

Green Monster Mine, Southern Inyo Mountains, Inyo County, California

Gregg Wilkerson, 2024

Acknowledgement and Disclaimer

The information in this paper is taken largely from published and public sources. I have reproduced this material and present it pretty much as we found it, not trying to harmonize discrepancies in mine or geologic descriptions. I have changed verb tenses for readability and have used some paraphrase. I have expanded abbreviations or special characters with full text (e.g. feet instead of ft., inches instead of ") Italics indicate quotations. Authors of the original information are indicated at the end of each paragraph. Paragraphs without a citation are our own materials. The maps in this report have been compiled and rectified from digital and paper copies of original sources that were made at different scales and in different geographic projections. Therefore, many of the maps had to be adjusted or stretched. They do not fit perfectly. Most are accurate to within 100 feet, but reproduction and projection errors can be as much as 300 feet for some maps. PLSS means Public Land Survey System. That survey data was obtained from the U.S. Bureau of Land Management website.

MRDS, 2011, Mineral Resources Data System, U.S. Geological Survey, <https://mrdata.usgs.gov/mrds/>. This database relies on records that, in many cases, are inaccurate or imprecise. For example, if a report describes a mine as being in "Section 9", with no other information, MRDS plots the mine location in the center of the section. If a mine is reported in "SW ¼" of a section, MRDS plots the mine in the center of that SW quarter-section. Where I could confidently adjust an MRDS location of a mineral deposit to features identifiable in aerial photographs or topographic maps, I did so.

Help me make this report better. If you have any photographs, memories or reports for this mine that you can share, please send them to yosoygeologo@gmail.com so that I can incorporate that information and material into this paper.

Location:

T.13S, R.35E, Sec. 1, MDM; 36.82968; -118.1212

The Green Monster mine is at the western edge of the Southern Inyo Mountains, 4.8 miles east of Independence, California

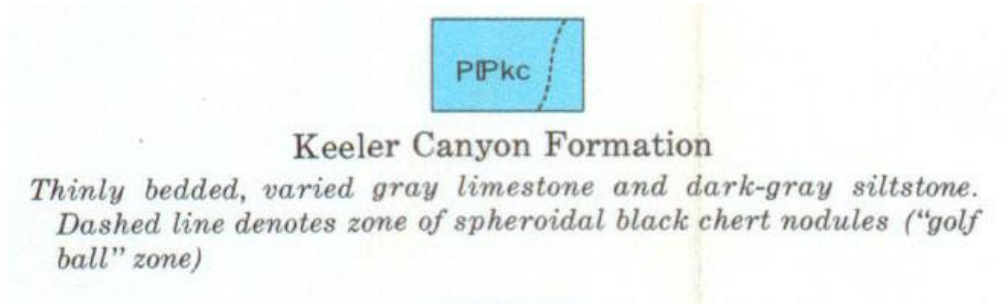
History

This mine has been a popular mineral collecting site since 1908 (Aubery (1908)).

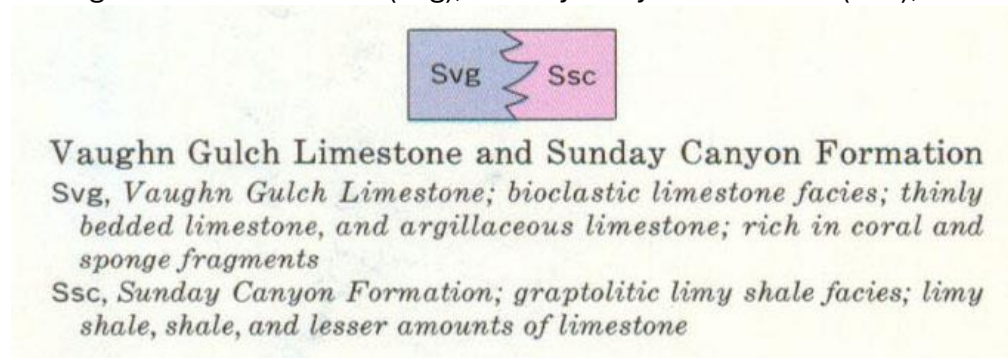
Geology

The Green Monster mine is listed in MRDS (2011) as copper deposit.

