

**--Cottonwood Uranium Mining Project--**  
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Service in cooperation with  
*Blue Mountain Shadows* and Utah Division of Oil, Gas and Mining

INTERVIEWEE: Bernal Bradford

INTERVIEWER: Kay Shumway

DATE: 1/23/01

PLACE: At his home in Blanding, San Juan County, Utah

TOPICS DISCUSSED: Mining in Cottonwood and on Elk Ridge

TRANSCRIBER: Debbie Christiansen

S: Bernal, what mines did you work at Cottonwood and on Elk Ridge?

B: Well, I worked in several in Cottonwood, South Stinky, Big Hole, Springwater. I never worked a long time in any of them. I worked the Sandy Mine on Elk Ridge for quite awhile. I brought low grade ore out of there on contract for Shumway brothers.

S: So you worked on a contract out there. What were your employment conditions in Cottonwood? Do you remember?

B: I just worked for wages at \$2.00 an hour. That was big pay back then.

S: Tell me a little about what equipment you worked with and what you actually did.

B: To start off with, we used a wheelbarrow and scoop shovel. That's what we mined with. We brought the ore out in a wheel barrow. We had a plank run up into a truck and we just ran the wheelbarrow into the truck and dumped it. When I got a full load, I would generally take it out to Durango or Naturita.

S: So you were a truck driver and scoop shovel operator.

B: Yes, that's kind of how the miners worked out there. They shot the ore down and mucked out the waste rock. You had to help those kids out of the mine, that was part of it. Whatever you could make a dollar at.

S: How old were you when you first worked at the mines?

B: I was probably 17 yrs old when I worked out at the mines out there.

S: Have you had any health affects from working in the mines?

B: I don't believe so. I had a lung taken out to lung cancer, but I don't believe that was the cause. I did some hand drilling, drilled dry, drilled wet. Cutting galvanized metal with a torch is where I think I got my problems.

S: You actually did drilling yourself with a jack hammer.

B: Yes, I used a wagon drill for several months down in Lower Cottonwood.

S: What is a wagon drill, some people might not know what that is.

B: Well, that's a deep hole drill mounted. There's a big hammer, big compressor. I drilled test holes in the ground anywhere from 16 to 130 foot deep.

S: You were taking cores out?

B: No, we would just set a jack hammer on it, and drill a hole and they would drop probe down your hole and probe the hole to see if there was any ore in it.

S: Did they use pressure to blow the holes clean?

B: Yes, we were in the dust all the time.

S: Did you wear any protection?

B: No, we didn't wear any protection. I made my helpers wear some, but I never did.

S: When you are drilling a face in a mine, did you have jack legs to use?

B: When we first started we didn't. We just bucked them in.

S: I've seen that happen, I've seen Gene and others do that, my uncle Harris. I saw him do it. I don't think there are any men anymore strong enough to do that.

B: Oh, they are, the jack legs just makes it much easier.

S: To hold that jack hammer up to get it started in the face, drill that hole while you are holding it, is tough work. Tell me about how you shot the face.

B: Each miner had his own style of drilling it. I learned from some of the best, Burdette Shumway, Phil Hawkins. They would leave a blank hole, drill a hole right in the center, then they would leave it blank and then start to more or less slabbing to it. You get a lot pull with a lot less powder.

S: When they shot the face, tell me what pattern you use in lighting the fuses.

B: Well, you drill one hole right in the middle and never load it, leave it blank. Then you shoot the hole closest to it and then you keep branching out, more or less slabbing into the burn you already have started. You come in from the side, and then your top holes comes in and then your last ones to go are the ones you call the "lifters" on the bottom. That brings that ore up and loosens up and makes easier shoveling. If you leave your last ones on top, it comes down and hits where the rock is already shot and packs it down and its awfully hard shoveling.

S: When you loaded those holes, the sticks that had the caps in them, did you put that in first?

B: Depending on how deep of holes we wanted. If we were going very deep, we would load in behind and then put it in where we would probably use a 6 foot fuse. If we were shooting just six foot rounds, normally we would put the primer clear to the back.

