

CLARK MARTINEZ
Oral History Interview

Statewide Oral History Project, Abandoned Mine Reclamation Program
Utah Division of Oil, Gas and Mining

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This is Lee Bennett and I'm here this evening at the Comfort Inn in Green River, Utah to interview Clark Martinez. The interview is being recorded by Jim Mattingly.

LB: To get started, would you give me your name, your date of birth, and where you now live?

CM: Vincent Clark Martinez; I go by Clark. I was born on August 26, 1958 in Park City, Utah. I now live in Kamas, Utah. I've lived in Summit County my whole life.

LB: How old were you when started mining?

CM: It was directly out of high school; I was 17 when I went to work at the mine [1976]. I had to stay working on the surface until I turned 18 in August, and then I went underground.

LB: Which mine was that?

CM: The Ontario Mine in Park City, Utah.¹

LB: What was the mineral you were going after?

CM: They were mostly mining silver and lead and zinc. It was for the Park City Ventures, at the time. They were the mine operators.²

LB: How come you had to stay on the surface until you turned 18?

¹ The mine is located in Ontario Canyon south of Park City and was discovered in 1872 and sold to George Hearst, father of William Randolph Hearst. With Hearst's money the mine was extensively developed and a mill erected, and by 1876 the Ontario was the largest annual producer in Utah Territory (John Boutwell, Geology and Ore Deposits of the Park City District, Utah, US Geological Survey Professional Paper 77, 1912).

² Park City Ventures, organized in 1970 by the Anaconda Company and ASARCO, ceased operations in 1978; the Ontario Mine was operated between 1979-1982 by Noranda Mining Company ("United Park City Mines Company," UtahRails.net).

CM: It's an MSHA law;³ you can't go underground until you're 18. I happened to graduate when I was 17, so I worked on the surface until I turned 18.

LB: What did you do?

CM: Worked in the machine shop, worked with the mechanics, whatever; I was a laborer on the surface.

LB: When you turned 18 you could go underground. Did they give you any training?

CM: You know, when I went underground it came up for bid. They were looking for underground laborers, so I bid on it and I got the job. I was underground for about a month and then I took an underground mining training. It entailed me and another guy with an old guy from Heber, and we spent three months with him running drifts, running raises. Pretty much learned how to drill, blast rock, do all the aspects of mining with this one guy that taught us how.

LB: How long had he been mining?

CM: He was old then, so probably his whole life. Rudy Thompson was the guy's name; he was from Heber.⁴ He had been mining his whole life and he'd just take green guys and you'd go through an underground mining school type thing. That's how I learned how to do it.

LB: What is a drift?

CM: A drift is a tunnel underground. The tunnel itself is called the drift. A raise, that's a part underground that goes straight up above the tunnel or the drift.

LB: How long did you stay at that job or that mine?

CM: That was 1976; I think until 1979. Then the mine shut down and I went to school but a year later the mine started back up so I went back to the mine. I was a fourth generation miner and would have been content to do it the rest of my life.

LB: Were all of your ancestors Utah miners?

CM: Yes, they were. They were all Utah miners.

LB: All of them in the Park City area?

³ Mine Safety and Health Administration, an enforcement agency within the US Dept of Labor, was created by the Federal Mine Safety and Health Act of 1977 (msha.gov).

⁴ Rudy Thompson would have been about 50 years old at the time; he died in Idaho in 2008 and is buried in the Heber City Cemetery (Findagrave.com).

CM: You know, my grandpa on my mother's side came from Ferron, Utah. He was a coal miner but somehow ended up in Park City. On my father's side, I think my great grandpa came directly from Spain and mined in Park City.

LB: When you were in high school did you just kind of automatically think you were going to be a miner?

CM: Not really. I came from a big Mormon family; I had eight siblings. I thought I might go to college, but I was kind of in the middle. My older sister and older brother were already in college, so I went to the mine. It seemed natural, it seemed like I went to work in the mine and it was almost like I already knew how to do it. I'm sure it's in my blood [laughs].

