

Below is a report filed with the CDS:

To members of the Cave diving Community:

For the last ten months I have been working with Forrest Wilson and Kelly Jessop and other members of the CDS BOD on finding a way to restore the vandalized clay bank in the Cow Spring system. Forrest e-mailed me asking if I could use my skills as an artist to come up with ideas. At the same moment (our e-mails literally crossed on the net) I volunteered my skills as both a fine art and theatrical sculptor. My only condition was that nothing be rushed, we do it correctly in a well thought out plan and that if I thought at any point the fix would cause more damage I would abort the repair. I asked that my participation in this project not become general knowledge so I could make a non pressured decision on the best way to proceed. I want to thank Forrest and Kelly for adhering to my wishes.

At the time I was working on a show in LA for several months and knew I couldn't even get to Florida till May 08. We talked for several months about the different ideas bouncing about. I knew I could work clay but had major concerns about the high flow. I would have to remain stationary over the damage for over an hour at a time.

Last June I did a dive with Bill Bowden and Mike McAuliffe to look at the damage. I had planned to take samples of the clay but my fears about the flow were correct. I aborted the dive. At this point which Forrest (along with CDS BOD members) and I began coming up with ways to rig a diver stationary in the current in order to make the repair. We came up with several ideas. Last August after the NSS convention we did a second dive in which Forrest rigged a rope across the mud bank. I was able to use the rope across my chest along with putting my fins on the ceiling to remain stationary enough to take samples of the clay.

I recommended matching the clay samples with artist ceramic clays. Then filling the letters with the clay, and smoothing the surface. I would then finish with spreading some of the particulate which is already in the cave. This can also be left to just happen naturally. Kelly suggested at this point that a small table with thin legs might be set up near the rope as a work station.

Last fall:

I first began contacting some north Florida ceramic artists but found out they get their clay from the Midwest. After visiting a few Chicago based ceramic suppliers I was directed to Great Lakes Clay Supply in Carpentersville, IL. These folks supply clay to all the region's art suppliers. I made a phone call to their tech support Tim explaining the Cow Springs project. He invited me out where I showed the samples to Al, one of their clay techs. Al then showed me several clays both in moist form and powdered form. (They receive the clays from around the country in powdered form where it's shifted thru a fine screen then reconstituted with distilled water.) This makes the potter's clay very clean and made me feel better about not transporting organisms in to the system.

In my studio I thinned down all the clays to paste form where I am mixing them to match the samples color and consistencies. Also I have modified a chalk gun (I milled the plunger to fit inside PVC tubes) to fit cartridges I made out of 2" x 12" PVC with an end fitting which I added a 3/4 " nozzle. Ok, now here's how these parts go together. The different color clays go inside the tubes. Stretch plastic covers either ends and are taped in place. A rod punctures the bag once I am on site ready to go. The clay can be dispensed into the letters in the bank like caulking. Using other clay sculpting tools I can mush the new clay in. I also have two types of soft hair paint brushes to smooth over the top.

(I hope this makes sense.)

Basically I am creating caulking tubes filled with matching clays as a practical way of applying the clay underwater. My clay modeling kit already contains many clay working tools and sponges. Out of the spare 3/4 " PVC and some scrap ply I made a small folding work station. A pouch was added to this to hold the tools while we worked.

MONDAY JAN 5 09; Bye bye PY:

We did our first dive at Cow. The team consisted of Michael Angelo Gagliardi, Wayne Kinard, and Gene Page. Bill Bowden acted as surface support. Our objective today was a set up dive. We reset the rigging rope. Set the work table in place. Preset the tools, caulking gun and brush on the table. We had planned to take samples of the clay around the PY initials then test one of the two clay tubes we brought in with us. I saw that the clay I mixed from photos of the PY already matched exactly so I decided to attempt a fix on PY. The first test of the clay

gun failed. I put the tube in without breaking the plastic on the front end. The back end broke and the clay came out the back. The second tube was inserted in the gun after first poking a hole in the front of the tube. It worked exactly as planned. The clay filled the letters and stuck. I then took the soft hair brushes and blended it all in. I continued filling in around the lower half then blending. If the marring was shallow I simply used the brush on it. The bank was fixed but as predicted cleaner than the rest of the wall. We can try to spread the silt on it to blend or just wait. In four months no one will be able to tell anything was ever there. Gene shot over 200 photos of today's dive. He also carried in a stage bottle acting as safety diver. We left the table, rope and tools in place removing only the empty tubes. Dive time was 103 Minutes

TUESDAY Jan 6 09, Begin removing DIC:

We did our second dive today. The Team consisted of Michael Angelo Gagliardi, Wayne Kinard (repair team), Jill Heinerth (primary photographer) and Gene Page (safety diver and Jill's asst). Bill Bowden was once again wonderful as surface support and good natured Sherpa. We did a team photo then entered the water. About 400 feet in I had a reg problem and called the dive. On the Surface Bill switched out regs for me and we were back in business.

