Druid Cave Rerigging Trip, July 3rd 2006

Report by Aaron Bird

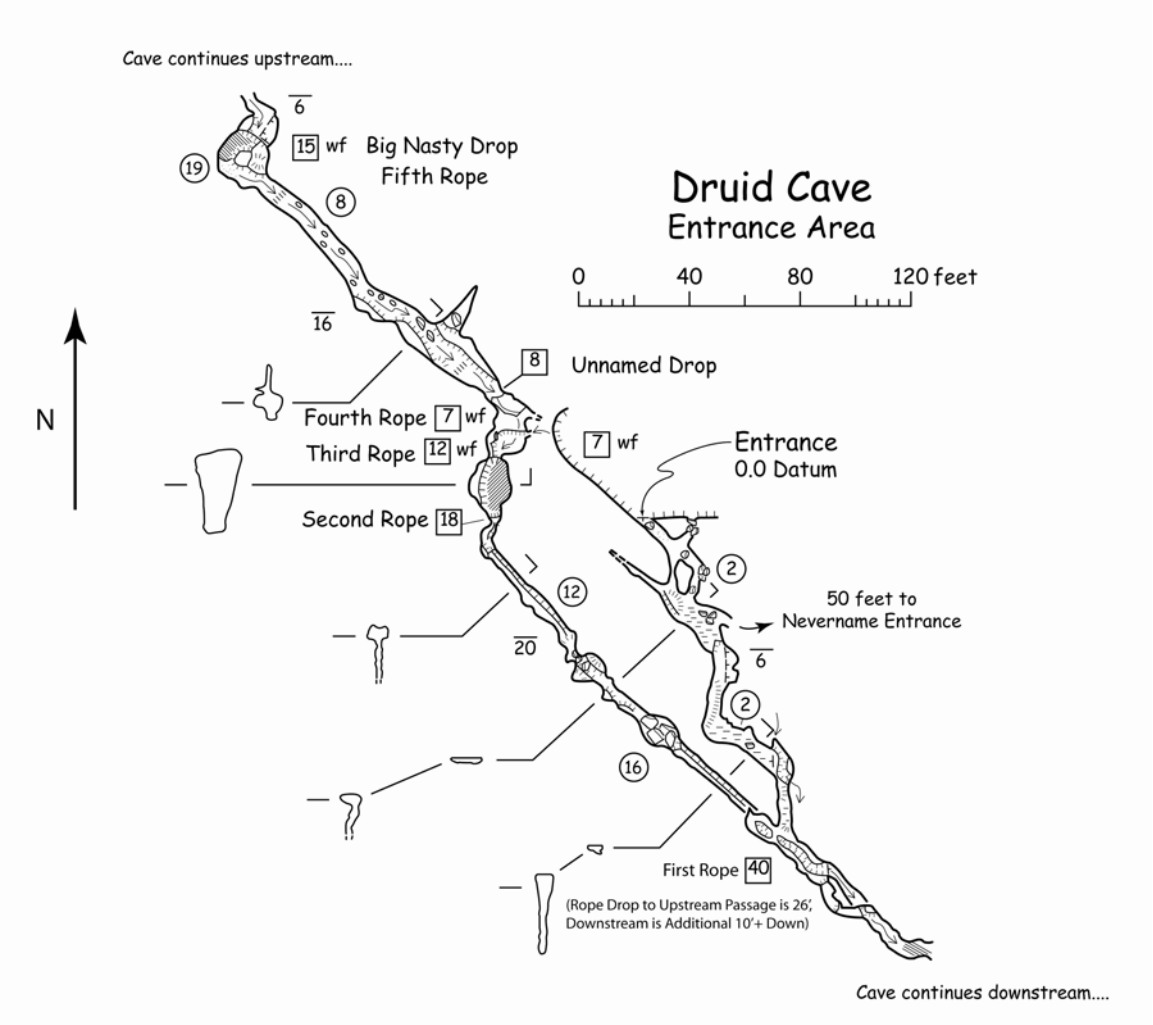
Acknowledgements: Brian Masney –photos and dedication to the project, Greg Springer –penned map, Carroll Bassett –hammer drill, Doug Moore –speleo supplies, Rachel Bosch –for keeping the kids entertained ;-)

