available and are assumed to be zero for apparent consumption and net import reliance calculation.

<sup>5</sup>Estimate includes operators of fee site deposits.

<sup>6</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>7</sup>See Appendix B.

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

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