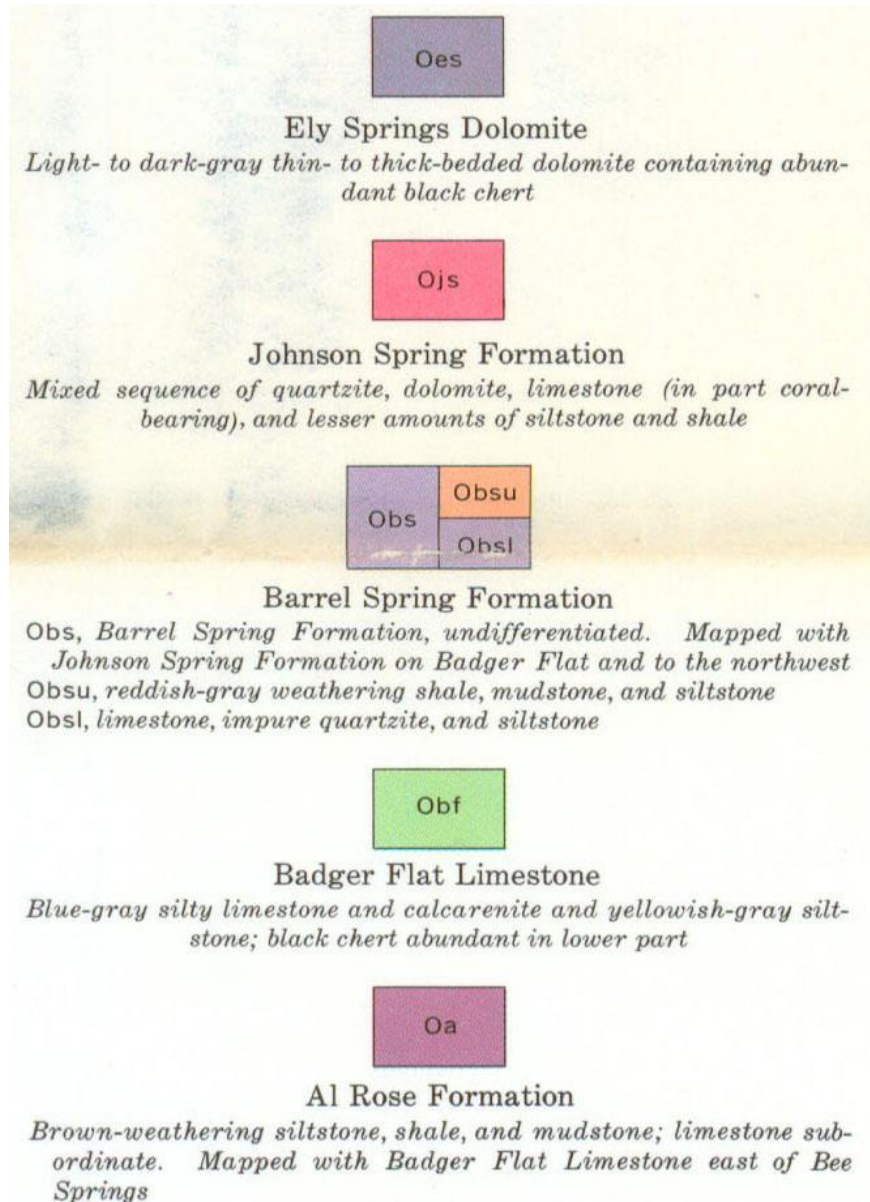
Ross (1962, 1965, 1966) mapped the area of the Green Monster Mine as Permian-Pennsylvanian Keeler Canyon Formation



To the east of the Green Monster Mine, formations are stratigraphically lower and consist of 1) Silurian Vaughn Gulch Limestone (Svg), Sunday Canyon Formation (Ssc);



and 2) Ordovician Ely Springs Dolomite (Oes) and Johnson Spring Formation (Ojs): Barrel Springs Formation (Obs): Badger Flat Limestone (Obf).



