

**Aaron Bird:** “How long have you been caving?”

**Bob Handley:** “Oh, I started out in earnest with VPI in I guess it was January or February of 1948. So that’s makes it going on 54 years now I guess. Before that I had been in some caves with my older brother. He was studying mamalogy in college and so he was looking for study specimens of bats and we went in several of the caves around Blacksburg. Much earlier than that I had gone in several caves back in 1937, when I was about 9 years old there at Frankford. So I have been caving in caves for quite a while, I think its 8 different decades.”

**Aaron:** “Where were you living when you first caved in the Frankford area? Did you grow up in West Virginia?”

**Bob:** “My dad was born and raised in Lewisburg, and his home place is there just west of Lewisburg. We would come from ... I guess at that point I was in Blacksburg... we’d come over to visit to my grandparents and I had a bunch of uncles and cousins and so forth in the area and so that’s the reason I was here... in Frankford.”

**Aaron:** “Bob, I’ve been curious about how digging came to be so important. I think... probably up through the 1970’s at least, weren’t there a lot of open caves that people didn’t have to dig?”

**Bob:** “Well... that’s true, but in order to explore a known cave, we did dig on occasion when we had a good blast of air blowing through a very small passage that required digging to get through... and that was the case in Organ Cave. We dug ... in fact the Charleston Grotto I think it was back in ’46, ’47 something like that, had opened what we called the ‘Old Saltpeter Route’ by digging. They moved some rocks... and if you’re familiar with that passage at all then you know there’s one place about where the connection back to the Main Room ... the Entrance Room there in Organ... what Jane Morgan calls the Chapel Room... where that connection is, is about where the breakdown was. I imagine really the saltpeter workings there in the ‘Old Saltpeter Route’ were “worked” through that connection to the Chapel Room. I was seriously doubt if they went down to the Organ Stream and down the 13’ waterfall and down that way. Probably came directly in from the Chapel Room down into the saltpeter workings... but that would have been back in the latter 1700’s, early 1800’s.

One of the early, very notable digs that Bob Flack and I did was to get into Cyclops Hall. There was one passage –just a short section of it— that was too tight, but there was a good blast of air coming out of it, and we dug the floor down, which was just old mud and gravel and we got through... and on the Life Magazine trip in 1959, we made sort of a game out of seeing who could go through that particular little section of cave the fastest, and that’s the way it got it’s the name, ‘The Drag Strip’... and we got drug pretty severely going through it [chuckles].

And there are a number of other digs around over the cave that... one notable one was when we opened up the Breezeway out of the Left Hand Passage that was full of breakdown... and we had to clear that out... and probably the most notable dig of all and the one I remember... I consider the most important one I’ve ever done was to remove breakdown in the passage that lead us on over into Lipps and connected Organ to Lipps... one big cave!” [chuckles]

**Aaron:** “When did that happen?”

**Bob:** “That was in the Fall of 1958, actually... and Hugh Jones and I -- and Jones was the one Jones Canyon was named for—were the ones that made the connection. Connie Revak —who the first big room there on the upper stream passage was changed to, to be called the Revak Room— so anyway, the three of us were on the trip, but Jones and I were actually the ones that opened the passage and found that we were in Lipps then, and Connie came on along and then we exited Lipps.”

**Aaron:** “I bet that was exciting!”

**Bob:** [chuckles] “Well that was sort of a high point really, and I don’t think I’ve ever been quite so excited in a cave before.”

**Aaron:** [laughing] “It’s a good feeling.”

**Bob:** “Oh yea... and then as time went on... of course in those early days we didn’t haul anymore than we had to unless there was a real good reason to, and blowing air was good a reason. There were a lot of places left that weren’t that enticing when we had walking passage to explore... so you’re very correct in saying there were a lot of open entrances... and there were.

Another notable dig was when we actually figured a sinkhole to get into Ludington’s Cave... and that was the Bell Entrance to Ludington.”