LB: Was there a lot of mining talk around the dining table?

CM: Quite a bit. It was not profound, it doesn't stick out in my memory. I think my Dad talked about the mine quite a bit.

LB: He was in the same mine?

CM: Well yes, kind of. All the mines merged. He worked in the Judge; when he was younger he worked at Hecla, the Silver King, all separate mines. By the time I was there, they kind of all merged into one. They later became the United Park City Mine, all of them.⁵

LB: So did they merge in terms of ownership or did they actually merge underground?

CM: No, they merged in ownership. No matter where you were in Thaynes Canyon, Ontario Canyon, all the mines were owned by the same company.

LB: But they were owned separately when you started?

CM: No, when I started they were owned together. But prior to that they were owned separately. At least to my knowledge.

LB: You started in the Ontario and then after about 2 or 3 years they closed the mine down for a period. And then they opened it up again and you went back to the Ontario?

CM: Yes. I actually quit school and went to work at what they called Keetley. Since I'd been to school and I'd taken building construction, I had learned carpentry, and so they hired me back as a carpenter/timberman from outside Keetley.

⁵ United Park City Mines Company was formed in 1953 by the consolidation of the Silver King Coalition Mines Company and Park Utah Consolidated Mines Company. Controlling interest at the time was shared by Anaconda and American Smelting, Refining & Mining Company. In June 1957 UPCM merged with the older Daly Mining Company ("United Park City Mines Company," UtahRails.net).

LB: How do you spell that?

CM: K E E T L E Y. It used to be a town that's now underwater from the Jordanelle Dam. You used to take Highway 40 and you'd come to a little town called Keetley.⁶ Keetley is still there; the tunnel is still there, maintained by Jordanelle Special Service District.

LB: As a carpenter/timberman in the mine, what did you do?

CM: I mostly took orders and cut 8x8s and lagging. I'd load trains so the train was ready to go back in for the graveyard crew. Mostly supplied the mine with timbers, and took care of the outside homes that were there.

LB: Did you have to do any of the shoring in the mine?

CM: When I was mining, yes, I did a lot of shoring. Not when I came back after school, no, but prior to that I'd done a lot. I put timbers in, I put rail in, we'd drill and blast and run raises, stand 8x8s and build chutes. You do a lot of timber when you're mining. You're actually going straight up into a body of ore and so you have to build these timber sets and chutes. Then when you get to the body of ore you blast it all into this chute and a train can pull under there. Then you have a hydraulic door that fills each car. The logic of mining, is you have these big bodies of ore and you run the tunnel underneath them and you run a raise up to them, and you mine it all out. That's how you get it in the train underground.

LB: Were the timbers of a specific length or were they random? Did you cut them to fit?

CM: They were 8x8 timbers that were random lengths, whatever you needed. You had to cut them by hand to fit.

LB: Where did all that wood come from?

CM: I think mostly the mountains around Kamas. We used to get it from Sargent Lumber out of Kamas. That's where most of it came from, local lumber yards.

⁶ John (Jack) Keetley, a native of Kansas and one-time Pony Express rider, engineered the Ontario Mine drain tunnels and the town was named after him. After mining in the area closed down, Keetley became "just a mining shaft at the mouth of a drain tunnel." During World War II a group of Japanese farmers from California relocated to Keetley and established a non-profit cooperative farm to provide food for the American war effort. In 1987 the town and mining area were documented by the Historic American Engineering Record UT-47; results can be viewed at lcwebs.loc.gov. By 1995 the town was inundated by the Jordanelle Reservoir (Marilyn White, "Keetley, Utah: The Birth and Death of a Small Town," Utah Historical Quarterly Vol 62, 1994; Jeffrey Nichols, "The Japanese Agricultural Colony at Keetley, Wasatch County," History Blazer, June 1995).

