GEM NEWS

Stephanie Dillon, *Editor*

DIAMONDS

Australia. Following the setting of a buying sample by Argyle Diamond Sales, Ltd. and the Central Selling Organisation (CSO), the first commercial sale of Argyle diamonds took place in Perth in April. Similar sales were expected to occur in Perth approximately 10 times each year. The alluvial deposits of the Smoke and Limestone Creek areas at Argyle are presently producing five million carats annually. Valuation at the first sights was $11 per carat, based on the classification of 10% gem quality, 35% cheap gem, and 55% industrial quality.

Belgium. In 1982, Belgium saw a 6.3% rise in exports of polished goods, a 2.9-million-carat increase over 1981. Exports to the United States increased 16.1% (an 82% overall rise in two years) and to Russia, 62%. Imports rose 14%. Part of the increase is explained by the abolition of import duties on polished goods in the U.S. and by De Beers's aggressive publicity campaigns, in addition to the growing dependence of the U.S. on foreign markets. Belgian polished exports to Canada rose 55% and to Hong Kong 42.3% during the year. Imports from Russia of over 57.4 million carats of rough, polished (700,000 ct), industrial, and synthetic diamonds represented a 6% increase over 1981. As of this summer, a promised reduction in Russian imports had yet to be arranged between Moscow and Antwerp.

Israel. Exports of polished diamonds for the first quarter of 1983 showed a 7.6% increase in value from the same period last year. Imports of rough for the first quarter rose by 50.9% over last year's figures. Israel's diamond industry is relying more heavily on open-market sources, as demonstrated by a decrease in the Central Selling Organisation's share of rough imports: a decline in dollars from 37.7% to 24.7% for the first quarter.

Thailand. In 1982, Thailand's six-year-old diamond-polishing industry exported approximately $10 million worth of diamonds. Leaders of the Thai gem industry, upon assurance from the CSO of availability of rough, propose to make Bangkok a major diamond-cutting center. Maintaining that there is an ample supply of experienced Thai gem cutters, Banjong Asavasangsidhi (president of the Jewellers' Association), Anant Salwala (president of the Gem and Jewelry Traders Association), and W. K. Ho (chairman of the Asian Institute of Gemological Sciences) signed the plan calling for establishment of a central organization to establish and maintain a cottage industry in diamond cutting. This would be in addition to the two diamond-polishing facilities now operating in Bangkok, each of which employs 250 cutters.

United States. Several hundred small diamonds have been mined from a site along the boundary of Colorado and Wyoming by Cominco American, Ltd., a Canadian mining company. Last year, the company built a $2.5 million processing plant at Fort Collins in expectation of further finds. Superior Minerals Company, a subsidiary of Superior Oil Company of Houston, has also explored the area and built a processing plant, the whereabouts of which are secret. Cominco is also prospecting around Iron Mountain, north of Cheyenne, Wyoming, as well as in Kansas and Michigan. North America's only established diamond mine to date, at Murfreesboro, Arkansas, operated from 1903 until 1919.

New York's three diamond industry associations—the Diamond Dealers Club, the Diamond Trade Association, and the Diamond Manufacturers and Importers Association—have banded together to provide accurate information to diamond merchants. Their organization, the American Diamond Industry Association, was formed to combat damaging media reports on the state of the industry. They have begun by inviting 47th Street retailers into cutting and importing concerns for a first-hand view of the trade.

According to U.S. government estimates, at least 25% of all Russian diamonds are consumed in the U.S. Although there are occasional purchases from Russian agencies in Europe, it is believed that distribution is largely through De Beers (marketer of most Russian rough), since the 10% duty applied to Soviet goods discourages direct importation.

General Electric Company's Special Materials Department has developed a new type of synthetic industrial diamond, a polycrystalline called Formset. It will replace monocrystalline diamond used to dress grinding wheels. The new synthetic is reported to lengthen

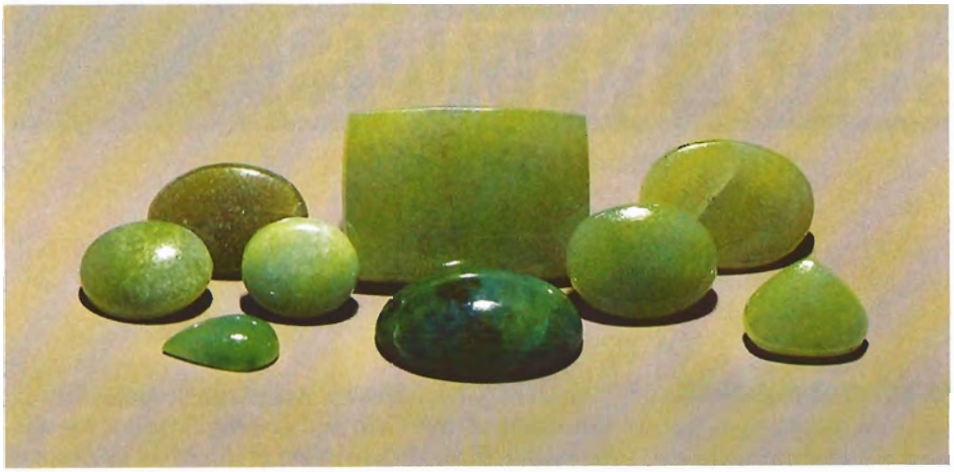

Figure 1. Color range of idocrase (californite) now being distributed in large quantities. The average cabochon is approximately 12 × 16 mm. Photo by Mike Havstad.

the life of the dresser while affording higher dressing efficiency and improving the grinding wheel's effectiveness.