**Aaron:** [surprised] “I didn’t know that entrance was dug open.”

**Bob:** [chuckling] “Well... we didn’t move dirt, but did we move one heck of a pile of trash!”

**Aaron:** [laughing] “Yep, that’s digging too!”

**Bob:** “Then Kay Robins, a Girl Scout, and I were the ones who found that from the inside. We were working up in that area we called the ‘Belfry’ and saw daylight, and went out there and of course we were looking up through a pile of trash, and didn’t make it out at that point. We went on back and came out the Ludington entrance. Then... I think Rutherford [Bud Rutherford] was the one who pinpointed that particular sinkhole, and it turned out he was correct. We dug it out the next day.”

**Aaron:** “It didn’t take long to dig it out?”

**Bob:** “It took... oh I don’t know, probably 3 or 4 hours to dig out because there was quite a bit of trash there of all sorts and descriptions.”

**Aaron:** “Did you find anything interesting?”

**Bob:** “Well... there didn’t seem to be a whole lot [of trash] at that point, but there was another time that it was blocked again... it had flooded... and when we went to go back in, there must have been 30 old wine bottles [chuckling] that were flushed out of the trash pile and they had all sorts of fancy designs on them and so forth. That entrance has collapsed or partially collapsed on several occasions and its been worked on —dug open—a number of times, and I don’t know what the state of it is at this point since it is closed by an unfriendly landowner.”

**Aaron:** “Bob, if its O.K., I would like to ask about Organ again? Specifically... about the Red Wagon Dig? What can you tell us about the Red Wagon Dig?”

**Bob:** [laughing] “Actually... it’s the second Red Wagon Dig. The first Red Wagon Dig...was... let’s see, Dave West and some of the D.C. people were trying to dig around the siphon there at the end of the big canyon, and it was actually their Red Wagon that we moved up there next to the Revak Room. Cliff Lindsay and Ed Swepston were the ones who started that dig... the second Red Wagon Dig. We’ve added wagons to it...I think West’s dig at the end of the of big canyon had only one wagon... but we have either three or four wagons operating, when we do dig, trying to get into Foxhole.”

**Aaron:** “Do you think someone will eventually break through?”

**Bob:** “I think so. We’re under Foxhole now according to the map and just how far under, we don’t know, because we’re not at all confident of the survey data... the elevation. The map itself seems to be fairly accurate, but the elevations haven’t matched up in all cases. Supposedly there’s around 40 or 50 feet between where we’re at now and Foxhole, but I don’t think that’s right, because of the map.”

**Aaron:** “What technique is used in the Red Wagon Dig? Can you describe how the dig proceeds?”

Bob: “Well its proceeded in several different ways [chuckling]. We’ve used the regular entrenching shovel that folds up and we can screw a collar up over the handle to secure the blade either as a hoe or a shovel. Its used pretty much as a hoe to dig with, and a shovel to load the wagon. One interesting part of it... well the lower part of it was pretty much clay and almost pure sand for quite a ways. One part of it was vertical; we went up 8 or 10 feet and that was all sand, very clean sand actually. I don’t know whether you’ve ever tried digging sand when its over your head, but [chuckling] it comes down all over you. So one way that I got around that was to take a section of galvanized stove pipe in, and dug with the stove pipe and most of the sand fell down through the inside of the stove pipe.”

**Aaron:** “Wow! That’s a good idea!”

**Bob:** “... just dabbled it up into the sand from below and you could almost stay out of the fall of sand that way. On up... when we got to the other level, it turned out there was real gooey clay on top of the sand, and as it worked out, the best way to dig that out was to undermine it... to dig the sand out first and then the clay would just collapse in chunks down so you could handle and that worked very well. The clay was very difficult to dig because you would stick your shovel into it and get a shovel full and you couldn’t get it off your shovel... it was tacky. By digging to undermine it, and taking it out in chunks, it really wasn’t a whole lot of problem with handling it.