LB: Were the timbers fastened with nails, lag screws?

CM: Everything was wedged [against] the solid rock. You'd cut a timber and you'd stick wedges in it and wedge everything, also wedge everything down. Not a lot of nailing, mostly wedging, and just stacking the lagging up the sides of the timbers.

LB: And the purpose of that timber was to do what?

CM: To create a chute and a man-way to get to the body of ore, and to create a way for that ore to get into the mine cars. I used to get on the cage at 7:15 every morning, we'd go down 2,200 feet, and there we'd get on a train and travel for 20 minutes, maybe 12-14 guys. There'd be what they call a doghouse, and that's just a timbered-in area with a heater where the boss would do his paperwork and everybody would go prior to going to their different work areas. Usually 2-man teams.

LB: How long did you stay underground?

CM: Everybody had to light their fuses by 3 pm, so if you were in there and you were drilling your round and you had all your dynamite loaded, you had to be ready by 3 pm. That's when everybody did what they called spit. That's where you light your rounds and head out to the shaft. Coming out of the mine you could hear explosions, random booms; it never was scary. But you could hear everybody's rounds going off. Now, if you had problems that day and you didn't get your round off and you didn't get your work done and you couldn't blast, you have a crew that came in after you. But if you don't blast they had nothing to do. I was just a little guy and I know I used to have to work extremely hard, but there's a pride in that.

LB: How long did you stay in the job as a timberman?

CM: Not very long, probably two years, and then the mine shut down. Noranda bought it, out of Canada. Personally, I think they ruined it. Ever since it was started they had these old methods of doing it, little tunnels and little trains. They [Noranda] wanted to get all this big equipment in there so they spent millions making the shaft bigger to get all this modern equipment down there. I think it just cost them too much and they shut it down. That was the last time it was ever really mined. They did start a Park City silver mine tour at one time, where they took the public down to the 1500 [foot level] and showed them the underground machine shop.⁷ It was a tourist attraction; I think it only lasted a few years and stopped also.

⁷ *The Denver Post* noted that in less than a year of operation, the tour of the Ontario Mine had attracted almost 100,000 visitors. Tours began in the summer of 1996. Riding a 4-story elevator to the 1500-foot level, visitors descended "through a moist, dark shaft" where water steadily dripped. At the 1500 level, visitors got on a train and rode 3200 feet into the mine through a pitch-black tunnel. One stop was the Keetley Drain Tunnel, where visitors saw a pin-point of light at the open end of the drain, a distance of three miles. Then the train stopped at the compressor room where visitors saw an air compressor with an 8-ft flywheel that veteran miner Richard Martinez managed to move into the mine through passages as

LB: What year was it when they closed down and you left the Ontario?

CM: I was in done in the Ontario in 1979, but I was done at Keetley in 1982.

LB: When the Ontario closed down what did you do then?

CM: Do you mean when Noranda shut down? When Keetley shut down? I'd gone to school and I'd taken building construction just because this one school offered it to me; it was a government program because the mine had shut down. I didn't really know what to do so I thought, "Well, I'll go learn how to build a house." At least I'll know how to build a house. I had learned how to build a house and I went and got a contractor's license when Noranda shut down. I was going to start building homes. Some guy hired me then, he wanted to use my license, but he had what they called an engineering license to do dirt work, trackhoes and dump trucks and backhoes. So I worked for him for four years and learned how to do all that. One year we got a job reclaiming a mine in Coalville. I was the superintendent on that job and that's when I decided, "Well, I'm going to make this my career." Since that time, since 1985, I've been closing abandoned mines throughout the state.

LB: Did you ever go back to mining?

CM: Nope. Never been back to mining, but I'd like to. I'd like to drill one more round, blast it, before I die. I probably won't, but it would be fun to do!

LB: Tell me how that drilling process works. What kind of equipment did you use? Was there a particular pattern to the holes?

