NEW MEXICO and ARIZONA SECTIONS
AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS
Copper Flat Field Trip and
Very Large Array at National Radio Astronomy Observatory Tour
Truth or Consequences, New Mexico
June 9–11, 2023

This is a cooperative field trip with the New Mexico and Arizona sections, and national AIPG all participating. The field trip will be to the Copper Flat historic mining and polymetallic project, located in Hillsboro, west of Truth or Consequences (T or C), on Saturday, June 10th and to the National Radio Astronomy Observatory, Very Large Array (VLA) near Socorro, on Sunday, June 11th.

There is a lot of detailed information regarding the field trip, so please read through this announcement carefully.

Hotel and Informal Dinner
Friday, June 9

The field trip group will meet at Truth or Consequences, NM on Friday evening, June 9th. A hotel room block has been set up at the Holiday Inn Express, 2201 FG Amin Street, Truth or Consequences, NM 87901. The hotel includes free WiFi and hot breakfast.

The room block (for 20 rooms) for arrival June 9th and check out June 11th, expires on May 10th, so you must make reservations as soon as possible. You must call the hotel directly and refer to AIPG Geology Group to make your hotel reservation (direct phone 575-894-3900).

We have planned for the group to meet informally on Friday evening at the T or C Brewing Company, 410 N Broadway St, at 6 PM for “reunión de grupo y refrescos”.

Copper Flat Field Trip
Saturday, June 10th

The southwestern states of the USA are host to some of the world’s largest and most prolific porphyry copper deposits. Typically, the ores are moderate, but their exceptional scale result in them being the most economical to develop. The Copper Flat Project is located in the historic Hillsboro mining district of New Mexico, USA. Following the discovery of placer gold and silver deposits in the late 1870’s, it was one of the first districts to be mined. For a century, silver and gold was produced from placer operations in the vicinity of the Copper Flat Project. The first copper smelter was developed in the town of Hillsboro in 1892 and operated until the early 1900s. Small-scale copper and precious metal mining continued in the district until 1941. Between the 1950-1960s majors such as Newmont Mining Company (Newmont) and Bear Creek Mining Company (Kennecott’s former exploration subsidiary) became involved in the district, and had varying exploration exposure to the project area.
On Saturday, June 10th, the field trip to Copper Flat will leave from the Holiday Inn Express hotel at 9:00 am. Please be in the hotel lobby by 8:45 am so we may distribute field trip itinerary and paperwork for mine entry, and to regroup into carpools so fewer cars are used. Plans are to tour Copper Flat mining operations. In the Copper Flat Area, one can see exposed veinlets that host pyrite + chalcopyrite + molybdenite – and their oxidation products, including very beautiful deep blue ilsemmanite, a soluble molybdate $[\text{Mo}_3\text{O}_8\text{H}_2\text{O}]$ and characteristic of very low pH weathering. We will be able to observe different rock types and structures, especially various veinlet types; contacts between rock units, Copper Flat ore host rocks and late, cross-cutting dikes of the Copper Flat System.

Return to Truth or Consequences is planned for about 6 pm. Dinner on Saturday evening (location is to be determined) is being planned for the group (but paid individually) at a restaurant in Truth or Consequences.

Themac Resources Group holds Copper Flat through its local subsidiary, New Mexico Copper Corporation (NMCC). All participants will need to complete the NMCC safety form. NMCC will collect the forms and provide a safety orientation at the gate before starting the tour. We anticipate having the Themac Resources Group CEO (Jeff Smith) and the local site supervisor (Clay Hein) on site with us. Bill Chavez from New Mexico Tech will be the field trip leader.

Additional reports on Copper Flat:


- Geology and Evolution of the Copper Flat Porphyry System, Sierra County, New Mexico by Virginia McLemore, November 2016 https://geoinfo.nmt.edu/staff/mclemore/projects/mineralresources/hillsboro.html

- The Technical Report from Themac Resources can be downloaded from their website at Technical Reports - Copper Flat Mine - Mac Resources Group (themacresourcesgroup.com)
On Sunday, June 11th, a visit is planned to the National Radio Astronomy Observatory (NRAO), Very Large Array (VLA) telescope facility, access from along Highway US60, near Datil, and west of Socorro. We are scheduled for a 10 am guided tour. Travel time from Truth or Consequences to VLA is about 2-1/4 hours (the facility is about 50 miles west of Socorro). We will meet near the gift shop at the visitor center.