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S: The fuses were six minute fuses, which means they burn a foot a minute?

B: Yes.

S: When you timed the shot, did you just wait a little while to light the fuses? Did you vary the length of

fuse?

B: You varied the length of fuse so you start lighting as fast as you could. After you loaded your rounds, got your fuses all out. You take then one you want to go first and cut that the shortest, then you take that fuse you have and put the next one in and cut that one not quite as short. You keep dropping the one you cut off. After you have it you use the carbide light and we would start lighting as fast as we could. Sometimes it would spit your light out. We used what we called a "spitter". We would take a length of fuse and trim cuts in it. When you got to there, you would break it where that cut was, and point that at it and the fuse would spit into your other fuse and ignite it. Then you knew if you used a spitter, I always used a spitter anyway. I would have about a four foot spitter. If that burned out to the end before I was done lighting, why I would dropped it and got out of there anyway, whether I was finished lighting or not, because I didn't want to be back there when the rounds started going off.

S: Apparently, that's what got Burdette.

B: I don't know just what got him. I know that several were careless, I've seen men get careless. I never even came close to it. I was chicken, I had my safety fuse there, my spitter, and when it went, I dropped it and got out of there.

S: It sounds like a smart way to go to me. Did you have any problem with powder headaches when you worked with powder or when you breathed it.

B: Yes, its the worst headache you can get, I think. If you had a cutting torch out, where you could breath the oxygen, that would sometimes help. An old miner out there swore the way to do it is to take a piece of dynamite, put it in your mouth, put up in his cheek like it was Skol or something and said that helped you from getting the headache. That was old Alma Jones. He said you just take that raw powder. But back then our dynamite was a lot different than the powder they use today. Back then, it was more or less sawdust impregnated with nitroglycerin. Today, it is a whole different type of powder.

S: Where did you get your fuses and caps and powder from?

B: Well, when I was really into it. Ken Baily had what is called Western Mine Supply over in Monticello, we got most of our supplies over there. There are several places that have powder. I think LeVan Palmer had a powder magazine up here we used to get some supplies from him. There was also a place out in Nucla we could usually get what we needed.

S: Did you use bits permanently fixed?

B: When mining while using the bits you would stock them all. We had some screw bits. On the wagon drill we used the screw bit, it had a carbon insert on the cutting edge. Some of the bits we had in the mine on jackhammers, that was quite rare. If it was hard surfaces the bit was knocking on and you would take your welder and put a hard surfacing on the drill bit. If you were drilling on soft rock, you used a hard bit. On hard rock, you used a soft bit.

S: Why was that?

B: Well, if you used a hard bit on a hard rock, it would shatter the hard surfacing on the bit.

S: Did you do any of that hardening yourself or did you have to take those somewhere?

B: Normally we would buy them that way. If you bought them from Ken Baily, he would already have it done. The miners just weren't that good of welders.

S: You were a good welder weren't you?

B: Well, I didn't have the welding supplies out there to use.

S: Did you haul ore any place else other than Durango and Naturita.

B: Rifle Colorado, Shiprock New Mexico, and even up to Murray to that old mill they had up there. Lots into Mexican Hat and lots into Monticello. I even hauled some down into Arizona and put on the rail. Of course it had some copper in it and they were trying to get the copper out of the uranium on that.

S: If you had a map, could you locate these mines on a map.

B: They are all quite close together out here. What you called the Blanding mines, Kimmerle's had it and the VCA got a bunch of it. Most of us were leasing off of VCA or Union Carbide and USV. Mostly VCA. If you thought you had some good ore in, you get returns and they would give you what they called the "lime docks", if it is high lime, they would dock you and your pay off would be wrong. I always figured we were getting ripped off. So lots of the miners would try to figure out how to rip the mill off in return. It was kind of a vicious cycle, you couldn't win. You took what they gave you and there wasn't much you could do about it. When the assay is over, you could get a sack full of assay if you wanted and run the sample yourself. But if yours didn't agree with them, which they wouldn't, two different samples aren't going to come back exactly the same. They could always claim high lime and give you lime docks.