But it’s been an interesting dig, and it’s gone back into the hill so far now... the last survey that I know was 80 feet from where it started there in the edge of the room. I think that room is now called the Red Wagon Room. It got to the point that we pretty quickly used up all of our oxygen at the face where we were digging. We started out running a piece of garden hose in from a bellows out in the room... just a little bellows that you blow to help start a charcoal fire or whatever... I think it was a foot-operated bellows and that worked for a while but we got so far back there was too much friction loss in the garden hose that it didn’t work anymore. The latest was ... we ran a piece of 4-inch diameter corrugated plastic pipe, with a hand-cranked blower – a squirrel-cage blower—back into the face and that provided plenty of air to keep things moving... and that could be extended without whole lot of trouble as the dig progressed. The problems with access to the cave has slowed that dig up considerably. Too many people have been locked in [chuckling] who weren’t supposed to be...so the only ... if you don’t know how to get around the gate, there is a bypass... of course only the 13’ waterfall and out through the end of the Chapel Room, but then you get out and then your car is locked in because there’s a pole across the road up next to the highway [chuckling]

and Janie Morgan lives five miles away, so it's not a good situation. The alternative is to go out Lipps."

**Aaron:** "So, some careful preplanning is necessary?"

**Bob:** "Well, yea... we're gonna have to work out a way to get a key, if the gate is locked and then we'll have a way to open it."

**Aaron:** "You used some pretty unique tools in the Red Wagon Dig, such as the wagons and the bellows to provide air into the face. What other unique tools have you used in your digging career?"

**Bob:** "Well... there've been all manner of crowbars and wrecking bars and pry bars, and all that sort of thing... various different tools. I've even used a mattock and a regular, long-handled shovel in some of the digs. One of the... I guess the second most notable that I've accomplished was getting into that cave there at Gene Turner's. When we got in, we named that for Gene's mother... called it Nellie B. Cave. One method that I've used in finding a cave like that... that was a collapsed entrance, I've gone on up next to the remaining cliff, and dug a narrow trench down the hill, just digging it down to bedrock as I went, and that would be just about a shovel width. And follow the bedrock down and when it drops, you're there at the entrance of the cave. I think in Nellie B.'s we dug down maybe a couple of feet after the bedrock turned vertical and we had a crack and had air, and of course there was a lot more involved then in getting the entrance open. When we did get that opening big enough, wide enough, so a person that could get in, there was so much silt in the cave that it was... I think we got Sonja Ostrander to go in first because she was smallest... course she said it went, so it wasn't too long before we had it opened up enough so the rest of us could follow. That was mostly pick and shovel. Now a pick, a pointed pick, works real well on gravel and rock... it's much, much better than a blade like you have on a mattock. Bars work very well to punch down through or into gravel, but a pick with a handle on it is a whole lot easier to break up gravel. Sometimes gravel has the consistency of concrete almost and it's been there and it's really sat in place.

But then probably one of the most difficult digs and one that involved the most effort was a dig down at Davis Spring, and trying to get into the cave there. We started out there digging ditch down across the hillside until the bedrock dropped vertically and at that point there was about... and how we managed it, I'm not sure... about a 14 inch Maple Tree right in our way. We tried to pull the thing over with a big come-along, but that didn't work, then we went around and tried to dig under the thing, and that just didn't work out either... it was all broken rock... we just weren't accomplishing anything. So the dig sat for a number of years, and finally I got a bug that I wanted to get going on it again. I went in and dug a ditch around the Maple Tree about 4 feet away from the trunk, and cut all the roots. So that was in November, probably of 1988 or 1989, and then we snow and freezing weather and so forth. I went back in February or March of the next year to cut a ditch around the other side of the tree, so I could maybe get it out of there. When I got onsite the tree had fallen down on its own [chuckles]. There was quite a root ball. Cutting the roots on that one side was enough to do it. So we worked on that dig all that next summer... a pretty concentrated effort. We had set up a 3" x 3" x 3/8" steel channel, angle, that we used as a boom. We supported that from a tree on up above the dig, and that gave us a high anchor to place a come-along to, and we moved some pretty big rocks up out of the hole with that system, and we finally got into cave. But as has happened, the hole we opened up was not big enough for me to get through, but it was big enough for the some of the smaller cavers. That was because we had gone down through breakdown and had moved all of the rocks we figured we could move without collapsing the pile. The hole that was left, was not really big enough for me. We did get down into a small cave there, and found that air was blowing up through the breakdown in the floor, which would have just been an impossible job to try to dig in breakdown, twenty feet below the surface. So I've made it a practice not to abandon a dig unless it is dangerous or absolutely fruitless. You get into something that shows signs of imminent collapse is just not a good place to be. In this case, we figured the main cave was about a 100 feet further on to the west in amongst really big breakdown, and the spot that we had dug was the highest exit for water during floods. We thought we would get a channel back into the hillside, but apparently what was happening was the water

was following right along the face of the cliff, underground... that's sort of a horseshoe-shaped cliff, so it was working its way through breakdown, and exiting where we had dug into. That would have meant that had we continued that dig, we would had to have dug hundred feet through breakdown, and that just didn't work, and we gave that one up."

