Nevada Test Site Oral History Project
University of Nevada, Las Vegas

Interview with Donald Owen

June 23, 2004
Las Vegas, Nevada

Interview Conducted By
Robert Nickel

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[00:00:00] Begin Track 2, Disk 1.

Robert Nickel: *OK, to start off, if you just want to talk a little bit about your background, where you're from, and how you ended up working at the test site.*

Don Owen: Well, I was born in Trinidad, Colorado, 1931, March 17. I lived there until I entered the military in 1950 during the Korean War. I was discharged out of the military in 1962. I moved to Bishop, California. I was there for quite a while, and I was driving back and forth when I hired out at the test site. And finally I decided to move to Las Vegas and I went to work at the test site in 1964. And I mined from 1964 to 1974 for Reynolds Electric[al and Engineering Company, REECo], underground mining. And then from there I hired out to Fenix and Scisson—they were a mining-engineering company out of Tulsa, Oklahoma—and I worked for them until, oh, let's see, approximately February of 1990. And Fenix and Scisson was bought out by Raytheon Company. We had the same jobs. And I worked for Raytheon until 1992, until I retired. So that's about all I give you of my background, other than I enjoyed working underground. It was just like sitting here. Are there any questions you need?

Well, I'm just interested in how you started working for REECo, Reynolds Electric. Did you work for them straight out of the military?

No. No. I [had] done mining at Bishop, California for Union Carbide. And actually my first mining experience was in Trinidad, Colorado—underground coal mining—and that was with Colorado Fuel and Iron [CF&I]. All of the coal went to Pueblo, Colorado to the big steel mill, which the steel mill was making steel for military and different projects. And then I decided I

wanted to see some different country, so I moved to Bishop. And I worked there for a while for actually a mining company, a Chinese mining company right out of Bishop, California. It was Wa Chang. It was all contract work, which we made real good money. When the tungsten market went down, why, they sold out and closed down because the tungsten went down to almost nothing as far as money-wise. And so I decided to go back to the test site. And I worked, like I said, underground there for many years, and then transferred into the underground mining inspector part of it, which all of our blueprints and designs were what they mined. It was all our designs, and all of our ground support was our designs. And like I say, I worked there until I retired in 1992.

OK. How did you first get the job at the test site? Did they advertise or did they come and recruit you or—?

You mean when I first went mining?

Yes.

Well, I went out of the labor union here—Local 272, labor union out of Las Vegas—and we were from there referred to the mining department at the test site. And from there on, why, when they needed inspectors and stuff like that—which I knew almost everybody, so I had a real good friend **[00:05:00]** of mine that was a geologist and he wanted to know if I would go to work for Fenix and Scisson, which I told him yes, I really would. And it was good money and it was a good opportunity, so therefore I stayed with them for a lot of years.

When you worked at the test site, you started off underground, is that right?

Oh, yes. Yes. Everything was underground. When I first went to mining for REECo, why, we were building cavities, just like big rooms. We had to go up with a pilot hole and then bell the pilot hole out for cavities. At that time we were doing two different ones at the same tunnel—and

that was U-12-G tunnel—and worked all the way through that. And then I worked at almost all the deep holes—the drill holes they called them—which one of them was about six thousand foot deep. And I worked in the drill holes which we also went down and put cavities in for different tests. And one of them was, like I say, six thousand foot deep, and there's only one way up and one way down so you're pretty isolated underground. And it didn't seem to bother the miners any. Some of those holes were hot. We'd work four hours on and the next crew would come down to work the other four hours. So it was good working conditions.

Now, you sort of touched on this, but what was a typical day like, working as an underground miner out at the test site? Did you live on site or did you commute?

Yes, I lived in Area 12 there for most of that time. We had regular trailers to live in. There were two men on each end of the trailer. And it was a real good place to live. We had a real nice cafeteria. We had a movie. And there were different games. We had horseshoe pits and we had pool tables. There was always something to do after work. And like I say, out there us miners and different people that worked for them, it was like one big family actually. Everybody got along fine. You did your job, they did theirs, and there were no questions asked.

But our regular typical mining was drilling, blasting, ground hardening, rock bolts, wire mesh, shotcrete—which is all ground hardening. So it was actually safe. We had electric lights. I mean it's just like working downtown.

How much work would go into each test, from a mining standpoint?

From the time it started?

Yes.

Sometimes as high as four years.

Oh wow.

Well, that included all the mining and all the—well, we had regular alcoves. Different—ground zero had to be excavated, and different places for tests—which there were a lot of companies that had the regular tests in there, a lot of your oil companies, a lot of your gasoline companies. Companies—well, LLL [Lawrence Livermore National Laboratory], EG&G [Edgerton, Germeshausen, and Grier], companies from Albuquerque—different big companies all had tests in there. After the event was completed and the test was completed, then they had what they called a re-entry mining. That would be going back in, going back through the doors, and mining to get the instruments back so the DOE [Department of Energy] and DNA [Defense Nuclear Agency] wanted to see what actually took place during the tests. And it was interesting. Very little radiation. It was safe. Although we were suited up for radiation, but it was still—it was always safe.

[00:10:00] *Now the instruments that went down into the cavity, did you have to put those down there or—?*

Well, some of them belonged to our company, some belonged to DNA, some to DoD [Department of Defense], and the rest of those companies would have different types of experiments. But all we would do—the mining part of it—they would mine to those and recover them for those different companies that had tests in there.

OK. So what would you do on a typical test day? I mean I imagine most of the work was beforehand, and afterwards, like you said, but did you actually get to witness the tests or were you—?

Well, I saw several from a long distance off, but normally they would evacuate the whole complete area clear back to Mercury. And sometimes it all depended on the weather conditions. Sometimes it was two or three days before it was favorable to do the test. In case of a radiation

leak or anything, they wouldn't take a chance on it blowing into neighboring counties and things like that. They wanted to make sure it was completely safe. And which it was usually 100 percent safe.

Now you said they suited you up with the radiation suits?

Well, yes, when we went back in after a test, yes, we were suited up with different type suits for the radiation.

And did they warn you about what to expect or did they have limits on how much you could be exposed to?

Yes. We wore what they called dosimeters, like a little telescope. Looked like a little pin actually. But you could read that and it'd tell you how much radiation you picked up. But we were allowed so many RADS, they call it. And after that, why, if you did pick up over that, they would probably take you back out. So normally we very seldom ever went over our quota on the radiation. I mean that was due to good ventilation and the tests went well.

How long after the shot did you go back in?

Usually maybe a couple days.

OK. One of the things, when you talk about mining, that immediately strikes me is that it—I mean mining in general but especially for weapons—is that it just seems like really dangerous work. And you're saying that most of it was pretty safe, but compared to other types of mining that you did before, was this more dangerous or less dangerous?

