

Radio Caving in Onyx

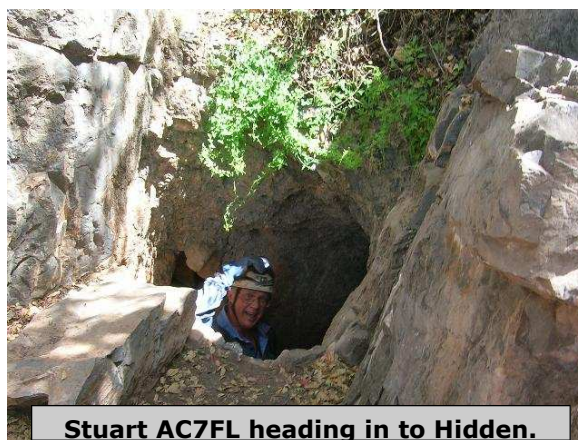
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The Arizona Regional Association of the NSS had it's Spring Campout at the Onyx Cave area in 2008. The ARA's are always a good time to see and visit with caving friends from around the state and, of course, do some caving. I had another reason to attend and that was to test my newest built radio, the MMR40 kit design by KD1JV being sold by QRP Kits.

We drove down on Friday with our new (to us - 10 years old) tent trailer. The washboard gravel road took it's toll on the spare tire carrier - which by the following weekend had a newly welded, far better attachment. It was a good shake down cruise for the camper. After we got set up, I set up the MMR40 and a random wire thrown into a nearby tree. It was working great, and I made a couple of contacts with the QRP (5 watt) radio before settling down for the night.



On Saturday morning several other cavers and hams had shown up and we went off on a tour of the smaller caves in the area, taking the radio, of course! Hidden Cave was chosen as a good first test for the radio to communicate with the underground. Stuart Lindsay AC7FL and Rich Bohman K7RRB were underground while I stayed outside with the MMR40. We were able to easily establish contact with the back of the cave. The underground station dialed back to 1/2 watt on the Yaesu FT-817ND and we were still able to have a great signal. The 40 meter radio worked just fine to do the radio caving operation.



Later in the afternoon, a full loop trip in Onyx was going out and Rich took the FT-817 along to experiment with ham radio underground from the far reaches of the cave. I set up in the entrance to Onyx Annex (the small cave next door) and waited for the call from in the cave. While I was waiting, Victoria Westmont came up the canyon and joined me at the entrance. She took my camera and got some photos of the 'surface' station while I was talking to Rich inside the cave.

The 'Loop' is nearly 1/2 mile of caving and is the most traveled part of the cave. It takes a couple of hours to do the loop route without stopping to explore other parts of the cave. Rich set up at the traverse not far inside the cave to make sure we had everything set right for both stations. We had perfect signals down to 1/2 watt. The cave team moved on around the loop. They stopped three more times to set up the radio for short contacts and were easily a S9 signal (very strong) even down to 1/2 watt! We were able to talk to the far side of the cave from the entrance with ease. Just as the cave team was nearing the entrance, a local traffic net started up on the frequency that we had been using. It

would have been fun to see if Rich could copy them underground with their hundreds of watts signals, but he was on the move towards the entrance (and a good dinner!).

Another successful cave outing with ham radio. If there was an emergency, we would be able to use the ham radio to talk to any part of the cave to do coordination with emergency responders - passing whatever traffic was needed to support the rescue. It was a good day for another home built caver radio!

The Loop Route



KE7HR using the MMR40 to talk to the underground!