Druid Cave is an infamous little speleo horror hole in the Cheat Canyon of northern West Virginia. It has been described as “easy but treacherous” due to the high likelihood that, for example, a large 40’ long ledge in nice-size walking passage that has been crossed many times previously by cavers of all shapes and sizes, will collapse in dramatic fashion just when you apply weight to it. This particular collapse actually happened and has been matched on numerous occasions by similar events. The reason for this is the type of bedrock in which the cave has made its home. The Loyalhanna Limestone is anything but loyal, and possibly not even limestone due to its extremely sandy consistency. So, it’s no surprise then that 40’ long ledges, and 20’ long ledges, and hand holds, and footholds, and anchor points have all collapsed in dramatic fashion, particularly when the only thing holding them up is a grain of sand or two.

Brian snapped a photo as Aaron was contemplating the integrity of the anchor.

A fair amount has been written about these and other exploits that have gone into the exploration and survey of Druid Cave. The most notable writeup is probably Greg Springer's 2002 article in the NSS News in which he describes the history of exploration from 1980 through 1997, during which the cave was pushed to a surveyed length of 2.3 miles.

The cave and the area were mostly devoid of cavers until late in 2004 when Brian Masney and I returned to look for an upstream entrance to Druid Cave. We and others poked around for a couple of months in a small cave trying to dig through a sand plug. However, on a dig trip on New Year's Day 2005 Jason Thomas found the upstream entrance in a nearby hole and we were in business. Over the year and a half since, 2500' of virgin stream passage was surveyed in New Year's Day Cave (NYDC) in a trend heading straight toward the upstream end of Druid Cave.



Druid Cave map showing the entrance area. This map was "penned" by Greg Springer using Adobe Illustrator based on the surveys of many contributors from 1980 through 1997. It is slightly modified from its original with the inclusion of "First Rope," "Second Rope," etc.

Brian Masney took a really “nice” picture of the first rope drop. ;-)

At some point in the pushing of NYDC, someone thought it might be a good idea to do a through trip to the Druid entrance, if the two were ever connected. This did sound like a good idea, again, if the two caves were ever to be connected. But it also posed a logistical problem in that the vertical drops in Druid were hard, nasty little SOBs, even if they were short. In addition, the cave had been rigged in the early 1990s for push trips to its upper reaches, and those questionable ropes were still in the cave.

To do a through trip would mean blindly trusting that the ropes and rigging were in good shape and that cavers who had never been there before would

be able to negotiate these horror drops. Thus, it was easy to make the decision that a trip should be made to rerig the drops in Druid in order to make the cave safer for sport trips and potential future survey trips (there are still leads in the cave worthy of attention). Brian Masney and I did just that on Monday of the 2006 July 4th weekend. Armed with a brand new rope, a big bag full of bolts and hangers, a borrowed hammer drill, our vertical gear, and a bunch of glue (I'll get to that later…), we headed into the cave.

Druid has a section or two that is actually nice caving. Unfortunately the entrance passage isn't one of them. Located at the base of a small waterfall, the 2' by 2' entrance leads to a nice and slimy 1' by 1.5' sewer tube. This passage soon widens to comfortable proportions, but never gets higher than a couple of feet. Finally after 150' or so, the entrance passage (and infeeder stream) encounters the top of a canyon, the base of which carries the main Druid stream. This is the first drop.

Previously, we had rigged this drop by wrapping a 7/8" diameter hunk of PMI around a natural bridge-like thing located 10' back from the edge of the drop and simply threw the rope down the drop. The problems with this were that the rope went down into a deep slot right at the edge that was a real pain in the butt when coming back up, and it put the rappelling/ascending caver under a small waterfall.

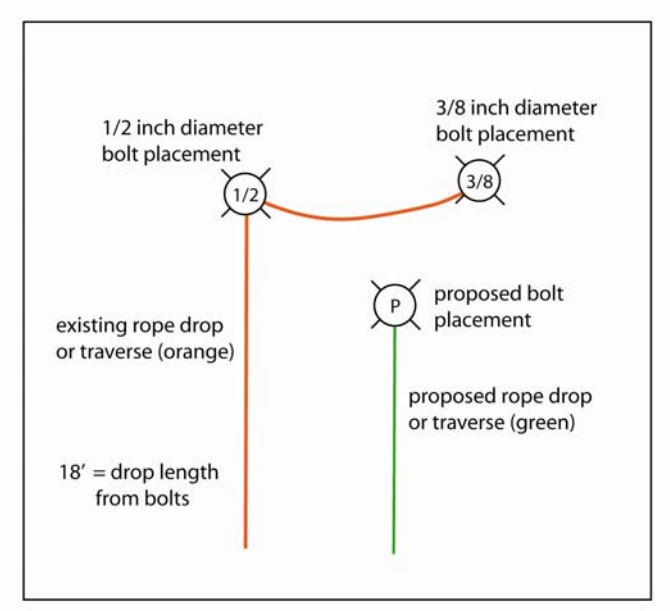


Figure 1. Key for deciphering the other figures.