Aubury (1908) wrote this about the Green Monster Mine:

Owner, D. C. Riddell, of Gilroy, Cal. This is a continuation of the **Silver Hill** prospect. Development consists of a 300-foot tunnel and two crosscuts, one 80 feet and the other 50 feet. Some good copper ore has been exposed (Aubury, 1908:306).

Silver Hill Prospect

This claim is located seven miles east of Independence, and one half mile from the Carson & Colorado Railroad; elevation, 4500 feet. Owner, J. C. Roeper, of Independence. There is a 70-foot tunnel, showing a 2.5-foot vein of malachite. The vein is a contact between granite

and limestone. There is plenty of water for mining and reduction purposes (Aubury, 1908:306).

Knopf (1914) wrote this about the Green Monster Mine:

The most notable deposit of contact-metamorphic copper ore is that exploited at the Green Monster mine, situated 1.5 miles north of Citrus. The total production of this property, it is reported, is 300 tons of 12 per cent copper ore, carrying \$4.50 a ton in gold and silver. In 1912 the property changed ownership, and it was the intention of the new owners to develop it systematically. The developments so far made (1912) consist of a number of open cuts, short tunnels, and drifts (Knopf, 1914, p. 120).

Geologically the mine is situated at the contact of intrusive aplite and limestone that is probably of Carboniferous age. The aplite, which is a white, even-grained rock of fine texture composed of feldspar and quartz, penetrates the limestone in irregular fashion and has produced considerable metamorphism in the invaded rock, as shown by the formation of garnet masses. At the upper workings of the mine the buckled arch of an anticline is exposed; the west limb, which is the more regular, strikes N. 10° E. and dips 30° W.; the east limb stands vertical (Knopf, 1914, p. 120).

The copper ore occurs in the garnetized zone; it is highly oxidized, so that the facts concerning its origin and distribution are much obscured. It is associated with iron oxides and occurs in such a form that its presence must be determined by chemical means. Chrysocolla, which is found subordinately, is the only copper mineral definitely recognizable. In the outcrop there is much yellowish green mineral, to whose prevalence the mine doubtless owes its designation. This mineral is in part earthy in texture, and in part shows a fibrous, woody structure. , Some of this fibrous material was investigated chemically by W. T. Schaller and proved to be a hydrous ferric silicate analogous to chloropal (Knopf, 1914, p. 120).

Mineralogy

Minedat.org (2024) lists the following minerals at the Green Monster Mine:

Brochantite
Chrysocolla
Clinochlore
Dioptase
Garnet Group'
Gypsum
Nontronite ?
Quartz
Tangeite
Vésigniéite

Volborthite

When Gregg Wilkerson and Bruce Bridenbecker visited the mine in February 2024 they also identified calcite and possibly sheelite.



Figure 1. Green Monster Mine vein sample. Photo by Gregg Wilkerson, February 2024.



Figure 2. Green Monster Upper Adit. Photo by Gregg Wilkerson, February 2024.



Figure 3. Green Monster northwest adit. Photo by Gregg Wilkerson, February 2024.



Figure 4. Quartz vein with other minerals, Green Monster Mine. Photo by Gregg Wilkerson, February 2024.



Figure 5. Green Monster Mine Upper Adit. Photo by Gregg Wilkerson, February 2024.



Figure 6. Green Monster Mine Lower Adit. Photo by Gregg Wilkerson, February 2024.

