

Mineral Seminar at the Desert Studies Center – 2011

We left home around 9am, on 10-21-11, and headed South towards Mojave. Six hours later, we arrived at our all time favorite eating place, Primo's. Having eaten there for the past 20 years, when we pass through Mojave, we can highly recommend the food. The place is a walk up and order arrangement, with building and décor reminiscent of the '50s. The quality and quantity of the servings are also reminiscent of the '50s, and at reasonable prices. We shared a Tri Tip BBQ sandwich sporting about a pound of excellent, thinly sliced beef slathered in BBQ sauce and served on an eight inch roll. On a separate platter we had an overly generous portion of to die for onion rings that could easily have served four people. Unable to finish the meal, we left full and very satisfied. After another hour's drive we arrived in Barstow, where we stayed overnight.

We left Barstow early the next morning, 10-22-11, for the symposium. Driving for another hour, through the Mojave Desert on desolate I-15, we turned off and drove South on Zzyzx road and into the Soda Lake depression. About four miles further on, we arrived at the Desert Studies Center, which is run by a consortium of California State Universities.



Ariel view of the Desert Studies Center - Photo property of the Desert Studies Center



The "Castle", now headquarters, lecture hall and kitchen

Check in and registration was fast and efficient. If your name was on the piece of paper at the desk, you knew that you were registered. Our only complaint was that name badges were not given out. The schedule of lectures and activities was ambitious, for a one day symposium.

- 9:00 am Registration
- 10:00 Welcome Dr. William Presch, DSC Director
- 10:15 Mojave Desert A Brief Stratigraphic & Structural History – Bruce Bridenbecker
- 10:30 The Blue Bell Mine Dr. Robert Housley
- 11:15 Soda Lake Salt Production R. Fulton, followed by walking tour of the salt works
- 12:00 Lunch Break
- 1:00 pm Minerals of the Mohawk Mine Robert Reynolds
- 1:30 Minerals of Otto Mountain, Baker Joe Marty
- 2:00 1,000 Years of Mining History: Halloran Turquoise Robert Reynolds
- 2:30 Afternoon Field Trip to Blue Bell Mine or Otto Mountain. Silent Auction upon return.
- 6:30 Banquet at the Desert Studies Center
- 7:30 Evening Keynote Speaker Dr. Kampf: "California – Treasure Trove of New Minerals"

The symposium began with an orientation of the Desert Studies Center and the small scale adjoining salt works. The history of the center is interesting and dates back to the late 1800's when salt was mined there. Because of the remoteness of the site, it was abandoned shortly afterwards. In the '30s a self proclaimed doctor and minister, Doc Springer, filed a mining claim for the salt and built the "Castle", a health and rejuvenation spa.



Remaining lake from Doc Springer's Spa

Years later, I believe in the '50s, the federal government decided that the claim was invalid, as salt is not claimable, and that unauthorized use of federal lands, along with frauds had taken place. The site was confiscated and Doc Springer was transferred to a different facility, the state prison. Eventually, the site was acquired by the California university system and is now used as an in place desert

studies laboratory. Classes and seminars are held regularly and a constant flow of students, professors and other interested groups use the facility. Onsite housing can handle around 70 people at any one time.

Dr. Robert Housley (Housleyite) gave an interesting and very informative presentation about the Blue Bell Claims, which are located just 15 miles to the North, as the eagle flies, from the Desert Studies Center. He gave a very interesting overview of the history of the Blue Bell Claims, before getting into the geology and mineralogy of the mines. Bob elaborated upon, and showed pictures of, some of the more interesting of the assemblage of over 50 mineral species that the mines have produced.

A short synopsis of the salt production at the adjacent Soda Lake salt works, was interesting from a historical viewpoint.

Lunch break seemed to come almost too soon, but hungry stomachs won over mineral talk and we adjourned to the outdoor dining area. A deli feast of cold cuts, cheeses, salads and chips satisfied all. Meals are prepared and served at the unique outdoor dining area that is nestled between the



Desert dining at its finest, when you can stand the heat

building and a huge carved out outcrop. This provides an effective shelter from the winds that can reach 80 miles per hour. But even at only 94^o, a far cry from the occasional high of 120^o, it was a bit too hot for us to eat outside, so we retreated and ate inside in the coolness that the swamp coolers provided.

