

Field Trip to Round Mountain Gold Mine, NV

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April 23rd - 24th, 2023

The University of Nevada, Las Vegas (UNLV) SEG Student Chapter organized a field trip to Round Mountain Gold Mine in Nye County, NV to tour a low-sulfidation epithermal gold ore deposit. There were 9 people in attendance, including undergraduate students, graduate students, and a faculty member. All students are members of the UNLV SEG Student Chapter. The group camped at Pine Creek Campground on the night of April 23rd. The funding for this trip was provided by the Stewart R. Wallace Fund, and the chapter is very grateful for your support.

The group departed UNLV on Sunday, April 23rd and traveled 4 hours to Pine Creek Campground in Nevada. It was there that the group set up camp, prepared a dinner of hamburgers and hotdogs, panned for gold in a nearby stream, and enjoyed a campfire. Andrew Martin, our UNLV staff economic geologist, also led a discussion about epithermal gold deposits and provided two scientific journal articles for the group to reference. Weather conditions were a little cold during the night, and there was even a bit of snow on the ground. Everyone came prepared for the cold and kept warm in their tents during the night. On Monday morning, the group woke up early at 5:30am to prepare for the day. We enjoyed coffee and bagels for breakfast, and each member prepared and packed sandwiches for lunch. We also packed up camp prior to departing at 6am to commute to Round Mountain Gold Mine.

It took approximately 2 hours to drive to Round Mountain Gold Mine via remote desert dirt roads. Upon arrival, we were greeted by Dylan Baldwin, our tour guide for the day. Dylan is the exploration manager at the mine. The tour began with a short presentation by Dylan about the history and geologic setting of the mine. Round Mountain Gold Mine is owned and operated by Kinross. It is an open-pit operation that uses milling and heap leaching to process ore. The ore deposit was discovered in 1906 and production began the same year. The deposit was actively mined until production stopped in 1942. Operations resumed in 1977 and have been active since then. Gold mineralization is hosted in Oligocene felsic tuffs and Paleozoic metasedimentary strata. The volcanic Oligocene units dip southwest and rest unconformably above the Paleozoic metasedimentary units. The gold deposit is believed to be associated with the edge of a caldera and sits above a steeply dipping contact between the volcanic and metasedimentary strata. The deposit contains coarse-gold-bearing quartz veins, varying degrees of gold mineralization in quartz-adularia veinlets, disseminated gold in rhyolitic tuffs, and structurally controlled mineralization in fracture zones. After the presentation, Dylan transported the group to the pit overlook where he pointed out recognizable features including dikes and faults. Dylan also gave the group an overview of mine operations from this vantage point. Unfortunately, the group was unable to go down into the pit at this time. Our next and final stop on the tour was the core shed. Dylan spent ample time with the group here. Many examples of ore and gangue minerals were displayed and discussed with the group. We were

also able to observe gold mineralization in veinlets. The tour lasted approximately 4 hours, and all members were appreciative of the experience. After leaving the mine, we stopped to eat lunch before returning to UNLV Sunday evening.

Photos



Figure 1: UNLV SEG Student Chapter Members in front of the open pit at Round Mountain Gold Mine.



Figure 2: In situ gold observed in a sample from Round Mountain.



Fig. 3. Cinnabar mineralization