

Bahia's golden gift

By Marie Feliciano

To gemstone miner Brian Cook, the Bahia golden rutilated quartz has a beauty all its own.

Much sought after by China's gemstone wholesalers, collectors and jewellery enthusiasts, the rutilated quartz is a transparent rock crystal that is valued for its golden needle-like inclusions or "rutile," a mineral impurity that forms hair-like threads within the quartz. One of Cook's specimens is a 23-kilo fine-grade Bahia golden rutilated quartz with arrays of golden needles resembling skyscrapers.

"The Bahia golden rutilated quartz is special among quartz crystals because of its rich colour that looks a lot like 14- to 24-karat gold. The rutile can be very thick or dense, and when associated with hematite, orients epitaxially, creating 60-degree angles and rarely, six-ray stars," Cook told *JNA*.

"It's a very sought-after material, especially among Chinese buyers. In the last 10 years, the rutilated quartz's popularity has grown a lot. This has led to price increases and stimulated mining activities."

Adventures in Brazil

Cook, who started his career in the gemstone trade in 1982, operates a pyramid-shaped mine in the village of Remedios in the old district of Ibitiara – now known as Novo Horizonte – in Bahia, Brazil. His operation averages 4 to 5 tonnes annually, 5 percent of which are commercial-grade quartz. Stones of fine quality

are extremely rare, accounting for only 1 percent of the mine's annual production volume.

Married to Aroma Jewels founder Kendra Grace, the gemstone miner was in Bahia when the original Paraiba tourmaline was discovered. "In 1987, I was offered a job to start a gold exploration company in Brazil. We had some projects in the northeast part of the country, which was very rugged and unexplored, and I happened to be in the area when Paraiba was discovered. To me, it was destiny," he said.

Ethical mining

Singled out by Robert Weldon, manager for photography and laboratory publishing of GIA, as one of the industry members who is doing the "right thing," Cook has made corporate social responsibility (CSR) practices an integral part of his mine's everyday operations.

"Today, there may be between 1,000 and 1,500 men and women all over the mountains of Bahia mining for rutilated quartz. It is a very unregulated business. All of those operations are comprised of small groups of men, financed by small investors. This is traditionally how it is done in Brazil and in many places around the world," he said.

Cook is the only gemstone miner in the area that has formalised his mining operations. "I have the proper equipment and safety regulations.



Top: Brian Cook of Nature's Geometry holds up a piece of rough Bahia

golden rutilated quartz

Left: One of Brian Cook's prized specimens: A 23-kilo fine-grade Bahia golden rutilated quartz

My workers get real wages with social benefits," he said. "I am just doing it to show an example of an alternative to the other artisanal miners in the area. I am not trying to preach to other people."

Cook has taken his CSR advocacy a step further by encouraging sustainable farming among local mining families.

Sustainable farming

"Right now, we are only growing our own food. The idea, however, is to use part of the land to grow high-value crops like medicinal plants that the mining families can export to China, the US and Europe," said Cook.

The gemstone miner is currently financing the farming project on his own.

"Our initial goal is for the farm to generate enough income for at least four mining families since it takes four families to keep the land productive. A small amount of money could really get this project going," Cook said. "It would be great if we could find like-minded investors who'd be willing to support this initiative." *JNA*