**Aaron:** "Well, that would have been a very exciting find, had you guys gotten into cave at Davis Spring."

**Bob:** "But... we haven't given up on that area yet. I do intend to go back and work on that some more. Hopefully, we can get permission from the landowner to use explosives on that one now. That's another technique that is available to us at this point... but another big dig that a lot of people worked on is what we called the Tripod Dig at Cliff Lindsay's. We had good air blowing out of a pile of breakdown. We had gotten down about twenty feet there... there were several pretty close calls where we had rock falls. Nobody got hurt, but it appeared that if we continued to move rocks, that somebody was going to get hurt or killed... it isn't worth that."

**Aaron:** "No. Its not. Digging can be dangerous..."

**Bob:** "Oh yea... so that's another one we've backed off from."

**Aaron:** "Now you've dug with Cliff quite a bit... is that true?"

**Bob:** "Well... Cliff is a great supervisor [Aaron and Bob chuckling]. But... Cliff did quite a bit there, and I think we also had Tim Brown and Dave Cowen, Mike Phelps, Bassett... Carroll Bassett got in on that, Liz McGowan, and her daughter worked on it for a while. It was very enticing because we kept getting blackness. We would move a rock and see black void ahead of us, but it didn't develop into anything of any size. So that one is awaiting a time when its dry when we can get a tracked excavator down in there, and we'll dig back into bedrock where we'll have solid rock over our heads."

**Aaron:** "Now, excavators have been used a number of times in digs. I believe Cliff hired an excavator to dig open Charlie's Slot."

**Bob:** "We dug at Charlie' Slot... it didn't get open. We never did find an opening there. It went down twenty feet or so... as far as the excavator could reach and moved a considerable bit of dirt and boulders the size of small compact cars even. I mean its fantastic the size and amount of material one of those excavators can move... and they're pretty fast. One of them can dig in 15 minutes what it would take us a month to dig by hand. So it can be worthwhile."

Dave Scott also used an excavator over on his property across from the airport, trying to dig out a sinkhole. He dug the sinkhole out, and there was some air blowing through cracks in the some of the rocks, but we never did open a void, so Dave had 'em close it up... he thought it would be a hazard if somebody would wander in and fall in the thing... it's pretty well all closed up now, but there again, that area hasn't been given up on either."

**Aaron:** "I believe Jeff Bray just finished some micro-gravity work where they might have identified a place where there's a void below the surface, so perhaps that will be a dig site in the future."

**Bob:** "Well, there's a hole up on top of the hill that we dug out of a very shallow sinkhole. The sinkhole wasn't much over a foot deep, and that hole is now over 40 feet deep, and takes water during wet weather, and we know the water goes into the Maxwelton Sink Cave, and I haven't been down to the bottom of that dig at all, but it's supposed to have a mud floor... but they've used micro-shaving to open up the crevice going down."

**Aaron:** “Maxwelton would be an exciting cave to get back into wouldn’t it?”

**Bob:** “Definitely!”

**Aaron:** “Now that one was originally opened by digging.”

**Bob:** “Yah. The dig was in the streambed, and a bunch of people had been working on that dig for years, and Chuck Hempel and Ray Pollick and some of the Pittsburgh Grotto were some of the ones who actually achieved an opening. But then, I don’t know whether it was Hurricane Camile or whatever, but there was one hurricane that closed it again, and they dug it open, and then Camile really closed it, and so I’m against trying to open the stream channel. If we do get hold of that cliff face somehow in the future... if we can buy a few acres there, then the way to get into is to dig out a hillside. There were two big passages that intersected the hillside and were full of breakdown, and that would be a great place for a tracked excavator to dig in, and then that would never flood and wouldn’t silt closed like the stream entrance did.”

