Wine Country Geology - Grapes, Geysers, and the Petrified Forest, Napa County

7:00 am – 5:00 pm

Leaders: Jim Jacobs, CPG-07760 and Gary Pischke, MEM-3042

What can be better than a day of California geology? How about a day of geology and wine! This field trip takes you west of Calistoga, where we’ll see the California Petrified Forest - giant petrified trees preserved from the 3.4 million-year-old eruption of Mount St. Helena that hit the forest with a Mount St. Helens type blast. We’ll stop at the Calistoga Geyser Visitor Center (Calpine) and have lunch. The highlight will be a stop at the Sterling Winery and Aerial Tram in Calistoga, representative of a high-quality Napa winery. The aerial tram will take us to stunning views of the Napa Valley. On the ridge, we will discuss the rich volcanic soils, which are home to one of the great wine-growing regions in the world, followed by wine tasting at Sterling Vineyards. We will review *terroir*, as well as the recent fire damage, and have a stop in the historic town of St. Helena if time permits. Our return will be through the California coast ranges to Sacramento (the order of stops may vary). Certainly, a day well spent.
Be sure to sign up for the field trips when you register for the annual meeting!
Monday, October 25, 2021

North Bay Geology - Flooding, Faults, and Groundwater
8:30 am – 5:00 pm
Leader: Gary Pischke, MEM-3042, PG, CEG

If you want to really see and experience the northern portion of the San Francisco North Bay, sign up for the North Bay Geology field trip. The field trip starts at Hwy 37 where the Novato Creek flooding and erosion has taken place. As you continue north, you will visit Sonoma where you will enjoy a lunchtime discussion at a Winery. After lunch, learn about how the Sonoma Valley Basin groundwater purveyors are satisfying the groundwater basin requirements and share in their enthusiasm of current successes. The last stop of the day will be the Napa 2014 Earthquake. You will see faulting and damage caused by this earthquake event. As the day comes to a close, you will travel back to the hotel along a route that provides an opportunity to hear about recent fires along the coastal ranges, enjoy the abundant picturesque views of the coastal range and listen to the story of how this range first formed.

Please wear field gear and be prepared for warm conditions.

Tuesday, October 26, 2021

A Fresh Look at the Geology of Mount Diablo
8:30 am – 5:00 pm
Leaders: Dr. Will Schweller (NCGS), Dr. Don Medwedeff (NCGS), and Dr. William E. (Bill) Motzer (AIPG and NCGS)

If you are looking for a lot of complicated geology within a small area, sign up for the Mount Diablo Field trip. The core of the mountain consists of a large fragment of oceanic crust (an ophiolite) and a chaotic mixture of chert, basalt and sandstone (the Franciscan Formation) that was scraped off an oceanic plate during tens of millions of years of subduction. Tectonic compression during the Tertiary has uplifted these rocks and deformed the younger sedimentary formations that were originally deposited on the Franciscan Complex. Modern tectonics associated with the San Andreas fault system continue this uplift, resulting in the older rocks being on the top of the mountain and younger rocks on the flanks.

For this field trip, we will combine new data on geologic ages and underlying structures together with easily reached outcrops and satellite images to give fresh perspectives on this interesting example of coastal California geology. We will drive to the top of the mountain for a regional perspective, then proceed to look at sections of banded chert, altered deepwater basalts, and clastic sediments of the Franciscan Formation before ending the trip in Eocene deepwater sandstones derived from the Sierra Nevada range. The trip will include short walks on flat hard trails to access numerous outcrops.

Please wear field gear and be prepared for warm conditions.