

The Story of Smithsonite

Smithsonite is a native zinc carbonate, $ZnCO_3$, this mineral is named after James Smithson (1754-1829) who founded the Smithsonian Institution in Washington, D. C. Smithsonite can be found in many sections of the world where zinc ore is present. Ordinary Smithsonite is colorless or white, however, much of the Smithsonite found in the Kelly, New Mexico mining district contains variable quantities of a copper salt that gives it a beautiful blue-green color. Because of this, and other geological phenomena, the only Jeweler's grade Smithsonite known to exist in the world comes from the Kelly mining district of New Mexico.

None of the mines within the Kelly mining district are active at this time. The last active Smithsonite producing mine closed in 1952. For years, miners grubbing out millions of dollars worth of silver and lead ores, had cursed a particular greenish rock that laced through their pay-streaks like gristle. They tossed it upon their ore dumps along with other worthless rocks. Fortunately, one man, Cony T. Brown of Socorro, New Mexico, became curious about these discarded dumps. In the 1890's, he shipped a few samples of this mysterious rock away for assay to a smelter in Missouri. The results came back, and quietly Brown set out to lease the Graphic Mine from whose dumps he had gathered the samples. The long-ignored green rock turned out to be a rare and valuable mineral.

In almost all the lead and silver mines whose production was failing, as well as the mines that had closed, there was Smithsonite. The most productive deposit was at the Kelly mine in a zinc vein in a cavity several feet wide and about twenty-five feet long. Here the green Smithsonite lined the cavity in layers up to two inches thick yielding hundreds of pounds of excellent material that was cut and sold as cabochons. In its best development, Smithsonite is a mineral of dry climates and is formed in limestone regions from primary zinc sulfides by weathering. The Smithsonite usually occurs in shells, layers, or veins up to an inch or two in thickness.



During the 1920's it became apparent that most of the Smithsonite deposits had been exhausted. With the closure of the last mine, coupled with a higher set of standards in mining safety, there is little chance that conditions will again exist that would warrant the opening of any within the district. The Smithsonite that may still be present in the depths of the Kelly Mine District is, in all probability, there to stay.

Very little top grade Smithsonite is available to the Jeweler today. Most of the existing mineral appears to be in the hands of private collectors and museums as mineral specimens and not available at any price. For example, the New Mexico Bureau of

Mines recently refused an offer of \$20,000 tendered by the Smithsonian Institute for a specimen of Smithsonite. The beauty and scarcity of this rare mineral, has caused the market value to skyrocket over the past few years. Those individuals possessing articles of jewelry made from this rare mineral, own an article far scarcer than gold or diamonds. Two examples are shown here.



SMITHSONITE – Technical specifications

From the Kelly Mine near Magdalena, New Mexico. A zinc carbonate $ZnCO_3$, carbon dioxide 35.2 % and zinc protoxide 64.8% Fracture is uneven to imperfectly conchoidal. Brittle. The hardness is about 5.5 and the specific gravity 4.3 to 4.45. Luster is vitreous to pearly. Streak is white. A rather rare mineral.