No, I would say it was safer, for the reason that some of the companies I worked for mining, their safety wasn't that good. Out there [at the test site] we had a real good safety program and it was followed. We had safety meetings out there once a week. If you were concerned about anything, you could bring it up during the safety meeting—which normally would be taken care

of. And also anytime you were working in a radiation area, we had what they called a RADSAFE [radiological safety] out there. They were the monitors. They would monitor our areas that were suspected of any type of radiation. So it was safe.

Now was that REECo that was in charge of RADSAFE, or was that DOE?

Yes, REECo. Well, they were working under REECo, but they were actually just radiation monitors. Normally we had one or two on each shift, all the time usually, in every tunnel.

What were some of the rules that they had in place for safety, apart from the limits and the suits that sort of thing?

Well, it was safety glasses. If you were working off of the ground or anything, it was safety belts and stuff like that. So actually they had a real good safety department. And it was followed real good by the employees and the miners and everybody else that worked underground. And far as **[00:15:00]** the ground, it was kept up, and it was probably safer than our ceilings, with steel rock bolts, wire mesh, and then—I don't know if you're familiar with shotcrete. We also used a steel fibercrete, which is just like a plaster. But that was two inches thick over your wire and rock bolts, so we had no rock bolts, in other words.

OK. How long would you be underground at a time?

Normally an eight-hour shift, unless we had to stay, oh, say, for something else just before an event or something. We had to check for leaks or anything like that through our enclosures, and if we had to do that, then we had to pressure-ground them and make sure there were no leaks before the test on our enclosures going out of the tunnel.

And was that every day, like a five-day work week, or was it staggered somehow?

Normally it was a five-day work week, until maybe two or three weeks before the event time. Then you were probably putting in a lot of overtime on the weekends to get everything ready and make sure we met the right date for our test.

Now were you ever working on a test where there were *leaks or there* were *accidents?*

Oh, I think they had one down in the flats there below Area 12 at one time which, oh God, that was *way* back in the early 1970s. Baneberry, I think, was the name of the test. And there was a leak, and everybody was evacuated. Nobody got any radiation. We were all evacuated back to Mercury, so everything went pretty good. But that's the first time I saw the mushroom cloud.

Oh really. I bet that was exciting.

Yes, it was. We were standing there getting ready to get on the bus to go to the tunnel, and when they had the test we was all telling each other how pretty that was. We felt the test, the ground shake, and we said, `Boy, that's beautiful`—you know, how it came up, mushroomed out. And we said, `Oh, goddamn, that's a leak.` And then all the alert bells and everything, the sirens, went off, and then everybody was being evacuated.

Wow. Now how close were you?

Oh, we were, oh God, probably fifteen miles away. So we were at a safe distance where it was actually no danger. But it was something to see.

I'll bet. Now how long was it before you could go back for that one? I'll bet—

It was quite a while because most of that—the way the wind was blowing—went right straight for Area 12. So that's why we went out the back way over Rainier Mesa and back through CP [control point] and down to Mercury. But it was two or three weeks before they got everything cleared up in Area 12. And one thing that helped us a lot—it was right after the event—why, it snowed real good, so that got rid of a lot of radiation.

Now after that test, I've heard that a lot of the safety concern was really heightened after that because they were worried about how they conducted the test—

Yes. Well, from then on we had to be evacuated to Mercury. We were not allowed to stay in the forward areas for another one, on account of that. And it was just something went wrong, that's all, you know.

Once in a while we'd get those protesters. They would get as far as ground zero up on the mesa, Rainier Mesa. Yes, in fact I was at the service station gassing my vehicle, going back to Area 2, and the helicopter brought them in. They had them blindfolded and everything. And we scared the living hell out of them actually. We said, `Are we going to hang them like we did the last bunch, or are we just going to take them over here and shoot them?`

[00:20:00] The security guards, they said, `I don't know. We haven't really decided what we're going to do with this bunch yet.` Well naturally they sent them to jail in Beatty. But there was one woman and a couple of men. So they had to hike a hell of a long time to get way back up in there. I don't think they ever wanted to come back.

Did that sort of thing happen a lot, the protesters?

Well, yes, they used to get penetration every now and then from them groups. We got a lot of them out, oh, days before the event. They'd be outside, below the gate there in Mercury. And it was some weird looking people.

Did they used to give you guys a hard time coming in and out of the site?

Oh, yes. Oh, yes. Yes, they'd holler at us and call us names and play like they were taking pictures and things like that. A little harassment.

Did you guys ever yell back at them or did you just ignore them?

No, we'd just laugh at them, you know, we kept it cool. But like I say, there were some weirdos. I don't know where they come from. They looked like hippies, most of them. Long-haired, dirty. What struck me is they had one, he was an old Indian, I guess from India or something, he'd sit out there and beat on a drum all day. That was something else. No, they didn't give us too much trouble but they got their point across, I guess.

What did most of the employees think of that? Just a bunch of weirdos sitting out there, or did it bother anybody?

No, not really. No, we still had our job to do. We'd go in and do our job and come quitting time, we'd go back out. They'd stay there for days at a time.

Really?

Oh, yes, they'd camp right outside there. Yes, they were something else.

Now did you or did most of the workers live on site, or did a lot of guys commute back and forth?

No, most of them were—there the last few years, we were bused in and out. Buses would—they'd pick different people up, different locations here in town. I think the bus was an MK at that time, the bus company—I don't know whether they're even still in business. But it was a dollar each way, and that was pretty reasonable. But a lot of people were bused into Mercury. And we went about thirty miles above Mercury to the forward areas where the tunnels were, so it was quite a ride. Normally if we were bused in up to the forward areas—normally we were putting in, with the bus ride and the time, about twelve hours a day.

Wow. That's a long haul.

Yes, it is. But we got along OK.

That's another thing that really stood out for me is that, you know, even after all these years, you still keep in touch with a lot of these people.

Well, that's the reason we started that NTS [Nevada Test Site] retiree breakfast program. It started, well, maybe just a few, and we're getting bigger all the time, you know, with getting contacts with a lot of the guys that didn't know anything about it. And there's two of us, the day before the breakfast, we do the calling. We call each member. I call half a list and Don Slagle calls the other half. And we tell them what we got going on. We told them at the last meeting that you people, students from UNLV [University of Nevada, Las Vegas] would be there, and it would be interesting to meet them. And this next meeting I think is, what, on the fourteenth of next month, and our speaker will be, what's her name, Vanya Scott from the museum [Atomic Testing Museum, Las Vegas, Nevada]. She'll be there. So if any of you people want to come back, feel free to come. You're always welcome.

Sure. Oh, great, thanks. So it's every month that you meet, then?

Yes, every second Wednesday of the month.

OK, and how many people are on the list?

