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## Message from the President

The Club's Board of Directors is opening 2024 by getting a jump on organizing our showcase Gem and Mineral Show for July. Toby has graciously stepped up as the Show organizer and each board member volunteering to support him by assuming one of the many critical roles this a Show of this caliber demands. This proactive and timely approach will (fingers X'd) streamline the production process thus reducing the production stress for all concerned.

On a more somber tone, I would like to note Carlos Mañón announced his decision yesterday to step down as club president due to outside issues which currently, demand a great deal of his time and attention. Carlos did add a positive bent to the conversation in that he would continue as the Shop Steward Coordinator and implement the training regime that the Board has been trying to implement for some time now.

As a consequence to this unexpected vacancy, the Board of Directors last night implemented the conditions of Article IV, Section 5 of the Club's bylaws and nominated and voted in myself, Mearl Webb, as the new Club President. I hope to continue the outstanding work David Gonzales and his predecessors have demonstrated during their tenure.

The roles of the Club's current Board of Directors is as follows:

Officer Role:	Name:
President	Mearl Webb
Vice President	Toby Mourning
Secretary	Emelie Frojen
Treasurer	Cindy Pugsley
Director	Denise Galley
Director	Marguerite Mason
Director	Mary Benson
Director	Shauna Dooley
Director	David Gonzales
Director	Vacant

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### **Stay Tuned for News of new Committees and Actions Planned During the 01/10/2024 BoD Meeting!**

Keep an eye out for this month's Board of Directors meeting minutes. While I won't let the nugget out of the bag until the minutes are approved, the BoD is working to enhance outreach and marketing in an effort to enhance the Club's community facing profile. Also, expect new and wonderfully educational field trips for 2024!

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### **Scholarship Assistance Program for Gem Club Classes**

The BoD also voted to continue our very successful grant application process in addition to expanding educational opportunities. Again, please stand by for the release of the approved minutes. You can also check for current updates here: [www.durangorocks.org/classscholarship](http://www.durangorocks.org/classscholarship).

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### Open Shop Hours:

Open Shop is now open for business. The Shops hours are listed at [four corners gem and mineral location and Hours - Four Corners Gem & Mineral Club \(durangorocks.org\)](https://durangorocks.org)