So to alleviate both problems, bolts were placed on a "nice" piece of exposed rock on the opposite side of the narrow canyon. I say "nice" because that word is a relatively rare adjective used to describe the walls in Druid Cave. Much of the cave is lined with this mud-rock stuff that if it ever dried out would probably

be equivalent in consistency to spray-in foam used for insulation in some houses. But it doesn't dry out, so that analogy is moot. Anyway, there are sometimes places where this stuff doesn't line the walls. Typically the very tops of the passages, which appear to stay dry or have a different type of limestone, have enough of the "nice" rock for placement of bolts.

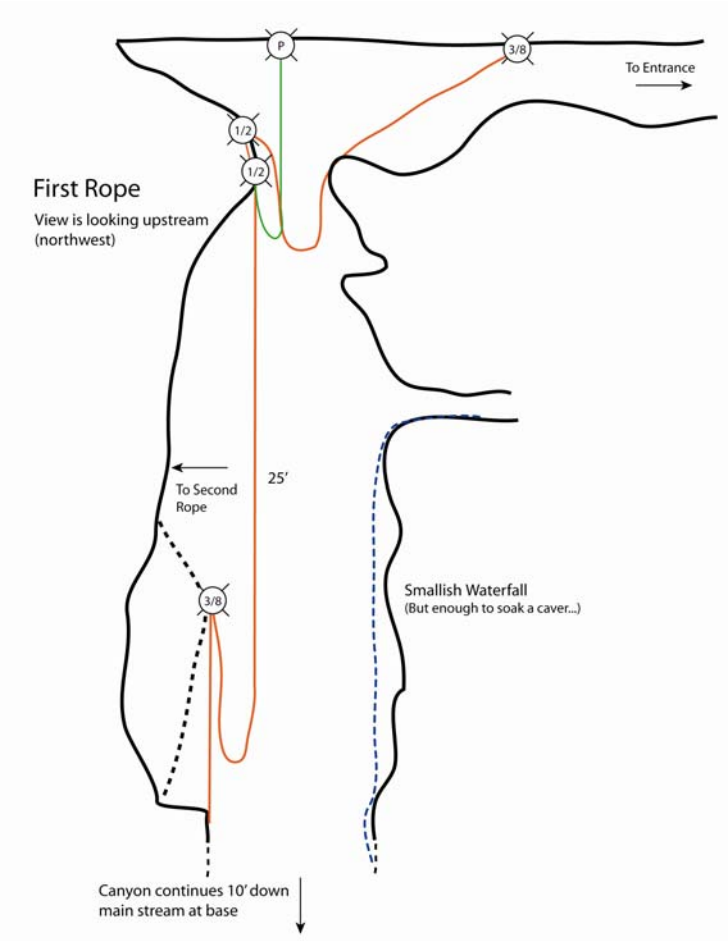


Figure 2. First rope drop in Druid Cave.

The first drop was rigged with one 3/8" bolt in the ceiling located about 10' back from the edge. This anchor is to be used as a traverse/safety line. Then, two ½" bolts with epoxy (recall the "glue" from several paragraphs above?) were placed in the "nice" rock. These bolts have epoxy in the holes for added strength. Even though the rock appears to be solid, we wanted to be sure that the bolts had as little wiggle to them as possible. Our fear is that, over time, motion by cavers loading the anchor could allow for some breakdown of the rock immediately around the sleeves of the bolts. So, hopefully gluing the rock and the bolt together will help to minimize the wiggle effect.

