

GEM NEWS

Stephanie Dillon, *Editor*

DIAMONDS

Australia. Ashton Mining predicts a total annual production of approximately 20 million cts. by 1986, estimating that about 2 million will come from alluvial deposits by late this year and the rest from the AKI kimberlite pipe at Argyle. Since it has been determined that the southern end of the pipe contains higher-quality diamonds, fewer stones will be produced. An initial production plant will be required to process only 2.25 million tons of material annually, rather than the originally anticipated 5 million tons.

Establishment of a local cutting and polishing industry will depend on whether Ashton decides to market through De Beers or independently.

Belgium. Because of the volume of cut diamonds being imported into Belgium from Russia, Belgian diamond workers in the "smalls" industry of Kempen fear for their survival. The proportion of cut diamonds imported from Russia jumped from 15% in the 1977-1979 period to 22% in the first half of 1980. Secretary of State for the Flemish Community Paul Akkermans has stated concern over the situation, but he has thus far ruled out the possibility of import restrictions as damaging to Antwerp's reputation as world diamond trade capital.

Illustrated in figure 1, against a Belgian postage stamp, is a sample of modern-day diamond carving, a faceted reproduction of the head of King Baudouin of Belgium. It was presented to the king by Belgian cutter Robert Meeus. The finished piece measures 10.77 mm × 5 mm × 1.90 mm and weighs 1.03 cts. It was cut from a 2.85-ct. rough crystal.

Among Meeus's other diamond carvings are replicas of the Eiffel Tower, the head of King Hassan II, and one of President de Gaulle, which is displayed in the Louvre. He has also worked on reproductions of Prince Charles and Princess Diana. Diamond cutters use flat crystals to produce any number of fancy shapes, including personalized examples such as this.

Ghana. The Akwatia, Ghana's only remaining producing diamond mine, may be closed this May because of financial problems. Output has dropped to less than half of that produced in the mid '70s, and production to date has been continued by an emergency loan to Ghana Consolidated Diamonds. GCD's Managing Director Harry Parker claims the company's survival depends on more state aid (the government holds 55%

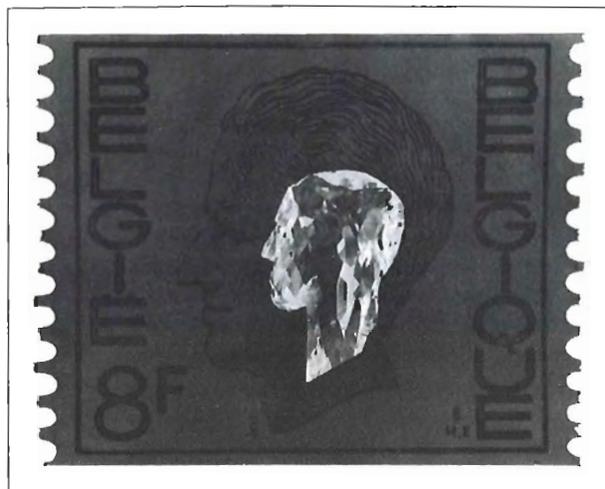


Figure 1. Diamond carving of King Baudouin of Belgium, 1.03 cts, by Robert Meeus.

of the company) or a major devaluation of Ghana's currency.

Guinea. Australia's Bridge Oil plans to invest \$22 million over the next three years in machinery and equipment for diamond production in Guinea. The lease involves 23,000 km² of the Kissidougou Eanankor section, close to the Sierra Leone border. The deposits, chiefly alluvial, will be worked by the Guinean government (50% shareholder), Bridge (45%), and two other companies, one Swiss and one British (the remaining 5%).

India. Indian diamantaires, concerned that the proliferation of automated cutting and polishing machines may deprive their industry of a portion of the rough traditionally provided by DeBeers, are seeking new sources for rough. Currently 40% of their material comes from DeBeers and 60% comes from Antwerp. The government's Minerals and Metals Trade Corporation has secured an agreement with Ghana and is pursuing new joint ventures with other African countries to increase supplies.

Israel. Following a slump, diamond processing in Israel appears to be reviving, with more than 30 new plants opened in recent months.

South Africa. The Diamond Club of South Africa opened that country's first bourse October 6 of last year. It is

expected to attract traders from other countries as well as raise domestic interest in diamonds.

Sweden. Sunsvall, Sweden, is the location of the first diamond discovery in Europe, made last summer. Two diamonds, each approximately 0.3 mm in length, were found by representatives of the State Geological Research Institute just a few months after they began prospecting.

Taiwan. Ochta Holdings, a South African company, is opening a diamond-cutting plant in the Republic of China which is expected to attain maximum polishing capacity of 10,000 cts. per month by 1984. The company intends to process South African rough for the Far Eastern market.

U.S.A. The General Electric Company announced in February a new method of creating invisible identification marks on diamonds. An ion implanter (a machine ordinarily used to make microscopic electronic circuits) bombards a crystal with a stream of ions. These produce a change in the ability of the material to conduct electricity. A stencil is placed on the diamond before its bombardment, causing the desired pattern (e.g., a number) of electrical conductivity to form. Subsequently, the gem can be rubbed on cotton or silk to build up a charge of static electricity, then dusted with a special powder that clings to the spots of ion implantation, showing the identification mark. The powder can be wiped away. This technique, which GE will make available for licensing, could provide positive and nondestructive identification of stones.