[00:25:00] Oh, God, I think this last meeting, oh, Jesus, we got over two hundred on our lists. So there's quite a few of them, and we're getting new ones all the time, you know. But we make it a point to call each member. A lot of them will maybe not make it the one meeting, and they'll all show up the next. We've had that place so crowded, you couldn't get in hardly. We had to set up special tables and everything. And they have been real good to us down there. They don't charge us anything for the space and, well, you notice they furnish all the coffee we need. But we bring a lot of people in there to eat, too.

Yes, that's the Original Pancake House on—

Yes, on Charleston and Decatur.

OK, that's right.

Right behind the bank on Charleston and Decatur.

And those are all REECo retirees or can anybody—?

Yes. Well, yes. There's operators, there's ex-miners, there's ex-electricians, a lot of ex-supervision. I mean we got a little bit of everybody.

That's interesting. Now when did you first start organizing that?

It's been about three years ago. And I got elected more or less as the spokesman. I enjoy it, you know. I know almost everybody that comes in. And you notice how noisy it got. There's all the—probably doing a lot of work-at-the-test-site-chat, I don't know—and when they start eating it gets a little quiet.

Well, that's interesting that it's such a wide range of people, you know. You have the miners, the electricians, and everything.

That's right. Yes. Well, we had some of them ladies, the secretaries. We got that one lady and her husband comes in. I can't think of their name right now [Helen Draper], but she used to sign all the checks for REECo.

Oh really.

And then we got all kinds. We enjoy it. Everybody has a good time. They come in and just see each other and see who's left. Every once in a while we lose one by death, but that's going to happen.

Now, how many people worked for REECo at the test site?

Oh, God, at that time I would say they—jeez, I would say probably two or three thousand people out there, in different areas. See, there's several different areas. You got Area 12, you got CP-2, and then you got Mercury, then you had some people over in that Area 25. They were scattered

pretty much. I would say there had to be that many around there. I don't know exactly what the count actually would be, but I would say that'd be close.

Now, was REECo as a company, were they based in Las Vegas at the time?

Yes. Right.

So did some people work in town and then other people came out to the test site?

Oh, yes, they had offices in town and also at the test site. And they were a big company. It was an engineering company, and they [had] done all the hiring for the miners and all the crafts. But all the crafts that come to there, they'd be sent out by their own unions, and they had to have a referral slip. They'd have to report to Mercury, in the main office there, and then they'd be sent out on to different areas, wherever they needed the personnel. So it was a lot of people there.

I'll bet. Now, you were talking about, you know, you had a movie theater and pool tables and everything at Area 12. What would you guys do after work when you were at the site, just socially?

Socially, we'd go and we'd have dinner at the mess hall, and we'd probably go over to the rec hall, they called it, recreation hall, might have a couple beers—they sold booze. So we would sit down and yak a while. We'd play poker, play pool. We had a barber. It was pretty well fixed up. And they'd get first-run movies, so we got to see a lot of good movies for pretty cheap.

[00:30:00] I think it was twenty-five, thirty cents a movie. So it was reasonable. And the meals were good out there. They took real good care of us as far as meals.

Did the REECo employees, did you guys, while working and socially, did you guys get to mix a lot with some of the other groups at the test site, like the DOE people or the—?

Oh, yes. Well, being the mining inspector, why, we worked right under DOE and DNA, and they were the ones we actually had to account to. See, all of my reports, well, DNA got one, REECo

got one, DoD got one, so they all got a report of our activities. And that was every day, on each shift. It covered all the mining—how much footage we got on that shift, how many rock bolts was put in, how much wire was put in, and how much shotcrete was put in—and so it covered everything everyday. So they actually kept up with their records, you know, for several reasons. I imagine cost and things like that. So it was done pretty economically, you know. There was no big waste.

Was there ever any tension between like the REECo management and REECo supervisors versus *the DoD people and the DNA people and the DOE people?*

No, not that I ever—very seldom you would hear an argument. Some of them at REECo supervision, they didn't like the way we wanted it done, but that was soon changed after one called the DoD. So that was the end of the argument. But normally everybody got along good. Like I say, we all—they had their own jobs, you know, everybody *did* their own jobs, and there were no questions asked. That's the way it was supposed to be done.

Now, as a REECo employee but working at the test site, what kind of security clearance did you need?

I had top clearance—which they called classified—so I could actually go almost anywhere on the test site, including CP-3. That was Area 3. That's where they monitored all the events, and I got to see a lot of that. And they had films of the actual events and we got to see a lot of those. Yes, it was on the badge, "classified clearance." And also on your badge, you had a dosimeter for radiation. It was built in under the badge there. Once a month, that was changed and they'd see if you had picked up any kind of radiation. And they knew what areas you had been in, so they knew what to look for. No, it worked out pretty good.

And what did you have to do to get that clearance? I mean I imagine there's some kind of investigation.

Well, you had to have a background check. Now, on mine, on my classified, when I went through it again, I got a copy of it. They went back—I was still in grade school—so they knew more about me than I knew about myself. So almost everybody out there had to go through a top clearance, and that was through the federal FBI. So they got a record of me and everybody else that was out there.

Yes. Well, that's interesting. Did you ever hear of anybody getting denied a clearance for any reason?

Oh, yes. Yes. If you had been arrested in this certain length of time or anything like that, yes, there were a lot of them that were denied a clearance. But I—also in the military I had a top clearance too, so I didn't—and yet they still went back, way back, on me, even with the military clearance.

Did a lot of the test site workers have military backgrounds? I imagine that's a—that whole generation—

Oh, yes, a lot of them had been in them military. Yes. Yes, most of those guys that shows up down there, at one time or another had been some type of military. The biggest majority of them.

[00:35:00] *Now, being, I don't want to say a civilian contractor but a non-government worker working for REECo instead of the government, were there any special rules that you had to follow since you weren't, you know, a government employee, as far as your clearance or what you were allowed to see?*

Yes. It all depended what kind of clearance you had, where you could go, what you could see, and what you could talk about. Actually out there everybody didn't talk much about anything,

because you didn't know who you were talking to. It could be a couple of those FBI men, or it could be an infiltrator, you know—and they were pretty slick too. But as far as I know, we never did have any of that kind of problem. Because like I said, when you come to the gate there in Mercury there, your badge was checked and your name, and they knew what kind of clearance you had and everything, so you were in pretty good shape. So we were in good shape. But we just didn't—even coming home to our—see, my wife died about seven years ago, but we didn't even talk about the test site at home to our wives.

That must've been tough, you know, you can't—

Well, not really. My wife was an insurance adjustor and I never even talked to her about *her* job. I'm not that interested in it. And like she said, `I'm not interested in what you're doing.` So I said, `Well, let's keep it that way.`

Do you think that that maybe is one of the reasons why all the miners in REECo were such a tight-knit group—just because you could talk to them about work things, but you couldn't talk to your families or your friends?