The rigging did serve to keep us out of the slot and away from the waterfall. Figure 2 shows the rigging for the first rope drop. Bolts labeled as 3/8" or ½"

indicate the diameter of the bolt used, and the orange rope indicates how the rope hangs with the existing anchors. However, there is a problem in that the traverse line is too far away from the main bolts, so the “stand-in” loop isn’t as effective as it could be. What we need to add to this drop is an anchor in the ceiling right above the main ½” anchors. This is demonstrated as a “P” for “proposed” with a green (proposed) rope.

At the base of the first rope we placed a redirection anchor to make it easy to get into the narrow canyon that leads to the rest of the upstream cave. Previously it was necessary to shimmy up a slimy canyon to get to a comfortable traversing level. Now, a caver just swings in.

Once we finished up with the first drop, Brian took a few pictures and we caved the short distance to drop number two. In a cave with a great many “bad” things (collapsing ledges, hidden pools, quicksand, etc.) the second drop was the “Druidella DeVille,” the “Nightmare on Druid Street,” the “I Know What you Did Last Druid Trip” for the whole cave. Even if the rest of the cave was a cake walk at the local elementary school, this drop was enough to make the cave a horror hole all by itself.

The problem with this drop is that the natural rigging point (again a natural bridge-like thing) was back from the edge of the drop about 10’, which forces the caver into a wedge-shaped canyon. The drop itself is a very narrow canyon just under the natural rigging but is plenty wide 10’ out, so that’s where the cavers have to go. Unfortunately coming up this drop means that the caver is getting sucked into the narrow crack while ascending. Essentially, to come up this drop, the caver has to push back while going forward. It’s a hellish balancing act, that when performed by a caver wiped out by a 12-hour survey trip, is quite simply “the horror.”

However, the good thing about this drop is that there is “very nice” rock in the walls at the top of it, so the hammer drill made good, clean holes and the bolts (with glue for good measure) went in to create very solid anchors. Rigging this one was relatively easy and resulted in a free drop of about 18’. In short, the hardest drop in the cave became the easiest. See Figure 3, “Second Rope.”

After rigging rope number 2, we proceeded down that drop and to the base of the next, which conveniently was located only 15’ away (See Figure 3). After descending two drops, we now needed to ascend ropes to continue, which meant climbing the old rigging. Not being one for waiting to “see what happens,” I grabbed the old line, put on my gear and went up it. It felt stiff and had some wear spots, but it was in otherwise good shape. Of all the ropes already rigged in the cave, this one could probably have been left as is even with its 15-year old rigging. But we were there to rerig, so that’s what we did.

At the top we had to determine where to put the next set of bolts. The rock just above the drop was not the place: “Hey Brian, watch this!” I said. He watched me bury the drill bit into the wall in about two seconds. Those walls wouldn’t hold bolts no matter how much epoxy we put in the holes. Remembering that there was possibly good rock at ceiling level, I climbed up onto a sketchy ledge and into a narrow slot in the ceiling. The rock was indeed good here, but the problem was finding somewhere that the hammerdrill + drillbit would fit in the narrow confines and still give us a good perpendicular hole. A little bit of exploration revealed a place that was just wide enough for the drill and soon two ½” bolts (again with epoxy) were rigged.

