

# William Earl Hidden, 1853-1918 Mineralogist, Geologist, and Entrepreneur

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The lively emerald-green gem, hiddenite, and the town of Hiddenite, North Carolina are the popular images that most collectors recall about W. E. Hidden. His contributions are actually more significant. His most significant work besides the emeralds and green spodumene of Alexander County was the mining and mineralogy of rare-earth pegmatite minerals from central Texas, North Carolina, and Colorado, and U.S. meteorites.

## The Early Years

William Earl Hidden, the son of James Edward and Abbie Angel Hidden, was born in Providence, Rhode Island on February 16, 1853. He received his education in the public schools of Providence, New York, and Washington. In 1868, at the age of 15, William finished school and started work as a cashier in a dry-goods store in Providence. In 1870, his father arranged for him to work in the payroll department of the National Banknote Company in New York City. As an amusement, he used to make lithographic drawings (from steel plates) that he would show around in the office. This artwork was noticed by the company and he was offered an apprenticeship in engraving at the banknote company. At this time, William developed two hobbies: coin and stamp collecting. Bernheim (1883) reported that he built very respectable coin and stamp collections. He expanded his stamp collection by asking American consulates located in foreign countries to send him a set of the country's stamps. In this way, Hidden obtained a very complete collection that was within his financial means. Unfortunately, "severe financial necessity...compelled him to part with" (Bernheim, 1883) both his coin and stamp collections.

Until 1872, Hidden had not developed an interest in minerals or rocks. The expansion of New York City resulted in numerous bedrock excavations being made for buildings. On his travels around the city after 1872, he developed the habit of collecting any interesting, colorful or odd rocks that he managed to find in these excavations. It seems, if his prior collecting habits are an indication, that Hidden was the sort of person who was attracted to collecting anything and everything. In any case, after some time, he filled with rocks all his available shelves and floor space in his home, which he shared with his parents.

While wandering around in one city excavation, he met a "middle-aged gentleman" who like Hidden was also collecting minerals. The two became engaged in conversation and since during this era mineral collectors were uncommon (and perhaps considered "off"), the gentleman was invited to examine Hidden's collection. He was politely surprised to discover an embryonic mineral collection and not a collection of junk. He

even recognized some minerals in Hidden's collection "that had escaped his notice." Through interaction with this man, Hidden's interest and expertise in minerals expanded. Although in this account, the helpful gentleman is not mentioned by name, it is quite possible to have been Benjamin B. Chamberlain, since in 1888 Hidden had remarked that he was personally indebted to Chamberlain for stimulating and guiding his interest in mineralogy when he was a youthful beginner (Hidden, 1888b). Chamberlain was an influential figure among mineral collectors of the New York area since he specialized in minerals of New York City.

Through Chamberlain, he was invited to examine other local collections and became acquainted with other collectors. At this time, his personal collection contained 80 different minerals from Manhattan Island. His zeal and dedication to minerals grew. Perhaps, his interest in minerals grew simply due to the greater attention of other highly motivated individuals or a continuation of his younger collecting habits. In 1875, at the age of 22, he joined the New York Academy of Science with the additional support of its president, John S. Newland. This organization functioned as the major meeting place for local mineralogists and mineral collectors since the N. Y. Mineralogical Club was not organized until September 1886 (Jensen, 1978).

During 1873-77, Hidden attended the chemistry lectures of Prof. Charles F. Stone at the Cooper Union (Greenwich Village, Manhattan, NYC). George F. Kunz (who was only three years younger than Hidden) and Hidden were students together at Cooper Union. As might be suspected, they became strong friends (Kunz, 1919a).

By the beginning of 1879, Hidden had decided (against the advice of many friends) to quit his job at the National Banknote Company and devote his time and attention exclusively to mineralogy (Bernheim, 1883). Hidden is reputed to have said that his reason for quitting his job as a banknote designer at the National Banknote Company was because of its indoor life and the loss of his individuality. How he intended to earn a living is unclear. But his active friendship with Kunz might shed some light on his plans. During 1876-1879, Kunz assembled and sold mineral collections to make a living. For example, he sold collections to the University of Minnesota, Amherst College, New York State Museum, the Field Museum in Chicago and Thomas A. Edison. Kunz was hired by Tiffany and Company in New York City in 1879 as a gem expert. Kunz's first published article about minerals was in 1881 (Sinkankas, 1976), only one year after Hidden's first article. What affect could the vigorous Kunz have had on his friend's decisions about his future career? Did Kunz's new job provide the stimulus for Hidden to change a hobby into a career? Conversely, what effect did Hidden's career have on Kunz. Their friendship and parallel careers certainly makes it difficult to view their relationship as one-sided. The two men were certainly not reserved with each other. Kunz (1919a) for example, recalled when as young collectors, Hidden and himself

had narrowly escaped arrest for damaging a stone wall in Kingsbridge (New York) because they had extracted a "splendid, doubly-terminated crystal of tourmaline" without permission.