No, or outside the test site, you didn't mention things. No, it was a pretty tight group. Just like I said, like I've heard them say down there, we were one big family, and we helped win the Cold War. And just like Senator [Harry] Reid said, `Well, you guys did a beautiful job and you did help us win the Cold War,` with our tests and different things that came out of that. Well, a lot of it was being tested. It wasn't all war. A lot of it was peaceful things—which I can't say what it was or this and that—but a lot of it was peace.

Is that the Plowshare tests and the excavating and that sort of thing?

Yes, things like that, you know. Did you ever get to see that big Sedan crater?

Yes, we did. That was pretty incredible.

That was quite—that sand went up, I don't know how high.

Did you work on that test?

No. But that's what they was testing for, for canals and stuff like that, which made sense. Instead of digging for months and months and months, why, they could do it with one blast. Yes, we went down sometime quite a while after that to do the bottom of—and drill the holes, tests in the ground, which it was nothing but sand.

Did you actually get to see that shot when it went off?

No. I wasn't there at the time. But they said it—you talk about one big dust cloud, and it was for hours

I'll bet. One of the things that I'm interested in is, you know, you talked about you did mining in California and Colorado, coal mining, you said it was?

Well, coal mining in Colorado, and a lot of hard rock. Water diversion tunnels. I've worked in a lot of, like I said, in California there where it was tungsten mining, gold, silver. Arizona. Yes, almost all kinds of mining.

I'm just curious about how that mining, you know, your previous experience, how that kind of affected your work at the test site. I mean, did you draw upon that experience, or was it a completely new—?

Well, they did a lot different types of mining than I was used to. We had better equipment out there. We had, like I said, the Alpine Miner™, which you saw pictures of. It was a continuous miner actually. But what they'd do, they would go eight foot and then they'd do their ground support. **[00:40:00]** Then they'd go again. And then we actually—one tunnel out there, we used the mole, and that was continuous. We'd go as far as ninety foot a shift. So they had a lot of good equipment. We had what they called jumbos. They had the drills and everything on them, and it

was all on track, and half tracks. So it was actually easy mining really. It really was. I mean a lot of it was hard, you know, when you're using a jack leg, which they called it—it's a regular drill on a leg—and then you're working. But with the equipment they had out there, it was real good mining.

Yes, when we went out there and we got to see some of the old equipment, I mean these things are massive. I mean the drill bits and everything.

Oh, on the big rigs?

Yes, it was pretty impressive.

Some of them are, what, about eight foot in diameter, the bits? Six foot, eight foot. Yes, that's quite a—and then those rigs are giants. Oh, she was asking me one time about, they sent a drill crew to Russia and was showing them how to use those big drill rigs. I don't know whether the Russians ever learned anything, but we hope so. [Joint Verification Experiment, JVE]

Now, speaking of the Russians, were you on the test site when the Russians came?

Yes. Yes, we didn't actually talk to them or associate with them. We would—a hand gesture or a smile or something, you know, and they'd wave. No, we kept pretty much on our own. But I understood they'd take them to town on those shopping tours, they'd buy every pair of Levi's they could find. A lot of that stuff they don't even get in Russia—shoes, stuff like we wear—and they'd buy everything they could get their hands on. And then they ate at our regular mess hall. Like I said, we had our own section. So a lot of them, I understood, after that defected back to the United States, they liked it so much, the people and the way they were treated. I guess it's pretty rough in Russia, the way they—and their military and everything. Gosh, most of those people, I understand, are starving to death anyway. They spent all their money for military and it didn't pan out. They were trying to keep one step ahead of us and they couldn't do it.

Yes. What was that like, you know, to work at the test site where you put so much effort into keeping things secret from these people and trying to get an edge on—?

Well, they would just take them to certain areas. They'd just see what we wanted them to see, you know, and that was it. And they had the guards with them all the time, and the drivers, so they didn't see much.

Was that a strange thing, you know, to see the enemy, the Russians, right here being invited and wined and dined in town and shown around the test site?

Well, I think more than anything, it was goodwill and politics, you know, show them that we *can* be better people than which I think we are.

Now, you were talking before about what Senator Reid said about the test site's role in the Cold war. I'm curious, when you were working there, did you see yourselves as part of the Cold War while you were working there, or were you so involved in your own job that you were just thinking about that?

Well, we didn't really think about the Cold War, but most of all of our activities *helped* the Cold War, every bit of it. Well, we knew later, you know. We were just doing our jobs in the best of our knowledge. But when he mentioned that, it kind of hit home that we *did* help to win it.

So it was a pretty patriotic thing when you think about it, you know, that the things that you're designing are helping to win the Cold War.

Well, it made everybody feel a lot better, instead of, `Well, maybe we're just old miners,` you know. So no, we were glad to do a job. And most of them, they'd do it **[00:45:00]** again. Most of us are too old to do it again. But I don't even know whether the younger generation would do it like we did. But I think they would if it come down to the nitty-gritty.

Now, when you were in Korea, your experiences there fighting in sort of the larger context of the Cold War, did that affect your views at all regarding the Cold War or working on weapons testing?

Well, the military, as a soldier, and you take lives and things like that, you're doing the same things we did at the test site. You're doing your job, you know. And like I say, it got rough. But a lot of people die in a war, and that's got to be expected. And that happens on both sides of the war side. But I was glad to get away from it, we'll put it that way.

Yes. I'll bet. You were in the Army, is that right?

Yes. Yes. In fact, we were about the first company in there. When I got to Korea, we went in through Pusan. All they had when the shooting started was a company of cooks and a company of engineers, so you can imagine what our Army looked like. Did you ever see a fat cook with a rifle? Most of them forgot about their combat training, you know, by that time. Probably a lot of them had been in fifteen years or so. But the engineers, they were building bridges and things like that. And well, it was exciting.

I can imagine. And how long did you serve?

I put two years in Korea.

And then you got into mining when you came back?

Yes. Went right back to it.

And when you first started at the test site, you were a miner, but later you were an inspector, right?

Yes. Well, ten years underground mining out there, and that was shafts, tunnels, drill holes, you name it and I did it. And then like I said, I went to underground mining inspection, and that's where I stayed until 1992, when I retired.

So as an inspector, what would you look at and what sort of things would you check up on?

Well, all of our specifications, mostly. We reported, like I said, our reports covered each shift, the different jobs that was going on—say they were mining in this section of the tunnel, they were mining that section. We had to have a report on each place, a complete history of how much material was used here, how many men were working in that area, and the whole thing. How much footage we got. By footage, I mean the excavation, how far we went on that shift. And then the next shift would come on, the inspectors, and pick it right up where I left off. So twenty-four hours were covered.

So they had three shifts, is that right?

Yes. So it was covered all the way through.