Returning to the lecture room, we were further treated to an excellent presentation, by Robert Reynolds, who talked about the minerals of the Mohawk Mine. This is another locality of interest for its assemblage of minerals, and sadly one that we may never be able to collect at again. Bob related that the mine has now been closed to access, so yet another favorite collecting place is no longer accessible.

Joe Marty gave the next presentation on the Otto Mountain mines, which we would visit on a field trip, just after the presentation, led by Joe himself. Otto Mountain is very interesting because it is the type locale for eight new Tellurium bearing minerals and perhaps three more that are currently being described.

Chromschiefelinite
Housleyite
Markcooperite

Ottoite
Paratimroseite
Telluroperite

Thorneite
Timroseite

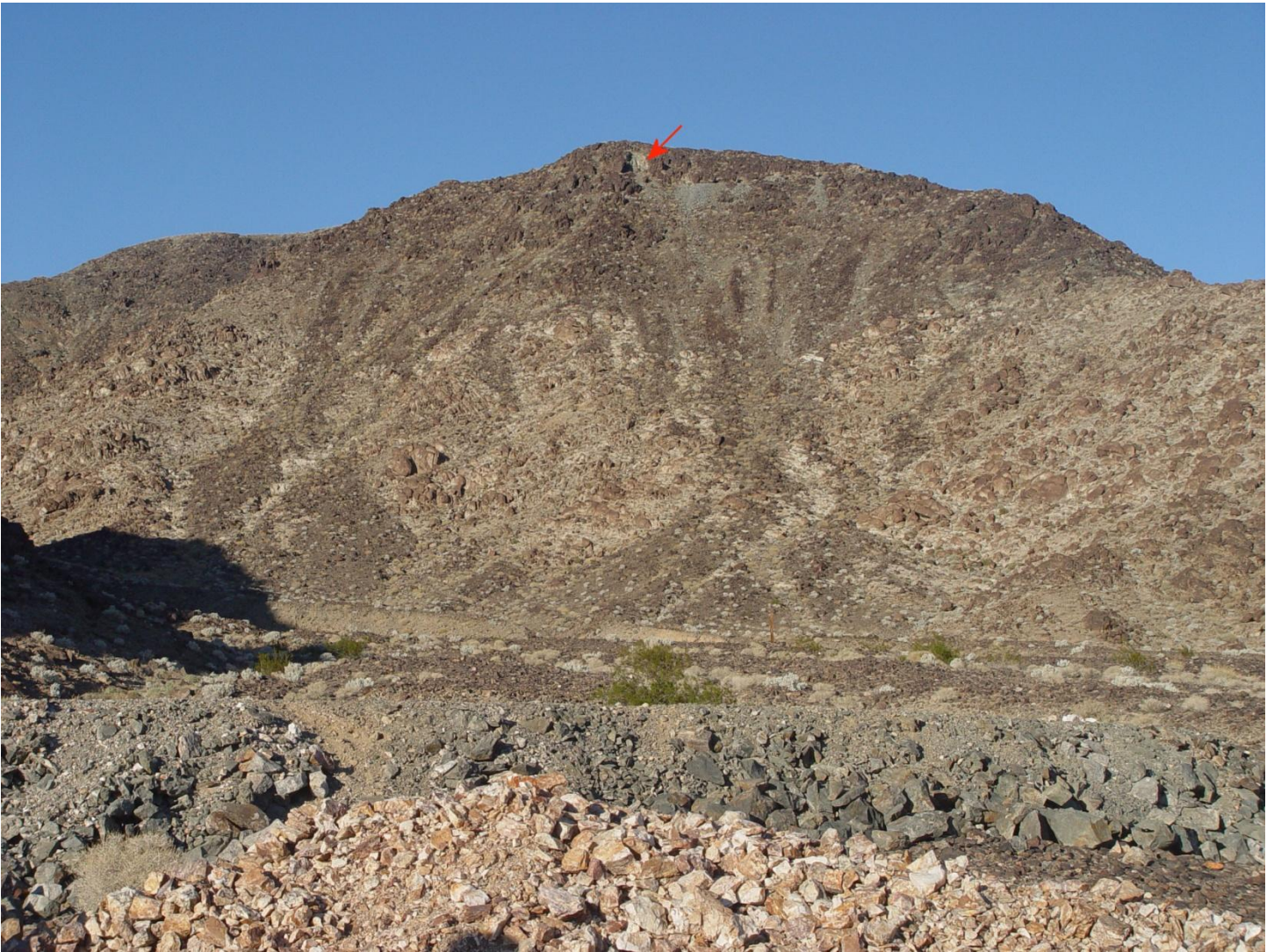
These are in addition to near 60 other mineral species found on/in Otto Mountain. Unfortunately, most of the minerals are very small and require fairly high magnification to do them justice. Joe's presentation included many photomicrographs of the new minerals and associations, as well as pictures of the various adits and collecting areas.