The rise in natural diamond production, especially from Australia, is expected to affect synthetic diamond manufacture. In the years since General Electric introduced synthetic diamonds in 1956, production has steadily risen; last year, well over 100 million carats were produced. An additional factor in the anticipated slowdown in this area is the rapid increase in production costs for the synthetics.

Zaire. For a minimum of two years, Zaire has agreed to return to the CSO system to market diamonds from Miba (Société Minière de Bakwanga), the country's main source. This contract voids the five-year agreement of 1981, which gave three diamond concerns (Industrial Diamond Company of the U.K., and Caddi and Glasol of Belgium) exclusive marketing rights. The *African Economic Digest* reports that Zaire will receive a fixed price for its stones, independent of free-market fluctuations. Miba produces approximately 70% industrial and 30% small gem or near-gem stones. At the first sale under the new agreement in March, nearly 300,000 ct from the Miba mines went to De Beers for a total price of $2,608,425. Miba's output represents half of the nation's diamond product; the remainder is found in alluvial deposits by small prospectors, and much of this has been smuggled into the Congo to avoid Zaire's high dollar-exchange rate. To discourage smuggling, government-authorized traders in Zaire's capital, Kinshasa, will now be able to pay at the same exchange rate as the black market.

COLORED STONES AND ORNAMENTAL MATERIALS

Amethyst. Jack Lowell, of the Colorado Gem & Mineral Company, Tempe, Arizona, reports on the recent amethyst find in Para, Minas Gerais, Brazil: "At one locality, there are large, weathered boulders of very dark to light, heavily zoned amethyst. Some crystal portions (now rounded boulders) weigh up to 20 pounds. I have seen clean stones up to 100 ct of a very deep red-violet. Many of the deep-colored stones are heated in test tubes over an alcohol lamp to lighten the color. Another locality in Para is producing well-formed, sharp crystals with a light to medium color. The material has been found in more quantity than the other locality, but is not as special as the first, which seems to be a surface deposit."

Blue chalcedony. After a ten-year hiatus, the Namibian mine that provided uniformly colored blue chalcedony has resumed production.

Coral. Asian coral, taken from depths greater than 200 m, is being gathered in increasing quantity. The material is not of a uniform pink color, as is Midway coral; it is characterized by irregularities. Beads and cabochons of unusual shapes and in a broad range of colors will be readily available.

Idocrase. A new source of californite promises an abundance of material for beads and cabochons. The stone ranges from a very pale opaque, creamy green to various shades of lime green to a deep, jade-like lime-olive green (figure 1). It is usually uniform in color, but is sometimes mottled with various shades of green or brownish gold. The material is cut in cabochons of up to 12 × 16 mm, on the average. It is distributed by Spectrum Commercial Lapidaries, Inc., of Boulder, Colorado.

Malachite. More rigorous export regulations imposed by Zambia and Zaire have led to a reduction in the amount of malachite available on the market.

SYNTHETICS

Cat's-Eye Chrysoberyl. The first successful synthesis of cat's-eye chrysoberyl is claimed by laboratories of the Sumitomo Cement Company, Funabashi City, Japan. The company filed for worldwide patents on the material, produced from a mixture of beryllium oxide, alu-

minum oxide, and a chatoyancy-producing additive. A company representative reported that the mixture was heated to approximately 2000°C and maintained at that temperature in equipment made by modifying a commercial crystal growth apparatus. Cooling to room temperature, followed by a special heat treatment, completed the process.

C-OX. Produced at the Lebedev Institute of Physics of the USSR Academy of Sciences in 1982, C-OX is a material similar in properties to cubic zirconia, although entirely different in composition. It is cubic in structure, with a Mohs hardness of 8, a specific gravity of 5.6 to 5.8, a refractive index of 2.0 to 2.1, disperson of 0.040, and a melting temperature of 2700°C. Supplied only as preforms and faceted stones, the material is produced in a wide range of colors, including intense green and blue not available in cubic zirconia. It is presently being distributed by C. Cerasi of Milan.

ANNOUNCEMENTS

A $20,000 reward has been offered for information leading to the return of the following collection of 23 gem crystals and mineral specimens stolen from Keith Proctor in Houston, Texas, on May 13, 1983.

