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The Zultanite mine is providing new opportunities for community beneficiation in a remote area of Turkey.

FAIR ENOUGH

BY DIANA JARRETT

Before “going green” made the radar screen of eco-sensitive industrialists, a mining site near the mountainous Mugla province of Anatolia, Turkey, was operating with a concern for both the ecology of the region and for the area’s inhabitants who work by traditional mining methods. Murat Akgun, a former Istanbul jeweler turned mine owner, became familiar with the watch words “green mining” and “fair trade” only after attending trade shows in the U.S. When informed that

ethical mining was becoming “the big thing” in America, he was incredulous. “How else would you do business?” he countered.

Akgun’s personal experiment in ethical mining is being conducted through his company, Zultanite Gems, LLC, at the site of the only known source of Zultanite. This unique disapore mineral variety is

***This page:** Overview of the agricultural land below the mine site in the Anatolian hills in Turkey. **Opposite page, top:** This Zultanite gemstone was cut en cabochon to reveal naturally occurring chatoyancy — a cat’s-eye effect. Photo courtesy GemsTV; **center:** mealtime at campsite; **bottom:** workers in the tunnels.*



gradually attracting the attention of the jewelry industry. It has a transparent gem quality, presents a striking color-change phenomenon and occasionally exhibits cat's-eye properties.

The government-issued permit covers 22,000 acres, making it one of the largest single mining permits in Turkey. The bauxite vein extends from Greece to India and Akgun's permit spans almost 28 miles of this vein to a depth of approximately 250 to 650 feet. Amazingly, Zultanite only occurs in this particular ore vein. Thirteen locations along this vein have been designated for mining activity but only a few locations have produced rough thus far.

The importance of this small, low-key operation in Anatolia is far greater than its role as the sole-source producer of Zultanite.

What is noteworthy at these mines is the extent to which the system provides support for the workers. The miners, all Muslim Turkish nationals, eat three daily meals prepared on-site by the resident cook, courtesy of the company. They also have free transportation to and from the mines if they live off-site, but they can live free in the base camp's company-provided housing if they prefer.

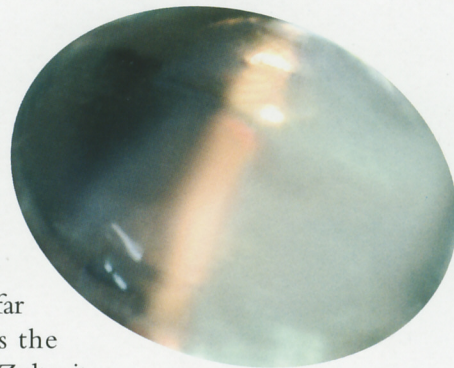
While the perks seem staggeringly simple, the fact is many artisanal miners in third-world nations are still on their own in arranging and paying for housing and transportation.

PROVIDING THE BASICS

At 7 a.m., Zultanite Gems' chief mining engineer begins rounding up workers in the village of approximately 300 houses located several miles downhill from the mine site, which historians and biblical scholars say is near the ancient city of Ephesus. It will take the company truck a half hour to transport the workers to the site, where guard dogs welcome them each morning. By then, those workers who live on-site are already finishing their breakfast. The 22 miners working the tunnels on this particular day convene in the kitchen to get organized and sip their last glass of chai before heading down to the mines. The number of workers at the site has been as high as 30 and can change quickly, depending on the size of orders that come in for bauxite and gems.

By noon, the convivial group emerges from the mine tunnels, or galleries, for lunch. Midway through their workday, the miners' animated joking and laughter resound throughout the lunch hall. Later, their peaceful evenings may include watching television, sipping chai or playing cards. Some seek out a quiet place in the mountainside to pray, while others wander off alone in search of a good cell phone connection.

(Continued on page 175)



Right: The other main source of income for locals in this mining region is olive farming.

(Continued from page 173)

As traditional mining sites go, this one is just about perfect because its southern Turkish locality can be worked all year long. The rainy winters may drop the temperature to freezing on occasion, but the mine tunnels stay warmer than the outside temperature. The reverse occurs in summer, when the galleries' temperature is cooler than the outside.

ECOLOGICALLY COMMITTED

If Akgun's first commitment is to the miners, his second is to the region itself. He interacts with the local villagers in ways that are culturally relevant to them. "So far, we helped the village mosque by donating truckloads of bricks. The imam was able to finish the closing of the roof with our donation," Akgun says in discussing the initiatives of the company he established to own and operate the mine and market Zultanite gems. "The mosque provides shelter for the homeless and others in need from time to time. We have also sacrificed sheep for the traditional holiday festivities of Kurban and donated the meat to poor members of the village." He says the actions are intended to provide a potent symbol of solidarity with the natives in the region.

Akgun also buys water, grocery supplies and baked goods from the nearby village and rents heavy equipment from the locals. He has begun improvements to the region's roads, which the other inhabitants are able to use to access their olive groves, plentiful in this rural, agrarian society.

This ancient district of bucolic charm will be conserved in its natural state if the Zultanite mining company has any say. Anatolia's rolling terrain with its ubiquitous olive gardens is protected from desecration because the mining is performed entirely underground within the host rock. No chemicals are employed in the recovery of rough from these tunnels, either. While mining is always considered dangerous, numerous safety measures have been implemented at the site. In this case, the host rock is very hard bauxite, making the galleries quite safe.

NEW INCOME

Before Zultanite Gems set up mining operations in the region, the only major source of local income was olive-tree farming. And because the trees do not yield fruit each year, income was sporadic at best. Since the establishment of the mines, locals working as miners are paid between \$700 and \$3,000 per month, significantly more than the minimum wage of \$450. Cash bonuses based on salaries are also distributed twice annually. In addition, the mine pays 100 percent of the costs of social security benefits for the workers, which will entitle them to monthly income upon their retirement. This



in itself, says Akgun, is a novel concept in a nation where employers are notorious for underreporting their workforce by as much as 75 percent in order to avoid paying monthly social security taxes to the government.

Akgun says the ripple effect of regional enrichment is a direct result when companies practice and promote ethical behavior. "My future plan," he projects, "is to open all the bauxite mines on the property. That will really make a difference in the number of workers we can employ."

Akgun's other long-term goals include improving schools and implementing an effective waste management system. Even longer-term, he envisions the mine becoming a tourist destination and pairing it with a Zultanite gem museum. Most villagers who do not work the mines still have their olive trees to provide them with a nominal income. For them, Akgun hopes to build an olive oil plant so that locals do not have to transport their olives to other villages and pay for processing.

Industry support for fair treatment policies and ethical and ecologically sound mining practices — like those in force at the Zultanite mine site — is gaining ground. In addition to their appeal on moral grounds, the fact is that they make good business sense.

Gavin Linsell, a colored stone marketing specialist and author of a guide to gemstones who is based in Chanthaburi, Thailand, said he has seen increased interest firsthand. "In mining, you get what you pay for. You take good care of your people and you can expect good results." At mine sites around the globe that he has visited, Linsell has seen, besides food and housing, plans to provide schooling and engage in profit sharing. The end result of all this proper treatment of miners, he says, yields "long-term sustainability rather than short-term gains." It is all the more vital in artisanal and small-scale mining because, Linsell points out, almost always "colored gemstones are harvested from areas of instability and conflict." ♦

This is the second in a three-part series on the gemstone Zultanite.