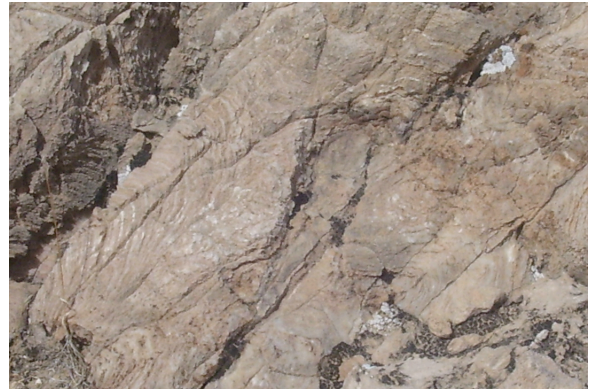


Blog for day 1 by Sandy Risberg, 26 March 2007

Wow! What a day. I chose to join the geology team on their hunt for a number of different analogs for the Moon and Mars. What that means is we were looking for things here in the extreme environment of the Mojave that are similar to what could be found on the Moon or on Mars. We started by leaving the Zzyzx research station and driving to the Northern Mojave to the edge of Death Valley. I saw an abandoned talc mine up ahead on the trail but that was not our objective. We were on the hunt for stromatolites.

These are fossilized columnar calcium containing formations in the rock that are created by layers upon layers of cyanobacteria or “blue-green” algae in ancient shallow seas. It is evidence of some of the oldest life on earth, what we were looking at was estimated to be 1.6 billion years old. In CA 7th grade science standards include the students understanding the evidence from geologic layers show the age of the earth and how life has changed over time. How exciting will it be to show and tell what I have seen today. Living somewhat locally (within 2 hours) perhaps the students will have the opportunity through school or family trips to witness the amazing geological formations of the Mojave. This is the type of evidence our scientists of the future, our current 7th graders, will be looking for on Mars in the future.



Next we moved onto an area with many old cinder volcanoes and basaltic lava flow fields. CA 7th graders are learning about the different formations of rocks, like these igneous basalt flows.



Standing on a 300,000 years old lava flow viewing to one side a 120,000 year old flow and to the other side a 10,000 year old flow gives you an awesome look at the changing earth. This shows the students that processes today are similar to those that occurred in the past and slow geologic processes have large cumulative effects over long periods of time. Lava tubes formed by these flows have places where the ceiling has collapsed along the tube creating a rift just like those seen on the Moon. Skylights, which are small holes (1-4 ft diameter) that open the tube up to the surface, have analogs or

counterparts that have recently been seen on Mars. The lava tubes on earth seem to be great places for the most basic forms of life to thrive. Moisture gathers during different climate periods. The idea that the lava tubes on Mars could possibly contain organics or microbes is a problem that will most likely be confirmed or discounted in the future by our middle school students of today. The students of southern California are in the perfect environment to see so many analogs of the Earth’s Moon and of Mars. Perhaps one of them will be researching the analogs of the Earth while on the surface of Mars on day.