And you mentioned there was a pretty lengthy process for each test. Would you be working on more than one at one time?

Well, no. The one was all over the tunnel, different sections, different areas where they were going to have instruments and things. And a lot of our instruments were strictly—we'd check every day—it was ground movement. We'd use a "mike" actually, a regular micrometer, and check them. And we had them drilled in the ground, and they would tell us exactly right to a thousandth of an inch if that ground did move. So we had to record all that also. Very seldom we ever had any ground movement.

Now how much drilling would be involved in a test? You mentioned some of them were thousands of feet deep. Was that normal or was that an especially deep tunnel?

Well, there were specifications, what type of event they were going to have, and it had to be a certain depth.

[00:50:00] *And so you drilled down and—*

Well, yes, and then we'd—just like this kitchen here, it would be bell-mined out, like a room. A cavity, in other words. And then normally it would be encased with a steel liner—and that was all welded in—and whatever they were going to test went down in the center of that steel lining.

OK, and that would be in the cavity then?

Yes. So it was quite a process.

And then you put all the instruments down there and everything.

Everything they put down was down in, yes. So it was quite a deal.

Now, were you involved at all in the containment aspect of trying to contain the radiation from the blast, like filling in the hole and that sort of thing, or is that—?

You mean before or after the blast?

Before the blast.

Oh, yes, we'd put in concrete barriers. Yes, we were in charge of that. Rebar and concrete barriers and, oh God, we had—we called it a plug. We might have ten or twelve plugs all the way partially out towards the entrance of the tunnel. The last barrier was a steel door about that thick [indicating three inches] and that was the last closure. But all those cement barriers—plugs we called them—had to be tested for leaks and the whole nine yards. Like I say, if we did find any leaks—they had a pressure test. They'd pressure that, and then you could find the leaks. And then we'd also check up on top of the mesa there and they'd monitor that also and if they found any leaks on topside. So it was pretty well detected. Everything was covered. Now, when we went back, we had to blast through those plugs and work their way back through.

Oh, really? Sounds like the recovery would be harder than the original—

Oh, yes, well, it was a little more specific, you know, and it took a little time, because like I said, you had all that steel and everything in those plugs.

How long would it take?

Oh, God, probably one plug is about three days, going through and cleaning it all up, getting their track back in. It was quite a process.

Now, how much of the structures that you set up, like the plugs and everything, how much of that was destroyed by the blast and how much would be intact?

All intact. The plugs were never destroyed—our containment plugs—but down in near ground zero area, it would move a lot of ground there. Sometimes it'd push it over a few feet one way or the other, the whole ground there in that area. But actually it wasn't that much destruction. A few of those tests, you'd get some ground come in, but it wasn't that bad. It worked out pretty good.

And did you also drill some of the line-of-sight tunnels for some of the instruments?

Yes. Well, there was one. Lockheed would put what they called a line-of-sight pipe clear from ground zero out. And if there was any debris, the LOS pipe they called them was the pipe that would catch all the debris. And they also had enclosures in different sections of the pipe. You saw that piece of LOS pipe down at the [Atomic Testing] museum?

Yes.

Well, that's LOS pipe. It catches the debris after the event. Anything goes, it'll go down that way.

Now, after a test, what would you do with the shaft? Would it be filled in or would you use it again for another test?

We'd usually mine back through it, use it again. I mean usually there wasn't that much destruction.

Really? That's surprising.

It was pretty well-contained, you know, with our different plugs and everything. No, it worked **[00:55:00]** out pretty good. And that's what they called re-entry mining. We'd go back, and we knew what parts of the areas where we needed to get the instruments and stuff, and that's what they'd mine. And like I say, they were all in coveralls and gloves and boots and face masks if they needed them. If there was any sign of any radiation, they were covered. They were safe.

Were there ever any tests that you remember where it was too hot to go in or anybody got exposed?

No. Once in a while you'd get it. But then, after a certain length of time, you know, you can go back in.

And there were rules about that as far as if you got x-amount of exposure, you had to wait this long before you could—?

Yes. Yes, like I said, you wore those little dosimeters—it was just like putting a pin on—and they'd tell you how much you picked up. And I never did hear of anybody that had where you get overexposed. All in all, it was pretty good.

So that had to be a little nerve wracking, I guess, to be one of the first people to go back into the ground zero.

Well, the first ones back in—what they call the regular re-entry crew—they had backpacks, oxygen, regular facemasks. They had everything on. So you can imagine them crawling through those portholes after they opened up, and maybe crawling into water—which happened a lot of times. The man behind you didn't know where you went, you know, but there you were, slashing around in a couple feet of water.

Wow. And now is that something that, you know, I guess just as a miner, you accept a certain amount of risk, but were people a little hesitant to go in and do that, or is that just part of the job?

Well, they had the regular re-entry crews that were trained for that. That's all they did. They'd practice every so often. About once a month, they'd go through their practices. Once in a while we'd get people that had claustrophobia. They'd get on the train going in and you could tell. I was sitting by one girl one night who was going in on swing shift—and she was RADSAFE—and she was lighting one cigarette after another, you know. And man, you could tell there was something wrong. I said, `Oh, we ain't going to get in there far.` So I told that motorman, `When I holler at you, you better go back out.` And then she finally went to pieces—claustrophobia—and they had to get her out of there. Yes, once in a while—I worked with a lot of miners that had claustrophobia.

I imagine that would be a tough place to work if you felt that way.

Yes, that's right.

As far as, you know, was there a lot of turnover for people working there? I mean were there people who just couldn't handle it or didn't want to work there, or were most people—?

No, most of the personnel stayed. Very seldom you'd have anybody quit or discharged. Most of them all hung in there. It was the same group of people most all the time, in each tunnel.

And from one test to the next, would these groups stick together, or you'd have new teams for each test?

Well, they had different people at each tunnel. See, you had G-tunnel there, you had their own personnel, miners, the whole nine yards, electricians, everything. Each tunnel had its own personnel. Once in a while, if they needed help during an event or something, they'd send one

group over to give them a hand or something—you know, if they were shorthanded or getting behind schedule—but very seldom, you know. All in all, it was more or less people stayed on their jobs.

Now, was it common to be like you, where you started off mining and then moved up to being an inspector, with that kind of mobility?

Oh, yes. Yes, that happened quite a bit, you know, if you had the knowledge to do so and they knew you had it. Of course, God, I was mining from the time I was sixteen, so I knew something about it.

And what did you like about being an inspector versus *being a miner, and was there anything that, you know, you didn't like?*

[01:00:00] Well, you didn't have to get all filthy dirty again and all that. You wore your clean clothes and normally you stayed that way. And you know, you got to associate with DOE personnel and REECo management people, and it was actually an upper class [job]. So it made your working day a lot better, although you stayed pretty busy all day, after you did all that walking, and then all those reports—about three hours of reports to write.