1. Aquamarine crystal (sky blue), pointed termination, on host rock (3½" × 1⅜")
2. Aquamarine crystal (sky blue) on quartz and feldspar (2" long)
3. Emerald (1½" high) on calcite
4. Emerald (2½" high) on calcite
5. Large green beryl (3¼" × 1⅞")
6. Lime green beryl, two parallel crystals (2⅜" × 1¼")
7. Green Russian beryl, two parallel crystals (3" × 1"), 26 vertical faces and 17 termination faces, very rare crystallography
8. Yellowish green heliodor beryl (2⅜" × 1¼")
9. Sea green yellow beryl, pinacoid termination (4½" × ⅞")
10. Diamond crystal, 29.23-ct octahedron
11. Olive green chrysoberyl, V-shaped (2" long)
12. Tanzanite (1¼" high)
13. Tanzanite (1¾" high)
14. Silver crystals on calcite (approximately 3" × 2")
15. Dioptase on calcite (4" × 4")
16. Pink gem rose tourmaline crystals with green tips on pink cookite matrix (two crystals, longest is 3")
17. Rubellite (2¾" × 1¼")
18. Emerald green tourmaline, two parallel crystals (3" × ⅞")
19. Bicolor (blue and green) tourmaline (3½" × ¾")
20. Gold crystals on 2" square piece of quartz
21. Imperial topaz crystal (approximately 5½" long)
22. Gold in limonite (1")
23. Twindle (twisted) quartz crystal on plastic stand (2½" × 2") with Smithsonian Institution label and number

Parties who believe they know the whereabouts of any of these specimens are asked to call the FBI in Houston at (713) 224-1511, or Keith Proctor at (303) 598-1233.

The Asian Institute of Gemological Sciences will host a seminar November 9 and 10 in Bangkok, Thailand, on "Diamond (Natural and Synthetic) and Diamond Simulants." Presenting the seminar, which consists of lectures and practical sessions, are Roy V. Huddlestone and Peter G. Read, who will cover the history, mining, cutting, and grading of diamonds and the evolution of diamond simulants. "Highlighting Rubies and Sapphires" is the title of a seminar to be held November 24–26. Robert P. Weiser will direct the course, which includes the AIGS color- and quality-grading system, the international market and wholesale pricing factors, synthetics and treatments of corundum, identification techniques, and major sources.

The American Gem Trade Association will hold its third annual meeting February 4–9 at the Doubletree Inn, 445 South Alvernon Way, Tucson, Arizona 85711. The theme of the show is "Add more color to your life." Natural, colored gemstones will again be featured, with seminars, social events, and a business meeting of the association to be held at the hotel. A highlight of the event will be the presentation of awards for the Spectrum competition for the design of colored-stone jewelry. The deadline for entries has been extended to January 5. Information on the fair may be obtained from AGTA Executive Director Stuart Woltz by calling (602) 279-7171. Applications for the design contest are available from Alex Bahtiarian, Chairman, AGTA Spectrum Award Committee, P.O. Box 32086, Phoenix, AZ 85064.

The Tucson Gem and Mineral Society's 30th Annual Show will be held February 9–12, 1984, at the Tucson Community Center, 260 South Church Avenue, Tucson, Arizona. Tourmaline will be the featured mineral. There will be exhibits of gems, jewelry, lapidary, and fossils, as well as related instruments, equipment, and publications. The show will provide the background for the annual meeting of the Mineral Museums Advisory Council; the joint symposium of

Friends of Mineralogy, the Mineralogical Society of America, and the Tucson Gem & Mineral Society; and the Neal Yedlin Memorial Micromount Symposium. Further information is available from Sue Angelon, Publicity Chairman, Tucson Gem & Mineral Show Committee, P.O. Box 42543, Tucson, AZ 85733.

EXHIBITS

Cooper-Hewitt Museum—2 East 91st Street, New York, NY 10028. Telephone: (212) 860-6868. "The Art of the European Goldsmith: Silver from the Schroder Collection" is a traveling exhibit of about 95 objects collected by an English family from the 1870s to the 1930s. This first U.S. showing runs from November 1 – January 22, 1984.

Smithsonian National Museum of Natural History/Thomas M. Evans Gallery—10th Street and Constitution Avenue, NW, Washington, DC 20560. Telephone: (202) 357-2458. "Ban Chiang: Discovery of a Lost Bronze Age" includes 200 archaeological findings dated 4000 to 200 B.C. from northeastern Thailand. Pottery, metalwork, ceramic animals, worked bone, weapons, and jewelry are exhibited for the first time from November 1 through January 31, 1984.

Smithsonian National Museum of African Art—318 A Street NE, Washington, DC 20002. Telephone: (202) 287-3490, Ext. 43. "African Islam: The Artistry and Character of Belief" demonstrates the influence of Islam on African life in an exhibit of sculpture (figures, masks, etc.), jewelry, and architecture. November 30 through (tentative) mid-April, 1984.