**Aaron:** “At last count, before the cave was closed by the hurricane, I believe the mileage was about 10 miles?”

**Bob:** “There was somewhere around 13, I think. The feeling is that the survey wasn’t finished at all, and so there’s possibly quite a bit more cave there. From the sinkholes that are across Vago Road from the cliff face, there’s definitely something else going on... whether the passages are collapsed... you just don’t know. There’s all sorts of indication of cave between Maxwelton Sink and McClungs, so they very well could be connected to McClungs at some point.”

**Aaron:** “Contact caves have mostly been dug open?”

**Bob:** “No, not really... of course McClungs and the Lightner Entrance to McClungs... Lightner’s is not a contact entrance, but McClungs is. Ludington’s is open, and then I guess is the next one down the line, and it doesn’t have a very big entrance, but it wasn’t dug open. [One of the entrances to McClungs] did involve a little bit of digging to get into it. I’m not sure they dug any to get into Wade’s or not.”

**Aaron:** “What about the Monroe County Caves? Do you consider some of those contact caves as well?”

**Bob:** “Some of them are.”

**Aaron:** “Like Hurricane Ridge, for example?”

**Bob:** “I’m not that familiar with Hurricane Ridge or the area around Union Cave. I’ve been down through there many times, but Monroe County wasn’t of that much interest to me.”

**Aaron:** “Well those were two good digs to get into those caves... and Scott Hollow as well.”

**Bob:** “Scott Hollow was dug with backhoe. But before we get over into that [area], I want to point out too that Organ Cave is a contact cave. An interesting contact cave in that its located in a syncline, and you have contact entrances... or waters... and yes entrances from both sides of the syncline, so you access the cave from the east and the west. I think probably Union Cave is going to be the same way. Scott Hollow, course has just one entrance, and they desperately need more entrances, and they haven’t been able to find any at this point... so far as I understand. Windy Mouth is the same, but Windy Mouth has the one entrance on the river, and it was a natural, open entrance. I can’t say about... of course Bone Cave... it has two entrances, Bone and Norman... well the Bone entrance was opened by a massive dig...”

**Aaron:** “Oh yes... the quarry operation.”

**Bob:** “And Norman’s was opened, so far as I know... at least it was when I first went in. I think a good many of the Friar’s Hole entrances were open. Some of them had... they had to move trash to get in, but Snedegar’s and Crookshanks and all those were big, open entrances, and that is not a contact cave... its on over in the limestone... course now, Cowen dug into what’s called the Borehole, and then when Bassett bought the property, then he and Bassett dug into the other side of the hill with a much better entrance than the original Borehole entrance. Bassett has dug into another cave on his place, I think he calls it Carroll’s Cave, and he’s Micro-shaving to open parts of it up to get through. I think Becky Jones was leading quite a bit of that effort, back last year. ... Bill Southington, from down in Greensboro, and I dug into what we’ve called Wake Robin Cave, there on my place. We dug down 12 feet, dug a 4 x 4 square hole down 12 feet, and the bottom-center of our hole fell out... that was the cave, and that’s the way I like to dig... I like to have space to work. I do not like to be really cramped so that you can’t swing a pick or a mattock or whatever, when you’re trying to dig. But then another cave that quite a few of the WVACS people had a hand in digging, was what we called Our Cave, which was over part of Buckeye Creek, and that was just a little wet place in the snow when we went over there looking, and the more leaves we pulled away, the more air blew out of it, and that was quite an exciting dig for a while. We used a small come-along to move a pretty big boulder, and actually demolished the come-along but it did move the boulder, and turned out to be a thirty foot deep pit with a little crevice running off one side that dropped down into another crevice and was blocked. So we shot off a stick of Tovex and shattered the rock that was blocking us, and moved that out of the way, and got into a little bit of an enlargement, and the cave continued on as a little meandering crevice about 6 inches wide and 14 inches high, but there were quantities of air blowing out of it. Nearby, there was another hole that’s blowing air, and just this last winter, we discovered a spring down at the bottom of the hole, in the bed of Spring Creek, below that one. I’m beginning to think maybe that some of the water in Buckeye Creek, that we think went into Buckeye Creek [cave], is not really going to Buckeye Creek, and may be going to this new spring... and its not a new spring, its just new to us. The way you find that sort of thing is to wait until the creeks freeze over solid and where there’s a melted area, you’ve got cave water coming out... so we look for warm air coming out of the top of the hill, and warm water coming out of the bottom of the hill [chuckling].”