REFERENCES

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MAPS

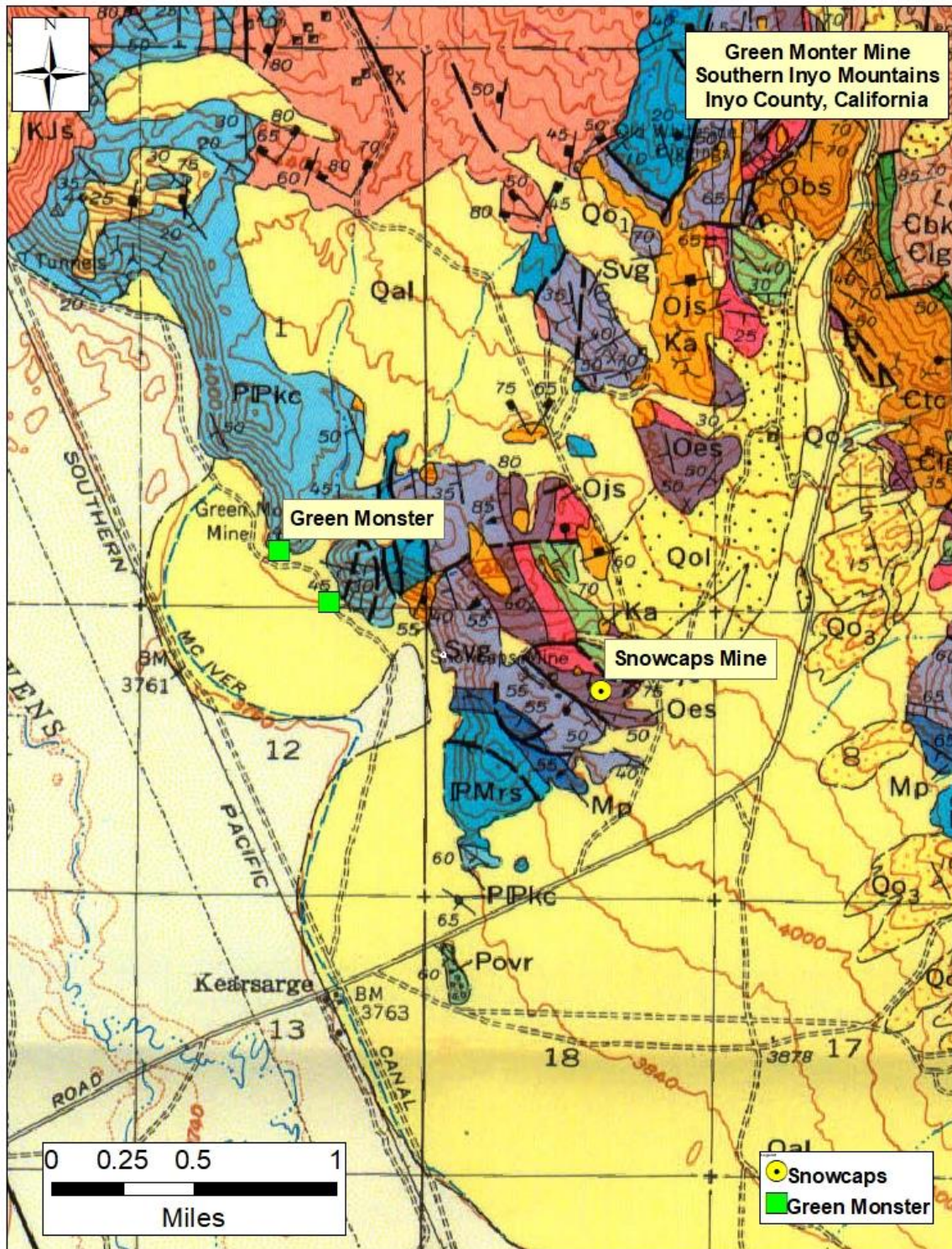


Figure 7. Geologic map of the Green Monster and Snowcap Mine Areas. From Ross, 1965.

