

GEMSTONES

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The mining and production of coloured gem material showed a marked slowdown during 2002. This was partly because of the ongoing slow down in markets, and partly because of the major fluctuations in the values of stocks and shares. The situation gradually worsened during the year owing to growing tensions in the Middle East, the invasion of Afghanistan and the ever-increasing possibility of war being declared on Iraq.

In spite of the difficult conditions, there were still a few countries which continued large-scale production of gem materials and there were abundant supplies available from Sri Lanka, Madagascar and Nigeria. Mining in Afghanistan and Pakistan was severely hampered by local military operations. In Brazil and much of South America, mining was severely affected by low demand in the North American markets, despite a few signs that there was more interest in coloured gemstones, especially in the US.

China continued to export quantities of inexpensive worked gem materials into the world markets. Much of the material was of poor quality and there were enormous quantities of stained and treated materials, especially of those that have a passing resemblance to jade. The quality of materials and workmanship had declined from previous years and this may have reflected the shortage of good-quality rough gem material which was absent from the market place. The Chinese internal consumer market for gems remained strong and much of the faceted gem production was purchased for internal consumption.

There continued to be a noticeable absence on the market of the large, high-quality gems rubies from Myanmar (Burma). There was, however, a quantity of fine-coloured Madagascan sapphires on the market, some being mistaken for material from Kashmir in India, although the majority of Madagascan stones only attain their fine colour after being heat-treated.

The Indian market was quite strong but there was a major downturn towards the end of the year, and Pakistani production was drastically reduced by the ongoing military operations in the northern mining areas. There was sporadic production from Afghanistan and it was only in the last few months of the year that some mining was resuming at relatively normal levels. The political situation in Sri Lanka showed a marked improvement and gem production was at a higher level than in more recent years.

Corundum

Ruby

Production of small commercial gems during 2002 was at similar levels to 2001. Mining continued from the several new sources in Myanmar. Large, transparent, fine- coloured stones in excess of 3 ct were extremely scarce and

held their prices despite a depressed market. Very few fine-quality gems were available, and prices continued to rise at the top end of the market.

Small, low-quality rubies (which were treated to improve their colours and appearance) were plentiful, and prices remained low, and in many cases actually fell during the year. Goods were readily available from Thailand where they were imported from Myanmar, Vietnam, Cambodia, India and a number of African sources.

Afghanistan production was very low. Only a few stones were seen from the mines in Pakistan during 2002. Russia and Tajikistan produced quantities of low-quality stones but the larger, more desirable gems were in short supply.

Madagascar produced quantities of low-quality rubies and a few stones of varying colours, many of these were suitable for various methods of treatment to turn them to more commercially-desirable shades of colour. Tanzania and India continued to produce quantities of large, low-quality stones.

Sapphire

With the improved political situation in Sri Lanka, sapphire production rose during 2002. Good-quality untreated gems were not plentiful and prices for these stones remained high. Heat-treated goods were readily available and a quantity of treated 'padparadscha' (lotus or orange/pink coloured sapphires) appeared on the market. These at first seemed to be from a new source, but many were produced as a result of heating normal material packed with powdered chrysoberyl which gives rise to the stones' vivid colour. The colour of these gems is only skin deep on the surface and repolishing will remove most, if not all, of the gem's apparent colour.

Sapphire mining in Australia, Thailand, China and Nigeria was sporadic during 2002, and there were no signs of new investment in operations in these areas.

Madagascar produced a number of low- and medium-grade sapphires, and a smaller number of very finely coloured gems. Some stones were very similar in outward appearance and colour to fine material from Kashmir, leading to considerable confusion in the market place, especially for customers requiring goods from specific localities.

Tajikistan produced a number of fine pink sapphires, and there was little reported production from Pakistan.

Beryl

Emerald

Colombian emerald production increased considerably during 2002 and good-quality small stones and larger, paler stones were abundant in the market place. Fine material was readily available in smaller sizes and prices fell during the year as supply outstripped market demand. Brazilian emerald production was down and few stones had found their way on to the market;

falling prices made many of the deposits uneconomic and many miners were laid off until markets recover.

Afghanistan produced only a little material. Pakistan increased its production of intense green material from the Hunza Valley although the colour of this material is so intense that it is only suitable for cutting gems up to about one carat in size. Larger gems are far too dark and have a less desirable blackish appearance.

Madagascar produced a number of very large good-coloured rather milky gems and many stones were seen in market place. Nigeria, Zambia, Zimbabwe and Mozambique all produced a range of gem material in 2002. Zimbabwe's production continued to be affected by considerable political unrest. Russia produced a number of large pale emeralds from its mines in the Urals during 2002.

Spinel

A find of extremely large, purple-red spinel crystals was reported from Pakistan; one piece was over four inches across and weighed over 1,000 ct. The crystals were found still embedded in a calcite matrix, were well-formed as octahedra and macles (spinel twins).

Aquamarine

Aquamarines were produced in commercial quantities in Nigeria, Mozambique, China, Pakistan, Nepal, India, Sri Lanka, Madagascar and Brazil.

Tourmaline

These gems come in an almost limitless number of colours, and sometimes individual stones exhibit a number of colours. On rare occasions, chromic oxide is the cause of a very fine emerald-green colour in these gems and, fairly recently, a number of colour change tourmalines have been found in Tanzania. These stones are normally about one to three carats in size. A stone exhibiting a pronounced green/red colour change (which cut an oval gem of some 22 ct) and very similar in appearance to those from Tanzania, has been reported but is believed to have originated from gravels in Sri Lanka. It was thought, before cutting, to be a fine alexandrite (a colour change variety of chrysoberyl). The stone was clean and of a remarkable size.

Rare Gems

A variety of the extremely rare gem material bastnaesite was reportedly found for the first time in northern Pakistan. The crystals occur in granites and can be up to several centimetres across, and cut stones of up to 24 ct have been reported.

General Remarks

Overall, 2002 proved to be a very uncertain year for gemstones and quite a difficult period for mining operators, especially for those who needed to sell their production directly into the market place.