Oh wow. Every day?

Yes. Because like I say, everybody got a copy. Our company got a copy, REECo got a copy, DOE got a copy, DNA got a copy, and some of those other companies, if they wanted a copy, got a copy, if they had some of their equipment or something involved. So all in all, it worked out pretty good, being an inspector. And the money was good.

Working on the test site compared to other forms of mining, I mean was that like a prestigious job? Was that something that was desirable? I mean did it pay better than other mining jobs, or was it very similar to working at a different mine?

No, it paid better than most places you went mining. You had better conditions. With your pay, you got subsistence, so much a day. That was to cover your meals and stuff like that. And no, it was actually better than working for just a regular old mining company. And I think they took it more seriously than most of those—just an independent mining company, because they knew what they had to do and how much time they had to do it in.

Were there a lot of people who came kind of back and forth from other mining companies, or was it pretty much people, once they got in, they—?

Well, we got miners from Arizona, New Mexico, just about everywhere, Colorado, that would go to work out there as a miner. And then like I say, they had to come through their regular labor hall, and when they needed miners, they'd ship them out of there.

And they'd all have to go through the clearance—

They all had to be cleared. When you first hired out, it was just a regular red badge—no clearance at all, see—but you could go to work and they would still check your background. And you had to be out there quite a while before—or like me, I had clearance in the military, but I got my classified clearance real quick. Like I said, they knew more about me than I did myself.

What kinds of things did they ask you about or did they check on? Do you know, or did they just do that kind of behind the scenes?

No, you were questioned. They had their own line of questioning.

About like past work histories and have you been arrested, that sort of thing?

Yes. Oh, you had to have everything down on that form. God, it was about four or five pages. All your mining experience, where you been, where you were born and raised. And then the FBI checked it all out.

Now, how long did it take? You said yours was pretty quick, but was it weeks or—?

About two months. But it takes them a while to check all that out.

I'll bet, yes. And so in the meantime, could you work?

Oh, yes. You could do your job, and if they found any discrepancy or anything like that, they'd come and get you. There were some of them—I didn't see them, maybe once or twice—come and get somebody that lied on the form or something like that about an arrest history or something like that. Then that was a lie, as far as they were concerned. But you had to report all that. As long as you reported it, they didn't seem to bother you. As long as you were honest. That was the main part of it, you know, being honest with your government.

And so when you started there, it was union, REECo was?

[01:05:00] No, not union. The miners were all hired through the labor union. And when I went to underground mining inspector, we worked through the operator's union. I was union—operators'. That's heavy equipment, whatever, you know. But we were all operators. Which I still carry an operator's card, and I still have their insurance and stuff like that.

Now, you mentioned that the working conditions were pretty good and the wages were good, but were there ever any labor problems?

Oh, yes, there were strikes. Yes, the unions, once in a while during negotiations, if the company wouldn't sit down and negotiate right, we'd walk out. Yes, you're allowed to do that, if they don't want to go to the bargaining table. You know, you got to have a raise once in a while. The same way with the miners. If REECo wouldn't negotiate with them, yes, they had strikes. Although when they went out, most of the time we would support them, you know, as much as we could. But there were never any big fights or anything like that. They were allowed to picket. but there were no big uprisings or anything like that. It was all peaceful.

Was it mostly over just wages, or was it working conditions too?

Mostly wages. The raises, insurance—benefits, in other words—but that's about all. I mean the working conditions, you couldn't ask for much better out there. They were all safety-minded.

As far as benefits, what kind of benefits did they offer through the union or through REECo?

Well, their wages were benefits negotiated for. Their medical and stuff like that was all negotiated. And that's about it. Wages, medical, and what kind of benefits their medical carried, such as glasses, hearing aids if they needed them, and things like that.

And then the housing and the meals and stuff were relatively cheap, right? I think it was subsidized.

Oh, yes.

Did you have to pay for your housing when you lived on the site?

Yes, I think it was, what was that? I think it was seven dollars a week. You had another man in with you. There were four men to a trailer, but you had your shower and bathroom in the center. But I think it was something like around seven bucks. But the meals in the mess hall were real reasonable, three or four dollars for a real good meal.

And did they give you like a per diem*?*

Yes, you got, I think it was—when I first went out there, it was forty-five dollars a week. That covered your meals and your lodging, so that wasn't too bad. Yes, you got—which they called subsistence.

OK. That's kind of nice, it didn't have to come out of your pocket.

Oh, God, I guess, yes. Yes, it made a big difference. So that was put on your regular check each week, see. So they were very fair as far as the money-wise and negotiations and everything like that.

OK, well, this CD is almost done, so maybe we'll take a little break and I can change the disk and we can continue?

OK.

[01:09:30] End Track 2, Disk 1.

[00:00:00] Begin Track 2, Disk 2.

We talked a little bit about the government trying to compensate people who'd gotten sick from radiation or asbestos?

Yes, like I said, that one woman, she was at—Sandie Medina is in charge of working for Boston University and—several years ago, she started working for Boston University. And they're running screenings on the ex-test site workers, which I went through the screening and I think I had a doctor from, oh God, I think he was from Boston University. We're getting them from all them different universities, [University of] San Francisco and—they come up and give them a complete physical. That's, well, your hearing, your lung capacity, and anything else—blood tests and things like that. But what they're mostly interested in is people that got silicosis. Silicosis is from—well, in the old days, miners drilled dry instead of water on their machines. And even with water on your machines, we've had a lot of them out here. It's a rock, a dust, that gets in the lungs, and it's like grit. If you get real bad silicosis, it's actually a death warrant. You're not going to make it too long, as far as your lungs. So what they're doing is they're getting a grant from the government. I think they're getting a $150,000, something like that, a lump sum, and then they're getting medical the rest of their life. So a lot of them have already collected in our group. So that works out pretty good.

And what do you have to do to collect that? Do you have to fill out forms—?

Oh, yes, there are different forms. Kind of your mining histories, where you worked at the test site, what areas. And at one time out there, in a lot of the tests they used asbestos material, and that also goes into the lung area. So there's a lot of them that did that. And like I said, a lot of them have been paid off and they got medical if they want to use it. But like I say, silicosis or lung damage that bad is—you haven't got much chance, we'll put it [that way]. The older you get, the worse it gets. So far, I guess, I been lucky. I worked that many years underground—I do have a little breathing problem, but nothing serious, from, well, you're breathing that diesel smoke and all that underground, and all that contains to your lungs.

Is there anything you can do to prevent that, or is it just—?

Well, yes, in the later years they were using different types of respirators and stuff like that, which worked out pretty good. But in the older days, well, they didn't know what it would do to you. You know, it's just like they didn't know when they started testing what it was going to do. It was all new. At one time, they'd have those shots in the open out there. Some of them were in balloons, some of them were towers—and they'd build little homes and everything, just to see what the test was going to do to it. Did you ever see that movie, Mickey Rooney when he was on the test site?