The NRAO is a facility of the National Science Foundation operated under cooperative agreement by Associated Universities, Inc. Founded in 1956, the NRAO provides state-of-the-art radio telescope facilities for use by the international scientific community. NRAO telescopes are open to all astronomers regardless of institutional or national affiliation. Observing time on NRAO telescopes is available on a competitive basis to qualified scientists after evaluation of research proposals on the basis of scientific merit, the capability of the instruments to do the work, and the availability of the telescope during the requested time. NRAO also provides both formal and informal programs in education and public outreach for teachers, students, the general public, and the media. There is a $6 admission charge per person, including group leaders, to the VLA. Please plan to self-pay.

Please note that the VLA is at an elevation of 7,000 feet so visitors should prepare for extreme weather conditions year round. The path for the self-guided walking tour is level and approximately 0.5 miles in length, half of which is unpaved gravel. There is NO food service at the site and the nearest gas stations are in Magdalena and Datil.

VLA requires electronic devices (cell phones, tablets, or anything else with an “on/off” switch) to be in airplane mode, and all WiFi and Bluetooth devices (GPS, cameras, wireless headphones, fitbits) to be turned off, whether on your person or in your vehicle.
RESERVATIONS

Please note, if planning to attend this field trip, either both sites or one, you will need to respond to John Sorrell no later than June 1, 2023.

To reserve a space, call John Sorrell at 505-239-6172 or send email to geodejohn@gmail.com and provide name, AIPG member number, AIPG section affiliation, your contact information including email and cell phone number.

Friends and family members may also attend but must be registered with John Sorrell. Please indicate if they are part of your group. Additional information will be provided by early June to those who have registered to attend the field trips.

There is no field trip fee, but participants will be responsible for payment of dinners, hotel, and VLA entrance fee. The AIPG sections are sponsoring the lunch, bottled water, and some snacks for Saturday. No drinks or food are available at VLA.

SCHEDULE AT A GLANCE

Friday (June 9)

6 pm: Informal gathering at T or C Brewing Company

Saturday (June 10)

8:45 am: Meet in lobby of T or C Holiday Inn Express (collect completed NMCC safety forms)
9 am: Leave hotel for field trip
9:45 am Arrive at Copper Flat Blue Gate (check-in, safety orientation, group photo)
Morning: Copper Flat Area (Rock hammers allowed but bring safety glasses; no climbing on mine highwalls)
Mid-day: Diversion Channel and lunchtime. Lunch, bottled water, and some snacks will be provided for the group by the New Mexico and Arizona sections
Afternoon: Mine bench at north end of pit
6:00 pm Return to T or C hotel, Dinner (restaurant to be determined)

Sunday (June 11)

7:30 am Leave T or C hotel for travel to NRAO VLA
10 am Meet at VLA Gift Shop for group tour
12 noon Complete VLA tour and depart for home

ADDITIONAL INFORMATION

June weather in New Mexico can be warm, even though Copper Flat is at a higher elevation than T or C. Please bring sunscreen and a hat for the sun. You may also want to bring leather gloves, safety glasses, collection bags, and a rock hammer. Long sleeved shirts and long pants are recommended.
Directions to VLA from Socorro

- From I-25 in Socorro, exit on to US60 west.
- Travel through the small town of Magdalena and continue on US60.
- Turn south onto NM52 just west of mile marker 93.
- Drive 2.5 miles then turn right on NM166 (Old Highway 60).
- Drive 1.6 miles and the VLA Visitor Center will be on your right.

For the Arizona participants, please note that you may return to Arizona via US 60.

The VLA tour will start from the Karl G. Jansky VLA Visitor Center, which is shown below.