CM: You have what's called a jackleg drill; it has water going through it so you're not breathing dust all day. It's got a hydraulic ram on a leg. It would take about 32 holes. You drill one hole right in the center and then in a series you make holes around that center hole. We used to drill 32 holes, 6 foot deep generally. It would take about a case and a half of dynamite. You put dynamite in all the holes except that center one. Then you set these charges off. If you set them off wrong you'd just end up with bigger holes. What you had to do was blast the ones around the center first, and then the next ones. Fuses were the same length so the first ones lit would be the first ones to shoot. But there is a pattern to it.

LB: So the center hole actually provided the relief for the rock blast?

narrow as 5 feet. As the visitors waited for the elevator to return them to the surface, they were entertained by veteran miners who shared ghost stories (Claire Walter, "Park City mine tour delves into boomtown's beginnings," *The Denver Post* Online Guide to Recreation, undated, viewed at extras.denverpost.com; "Silver Lining: Park City Firm Turns Unprofitable Mine into Tourist Attraction," *Deseret News* 9 Jun 1996).

CM: Right. Everything slabs to the center. These four holes around the center one, it is milliseconds. So it goes, bluh, bluh, bluh, bluh. If you wire that wrong, like I say, you're just going to end up with bigger holes. Everybody asks me all the time, "When you close abandoned mines do you go in there and put a case of dynamite in?" It would never work! It would be more like a rifle; you'd actually clean it out. Very seldom have we ever blasted a mine shut.

LB: Did you have to do any handwork?

CM: Quite a bit, a lot of shoveling. They still had the old EIMCO 12B mucking machines⁸ when I worked there. It was just a scoop with two handles, forward and backward, and you could load cars with them pretty good, but you still had to shovel the sides. There was a lot of hand shoveling.

LB: How big a face was it? What were the dimensions?

CM: It was always different. If you were doing a raise it could be 20 ft wide by 8 ft wide; it's a three-compartment raise. If you're going straight up, drilling, sometimes it is a huge blast. But generally the face was maybe 8 feet wide, 8 feet tall at the most.

LB: The cords that you used to set the charges off, were those strung back to a switch someplace where you were away from the face?

CM: Some people liked that, but I lighted it with a match. Every fuse is the same length, it has a little metal clip on it and then it has a primer on it. You take a stick of dynamite and poke a hole in the end of it and you stick this blasting cap in the end of the dynamite, put it in the hole [in the face] with a wooden stick, and then you'd fill it with dynamite, each hole. You'd have all these fuses sticking out of every hole you'd drilled. So then you take what they call spitter cord; it's another cord that, depending on how you hook them [fuses] on, is how the blast would happen. Then you'd light that with a match. It would just pssst and then each one would get going and you'd stay there and watch until they were all going, and then you'd get out of there.

LB: As in run like hell?

CM: No, you had time. You know, I did have an uncle that got blasted and killed. The blast didn't go off for some reason, I don't remember the exact story, but it didn't go off and he went back to see why. It went off. I think that's the story my dad used to say. I would never go check if they went off, I don't think.

⁸ EIMCO = Eastern Iron Metals Company, sold in 1980 to Sandvik Group of Sweden who market loaders under the name Tamrock. EIMCO introduced the Model 12B rail-mounted compressed-air rocker-shovel in 1938. The bucket held 4-6 cubic feet and was capable of removing 30 cubic feet per minute ("EIMCO Rocker Shovel Loader, Model 12B," Landmarks Program #212, American Society of Mining Engineers at asme.org).

LB: How do you work a raise?

CM: Same thing, you drill holes up. The same thing, you blast everything to a reliever hole, and you'd shoot six feet out and then you'd come and stand all the timbers and build a deck. You'd make a chute so when you got up to that body of ore you could blast it and you could run a slushing machine and pull all the stuff into the chute so the cars could go underneath it. It was a lot harder running a raise than a drift; drifts you'd continue forward and you'd put rail down. If it was bad ground you'd timber it. But very seldom did you need to timber; when you get that deep in the earth it's solid rock. It's not like stuff is caving in all the time, it is not timbered everywhere. It is more like a solid hole through a rock.