There were no incidents getting to the site. On site, Wayne checked the rigging while I began resetting the tools on the bench. We attacked the DIC and filled and smoothed the clay. After an hour or so we had about 80% of the DIC gone, but some of it remained. I called the dive at this time due to thirds but also fatigue. We collected the bag of empty tubes, secured the tools to the line and began exiting. At this point I want to thank the projects team. The team effort and skill of these four individuals is outstanding. It's been a pleasure to work with them.

Working with Wayne is like working with a telepath. He knew every tool I needed as I thought about it. All I had to do was hand one tool back and the next tool was popped into my hand. Also Bill Bowden -- surface support -- saved us hours in not only the sherpaing but the emergency reg repair got us going again in 20 minutes. I also want to thank Dive Outpost for their help and support.

COW SPRINGS RESTORATION PROJECT DAY 3:

\*\*\*RESTORATION COMPLETE AND SUCCESSFUL\*\*\*

The dive team consisted of Michael Angelo Gagliardi, Wayne Kinard, and Gene Page. Bill Bowden stayed an extra day to once again act as surface support. After meeting at Dive Outpost, where we went over the day's plan, we left for Cow Springs. Both Wayne and Gene back mounted while I side mounted. Gene had an extra 80 already in the cave as safety bottle. I carried an 80 which I used as travel gas. We wanted to do one long dive in which we would finish the restoration and clear all the tools, workstation and rigging rope. I was planning on a two to two and a half hour dive.

Once at the site, I clipped the stage bottle to the line, went to work moving the tools from the line to the work bench. Wayne checked the rigging then began assisting me in the repair. The DIC was still visible. I took a clay modeling tool (a rubber scraper shaped like a French curve). With this tool I began working the clay from the center of the letters to over the letters themselves. This buried the filler clay with the clay from the bank. This blended the clay making the letters disappear. Next I went to the darker sienna colored streaks and began dragging the streaks across the place where the letters were connecting it to the streaks on the other side. This began restoring the multi colored streaking. This done I used two soft haired brushes to smooth and blend the restoration further. This was a slow and meticulous process taking about 60 minutes. The rigging line was invaluable in holding me in place for this amount of time. It allowed me to focus on the work. When I finished this stage I got an ok from Wayne (who proved his telepathy again today). I just had to think which tool I wanted, put my hand back and the tool was put in it. Once all three agreed that this stage was done, I began handing Wayne all the tools and tubes. He bagged them and clipped them off to the permanent line. I made myself buoyant and pulled the table. This was harder than I thought due to the weights we attached. I moved it to the permanent line where I folded and clipped it off. This left four small holes in the floor. I used the clay in the legs to fill these holes. Wayne then placed darker material on top making them disappear.

Next using the rigging line and the larger brush I slowly moved along the wall creating what

we are calling controlled silt out. Using the brush to fan where the wall meets the floor. This took the loose clay droppings from the vandalism and the repair and kicked it into the flow where it was taken away and/or immediately disincarnated. I started working on the upstream end of the wall and working slowly a foot at a time began cleaning the debris away. It was "fan it away," which took vis to zero, wait for it to clear, fan again and wait. When an area was clean, move a foot or two and repeat the process. I am guessing this took 30 minutes. Yesterday during my exit, I collected sand and dark gravel in a bag. Now taking this particulate I slowly released it into the water just upstream of the repair. This was the final blending. The light particulate landed on the clay wall and floor. If you never dove this system before you would now not be able to find the vandalism or the repair. I am hoping it even fools some that know the system well.

Lastly we began gathering stage bottles, table, and bags of tools. Taking one last look at our work we shook hands and exited.

The flow helped moved the gear out. We each went half way thru the restriction, turn and wait for the man behind you, helping him if needed.

At deco Wayne had a reg malfunction which he repaired in-water. With deco finished I went back and pulled the reel. On the surface we gathered everything with Bill and got it up the hill. There were a few YAHOOs as well as back slapping.

Today's dive was 138 minutes. All in cave work times given were estimates. We all three had just under 1/3 gas left. All told this week counting Forrest's setup dive and Bill's sherpaing we had over 30 hours in this project. This is not counting off site activities like getting fills. Nor does it count all my research time, shop time, or Gene's post dive photo time. Dive Outpost and Amigos donated the gas for this project.

Gene shot over 500 pics and will post before and after photos ASAP.

Since the table and other tubes were built specifically for this project, I would like to donate them to the CAVE DIVING MUSEAM.

After the dive the team, in keeping with cave diving tradition had a victory dinner at Sonny's where we proved that when it comes to cave divers, gluttony is not a sin but an expectation. Oh Kelly, I got a Sonny's receipt for ya.

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