No, I haven't. What movie is that?

It was Mickey Rooney. I forget what the name of it [was], but it was supposed to have been taken on the test site. He was there in one of them little houses when the event went. And it was silly. I forget what—*Atomic Kid*, I think was the name of the movie. I don't know whether you can ever get it again, but it was crazy. Every time he'd walk down through the casino, the slot machine would pay off.

Well, I wouldn't mind that.

Hell no, me either.

[00:05:00] *I went out to the test site and those houses, a few of them are still there. Incredible.*

Yes, there are still remnants in the—yes.

But that was before you started working there, right? You were only there for the underground testing?

Yes. But at that time, they'd use the military dug in, in trenches, oh, quite a ways away. But all they give them was a pair of dark glasses. They didn't know. They just don't look. Because they didn't know exactly how things were going to go. But evidently nobody really got seriously hurt or burned or anything like that. Like I say, the Army's pigeons, you know, why not use them?

Yes, and I believe they also have a similar compensation program too, as the miners. I'm not too familiar with it. But I'm curious, it seems like that might be somewhat controversial, you know, trying to—I imagine maybe somewhere along the line there's a lawsuit or that sort of thing, but as far as trying to get this $150,000, I mean what's the attitude towards people who—your co-workers?

Well, if the doctor diagnoses you with some of that, so far they've been good. It takes them a while. Anytime the government owes you something, it's going to take a while to get it. Just like pulling teeth. But most of them, it took a while, but they got it. But there are forms for everybody to fill out, and there are quite a few questions. I don't know whether I got one or not [looking for form]. Yes, take one of those [handing forms to interviewer]. That's the whole packet. So you might want to go through it, read it, and see what type of stuff they want to go—and you met Joe [Krachenfels] there. He's in charge of that office [DOE/Dept. of Justice Energy Employees Compensation Resource Center] down on Flamingo. That's where this is all taking place. And you met Joe, the big guy?

OK, yes, yes.

But that's his card there. If you ever want to talk to somebody about some of that, just give him a call. He'd be glad to answer any of your questions. But those are the forms, and I usually carry some and if somebody hasn't filled one out, why, I make sure they get a packet. But I think that's what they're getting, $150,000 plus medical, unless it's been raised. I don't think it has.

Yes, I think $150,000 was the number that I had heard.

I think that's what it is. Of course, that's a pretty good paycheck.

Well, I can see here, there's a lot of paperwork to go through and—

Well, the girls down there too help anybody that—they'll help you fill them out and everything else. They're real convenient helping. So that's about that part of it.

Do you know how this whole process started? Was that a union idea or was it that when people get sick and go forward—?

Well, there were a lot of lawsuits started first out there. Some of the husbands and the wives, after they died of cancer and this and that, filed lawsuits. So then the government came up with, if you had 2 percent, I think it was 2 percent, silicosis—or they called it 2 percent of something—then you were eligible to get that money. So we bitched about that and we got people—Senator Reid got it down to 1 percent—so that put a lot of guys in the paycheck. So Senator Reid has done a lot of good for us. He comes to a meeting once in a while.

Oh, really?

Yes. His father and his family partly was all miners. So he comes in the fields and works with the miners.

Now, is there anybody, you know, when these people started going forward, did anybody kind of have resentment towards them for going forward or—?

Oh, no.

Is that seen as being disloyal at all?

No.

Or were people more excited just to finally get some help and—?

[00:10:00] Well, they were glad somebody was going to help them finally, you know, after that many years. We had several out there die before anything ever was started, you know, lung damage, cancer, hearing. See, the government, if you fill out a deal now for hearing even. That Don Slagle I was telling you about, he got compensated for hearing, got new hearing aids and a lump sum. I don't know how much it was. He got something. So now they're starting to listen. Well, I think they should because we done our share out there for the people. It wasn't just for us. We made a living, but yet we were doing it for the country. It's just like if you're in the military, you're doing it for your country. You do your job. And that's what we did out there.

Now, how common is it for the people that you worked with, is it overwhelmingly common that people are getting these illnesses, or is it just—?

Oh, yes. Well, yes, there are a lot of them with lung problems. Yes. Anytime you worked underground for so many years, you're going to have some kind of damage. And then like I say, it's dust, diesel smoke, and when we were using dynamite and blasting, powder smoke—so it's a combination of a lot of things that cause lung damage or cancer. It's not due to actually radiation. A lot of it could be. They haven't proved whether it was or it wasn't, but it's possible.

Yes. I think that's one of the difficulties, is that it's hard to prove how you got these illnesses but—

That's right. But if a doctor diagnoses you with something and you worked out at the test site, normally you start the process. That's your first process. And then you go from there. And if

your lungs are in pretty bad shape, why, normally you're going to get your money. So it works out pretty good, you know, for the guys that do need it. Yes, we've got quite a few that comes to the breakfasts that's already gotten it.

That has to be tough, to get to the point where people are getting sick and you know that it's the aftermath of all that work you did.

Yes, we had Channel 8 [Las Vegas television station KLAS] down there one time. Senator Reid was there. We had Channel 8. Well, they look at all them poor old guys and that gal said, when she comes in, `Boy, I can't believe it. You're all ex-test site people.` And I said, `There's a lot of us that ain't here.` Of course anytime Senator Reid shows up, there's always a media, you know. We had that place packed that day. Here comes those guys with their oxygen tanks and they were getting their pictures, you know. They had it on television later.

Was that recently or—?

No, it's been three or four months ago.

OK. Now, what kind of guests and speakers have you had? You mentioned Senator Reid.

Well, we've had some of the doctors from Boston University, some doctors from USC [University of Southern California], some from UCLA [University of California, Los Angeles]. We've had them from all over.

That's interesting. I imagine that a group of that size has all sorts of contacts and people that they run into, and then people like us from UNLV who are interested in—

Well, we're getting more people that's interested in what we been doing, you know. Well, that's good. We can share our experiences with somebody else, because we been through it, that's for sure.

Well, you all have so many great stories. It's very interesting to see, you know, from so many different perspectives. Now, have you been back to the test site at all since you stopped working or—?

No. No, I sure haven't.

Do you keep up with—apart from keeping in touch with people at the breakfasts and everything, but do you keep up with the news from—?

[00:15:00] Oh, yes. I still got some friends that's working out there, you know. We talk once in a while. There's not really too much going on now. Very little. Oh, some real small what they call HE [high-explosive] shots. It didn't amount to nothing. Yes, that's all. They're not doing much. Eventually, I really look for them to go to testing again. I really do. I mean I think it's going to come the time when they're going to have to. Because a lot of our inventory now is, we'll say, obsolete. They're going to have to get newer stuff.