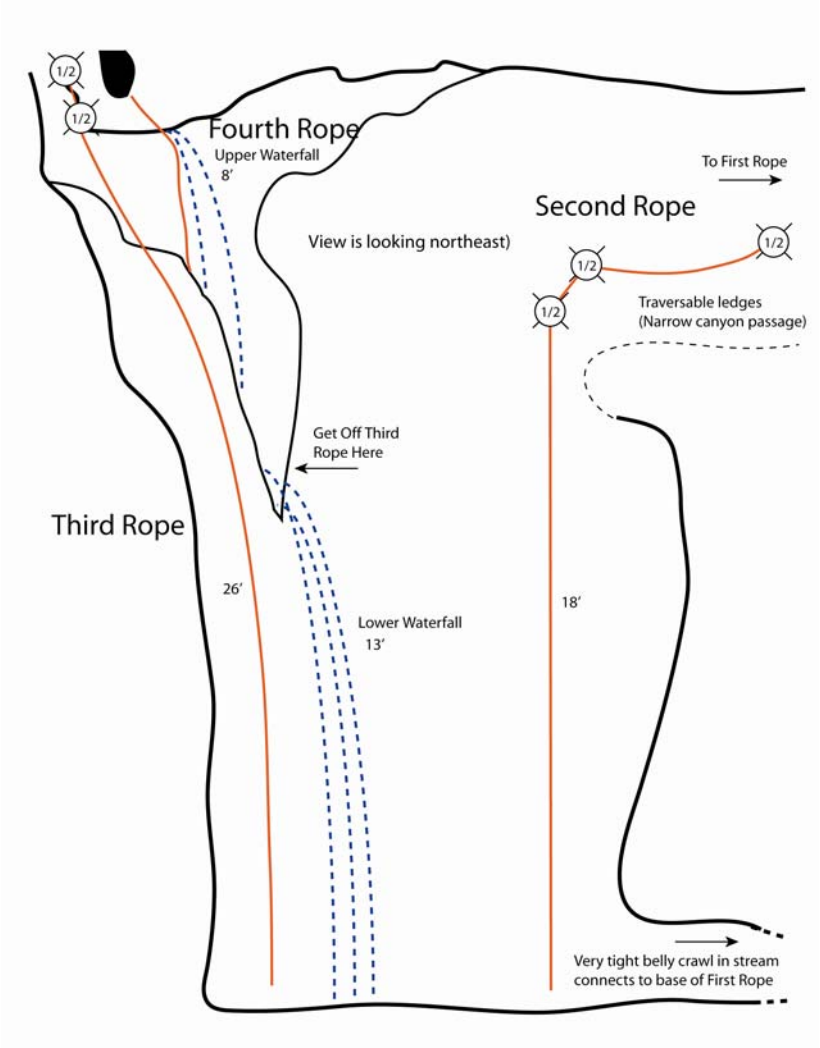


Figure 3. Second, third and fourth rope drops in Druid Cave.

There are two nuisance drops (Fourth Rope and an unnamed one) between Third Rope and the last vertical obstacle of the cave. These two drops are rather minor in comparison to the others, and in fact the unnamed one has been free climbed many times (Brian did it seven times on this trip to ferry gear). Even so, ropes at both are probably a good idea. We rigged one at the Fourth Drop, but not at the unnamed one. It would be easy enough to take the

old rope from the Third Rope drop and simply throw it down that slot using the existing natural rigging as the anchor.

The last drop requiring rope (most of the time) is called “Big Nasty.” This drop shares its name with an infamous set of rapids on the Cheat River located upriver from the Druid Cave entrance. Big Nasty rapids eats rafts, kayakers, logs, dogs, fishermen, and photographers on a regular basis. Big Nasty in Druid Cave just eats cavers. It’s not terribly difficult, but a primary goal of caving in Druid is to stay dry because the “Druid Wind” will turn your blood blue if you get wet. No joke about that one, because hypothermia is a real concern in this cave, even in the summertime.