**Aaron:** “Bob, if you could pick three spots in Greenbrier and Monroe Counties, to concentrate on digging, what would those spots be?”

**Bob:** “Well, Greenbrier and Monroe... the Union Cave is an ideal site in Monroe... the folks who dug at Dixon Spring trying to following the cliff down there, that seemed to be a hopeless job... I don’t know... I would say somewhere over top of Scott Hollow Cave would be a very pertinent place to dig... a very important achievement of another entrance to Scott Hollow, but I’m sure Mike Dore’s working on that. It seems very strange to me that a cave with 27 miles of passage doesn’t have another entrance.”

**Aaron:** [laughing] “It’s a big cave, for one entrance.”

**Bob:** “Right.”

**Aaron:** “I think they’re working on it...”

**Bob:** “Yah, think so. Of course you all have gotten into your Deel’s Hole, and wasn’t Zigafoose Blowing Cave dug into?”

**Aaron:** “Yes. Mark Passerby, Mike Dore, Jim Thompkins, Pat Dolin, and a bunch of other people... dug to get into Zigafoose.”

**Bob:** “Well, we’ve worked on Davis Spring off and on for twenty years, and that is still a prime area. If you project a line along Mystic River in Scott Hollow, then follow that line on the North, it intersects Davis Spring.”

**Aaron:** “I have observed that as well. That’s a really interesting thing to see on the topo map for the first time. When I saw it, I was pretty excited about it.”

**Bob:** “So probably you have a syncline there and the cave never did run clear across the river, I don’t imagine. You have a cave on one side and the biggest spring in the state on the other, you’re bound to have a big cave.”

**Aaron:** “That’s part of the reason why we’re working so hard in Rader’s Valley.”

**Bob:** “It would be very, very interesting to find out where your water in Deel’s Hole is going... whether its going down into Mill Creek, or does it go into the mountain and come out at Davis Spring?”

**Aaron:** [chuckling] “I think there’s a lot of people who would like to know the answer to that question.”

**Bob:** “Personally, I think one of the most fertile areas is up between Frankford and Maxwelton. Or between Spring Creek and Maxwelton, because I believe there’s potential there for a 100 mile cave.”

**Aaron:** “What makes you feel that way?”

**Bob:** “Well, we’ve got the Hole, with a 23 or 24 mile start, with blowing air on the south end of it, and a little hole up on a solid rock wall that blows air. Then on the North end of Ludington’s, there’s breakdown with air blowing out of it.”

**Aaron:** “If Ludington and the Hole were to contact, wouldn’t there have to be a drainage divide?”

**Bob:** “Possibly, and that drainage divide would be the cave that runs under Rt. 219 Ridge. If we would get into that, that’s another maybe 20, 30 miles of cave.”

**Aaron:** “Are there any good dig sites down in that area?”

**Bob:** “We’re working on it. We think Ludington’s and McClungs have already been connected... hasn’t been surveyed, but we’ll have to await that survey to find out. But if that’s the case, then it bumps McClungs-Ludingtons up into the 25-30 mile class. With Lightner’s open, we may very well be working in the lower end of McClungs some more, which can possibly produce some more cave. Like I say, that area from Maxwelton to Spring Creek is very, very interesting.”

