



## Rolling Stones Gem and Mineral Society: Geology Field Trip Burro Mountains – April 6, 2019

### Proposed Stops:

#### Stop 1: Little Burro Mountains

The long slope on Highway 90 from Tyrone to the crest of the Little Burro Mountains is underlain by Tertiary volcanic rocks that have been tilted to the north. Just after you pass the mine entrance road, Highway 152 crosses a fault. The Little Burro Mountains have been raised (and tilted) along the fault and the Mangas Valley has dropped down and is now filling with gravel.

#### Stop 2: Mine reclamation overlook

The mine is in igneous rock intruded about 50 million years ago. The copper minerals have been concentrated by natural processes in a layer that makes it possible to mine. Reclamation has reduced and covered the slopes of the rock removed from the mine.

#### Stop 3 and 4: Burro Mountain Granite

There will be two stops to look at the granite. The granite is composed primarily of feldspar (white to red rectangular crystals up to 1" in length) and quartz (irregular, glassy, grey grains). The granite is frequently cut by quartz and feldspar grains.

#### Stop 5: Dike in granite

Dark-colored igneous dikes (Yi) that cut the granites are also common. This stop is another opportunity to examine the granite and the dike. The dike shows chilled margins suggesting that the surrounding rock had cooled before the dike was intruded.

#### Stop 6: Mangas Valley gravels

The Mangas Valley was filled by gravels shed from the Burro Mountains and the Silver City Range. Here the source is the Burro Mountains as the cobbles represent rock types commonly found in the Burro Mountains.

For more information about the area the description of the Tyrone Mine at <https://geoinfo.nmt.edu/tour/home.html> is a good starting point.