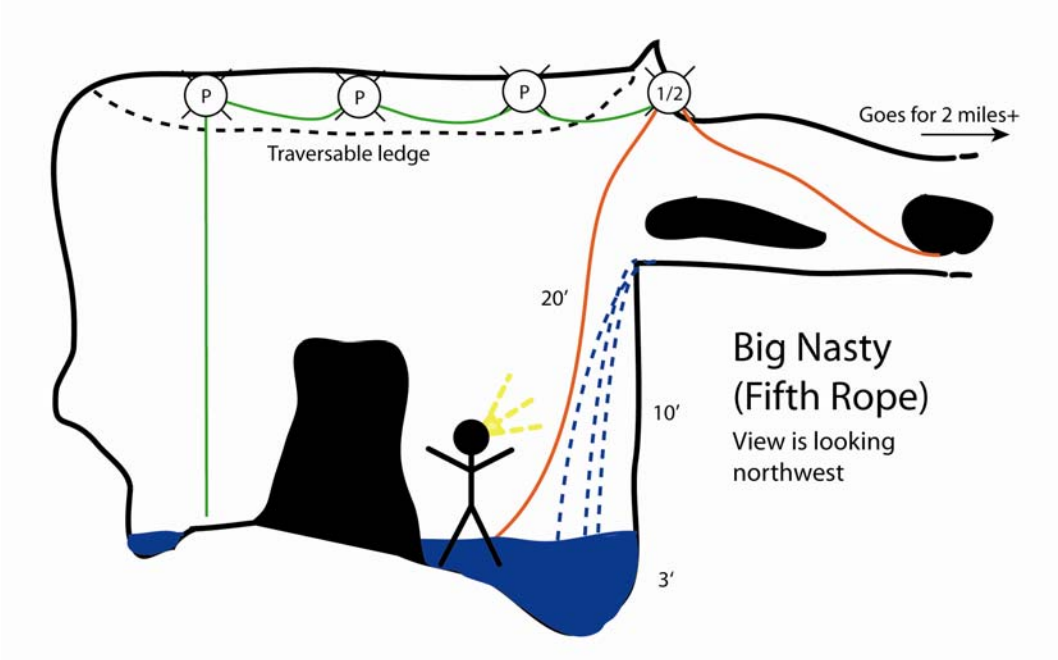


Figure 4. Big Nasty in Druid Cave.

The cave approaching Big Nasty is a nice stream passage. In fact, it’s nice enough to get moving in a caving groove, until one rounds the corner below these falls and sees the big pool of turbulent water and no apparent dry way to continue. This is the case now. However, there was a time when a bold (and possibly desperate) caver would climb a strange mud-rock column/formation (see big black blob beside caver in Figure 4) and levitate onto ledges in the ceiling in order to bypass Big Nasty. Even when most of the column was intact (a big piece fell off once when a caver stood on it), it was still a very nerve racking experience.

A fall wouldn’t have been too terribly bad because the landing would have been into a 3’+ deep pool of water. The problem with a fall would have been that the caver would have fallen into a 3’+ deep pool of water, and gotten completely soaked, as well been rather shaken up. Simply put, a soaking wet

caver can't survey in a wind tunnel and expect to have a good trip. So a fall into the Big Nasty pool would have meant that the trip was over.

Through some impressive cave-levitation moves, the drop was climbed without getting wet and a natural rigging point was eventually found. This rig point was, yet again, a natural bridge-like thing in the middle of the passage. The rope was brought down from the rigging under a shelf and down the right-hand wall of the cave along a sketchy mud ledge. This allowed the pool to be bypassed. With some luck (OK, a lot of luck), a caver could slide their ascender well up the rope and if their boots were tied on just right, could stand on tiptoes to nearly reach the handhold at the top of the drop. If all of these things happened, the caver wouldn't swing out under the waterfall. If any one (or all) went wrong, it would be shower time under Big Nasty Falls.

Luckily, on our July '06 rigging trip, most of the things went right and I was able to get up the drop without getting too wet. Once I was at the top, Brian ferried gear to the edge of the pool and sent up specific gear bags via haul line so I could rig. While Brian was prepping gear, I used the free time to inspect the natural anchor and found it to be solid. This would turn out to be a serendipitous find.

Up to this point in the cave, the trip had gone quite well, even if it was taking a lot of time. However, we were just about to find out that 3 of the 4 batteries we brought for the 36-volt Hilti hammerdrill were not holding their charges. I started drilling a new ½" hole in "nice" rock and got only an inch or two before the battery quit. I replaced the used battery with another one, but it died immediately. I then went to battery number 4 (#1 was DOA at the first drop) and it seemed OK, but when I started drilling, it crapped out after a couple of seconds. I waited a minute or so, then tried again and it worked great for a few seconds, then crapped out. I waited again, and again it worked great for a few seconds, and then crapped out.

A pattern was pretty clear at this point, and following the battery's behavior of working/dying, working/dying, etc., I was able to get a hole good enough for a bolt. One ½" bolt was placed in good rock and the rope redirected through that anchor, but still loaded primarily on the good natural anchor, hence the serendipitous finding that it was solid.

Without a functioning battery, there was no point in trying to accomplish what we set out to do with the Big Nasty (see Figure 4, green rope, "P" anchors), so we bagged everything up and headed for the sunlight. For me, that meant a quick dip in the Big Nasty pool, but since we were on the way out (and not planning on standing around in a wind tunnel along the way), it was almost refreshing. We arrived on the surface to a bright sunny day after a 5-hour trip in which we took a lot of photos and placed 10 bolts.

Now, after this rerigging trip to Druid, a caver may actually enjoy the vertical section of the cave. Some work still needs to be done, specifically an additional anchor at the first drop and completely rerigging Big Nasty, but these drops are manageable. More importantly, we know the condition of the old anchors and existing ropes, and have faith in the new anchors and new ropes. Thus, a potential through trip someday will be done with much greater confidence than if we hadn’t rerigged the cave.