S: I remember my dad was always looking for a mine that didn't have high lime so he wouldn't get docked.

B: I worked with your dad on the Shay.

S: No kidding, you did the Shay? Coming down off the mines to a level place, that was a heck of a hill wasn't it?

B: We more or less went in on the level, that hill road was built after I was finished out there.

S: What kind of truck did you have?

B: Oh, that time at Shay, I think was driving a 1954 Ford 2 ton truck, I think it would hold about 7 ton of ore or 7 1/2 ton. I was driving for Olie Black. I heard he got started in the business buying your dad's old dump truck.

S: What color was that, the red one or the blue one, do you remember?

B: I can't remember. He drove in then I drove for him afterwards.

S: When you worked at Cottonwood, did you just drive back and forth everyday?

B: Yes.

S: When you worked West Water Big Canyon too?

B: Yes, drove a model A Ford out there.

S: What problems did you have with that, coming back and forth?

B: When it rained, the washes would flood and you would have to sit and wait it out. Wait for it to go down. Then when we were in upper Cottonwood, up high there, you would make one crossing at a time. I hauled more than I mined up in the upper end.

S: What were those mines called up there, you are talking about clear up in North Cottonwood?

B: Yes, we called them Ransom Brothers, but there was the King James, King Charles, the Virgin, can't

remember all the names. The Ransom brothers had them at the time, but then I think Shumway's bought them from them seeing how then ended up with them.

S: I rode that on my bicycle once, we crossed Cottonwood thirteen times. You guys probably did the same.

B: It did get washed out a few times, we changed the road. I changed it several times while I was working for the county. When you're on the Ute land, some of them really got upset if you change it. If you put it back where it was originally, they'd say you were changing it when you weren't, you were just putting it back where it was originally.

S: Were there any Utes or Navajos working in the mines when you worked?

B: Yes, I worked with a fellow out there in South Stink, by the name of Harry Dutchie.

S: There was an AEC Camp in that area.

B: I remembered I didn't have much to do with it. The people came in, some married to. . . . . was kind of in charge of it. That's were Al Prichard come in. He came in as their mechanic, started drilling around, had drill rigs. Their operations were top secret according to them. But we knew what was going on.

S: Did they not want the Russians to know or something?

B: I guess. You can still go out and found a lot of their old drill holes. They would drill a lot of times. They would withdraw from state control. You couldn't stake it, it stayed government property for a long time. When they opened it up, we thought we would have Bonanza, it wasn't any better than any of the other stuff we had. A lot of it wasn't even worth mining.

S: Did you ever use horses to pull that ore out of the mines?

B: Oh, yes. After we got away from wheelbarrows, we went to horses. After they would shoot it down, I would go out and muck it out. Muck out a truck load of ore, it was a days work. would come down after he got their ralls down. It was a good job to go out there. I would muck out about 16 to 18 ton of ore. Then I would come to town and my day was over with. I would be in town by lunch.

S: So you got paid by the load.

B: Yes, by then I would get paid so much for mucking out. After they shot it down, I would muck it up, then after I'd come to town, they would go out and drill in the afternoon, shoot it down. The next morning I would go muck it out.

S: Which mine was that?

B: I don't remember the name of that. It was one up the creek, I don't remember the name of it.

S: How do you feel about what the uranium industry did to Blanding the Boom and Bust.

B: It made some people well off. I guess it made everybody a little better off. Lots of people come in a run up big store and gas bills, lights and water and then would leave out. That hurt people. It brought a lot of people in. Some were good people, some of them not so good. Actually, it probably good for the town to get an infusion of new blood into it. New dollars. It came and went, the uranium boom, then the oil boom. We'll probably have a tourist boom.

S: I hope we have some money come into the county, we're really hurting right now.

B: We're going to have to do something. Any time there is anything done about uranium, its blown plum out of proportion, you hear all about it. There have been more miners killed mining coal which produces

most of the power than there has all told in the uranium industry. I don't know any one killed in the actually refining of uranium, a few miners were killed, but not anywhere as compared to the coal miners. Uranium mining is much safer than coal mining.