### Platinum In The Appalachians

In the Spring of 1879, Hidden made a visit to the offices and home of Thomas Edison, perhaps to view Edison's newly acquired mineral collection. At this time, Edison was in the midst of finishing his project on manufacturing a workable electric light bulb. At this point, his only functioning filament was a strand of platinum, a rare and expensive element. Edison did not wish to rely on imports from Russia and other foreign countries but needed native sources, which of course did not exist. This concern was so strong that he asked many of his knowledgeable visitors if they knew of platinum sources (Bernheim, 1883). Edison asked Hidden about the availability of platinum. Hidden's answer is reputed to have been "that platinum had been reported as existing in placer deposits in North Carolina, California and Oregon in very small quantities" (Bernheim, 1883). His hypothesis was that by analogy to gold-bearing sands, the metal also might be found in veins near those places where traces of platinum had previously been reported. Edison is also reputed to have been surprised by such a potentially positive answer, with the result that Edison asked Hidden "what he would charge to make a tour of the Southern states in search of platinum." After working out the details, Hidden embarked on a five month search for platinum in the southern Appalachian Mountains of North and South Carolina, Virginia, Georgia and Alabama. It was probably this job offer which was the precipitating event which resulted in Hidden quitting his banknote job.

This 5 month trip also gave Hidden a unique opportunity to geologically inspect much of North Carolina—not a trivial achievement in those days. This trip accordingly allowed him to learn of the rare-earth mineral deposits, gold mines and gemstone deposits scattered throughout North Carolina. During his travels, he visited the Brindletown gold district, Burke County, North Carolina, where he inspected the Flat Rock Mine, Deake Mine, Lewis Mine, and the Mills Placer, the Cashiers rare-earth pegmatite district in Henderson County, and the emerald area in Alexander County.

After Hidden had embarked on his expedition, Edison was successful in determining that carbon made a cheaper and better filament for an electric light than platinum. Accordingly, he recalled Hidden from the South. It was during his search for platinum in the South that Hidden had met J. Adlai Stephenson of Statesville. Stephenson at this time was involved in trying to locate gemstone deposits in North Carolina, so it was natural that the two men became at least casual acquaintances.

### Mining Emerald and Hiddenite

On September 17, 1879 J. Adlai Stephenson and W. E. Hidden visited the G. W. Warren farm, located near Stony Point, Alexander County. Stephenson in 1875 had obtained his first emerald from the Warren family. Stephenson had previously informed many local inhabitants of this area of his desire to purchase all potentially interesting gemstones, especially emeralds. Although, Hidden and Stephenson's visit to the Warren farm was short (Stephenson, 1888), they had a chance to inspect the geology of the area. After returning to New

York, Hidden formed the Emerald and Hiddenite Mining Company to excavate gems from the G. W. Warren farm. He soon returned and obtained a six month lease for \$50. Later in 1880, he purchased the farm, 200 acres in all, for \$1,800 (Beam, 1947).

Previously, in April 1879, Stephenson had given a few unknown green crystals to Hidden. Hidden sent them to J. L. Smith of Louisville, Kentucky for identification. Earlier, Stephenson had sent several crystals of the same unknown to Norman Sprang of Pittsburgh, Pennsylvania. In 1881, Smith described the unknown as a variety of spodumene which he named hiddenite (Smith, 1882). This led to a heated controversy between Sprang, Stephenson and probably Hidden and Smith (Kunz, 1919a). Although easily available sources do not mention the controversy, it probably generated a great deal of long lasting ill-feeling. One should wonder why then did the name hiddenite receive sufficient approval to cause the local inhabitants to change the name of the post office (and village name) to Hiddenite when it seems clear that it was discovered by Mr. Stephenson. Perhaps, the observations of G. W. Warren as described later about Mr. Hidden are relevant

To operate the mine, Hidden moved to North Carolina. He hired a work crew of approximately 100 men. This represented a significant proportion of the local population, whose cash income from farming was probably very low (Beam, 1947). In addition, Mr. Hidden was very popular with the people in the community. At one time he donated \$100 to the local Methodist Church. He was also considered very democratic because he lived/rented his room from among his workers. Perhaps his one peculiarity was that Hidden wanted people to honor him. If they didn't address him as Mr. Hidden, he wouldn't hire them. Workers' pay was personally delivered to the workers by Hidden, although he had several foremen working for him, who could (in theory<sup>1</sup>) just as easily do the job. He is reputed to have paid each man according to his worth. If a worker did a poor job, he got paid less. Hidden paid each man his money wrapped in paper, so that a worker did not know his pay until it was opened. It was said that he was honest about the pay (Beam, 1947). Certainly, this is not a method of employment that is considered acceptable today.

