

# Mineral Showcase

## Glaukosphaerite



Named from the Greek for "bluish green" and "spherical" (the typical color and habit of the mineral) glaukosphaerite was officially "discovered" in 1967 and added to the collective list of existing minerals in 1974. However, saying it was *discovered* is rather misleading, as if someone broke open a rock in 1967, found an unrecognized specimen inside, and later figured out that it was a new mineral. Instead, glaukosphaerite was officially *recognized* as a distinct mineral in 1974; miners plying their trade in a nickel-bearing deposit at the Key West and Great Eastern Mines near Mesquite, Nevada certainly knew of its existence--if not its actual identity--as far back as at least the early years of the last century. Indeed, glaukosphaerite was likely mistaken for malachite, a common and related associate, as simple tests for copper and carbon dioxide, along with its general appearance of color and habit, would suffice to lead one astray. And who could blame them? Those mines were originally operated for their copper content, not nickel. With no compelling reason to test for other ions such as Ni, those early miners were understandably satisfied with their assumption!



**Glaukosphaerite exposed to the atmosphere alters from a vibrant blue-green color to a dull robin's-egg green.**



Despite its abundance at the Key West Mine, it wasn't until 1967 that glaukosphaerite was actually determined and described from Widgiemooltha, Western Australia, by R. C. Morris at the W.A. Government Chemical Laboratories. The type material is from Hampton East Location 48, three kilometers north of the Durkin Shaft, Kambalda. Nickel substitutes for copper in almost equal amounts in the molecular structure, making it more closely related to its zinc analogue, rosasite. Apple- to malachite-green Glaukosphaerite is monoclinic, occurring as divergent fibrous to concentrically zoned spherules and botryoidal crusts, in plumose aggregates, and rarely as felted masses of parallel fibers. It is brittle and relatively soft with a hardness of 3 to 4 on the Mohs scale, has a dull to subvitreous luster, and a pale green streak.

Besides the Nevada locations, the mineral has also been found at the nickel mines at Kambalda, Windarra, Scotia, Carr Boyd Rocks, and St. Ives, Western Australia, where it is apparently an indicator of copper-nickel sulfide mineralization.

Since I've never been to Australia, I don't know how abundant glaukosphaerite is at those locations, but at the Nevada locations it is a very prevalent mineral, though I suspect it is still often overlooked and disregarded as common malachite. If you're in the area, it is worth a trip to acquire and add to your collection this very rare and attractive nickel-bearing mineral.



**Glaukosphaerite occurs with other copper minerals that fill crevasses in the walls of the Key West Mine excavation**





### Glaukosphaerite

*Specimen VII 145 C*

Samples found on dumps are pale green in color due to exposure to the environment.

*Key West Mine; Clark Co., NV*

*5.75 x 4.58 x 3.75 inches*

### Glaukosphaerite

*Specimen VII 145 C*

Fresh material found with Malachite and Chrysocolla in fracture seams in wall of excavation have much more vibrant green color.

*Key West Mine; Clark Co., NV*

*3.25 x 2 x 2.6 inches*

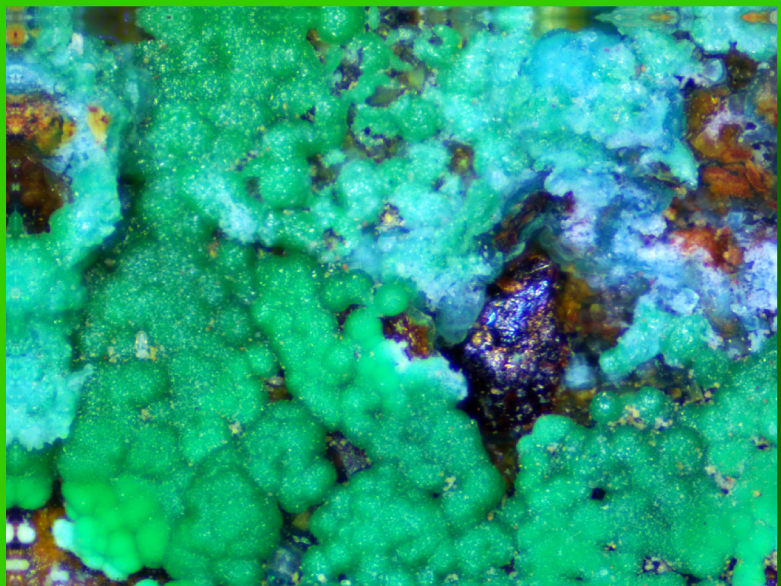




# Classic Relationship Specimen



This specimen from the Key West Mine in the Bunkerville District, Virgin Mountains, Clark Co., Nevada, displays the typical relationship of minerals commonly found at this location. Apple-green Glaukosphaerite dominates the specimen, while pale blue Chrysocolla is interspersed throughout with minor amounts of Malachite on a highly altered mafic matrix. At first glance it is easy to mistake the specimen for Malachite. More closely related to Rosasite, the specimen's true identity is better revealed when placed under a microscope, as demonstrated by the bottom photo. The best material is obtained directly from fractures in the walls of the excavation, as material on the dumps is generally paler from exposure to the environment.



*Specimen VII 145 D from the G. Miles Lehman Collection*