S: That coal really pollutes the air.

B: Yes, there is no question, it is a dirty fuel.

S: Stand out on White Mesa and look down towards Farmington, and you can see that.

B: Yes, its clear down towards Page, you don't know where it's coming from. It's got to be coming from one of the power plants.

S: When I go out to Cottonwood, I see the foundations for that old mill. Do you have any memories of that being in operation?

B: Yes, my dad worked there, about all the time it was in operation. Howard Kimmerle's dad worked there as a manager. It was a Vanadium mill, they didn't extract any uranium, just vanadium. It was afterwards they took tailings off that. I helped haul them into Naturita. Got the uranium out of it out there in Naturita. Asa

laws got killed in that mill out there. He was a great friend.

S: Heavy equipment guy was he?

B: He wasn't into it that much. Frost Black had dozer and built most of the roads in coal country and Asa Laws worked for him on a dozer one time. I was standing there watching it. He got off and asked if I wanted to try it. I said you bet. He showed me what to do with it. I loved it and been doing it ever since. Every chance I got I'd get on one.

S: I really admire those guys who can drive, like Frost Black.

B: Willie Certonio, he had one a going. Frost probably built more roads out here into the mines than anybody.

S: Do you remember about when the roads came in?

B: It would have been long before my time. They were there 75 yrs ago I know. One of my first recollections was going over there with my dad in an old model A Ford. It wasn't a new road then by any means. It was a state road at one time. It was highway 47.

S: That's good to know, not many people know that.

B: I don't know when they made it a state road, but there are still old reflective signs out there they used to use. It wasn't a very good road. Its been upgraded several times by the county. Quite a bit of work has been done on it.

S: I haven't asked anybody else this, but you are a unique guy to answer it. What was the attitude of the county on building roads for miners.

B: They were willing to help the miners any way they could. They actually couldn't go get private enterprise. As far as building the roads, they couldn't do it just for the miners. Once it was brought to grade, or a certain standard, then they put it on the schedule for them. They did it out the Marky Mine, the Radium King and on up to Happy Jack before they started putting a lock on the gate and locking it up. The county never built any roads into the mines, but once they were put it, we did upgrade them smooth them up and make them passable.

S: How long did you work for the county roads?

B: I worked for them in 1967 and quit. I went back to work for them in 70 and I retired in 90. They hired me to take care of their outfit, they bought a new diesel water truck. There really wasn't anyone to put on it that was well-schooled with it, so they hired me, figuring I would keep it up and keep it going. Then they put me to hauling their heavy equipment, which was one of the best jobs with the county. It never got boring.

You hauled a piece of equipment out, do a job, load it back up and haul it back in. You slept in your own bed every night. You put in your 40 hrs a week and you were done. It was the best job I'd ever had. It wasn't paying very much. I was used to a lot more money than they was paying, but it sure was a good steady job. I had to quit to get caught up, made twice as much money. But the first chance I got, I went back to work with them. Then we learned to get a long with what me made with the county and kept a job on the side most of the time.

S: What did you do?

B: Oh, I'd tend station, or drive truck on weekends. After Dave Guymon retired, I tried to get all the guys to put in as foreman because we didn't want them running some stranger in that we didn't know. The only people who put in for it was a couple of us. Calvin Black come and told me it boiled down to me and Olie Black. I told him to give it to Olie because I could work for him and feel good. He laughed and said, Olie just said the same thing about you. So I took over as foreman. They brought in some superintendent from way back east and he know as much about roads as I knew about brain surgery. He was something else. After they got rid of him, they asked me to take over as superintendent. I never felt like we needed a superintendent over the county. I felt like if we had two good foreman, that's all we needed. I still feel that way. I didn't want to stay as superintendent. I wanted to get back down on the road. So they put me back as a foreman. I went ahead and had my fun when I wanted to. Later on when they x-rayed me after they took my gall bladder out, they worried about my lung because there was a spot on my lung. After I had an aneurism, they took out half of my lung.