LB: So the EIMCO machines were track mounted?

CM: Yes, they were track mounted. You'd slide two rails as you go until the whole length was to the end of the next rail, and then you'd put ties in. They ran on tracks.

LB: How big were the chutes?

CM: I think they were, maybe, three-foot wide at the bottom, but the chutes would be 8 ft x 8 ft, like a hollow shot that you could fill with the ore and the waste rock. Sometimes you'd have waste rock. Sometimes, if the mine got busy or they had trouble with the motors,⁹ your chute would be full and you couldn't really do any work. They had to pull your chute or you were muck-bound. A lot of it depended on the Motorman that ran the train in and out. The productivity of the mine was based on that.

LB: Were the EIMCO the kind where the operator stood to the side or was he actually in it?

CM: No, he stood to the side of it. I did some work in the old Daly West Mine once, I was on the 1200 [foot level], and they ran those tunnels without an EIMCO machine. So there were times you had to run them with a stick, like take some [dynamite] loading sticks and tie with wires, because you couldn't fit between the timbers and the machine to run it. That was Noranda; they were always trying to modernize something that can't be modernized. At least I don't think so. Now, the mines are done pretty much for good in Park City. Kind of a sad thing.

LB: That far underground, how did you get air down?

CM: They had big fans that blew air in from Keetley. Somehow they had a circulation system. I never thought "Oh, there's no air." People smoked under there; I never had a problem with it. One of the ways they warn miners underground is they had what they called a stench bomb. Once a year or so they'd have a practice, everybody has to get out of the mine. They'd break the stench bomb in the fan and that smell would go through the mine and that meant to get out of

⁹ Engines that powered the underground trains.

there. There was a lot of water, you'd go down 2,200 feet and at 1,500 feet you'd start getting water off every level. So as you go down the shaft about every 100 feet there was a light and a mine level, so pretty soon water is running off every level. When you are at 2,200 feet it is like you walk through this wall of water, and then you're in the tunnel where it's dry. Sometimes I thought, "Boy if the pumps went off you might be in trouble." I don't know, I guess that is when they'd better get the stink bomb in the thing!

LB: What did you do to illuminate the working area?

CM: We had cap lamps. It is a light and a battery and everybody wore one underground. You got pretty used to them. I used to catch myself at home looking at things like my light is still on. I think I've gotten away from that!

LB: Tell me what a typical day was like.

CM: You'd show up at the change room at a quarter to seven, change your clothes and put on your rubber suit, get your light and get your tag. Go get on the cage; they'd lower 12 or 24 people at a time, 12 guys on one level of the cage and 12 on the other, and they'd lower you down to what level you were working on. Generally you'd get on a train there and go for another 20-30 minutes to a doghouse. There was actually an underground machine shop on the 1500-foot level where they'd build; they had a lathe, they had welders, and it was all wood sides--you wouldn't even know you were underground if you didn't know. You'd get to your work area, get to the doghouse. It took a lot of time and if you were a miner you were pressed for time. So you didn't dally much. You get to the doghouse, leave your lunch, go to your work area. You had to clean up the mess the last crew left, so they'd just blasted it at 3 and then the afternoon shift would come at 5, so they always had two shifts. But you have to clean their mess up and then drill your own and blast. A lot of times you worked hard for that little bit of time. I missed a lot of lunches. If you don't blast, the crew that comes in behind you has nothing to do, so pretty soon if you're not performing you get stuck as a motorman; if you want to be a miner you had to work hard.

LB: Usually, you said, a two person crew?

CM: Two persons, yes.

LB: What would one person do and what would the second person do?