U.S.S.R. Mine shafts being driven at Miniy in Yakutsk represent the first underground diamond operations in the U.S.S.R. Until this time, mining has been done by open-cast methods. The shafts are driven under Siberian permafrost, where the galleries must be artificially frozen, since the earth would be too soft otherwise to support driven shafts. One shaft, from which a high yield is expected, will reach a depth of 1,000 m.

To man the local polishing industry, four Russian schools—in Moscow, Kiev, Barnaul, and Gomel—are training diamond cutters. The one-year course includes crystallography, drawing, and the technology of working with diamonds. The students work exclusively with diamonds, with processing losses reported at just 5% higher than those of experienced workers.

COLORED STONES

Aquamarine from Afghanistan. Dr. Edward Gübelin has followed up his report on gems of Pakistan (see this section of the Fall 1981 issue of *Gems & Gemology*) with a photograph of aquamarine with albite and muscovite from Dassu in Baltistan, Pakistan (figure 2).



Figure 2. Aquamarine with albite and muscovite from Dassu, Baltistan, Afghanistan.

Synthetic Amethyst. Synthetic amethyst offered to dealers as natural is currently causing concern in the jewelry industry. Material produced in Russia has been commercially available since 1970. Recently, the Japanese have also begun to produce and cut synthetic amethyst crystals. Although some specimens are recognizable by "breadcrumb" inclusions, much of the material is indistinguishable from natural, especially in mounted goods. The GIA Gem Trade Laboratory, therefore, does not specify the origin—natural or synthetic—of amethyst on identification reports.

Imitation Opal. Readers may be familiar with the synthetic opal first produced by Pierre Gilson in 1972, which has been marketed since 1974. Now we are indebted to Dr. Edward Gübelin for the announcement, originally published in Moscow, that Siberian and Tadshikian scientists have collaborated to produce synthetic opals in Isfaru, Tadshikistan. Another recent product is discussed in the Gemological Abstracts section of this issue of *Gems & Gemology*.

Israeli Emerald Industry. The largest emerald-polishing center is now Israel, where approximately 50% of the world's production for 1981 was cut. Numerous innovative techniques have been patented by Israeli plants, and domestic educational institutions are cooperating in research and technological training in the field. Ben-Zion Harel, chairman of the Israel Emerald Cutters Association, formed last summer, estimates that 40%–50% of the emeralds sold by jewelers are processed and marketed by Israel. Pointing to the technology behind the rapid development of the industry, he predicts that within two years production quality will be standardized and loss minimized by the use of robots as cutters.

Another Taaffeite. In 1981, a 4.02-ct. light mauve stone from the collection of a resident of Colombo, Sri Lanka,

was identified as taaffeite. The first such stone was discovered in 1945 by Count Taaffe of Ireland. David Dikinas, of Los Angeles, who made the recent discovery, estimates that fewer than 30 of the stones are known to exist.

New Pala Tourmaline Pockets. Four new pockets were revealed last fall at the Himalaya Mine in Mesa Grande, California. Bill Larson, owner of Pala Properties International, reopened the mine three years ago and directed exploration to reach previously undiscovered pegmatite. The pockets were located after 14 months and 715 feet of tunneling. Pink, green, and bi-colored material (figure 3) has been removed, including a number of sizable mineral specimens; less than one per cent of the material is considered suitable for faceting.

INTERNATIONAL GEMOLOGICAL SYMPOSIUM

February 12–15 were the dates of the first International Gemological Symposium, held by GIA at the Century Plaza Hotel in Los Angeles in celebration of the Institute's 50th anniversary. The event was attended by 750 people, representing 35 countries, and was, in the opinion of the participants, outstanding in both effectiveness and content.

The 12 sessions featured 60 noted international gemologists, who examined production, mining, culturing, marketing, treatment, and many other aspects of gemology. The keynote address, "Diamonds Today and Tomorrow," was delivered by G. L. S. Rothschild of I. Hennig & Company, Ltd., the largest brokerage firm for DeBeers' Central Selling Organization. Formal sessions culminated in an audience participation program of questions and answers.

In conjunction with the Symposium, the Los Angeles County Natural History Museum featured an exhibit of the Rainbow Gems Collection of 300 naturally colored fancy diamonds.

Forty-two of the speakers' presentations have been published in a proceedings volume. The talks have also been recorded on tape cassettes. The proceedings and tapes of this unique event are available from the GIA Bookstore, P.O. Box 2052, Santa Monica, California 90406. Telephone: (213) 829-3126.

TUCSON GEM AND MINERAL SHOW

This year, for Tucson's February show, 151 gem exhibitors were stationed at the Marriott Hotel, while 88 members of the year-old American Gem Trade Association occupied booths at the Doubletree Inn. A half dozen other locations contained booths featuring faceting and cabochoning rough, mineral specimens, findings, and lapidary and jewelry manufacturing equipment.