S: Do you notice a difference how hard it is too breath?

B: Big difference. I went to work hauling down to Phoenix once, down there on the Mail run, I told them as long as its fun I'll do it. When it isn't fun, I won't do it nor more. That was how I lived my life.

S: It's important to keep those roads open so we all can enjoy it.

B: Some of us can't walk that far anymore. I want to be outdoors all I can. I want to get out there and see some of that country again. There are places out there I haven't seen.

S: There's plenty more to go see.

B: Yea, there's a lot of places to see, like Hammond Canyon. That's such a beautiful canyon and try to limit it to just a few is said. Its a beautiful canyon. Dark Canyon and Arch Canyons are two beautiful canyons. I don't think we should give all the canyons and all the ground. There are some like Fish Creek, that has kind of gone to the hikers.

S: I guess guys go in there on horses quite a bit.

B: A horse will do so much more damage any time that a four wheeler will. But if that is the way it goes, that the way it goes.

S: Its always amazing that horses are considered OK and can go any where, while an ATV with 15 pounds of pressure at the most isn't acceptable.

B: I used 1 1/2 pounds of pressure. I can run over a plant and not even damage it. The worst thing is to run over a prickly pear and it gets into a tire and gets transplanted somewhere else.

S: Can you think of anything else about Cottonwood we should know.

B: A lot more people know lots more about it than I do. Joe Nielson worked out there, the Shumways, Lark Washburn. Lots of them are dead now. There were lots of transient miners who came in and when the boom was over they were gone.

S: They would be hard to trace down.

B: I remember seeing old mines out in Montezuma. I look at them and I can almost tell you who the people were that mined him. I knew of a Texas Cross bunch.

S: My dad mined a little bit in Long Canyon and then down where Long Canyon comes out into Cottonwood Creek.

B: Cottonwood Claim was out in there and just up around from the Rock Claim.

S: I remember the rock claim.

B: -----Brown worked out there, John Palmer, Harry Laws, Troy Black.

S: Bernal, do you have any photos or pictures from those years around.

B: I could go through and look and see, I don't have too many.

S: Blue Mtn Shadow printed some a few yrs ago. They'd like to get some more.

B: Some of them are mine, my mother give them some pictures. I don't have any of the old mill and the like. I have some pictures of some of the wrecked trucks. When I wrecked down on Zeke Hole, I got pictures of that. I was driving when it wrecked. The drag link came off. When it wrecked, all the ore came in the back window, and covered me up. If I'd had a seat belt on, I wouldn't have got out. When I looked up there was fire everywhere, everything was on fire. I went back down and took pictures of it.

S: Did you ever use any of the shuttle buggies.

B: Clin Young brought it out there and we'd have a race to see which was faster, the horse or the shuttle buggy. Shuttle buggy broke down and the horse didn't. The shuttle buggy would sit there all week without water or food. At first there was quite a bit of argument about what was best. There was no doubt about it, the shuttle buggy was the best. Clin Young, I believe, was the father of it. Then Ken Baily started making them. Lark Washburn and I used the one he made down at the Whirlwind mine, down on the south side of the river from Clay Hill Crossing, what use to be the Piute Farms, it was just up on that mesa.

S: Where did they get the lumber?

B: Most of it Vern Rowely made, then George Hurst made a bunch. He had saw mills here. They hauled a bunch of it from La Sal from the Stops Mill over there in LaSal. Thayne Robinson, at the Lucky Lady Mine up there, had that timbered up heavy. I hauled a lot of the timber he used for that.

S: Where was the Lucky Lady?

B: It was just above the forest fence up there. Bernard Black was his partner. Bernard put up the capital. Thayne was killed due to carelessness. He was a good fellow, really a nice fellow. Got a lot of work done, he had lots of knowledge, he was just careless.

S: Did Burnard actually do any of the mining?

B: Not that I know of, but he was in with a lot of miners. He had a lot of knowledge about it.