The trip from the Desert Studies Center to Otto Mountain only took about twenty minutes and was just a couple of miles off the paved road. It's amazing that all those new minerals were only a couple of miles off the road and in view of downtown Baker. Downtown Baker consists of a dozen motels, gas stations and eating places. If you blink, you will miss it. The Aga Mine was first on the list of localities that we would visit and was just a few tens of feet off the dirt road and easy to access. Too easy, I guess, because I was told that Dr. Housley had gone out there the day before the field trip to "ask" the person that was living in the adit to please not be there when we arrived the next day. Apparently

that went well, as Bob was at the symposium the next day. A few of us that had hardhats and lights went into the adit to see the glory hole where several of the Te bearing minerals were found. The rock that they occur in is fractured Quartz with Chrysocolla stains, but appeared to be very localized and tight. Digging out any material would be very difficult and tedious. The dumps looked like they would be far more productive as a lot of fresh material was still visible.



Sharon prospecting near the Aga Mine



One of many other adits on the mountain that require arduous hiking

Driving a few tenths of a mile further around the mountain took us to the area where most of the new minerals were found. Located high up on the side of the mountain, where an almost visible trail leads, is the Bird's Nest Mine. This is definitely not a trek for the inexperienced desert hiker. Several other unnamed adits, at least to us, were also visible on the mountain. Certainly more discoveries will be made as collectors explore further. We were very fortunate to be given an orientation of the area by none other than the experts themselves, the people who first recognized the new minerals and described them.



(*American Mineralogist*, Volume 95, pages 1560–1568, 2010)

Anyone who attempts to collect at Otto Mountain should be aware that people have been found living in some of the adits.

Joe Marty and Tony Kampf

We noted some packed bags lined up just inside of one of the out of the way adits and assume that it was being used for shelter by some unknown person or persons. One adit was named the Library Mine, as that is exactly what was found inside, a small library of books, a bed and other living comforts. Be alert when approaching and entering any of the adits and do not go alone.



The Bird Nest Adit, way up the canyon, is where most of the new minerals were found

Upon return to the Desert Studies Center, we were treated to another nice meal that was prepared by the Center's chief. Plenty of lasagna, Italian sausage, garlic bread, salads and other tempting items were well appreciated. Dinner was followed by a silent auction and the keynote speaker, Dr. Tony Kampf. Tony is the person who did much of the work in describing the new minerals from Otto Mountain, along with Bob Housley and others. His presentation was centered on the prolific number of new species that have been described from California. Fourteen new species have been described in the past few years and several more are pending. The total now stands at 135 and climbing. Tony went on to talk, in detail, about the top 12 California deposits for new minerals and concentrated on the latest discoveries in the Mojave Desert, namely Otto Mountain. This was presented in a very detailed, but understandable, way that was highly informative and lavished with many photos of the minerals.

