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Something New

Zultanite is a little jewel competing in a big market.

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Is there room for a small-scale mining group with a single, remote site to compete with the major players in a global gemstone market? The answer could be yes when the gemstone being mined turns out to be a one-source anomaly that comes with a color-change phenomenon and cat's-eye properties to boot. The stone is Zultanite, and it's gradually creating a niche for itself with cutters, designers and consumers, thanks to broader exposure in recent years.

In fact, in the first few days of the 2008 JCK Las Vegas show, a museum-quality 11.27-carat Zultanite gem, cut by master cutter Stephen Kotlowski, was snapped up. The stone had previously won an American Gem Trade Association (AGTA) award. A dealer shopping the JCK show acknowledged that Zultanite was really the "only new thing" available in commercial quantities at the enormous trade fair.

In daylight, well-cut Zultanite appears kiwi green. Under incandescent lighting, it transforms into brownish raspberry. And neither of these colors occurs

naturally in another gemstone. So, once one is familiarized with Zultanite, it is easily recognizable. Both the carat size and the cutting style are influential in achieving the greatest color change.

SERENDIPITY

Kotlowski also cut the first Zultanite gemstone that got national attention. It was at the 1999 Tucson Gem Shows that the late Robert T. Liddicoat, the legendary father of modern gemology, was entranced with an unfamiliar gemstone he saw there. The stone Liddicoat admired was a 26.04-carat apex-fan-shaped Zultanite

This page: Zultanite, white gold and diamond-accented necklace was a Manufacturing Jewelers & Suppliers of America (MJSA) Award winner. Opposite page, top: Galleries in the Turkish mines reveal exposed vein of Zultanite rough crystals embedded in the bauxite matrix. Photo courtesy Zultanite LLC.; center: master cutter Rudi Wobito, gemstone expert Don Kogen and mine owner Murat Akgun examine rough crystals at the mine site in Turkey. Photo courtesy Murat Akgun.



that had been named "Uniquely-K Apex."

That serendipitous encounter became a pivotal moment for Murat Akgun, a Turkish jeweler-turned-mine owner. Spurred by Liddicoat's enthusiasm, Akgun's real-life journey into marketing this gemstone would soon resemble an Indiana Jones adventure. His first financial investment was with a partner who, it turned out, had absolutely no legal rights to the mining site he had said he owned. Then Akgun battled for years through the Turkish bureaucracy in acquiring legal permits and ownership rights to the site for himself. Finally, he is fighting the rugged, remote terrain of the Mugla region of Anatolia, Turkey, the only known source of Zultanite, in extracting the gemstone.

Akgun named the stone after the 36 sultans who once ruled the Ottoman Empire in Anatolia and then established Zultanite Gems LLC in 2005 to mine and market it. Together with Jim Fiebig, the company's global sales director, and Yoshi Kirsch, its chief financial officer (CFO), Akgun is marketing Zultanite to the industry.

The 2006 Tucson Gem Shows was the first time the company displayed Zultanite, laying out approximately 200 one-of-a-kind loose gemstones. The intrinsic crystal system of Zultanite produces an astonishingly small finished product after cutting — only 2 to 3 percent of the original rough will end up as a cut stone — and eye-clean goods are important in showing the stone's color-change properties. These two factors make large-carat Zultanite all the more extraordinary and the services of an expert cutter absolutely essential.

Akgun initially allowed only award-winning cutters to work on his stones, further limiting their availability. He then began educating other cutters with the assistance of Wobito Brothers, Canada-based master gem cutters. The inventory of stones finally was sufficient to start serving quantity buyers by the 2007 Tucson show. The most enthusiastic customer at that show was Don Kogen from GemsTV, who purchased a large amount of Zultanite stones on the spot.

"I saw this as an opportunity to get the word out to the consumer since GemsTV broadcasts in five countries, so I offered Kogen exclusivity," recalls Akgun. "I invited him to the mines in Turkey and he came with his entire family and shot a documentary."