Exactly. And the way—

Well, you saw that when they invaded Kuwait, those smart bombs and all that. Well, that's kind of rough, isn't it, to be sitting there and bomb come down the smokestack. Oh, they've got things people would never guess. Oh, yes.

And the way things are going nowadays, I think it's moving more and more towards that direction, where they will *need to start testing again.*

I think they will eventually. Well, it would be good for a lot of people to go to work.

That's right. But REECo, now Reynolds, they are no longer—they were bought out, right?

Yes. Raytheon bought them out, and then, well, Bechtel is in charge out there now. Bechtel Construction Company. They bought out Raytheon's contract out there. So Bechtel is the main contractor now. In fact, when they took over—I don't know how many telephone calls I got—

they wanted me to go back out as underground mining inspector. I said, No, sir. I said, I'm retired and I'm enjoying it and I don't want no more. [They said] Well, think it over. Offered me a real good position.

I'll bet it's hard to find people with your experience, you know, because it's such a select few people who—

That's right. There aren't many left.

That's interesting.

But they're the ones that got the contract out there now, Bechtel. They're actually a big construction company, because I worked for them in Colorado at one time, so they got contracts all over. They're a big company.

Now, you worked for Raytheon after you worked for REECo, is that right?

Oh, yes, I worked for REECo, then Fenix and Scisson, and then Raytheon, and retired out of Raytheon.

Was that also at the test site or—?

Oh, yes. Yes. All three companies. Yes, I was an old figurehead there.

Well, that's interesting, how many companies there actually were contracting out there.

Well, and then you had H and N—Holmes and Narver—you had a lot of different companies working out there. Lot of different companies.

Now, what did Raytheon do? Were they working on a lot of the same projects as REECo?

Well, it was the same as they were doing, yes, we were covering the same as I was for the other company. Raytheon, all they really want is government contracts. See, they're in the atoll islands, they're all over. See, Raytheon's the one that invented the Patriot missile. And when they sent it over to Kuwait, when they were using SCUD missiles, why, they—[phone rings]

[00:19:25] End Track 2, Disk 2.

[00:00:00] Begin Track 3, Disk 2.

OK, well, we were talking a little bit about Raytheon and some of the other contractors, but I was sort of getting to there is, I'm curious because you were at the test site, when, from 1964 to—

Well, 1964 to 1992.

To 1992. OK. And then you worked for REECo and Raytheon and Fenix and Scisson. So I'm just curious how the test site changed from when you started to 1992 when you left.

Well, a lot of the procedures, you know, change through the years, but other than the mining and all that, why, it was pretty much the same. I mean they used the same equipment and things like that, other than in the later years we got that mole, continuous miner, and other than that the mining was all pretty much done the same way.

And did you do more tests or fewer tests as—?

Well, we were doing quite a few more from the time I started. I mean it was pretty steady. But like I said, for one of those events, it'd take several years sometimes to get it all down.

A lot of work.

Oh, yes.

I don't know if you kept track, but how many tests do you think you worked on over the course of the time?

Oh, God, seven or eight, I imagine. Maybe more. Quite a few.

OK, and as far as, you know, when you retired and they're calling you to offer you another job, what do you think about sort of the newer generation of people working at the test site, going in?

Well, they more or less have to pick it up, what the procedures are and things like that, which all of us guys that are retired already knew all that. But I imagine they'd get along.

I imagine it's a little different now because you did everything in this context of the Cold War and you know—

Well, a lot of the same miners when I retired are still out there, so you know that helped them quite a bit. But as far as inspectors and stuff like that, there weren't many left, you know, from the old bunch.

I'll bet you guys are in demand, you know, with all the experience you had.

Yes. Just like a couple of those guys were safety engineers—that were there at the breakfast—and they'd make their tours, oh, maybe once a month or so, you know, underground, and write down anything *they* thought was unsafe. Which our company—my job was also to do the same thing. If something was unsafe, it'd have to be reported. But normally, it was all done real good out there. I think in all the time I worked out there mining, I think we had one death, and that was from a rock fall, but those things happen. They got a pretty good track record out there.

I'll bet, for all those tests, just to have one.

That's right, and all the mining they did, so I'd say they got a good track record.

Well, and that's interesting to hear you say that because when I first thought about mining at the test site—and of course I didn't know very much, hardly anything, about it—because I just thought how incredibly dangerous it must be. But it's interesting to hear you say that it's actually maybe even safer than a coal mine somewhere else.

Well, I felt just as safe as I do sitting here, you know. And I worked in almost every tunnel out there, almost every shaft, drill holes. I tried it all. But as far as safety, I mean they had a good safety program. And they had people to take care of that. And just like underground, we had

good ventilation, good air. Sometimes it got too cold. In the wintertime, you'd want to wear a jacket underground.

[00:05:00] *It's hard to believe it would ever get cold out there, based on how hot it gets in the summer, but you know underground is a different story.*

It would get pretty chilly in some of those places. But you got those big fans up on the mesa there blowing air, so you got plenty of air.

OK, well, just overall, what would you have to say, looking back in your experience, what stands out as the most significant memories, or if you have anything else you wanted to add before we wrap it up here?

Well, I don't know. I think just the people I worked with. I mean still we're all friends. We all had a lot of experience. And I think when I left there, I missed them people—the guys I worked with—more than anything, you know. And then we got this deal started for breakfast once a month and, you know, it's always good to see the guys. And then a lot of them have different news and different things. A lot of the guys have moved to Utah and Colorado, and a lot of them went back to New Mexico. We had people from all over. And I think that's it. I missed the personnel more than anything.

Yes, I think that says a lot, that you still keep in touch with people even as they move away. That must have meant a lot.

Well, yes. Right. Yes, we got addresses, phone numbers of people that moved to Utah and some New Mexico, and we still know where they're at. And once in a while, they get to town, they'll make it a point to get to the breakfast. And a lot them are still being called for that screening for Boston University, so a lot of them will come for that. And sometimes we all get together.

Was that done here in Las Vegas or was that done in Boston?

The screening? It was, yes, down on Charleston there for a while. I don't know where the office is now. They were using that Quick Care down here by the university, but I think they closed that up, so they opened a new office somewhere. I forgot to ask Sandie [Medina] where they opened the new office. But they're still doing a lot of screening, so hopefully we'll get a bunch more paid. That's what our goal is, helping those guys.

Exactly. Yes, making sure everybody knows about it.

Yes. Yes, the word's out, you know, and we'll see what happens. That's about it.

OK, well, thanks a lot for taking the time and—

Well, it's my pleasure, Robert, and anytime we can help you people, why, feel free to come to the breakfast or give us a call.

Great. I appreciate it.

OK, Robert.

[00:08:20] End Track 3, Disk 2.

[End of interview]