**Aaron:** “So the future of caving in West Virginia is still pretty exciting then?”

**Bob:** “Absolutely. I think we’ve found maybe 30% of our cave.”

**Aaron:** “Do you think digging will be required to find a lot of the rest of it?”

**Bob:** “I think so. I think digging very definitely has its place in caving. Once you’ve dug into a cave and have a better chance of preserving what’s there than we certainly did walking into an open entrance that people had been into frequently in the past. We can either just not say anything about it and hope its protected, or if it’s a dug entrance, then we can certainly put a gate on a lot of them, if that’s what it takes. Of course there are going passages in known caves that are too small to follow as is the case in the back end of Rapp’s Cave. It’s a small passage that is solid rock that has a good blast of air coming out of it, and one of these days we’ll

work on that with micro-shaving. I'm still working on a hillside on my place here, that's a little seepy blowhole that has been too small for anyone to get in, but it blows air out in the summertime, and sucks it in in the winter, and when there's a flood, water comes out of it, and it very likely leads into the Wake Robin Cave, so I'm going to exhaust all possibilities of that sort before I get divers to go in and dive the pool in Wake Robin. I want to see what's there first. There's a considerable area to the North of Buckeye Creek that I know there's caves in. There's water running into, and at this point, we don't know where the water that comes out Wake Robin comes from... its sort of a mystery stream."

**Aaron:** "Well its always good to have a couple of those left to work on... isn't it?"

**Bob:** "Right... [chuckling] Other ... you've spoken of Jeff Bray's micro-gravity, I've also used dousing to locate caves and site cave digs. That was the way I... one of the tools I used to located the Wake Robin dig. If we had dug three feet in any direction, we would have missed the entrance."

**Aaron:** "Wow! You know, I've heard that Mike Dore used dousing to choose the location where to dig open Scott Hollow."

**Bob:** "Right... yah."

**Aaron:** "Sounds like its been successful in some circumstances."

**Bob:** "Well... I've used it over at Nellie B. Cave too, but I didn't understand what I was finding. I thought at that time I was dousing for water, and the rods were affected over an area that was about twenty feet wide. It turned out that was the width of the cave, not the width of the stream. I've learned considerably more about dousing since that time. We used it when we were working on Callison's Pond Cave. There were so many levels of cave and broken rock and so forth that I didn't understand what results I was getting there either. Now I know more about dousing and how to sort things out a little better... there are ways."

**Aaron:** "Maybe we can get you down to Rader's Valley sometime, and do some dousing for us down there."

**Bob:** "Well, I want to go over Jeff Bray's courses with my rods, but I don't want an audience. The influence... I guess that sounds silly..."

**Aaron:** "No, it has to be done the right way... just like all things."

**Bob:** "So anyway one of these days... if I hadn't been in New York this last weekend, it would have been a great time to go down and work on that while it was warm."

**Aaron:** "We have had some nice weather, haven't we?"

**Bob:** "Hmm, hmm... but we'll have more. I've talked to Jeff, and he's set to let me work over the courses and that will happen this spring, and if he's worked in Rader's Valley, then that will be one place where I'll work."

[discussion changes to blasting]

**Bob:** "I think its best that when we get into actually using explosives and blasting, that we do go to the trouble of obtaining a license, which in West Virginia doesn't seem very hard to get. You have to apply for it through the State Fire Marshall's office, and I got one for agricultural use only license for 10 dollars a year. So most of the blasting we're doing is on farms, so if that's agricultural use... there were a number of choices and all were more expensive per year than the agricultural license was."

**Aaron:** “I agree with you completely that laws should be followed. People using explosive devices should definitely have a license approved by the State.”

**Bob:** “...and we need to be trained because we can really cause personal damage and that goes for micro-blasting if its not done properly... so we’re learning and as time goes on, we’ll perfect the techniques and so forth, and hopefully we’ll survive long enough to use them.”

**Aaron:** “I hope so... so far we’ve had a pretty good track record.”

**Bob:** “We’ve been damn lucky so far. [chuckling]”

**Aaron:** [laughing] “I’m going to quote you on that one!”

**Bob:** “Well, I think I’ve had a very active angel.”

**Aaron:** “Yep... I think you have... and I think you’ve been an angel over a lot of other people too. I think a lot of people have learned good techniques from you and have been able to learn how to cave and dig and just be good people in general.”

**Bob:** “I would like that if they can benefit from my experiences, and if my time has been worthwhile. As I’ve said many times, I’m not done yet.”

**Aaron:** “No sir, I’ll be seeing you down at WVACS real soon.”

**Bob:** “O.K.”

**Aaron:** “Well, thank you for very much for answering my questions and sharing such great information with us.”

**Bob:** “You’re very welcome, and I’ll catch you later then. Bye.”

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