In the following months, the GemsTV outlet sold approximately 7,000 to 10,000 Zultanite gemstones.

As Zultanite's production capacity expanded, the exclusive GemsTV arrangement was ended. Today, Akgun says the company can fulfill any large order and can cut anything from 2 to 12 millimeters in calibrated quality in all the classic shapes — round, oval, emerald, trillion and square — as well as cat's-eye cabochon and fancy shapes like Wobito Snowflake. Prices vary between \$200 and \$3,000 per carat and special museum-quality stones are individually priced.

How is this little jewel faring in an industry where many other gemstones rely on massive marketing campaigns to push their product? The key to its success will undoubtedly be its dramatic, atypical color-change qualities. The gemstone also could benefit from the industry's recent appreciation of color-change properties.

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Right: Naturally occurring tubular-shaped inclusions are present in Zultanite. Photo courtesy Martin Fuller.

Something New

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CONSUMER DEMAND

As consumers become increasingly astute about colored gemstones, they seek out the unique when building their collection. Phenomenal properties in gemstones add to their cachet and desirability. Today, the mystique of color changeability found in garnet, sapphire and alexandrite is a vital and persuasive selling point for retailers in explaining to their customers why a particular stone is rare and valuable.

When gemstone authority Antoinette Matlins inspected Zultanite, she speculated on how its delicate colors would resonate with female consumers. "Women like the more subtle pastel contrast and find they complement earth tones," which could broaden the gem's market appeal even further.

Zultanite has other attributes besides its color-change capability. Aluminum Hydrated Oxygen $AlO(OH)$ makes up the chemical formula in Zultanite's orthorhombic crystals. This type II gem is found to be exceptionally eye-clean with inclusions noticeable only under standard 10x magnification. Strong doubling of the back facets is apparent under microscopic inspection.

Zultanite crystals are trichroic, not just dichroic. That complex mineral organization may also contribute to the stone's tendency to shift color under the same natural light at different times of day or in different natural environments. A bonus with this material is the ability in some crystals to produce a chatoyant effect, or cat's-eye, resulting in an attractive russet and green cabochon. Zultanite's chatoyancy is a phenomenal reflective effect that produces a single ray of light across the surface of the stone, caused by light reflecting off parallel inclusions. Designers and cutters are still experimenting to discover the full potential of the chatoyant capabilities of these jewels.

Zultanite's rarity is underscored by a noticeable absence of the inclusion of its species, diaspore, on the Gemological Institute of America (GIA) classic Gem Property Chart B, the definitive old chart of peculiar gems that gemologists have referred to for years.



One of the reasons Zultanite has emerged as a muse for top-notch gem carvers is that its color-change potential can be heightened through the masterful execution of well-thought-out facet designs. Its near perfect cleavage in one direction requires cutters to think through their shaping plan to minimize the risks of unintentional breaks.

UNTREATED

Recent jarring news over laboratory findings of coated Tanzanite, the other one-source gemstone, may drive even more focus to Zultanite because, unlike Tanzanite, it is completely untreated. As sophisticated gemstone treatments continue to evolve, the call for natural, untreated gemstones like Zultanite can be expected to gain momentum.

Appraising Zultanite is best undertaken by a specialist familiar with rare gemstones. Appraiser Martin Fuller, located near Washington, D.C., is an expert at valuing the most curious gemstones. He appraised a "magnificent 24.60-carat Zultanite that is now part of the GIA collection. Fuller recollects, "It is a must for any lover of rare gems. What collection is complete without it? The cleavage makes it a little tricky, in my opinion, for everyday wear, but its sultry, exotic beauty makes it perfect for stirring up intrigue on special occasions."

That beauty will be promoted on a wider scale, beginning this winter, when advertisements for Zultanite begin appearing in major magazines. "You will be seeing Zultanite at many stores and TV shopping channels this Christmas," says Akgun. "We are only selling loose stones, and there are no other distributors besides us. We would like to control everything until we see Zultanite where it deserves to be. Maybe then we will decide to use distributors." ♦

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