Up to 1882, Hidden's workmen had uncovered more than 80 narrow veins containing emerald, hiddenite and other minerals (Sinkankas, 1981). The largest emerald crystal although broken measured 8½ inches long. In the spring of 1882, one pocket yielded 74 emerald crystals. The majority of these emeralds were only of specimen grade quality and ranged in estimated value of \$ 25-1,000 dollars. Many of these emeralds as well as hiddenites were distributed to well known collectors such as Clarence S. Bement. Most of these crystals have probably since ended up in various museums.

While Hidden was in charge of the mine, the company prospered. After he returned to the New York area, the company sold the mine property to some local men (Beam, 1947), circa 1888. After this, for various reasons the mining operations ended, perhaps due to a lack of geologic guidance, the

<sup>1</sup>A close reading of 18th century America history reveals widespread cheating of low level workers by their foremen. Deception, bribery, cheating on wages and intimidation by all levels of management was common in American businesses of this era. Hidden might have been unusually honest for his time.

easily found gemstones were gone or legal disputes among partners.

### Family Life

Somehow between his trips between North Carolina and New York, Hidden found the time to court and marry Josephine Morton of Newark, NJ on October 30, 1883. During later years he had 3 children, Irad Morton, Morton Earl and Abigail Elizabeth (named after his mother).

### North Carolina Rare Earth Pegmatites

After his work in Alexander County was tapering off, Hidden investigated developed, and mined rare-earth minerals, specifically zircon and monazite, in Henderson County, North Carolina (Cashiers pegmatite District) for the Welsbach Light Company. Hidden was reported to have convinced the Welsbach Company to test the use of thorium and other rare-earth elements for use in gas-burning mantles in 1884.

The rare-earth elements were found in several deeply-weathered pegmatites in Henderson County. These were probably first recognized by Hidden during his platinum exploration. During 1888-1889, Hidden leased and operated the Meredith Freeman Mine, Pace Mine(?) and the Jones Mine. The new mineral, auelite (now recognized as a variety of thorite), was described from the Freeman Mine pegmatite (Hidden and Mackintosh, 1888). They named it to honor Dr. Auer von Welsbach, owner and founder of the Welsbach Light Company. In March, 1888, Hidden recovered 6½ tons of zircon from these mines for sale to the Welsbach Lighting Co. to manufacture gas mantles for incandescent gaslight.

### Central Texas Pegmatites

The Baringer Hill pegmatite was discovered in 1886, when more than 500 kilograms of a dense, glassy black material was excavated by J. J. Baringer from the outcropping pegmatite. The landowner, J. J. Baringer, gave samples of this unknown material to various people, until in August, 1888 when a sample which had been previously sent to New York, was properly identified as gadolinite. The local Texans had previously re-

ferred to the material as tin-ore, black-jack zinc, or volcanic glass.

The identification of gadolinite was brought to the attention of Hidden in New York in August 1888. Hidden sent William Niven to Texas to visit the locality. He brought back several gadolinite specimens. This caused Hidden to visit the locality in July, 1889. He published a report of this visit in 1889 where he named 3 new minerals, yttrialite (now recognized as a variety of thalenite), nivenite (a metamict variety of uraninite) and thorogummite (still a recognized mineral). In May, 1889 Hidden stated that this property holds "...great promise... for yielding commercial quantities of the so-called rare-earths." Up until May, the deposit has yielded an additional 500 pounds of gadolinite. Hidden hoped that the deposit will be able to supply hundreds of pounds of yttrium in the future.

Prior to 1895, the Piedmont Mineral Company Ltd. had mined the Baringer pegmatite for its gadolinite and radioactive zircon (variety cyrtolite). The mine was idle from 1895 until 1902. Hidden believed that the property had additional potential. Accordingly, early in 1903, he purchased from the Piedmont Mineral Company Limited of London the 24 acre tract of land which contained the Baringer Hill pegmatite along the banks of the Colorado river in Llano County, Texas. Immediately afterwards, he field inspected and prospected the pegmatite during the winter of 1902-3.