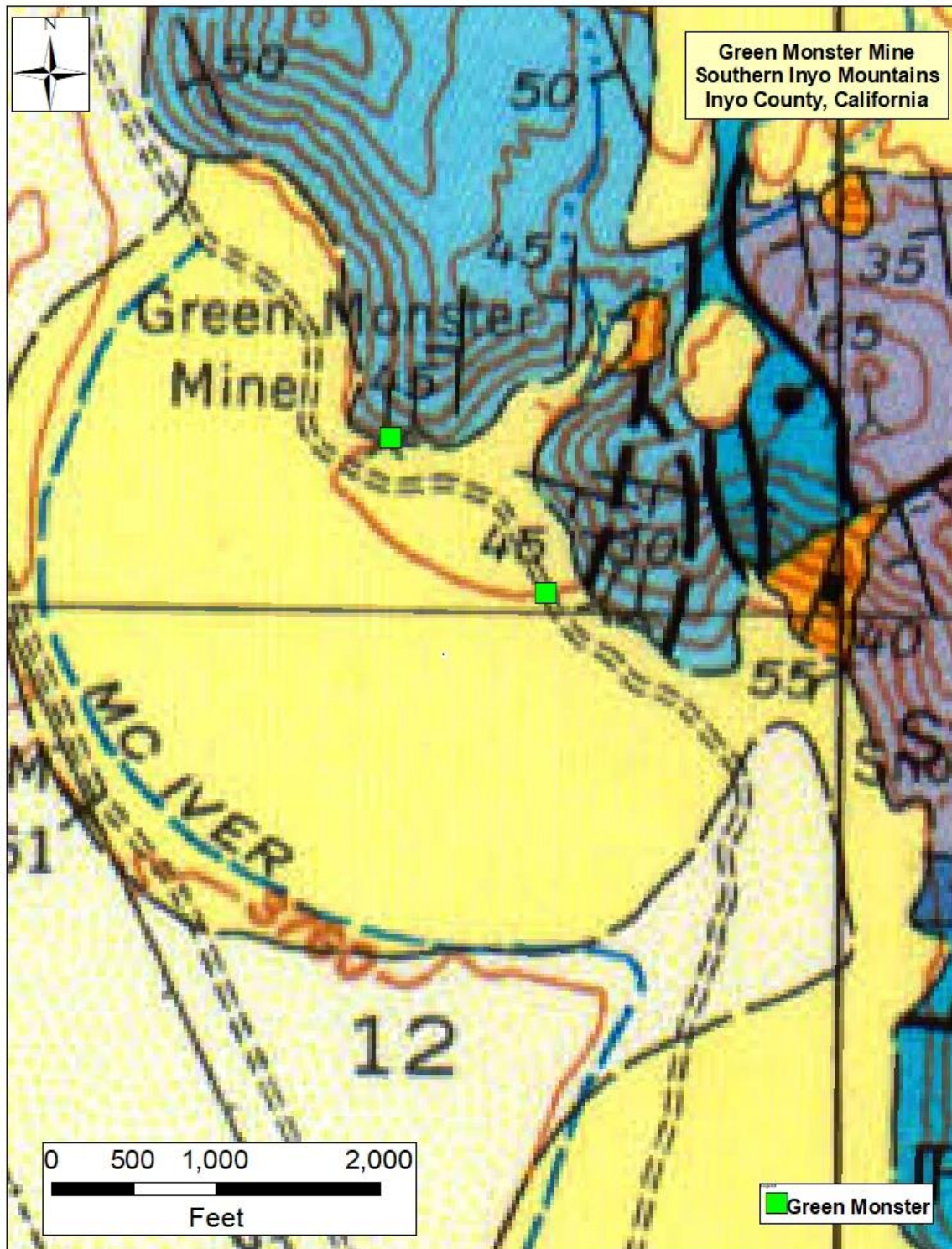


Figure 8. Geologic map of the Green Monster Mine and surrounding area. From Ross, 1965.



Figure 9. Aerial photo of Green Monster Mine. From ESRI, 2024.