Beryl. Faceted aquamarines from Brazil and Afghanistan were plentiful, as were aquamarine specimens from Idaho.



Figure 3. Himalaya tourmaline mine as seen with miners' lamps. Photograph by Mike Havstad, GIA Gem Media.

There were very fine emeralds from Pakistan and Afghanistan in addition to those from Colombia. A new feature was the presence of a quantity of African emeralds in large and calibrated cuts offered by dealers from Israel.

Red beryl was present chiefly in mineral specimens, but some cut stones were available.

Corundum. There were many fine cut Umba River (East Africa) corundums, usually in sizes of one carat and under. These were in all colors, both faceted and en cabochon, some showing a change of color (usually blue to violetish blue).

Medium-quality rubies from Pakistan were on display.

Suddenly this year, there were trays full of the hitherto very rare orange sapphires. Pink and yellow sapphires were also in abundance. The presence of so many of these stones, reportedly from Burma and Ceylon, suggests the possibility of a newly discovered source or, perhaps, that color treatment is becoming either more widespread or more sophisticated.

Garnet. Orange garnets were plentiful, as were rhodolites, reportedly from Tanzania.

A number of large cut tsavorite were displayed. These may have been from old stock, but a plentiful supply of tsavorites up to one carat in size is predicted by mine owners.

Malachite. Malachite was on display in the mineral exhibit. There were many very fine stalactitic specimens of this mineral.

Pearl. Surprising to Tucson habitués was the quantity of pearls on display. In addition to strands of fresh-water cultured pearls from China, there were some from Japan's Lake Biwa and strands of 2- to 8-mm Japanese salt-water cultured *akoyas* (cultured over mother-of-pearl nuclei). Individual natural pearls from Tennessee were shown in sizes ranging from seed pearls of 2 mm to stones of 20 to 30 mm. The colors displayed included white, gold, pink, lavender, purple, bronze, and black. There were a few South Seas naturally colored black cultured pearls and some of treated color. A fair amount of the Chinese fresh-water product shown appeared to be dyed.

Peridot. Some fine peridots from Burma and from the San Carlos mine of Arizona were shown.

Spinel. Spinel of all colors were plentiful, including a few 10-ct. and "ruby" red stones.

Spodumene. Pink spodumene from Afghanistan was displayed primarily as rough material. There were also cut stones of Brazilian kunzite.

Sugilite. The purple stone introduced at Tucson last year was shown in quantity, in rough form and en cab-

ochon, with the more translucent material faceted. Trade names are Royal Lavulite and Royal Azel.

Tanzanite. There were few fine tanzanites in evidence, and those available apparently came from old stock, inasmuch as little material is being brought out of Tanzania at present.

Topaz. Topaz was abundant in light blue stones and in yellow to orange colors. Because of recent concern over some marketed topaz emitting radiation (see the article by Robert Crowningshield in the Winter 1981 issue of *Gems & Gemology* for further information on this subject), a representative of the Nuclear Regulatory Commission examined numerous materials with a geiger counter. Dealers were universally cooperative in submitting stock for testing. All material proved acceptable by commission standards.

Tourmaline. Green tourmaline from Zambia was plentiful. There were a number of coppery earth colors in stones from Mozambique. There was also an unusually large quantity of fine colored rubellite, reportedly from a Brazilian source discovered last November. Tourmaline mineral specimens from Nuristan, Afghanistan, were displayed, as were tourmaline carvings from Idar-Oberstein.

ANNOUNCEMENTS

The Canadian Gemmological Association has announced that, in affiliation with the Gemmological Association of Great Britain, it has opened a course leading to a Diploma in Gemmology and Fellowship in the Canadian Gemmological Association. The course is available through correspondence and through evening classes held in Toronto. Registration for 1982 closes September 30. For further information, write to: The Registrar, Canadian Gemmological Association, Box 1106, Station "Q," Toronto, Ontario M4T 2P2.

The Adiel Steacy Memorial Scholarship is offered annually and is open to a resident of Brockville, Ontario, Canada, who needs aid to study gemology. The scholarship provides up to \$2,500 for the recipient, who is expected to seek employment in the Canadian jewelry industry upon the completion of his studies, to attend GIA or its equivalent in Canada. Should no application be made by a Brockville resident, other residents of Ontario will be considered. Applications may be submitted to the Assistant Registrar (Student Awards), Queen's University, Kingston, Ontario K7L 3N6, prior to July 1.

The Henry H. Hartevelde, Jr. Scholarship, to cover the cost of the Resident Course in Diamonds at GIA's New York facility, is offered by the institute. It will be granted on the basis of financial need and the individual's desire to become a professional jeweler. Deadline for application is August 15. Applications are available through the Scholarship Office, GIA, P.O. Box 2110, Santa Monica, CA 90406.

Gems & Gemology welcomes news of exhibits and events of a gemological nature. Please contact Stephanie Dillon, Gemological Institute of America, 1660 Stewart St., Santa Monica, CA 90404. Telephone: (213) 829-2991.

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