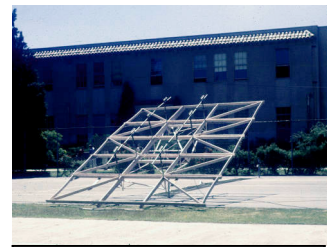


## Recollections of The Clark Lake Radio Observatory

In the spring of 1960 in my senior year at the University of Santa Clara I was working on building an antenna for a radio astronomy project. The professor who was the advisor told us about the University of Maryland radio astronomy project at Clark Dry Lake and asked if we wanted to take a field trip there over spring break. Three of us agreed to go and traveled down to Borrego Springs.



The SCU Antenna

The only antenna there at the time was the two-mile long interferometer operating in the high frequency (HF) range. I do not remember the exact frequency. Facilities at the time consisted of a couple of trailers, a van with electronic equipment, a water tank and a windsock. Transportation consisted of a single engine plane and a WW2 Dodge Power Wagon ambulance. I am not sure where the generator was. I don't think power lines were available but am not sure.



CLRO Facilities – Spring 1960

The antenna consisted of two miles of transmission lines supported by 4 x 4 posts with a 4x4 lintel across the top. The posts were painted “barn” red. As I recall dipoles were spaced out along the transmission lines but am not sure of the actual configuration, neither the number of dipoles or how they were phased. The figure shows a view down the center of the transmission line supports.



The “Barn” red poles

Because the posts were placed in the sand of the playa without any foundation concrete they tended to lean. We spent the better part of a day going down the line with the power wagon using it to push the poles into a vertical position and then filling in sand in the voids with a shovel.

The next figure shows a view of the playa from near one end of the lines.

In 1999 I returned to Borrego Springs for a week of hiking with some friends. I took a few of them out to Clark Lake and stopped near the west end to take a look. I thought I saw the ruins of a building, which had not been there in 1960. However, at this time, we did not walk out on the playa.





Playa View of Transmission Lines

Then in 2006 I returned with my hiking group and went out to the Lake on my own and wandered around the playa. I was searching for any remnants of the old HF interferometer. Unfortunately I only walked around the west end and found nothing.

### **The Great Archaeological Find**

In 2007 I contacted the Anza Borrego Foundation and talked to Joan Carskaddan to see if anyone was interested in the pictures I had taken in 1960. She said her husband Phil definitely did so I contacted him and sent the pictures. We agreed to get together the next time I came to Borrego springs and take a walk on the playa.

My wife and I came to borrego Springs in early March 2008 with my hiking group and I met Phil on March 4th. We drove out toward the east end of the playa and started walking around. We investigated the old

Rake Stations and the rock piles/targets for the bombing practice during WW2.

We found the remnants of the smaller array which ran orthogonal to the two mile array. The remnants included some of the supports for the array and some of the ladder style transmission lines.

We also found some of what I thought (but may be wrong) were the dipoles. They consisted of some foam center filled dual wires with what appears to be a break in the middle where the dipole wires were broken into a feed. The pictures are shown next.



Phil on the Playa



Orthogonal Array





Ladder Transmission Line and Dipole?

I was disappointed that we found no trace of the original two mile array, but we wandered around a bit more and I spotted a four by four piece of wood with some of that barn red paint still on it. I am sure it is the last remnant of the original antenna. I was elated! We left the post there because I generally do not like to remove or move old relics. I hope it stays there for a long while.



The find

I have to thank Phil Carskaddan for taking me out to the right part of the playa to search for these remnants.

It “made my day.”

Tony Ferrari - April 2008



The Archaeologist