After the final presentation, we adjourned to our assigned little bungalow, number 2Z. Somehow, the letter Z seems to have some special significance here, as is obvious in Zzyzx, but I have yet to figure it out. Before the final lights out, we strolled out to the lake, enjoying the balmy 80⁰ evening and sat in

the swings, discussed the day's events and enjoyed the star filled sky. The Milky Way was clearly visible and I took the time to point out a number of constellations to Sharon, with an occasional meteor seen streaking across the sky.

We rose bright and early on Sunday, the final day of the event. An excellent breakfast of pancakes, bacon and eggs was served, which commemorated the end of the symposium. We had hoped that someone would be going out to the Blue Bell Claims so that we would have company and several had already assembled and were ready to leave. We were delayed a few minutes and hoped to catch up, but we were left behind. I had a good idea as to how to get there, but of course, nothing looked the same as it had the last time that I was there, about 54 years ago. The mountain was recognizable, in the distance, so we just set a course in that direction. After a few false starts, to get on the right track, we were headed across about 6 miles of open, rocky desert towards the Blue Bell Claims. Still, no one was in sight and we weren't sure whether to attempt to get up the fairly bad track to the B adit, or to drive around the mountain and try to get to the A adit. A short walk up the track towards the B adit convinced me not to attempt driving up without a backup vehicle, in case of getting stuck or worse. Retreating back to the main track, we circled around the mountain and up towards the A adit. To my surprise, as we took the last turn, three vehicles were already there. The view of the desert, far below, from the A adit was spectacular. Just being 6 miles off of the paved road gave a great sense of the vast and desolate Mojave Desert.



Panoramic view of the desert from the A adit

Of the numerous adits, we decided to locate the C adit, where the Plumbophyllite was found. I had studied the map of the claims, but as luck would have it, I forgot to bring it and had to rely upon memory. An obvious trail headed in the right direction and after a time, and asking another collector, we found the C adit. We entered and were pleasantly surprised by its two inhabitants. In the two short side drifts were our friends Tom T. and Al W. digging away. We poked around a bit exploring the fairly short adit until Al left and we could dig in the Plumbophyllite "hole". To my uneducated eye, the pickings looked pretty slim, with only a smidge of blue green showing in small spots. We decided to dig out as much of the blue areas that we could and examine it later, in hopes of finding a bit of



Sharon and Tom T. eating lunch near entrance to A adit

Plumbophyllite. We did the same in the second small drift where the Fluorophosphohedyphane was discovered. Both are new minerals and the Blue Bell Claims are the type locale. After loading up the sparse amount of material that we could dig and the small amount of hopeful material that we found on the floor, we headed back up to the A adit. By the time we reached the truck, a lunch of French bread and Italian salami, along with an ice cold soda, seemed like a feast. As we finished eating a noise alerted us to the mostly caved in entrance to the A adit. More rustling sounds and Al W's head popped out through the hole. After a bit of a struggle, as the

adit entrance dips downward, Al managed to liberate himself, a large pick hammer and his flats of minerals out of the small access hole. That was good, as I was then fairly confident that no rattlesnakes would be hiding just inside the entrance where I wouldn't see them while sliding down and into the adit. The entry was easy for Tom and I, though a bit tight. Sharon had no difficulty at all getting in. The A adit is not a large working, having a single large room with two tunnels leading off of it and a drift that heads up on a very steep angle to an outside opening. This drift is one to stay away from, as there are timbers, with large rocks lodged against them that could fall. The rest of the room seemed fairly safe, though the ceiling and some of the side walls are highly brecciated. That made for easy digging and I was able, with the help of an old wood ladder, to climb up and hack out some interesting material from one of the side walls. Two other areas in the walls of the room were also productive. As the minerals are small here, the only ones that we have identified by loupe are Chrysocolla, Cerussite and Fluorite. Many other associated minerals, such as Wulfenite and Pyromorphite, are known from this adit.



Sharon scoots out of the adit while Gene struggles



Sharon bids the Blue Bell Claims good bye for now....

Well, out of the hole and sadly leaving the mountain to head back home, we stopped after a couple of miles, to look back and say goodbye for now. While driving home we realized that it would take a week, or more, to begin to do this locality justice. Fortunately, there are good camping spots, so who knows? Perhaps we will return another day to stay longer and to explore further.