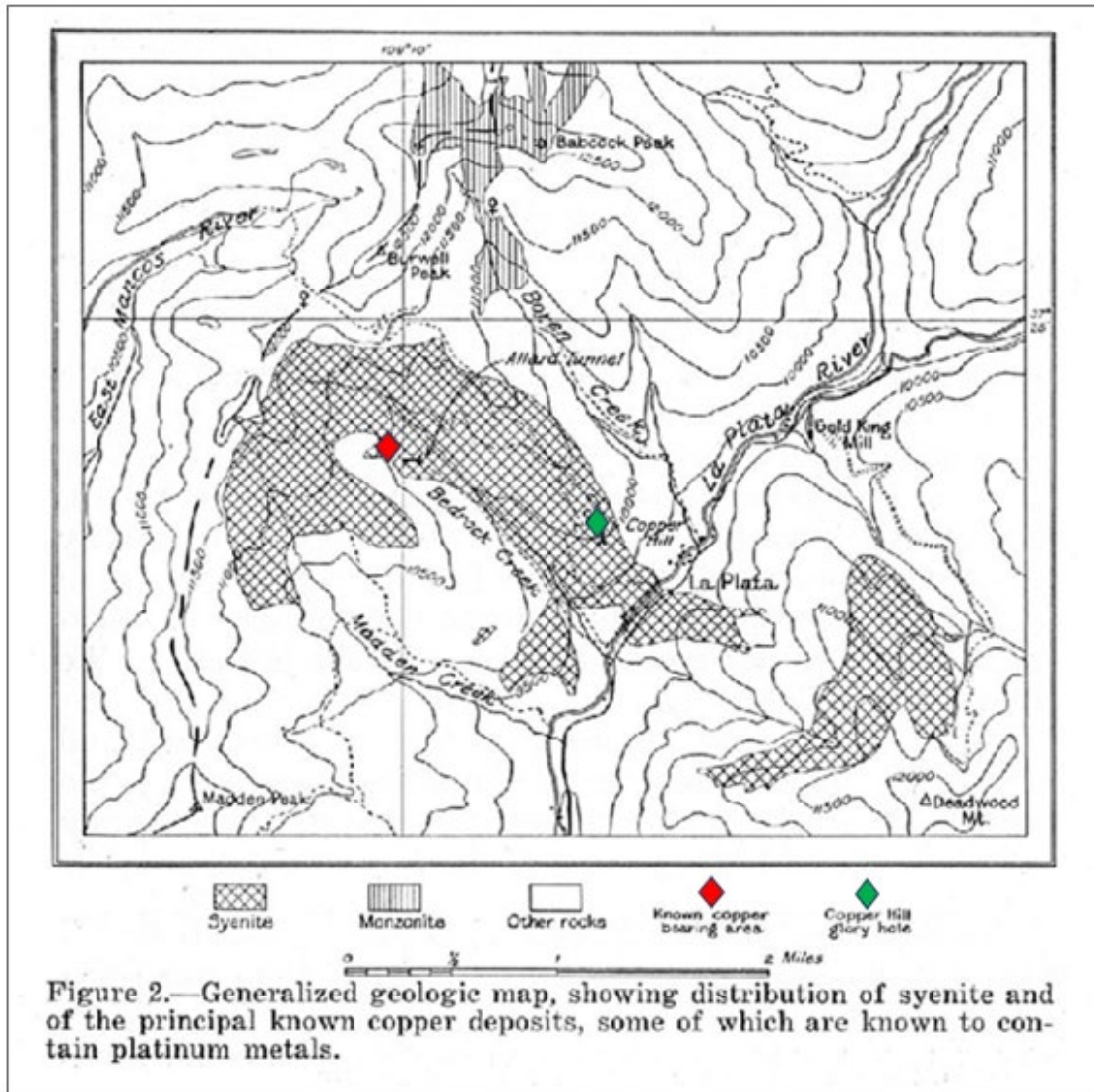
### Open Shop Punch Card

If you like using open shop, remember we have a punch card for multiple use. [Prepurchase](#) 10 visits for \$45 - a \$5 savings - and don't worry about having your "shop fee" when you come in!

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## Rock On: There's Gold in Them There Hills... And Copper... And Platinum

As I look back on events related to earth sciences with respect to events in and around our area I think on of the really interesting stories was related to the [Durango Heralds article about Metallic Minerals, a Canadian "junior" Mining Company](#), who kicked off their exploration program in a syenite stock located in the Bedrock Creek area of the La Plata Mountains by Edwin B. Eckel entitled "[Copper Ores of the La Plata District, Colorado, And Their Platinum Content](#)". While dated, this article is excellent and one of the few authorities I have been able to locate that does a thorough and scientific job of describing the geology and prospective mineral resources in the La Plata Mountains.



The Herald article states: “The company is drilling on 17 square miles of mining claims, which it purchased in 2019, on the west side of La Plata Canyon, located 15 miles west of Durango.

MM is drilling at the site of the historic Allard and [Copper Hill](#) mines. The land was once the site of extensive mineral extraction. Mining there collapsed during World War II, Johnson said, and although some companies continued to explore it through the latter half of the twentieth century, mining never picked up again. The property has not been touched since 1995, when the last exploratory hole was

drilled.

In 2022, MM completed drilling two holes, each over 2,500 feet deep. Samples from one hole indicated little mineralization of value, but the other revealed a potentially valuable trove of copper, silver, gold, platinum and palladium, especially toward the depths of the mountain.

“It's hard to find spots where you've got a concentration of metals like copper and these other critical minerals that occur in enough concentration, on a big enough scale that they're potentially economic,” Johnson said. “So we've got a great start with the resource that we have – it's right around a billion pounds of copper metal in the ground.”

The abstract from Eckel's paper (op. cit.) states:

#### ABSTRACT

Small but appreciable amounts of platinum and palladium have been discovered in random samples of disseminated chalcopyrite ore from the Copper Hill mine, one-half mile west of the town of La Plata. The area described here is characterized by the presence of one monzonite and two syenite stocks. The rocks that surround these stocks comprise most of the sedimentary formations that occur in the district. In addition, there are many bodies of diorite-monzonite porphyry, some of them very large.

Between 1911 and 1917 the Copper Hill mine shipped to the Durango (Colo.) smelter 2,336 tons of crude ore, which carried 4,478 ounces of silver and 223,865 pounds of copper. All of the ore was taken from a small glory hole. A long tunnel was driven at a lower level, but no ore was taken from it.

The deposit is situated near the edge of the larger syenite stock in a metamorphic rock composed essentially of alkali feldspars and augite. Chalcopyrite, hematite, magnetite, and some pyrite are disseminated throughout the rock and also occur as veins that reach a maximum observed width of about 2 inches. Oxidized minerals are rare. Gangue is subordinate to metallic minerals in the veins and is made up chiefly of garnet, ankerite, fluorite, and quartz.

The results of assays of two random samples of ore from the Copper Hill dump relatively high in chalcopyrite are summarized. In addition to copper, they contain appreciable quantities of platinum, palladium, and silver. The gold content is very small, and osmium, iridium, rhodium, and ruthenium are present only in negligible quantities. Any statement as to tenor of the ore in place is highly speculative, since no representative samples were taken. Careful consideration of all known factors makes it seem possible that the ore in place will be found to contain valuable metals in something like the following order of abundance:

Copper	2 to 4 percent
Platinum	0.02 to 0.06 ounce per ton
Palladium	0.02 to 0.04 " " "
Silver	0.14 to 0.76 " " "

To put these legacy ore grades into perspective, most of the large copper mines in Arizona are exploited ore bodies averaging 1% copper. Traditionally, gold and other precious metals were graded in Troy Ounces/ton. Platinum ores currently mined in Canada range from .22 to .3 grams/ton or close to .01 ounces/ton. Based on the areas sampling to date, the Copper Hill ores appear to be very prospective. However, ore grades are only one component of mining. The actual physical mining technique (open pit vs. underground methodologies) together with the cost of extraction (the physical and chemical process required to extract the metals from the ore) add considerable cost to the overall mining effort.



While the jury will be out for sometime with respect to commencement of mining (if at all) a trip to visit the old workings are well worth the effort for those interested in viewing the Copper Hill glory hole and collecting some chalcocopyrite. After speaking with Toby Mourning on the subject, a friend and I went up and located the glory hole (see [photo](#) below).



Be cautious, the old workings are unstable and I would NOT advise climbing to the area were the unknown individual is standing (this is a stock photo from MinDat). Rock samples can be safely obtained in the entrance to the large opening without be under the over-hanging excavation.

If anyone desire a map to the glory hole site, I have created a map on Google Earth I can share.

Enjoy!



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