In May, 1903, he sold the property to the Nernst Lamp company of Pittsburgh, Pennsylvania. They purchased the property to mine the rare-earth elements, yttrium and zirconium for use in manufacturing fluorescent lights. Hidden was retained by the Nernst Lamp Company as a consultant to supervise the mining of the deposit. His plan was to remove the entire top of the hill (representing the quartz core and adjacent microcline zone) by blasting and gradually make a dump of it adjacent to the Colorado river. During the winter of 1903-4, about 12 men worked for 6 months cleaning out all the old cuts and extending the quarried areas. The most intensive effort was focused at the southeast point of the hill and at as low a level as the river terrace would permit.

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Hidden and Hillebrand (1893) described two more new minerals from the pegmatite; rowlandite (a variety of thalinite) and mackintoshite (a variety of thorigummite). The mine appears to have been shut down during the summers which is understandable because of the summer heat. Hidden continued to supervise the excavation until at least February, 1907 when Frank Hess, a geologist, visited the mine (Hess, 1808). As a minor note, the Baringer Hill pegmatite is now under water of Lake Buchanan due to a dam being completed in 1936.

### The Last Years

Not much is known about Hidden's activities after 1900. Interspersed with his major activities, Hidden was also involved with many other projects. For example during 1890-1900, Hidden investigated ruby mines in North Carolina (Judd and Hidden, 1899). He also aided in opening up some turquoise mines in New Mexico (Hidden, 1893). During most of his career, meteorites fascinated him as shown by his numerous publications about meteorites. Hidden's entire meteorite collection was purchased by the Imperial Museum of Vienna.

Kunz (1919a) considered Hidden restless because of his habit of developing each deposit and then selling it soon thereafter. For whatever reason, the end result was that he was never particularly profitable in business. Although Kunz considered Hidden a geologic gypsy, if compared to other geologists and mineralogists of this time period (or for that matter any time period), Hidden fared about average, neither rich nor truly poor (which is probably still true for most geologists of today).

Hidden died of heart trouble in his home in Ocean Grove, New Jersey, on June 12, 1918 at 65 years of age.

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## Franklin, New Jersey Show

Joe Polityka  
Staten Island, New York

I attended the Franklin, New Jersey Show on September 24, 1994. In contrast to previous years, the weather was wet and cloudy. Luckily, no significant rain showed up on Saturday, the day I attended.

I arrived at the show about 7 AM; at that time, about 20 tailgaters had already set up on the field adjacent to the main show. By 9 AM, the number had swelled to about 80 tailgaters. Many tailgaters were selling run-of-the-mill beginner material, however a few dealers with quality minerals deserve mention:

**Broken Back Minerals** (Roland Bounds and Eric Meier, Newark, DE) had a nice selection of Tennessee calcites in large sizes. These specimens are reasonably priced for the quality being offered. Roland and Eric have become important suppliers of Elmwood calcites within the last few years.

**Ernier Schlichter** recently acquired the collection of the late Gene Vitale of Paterson, NJ. Gene collected Paterson zeolites during the 1930s to 1950s. This collection included a lot of larger specimens rarely seen today, along with polished slabs of Paterson agate and amethyst. I picked up a cabinet ap-

ophyllite for my collection. There was a lot of activity at Ernie's table.

A few tailgaters had a nice selection of Franklin specimens. Most notable of these was **Fred Parker** of Columbia, MD, amongst Fred's stock of Franklin and Sterling Hill minerals, I found a specimen of erythrite from Schneeberg, Saxony. The 0.5 inch, flat spray on quartz was a real surprise.

**Al Jehle** was selling the humorous hit of the show—large white stalactites, up to 2 feet long, of post-mining origin, from Sterling Hill. These "phallic symbols" sold very quickly. The largest specimen drew many comments and giggles. Who says mineral collectors are a boring lot? Not me!

Inside the main show, several dealers had notable specimens:

**Detrin Minerals** had just returned from Russia with a selection of fluorite, calcite, and stellerite. Most notable were the calcites and stellerite from Kazakhstan. The calcites, in miniature to large cabinet sizes, were clear with a pleasing lemon-yellow color. The stellerites were a bright orange-brown with single and intergrown spheres and hemispheres up to an inch. These specimens were offered in miniature to large cabinet sizes. According to my budget, these were reasonably priced.

**The Rocksmiths** had a fresh supply of minerals from Russia, Brazil, and China. Most notable was the selection of Chinese fluorite, the best I have seen in a while.

I hope to see you in Franklin in 1995!