CM: Depended. If you were in a stope, one person would be slushing. The crew before you had blasted down this ore, the silver and the lead, and you had a little two-drum machine with cables on it and a bucket. You'd hook the cables up there and you'd just sit and the bucket would go back and then drag some muck and drops it down the chute. So one guy would start cleaning that up while the other guy started drilling, or timbering. The big heavy 8x8s always took two to lift the caps up or to lift the posts up. It seemed like both men stayed pretty busy. A lot of times

when you drill, I'd always start with a 2-foot drill steel [gestures] and drill all my holes two feet [deep], then I'd take a 6-foot steel and drill into all the holes again. But some guys would use a two-man system and they'd start with a 6-foot and one guy would collar it for him [gestures]. Once it is in so far he can do it himself and the other guy would stay there and move the end of the bit. Most of the time, I think, one guy would drill and the other would do whatever had to be done.

LB: What's on the end of the bit that is hard enough to cut rock?

CM: It's a carbide tip, kind of a diamond-looking bit on the end of the steel. It is a hollow steel so water comes out as you're drilling. Occasionally you'd be drilling and you'd hit water, so you'd pull [the steel] out and all the water would fly right back at you, like natural water in a mine. I used to hate working in the wet places because it was cold and wet.

LB: Did those suits keep you dry?

CM: Yes, they did pretty good. I stayed dry. But I know if you sat around you'd get cold, but if you stayed busy it was [ok].

LB: When your shift was done underground, that was what, eight hours?

CM: Yes, eight hours.

LB: And you'd have to return on the train and the cage?

CM: Yes, everybody would wait for the cage. Everybody had to blast at 3 o'clock and that's when everybody would head back out to the shaft to catch the cage and go out. There is a period of time in the mine where the smoke from everybody blasting has to be ventilated out. So usually shift-change, by the time the next crew came the smoke was out.

LB: Where did they put the waste rock?

CM: Most of it went out. Most of it went out the shaft and they dumped it over the dump. One thing interesting, though, they would fill everything back in with sand. So they had a sand crew. The mill where they were milling the ore would generate sand, and they'd pump it back down into the mine. When you were in a body of ore you'd mine six feet out of the bottom of it; it could be as big as this room [about 8x15 ft], a body of ore, maybe 30 ft high. You'd take six feet out and then they'd fill that with sand. So then the next level you'd take six more feet out, and shoot everything down onto the sand. By the time they were done with a body of ore they'd filled the hole back up with sand from the mill. You didn't know that did you?

LB: I didn't know that [laughter]. How far away was the mill?

CM: Clear up on the surface. They had these two-inch steel lines that were run all through the mine and a sand crew that would come and build bulkheads and take these big hoses and run them up in there and fill them with sand. Usually, if you were a miner, while they were sanding your stope you'd be somewhere else repairing timber, repairing rail, somewhere else doing other stuff. It was good to be a miner as opposed to a motorman or a laborer, or a guy on the sand crew.

LB: How did they handle the ore once it came out of the working face?

CM: You know the ore would drop out of the chute, they'd fill up cars on a train, the guy would take it out to the shaft. The cage would be there [with] the bucket that hauls it outside. As that train goes by they had a camelsback, each car would dump right into the shaft [gestures], but also right into the skip. So the same hoist you go down on in the morning, they'd switch out the buckets so they could haul it all up. It dumps it on the surface onto some belt that would take it right into the mill.

LB: Who was the customer for the ore, do you know?

CM: I have no idea. I don't know who bought it.

LB: When you were not mining and you had some time off, did you spend that time with your fellow miners?

CM: Generally not. Mostly with my wife and my own family. I got married when I was 20. Mostly my high school buddies. My fellow miner was from Heber; I was from Park City and I was still young and hanging out with my high school friends.

LB: You were living in Park City at the time?

CM: Yes. I was in Park City until 1980 and then moved to Kamas.

LB: What was it like in Park City then?

CM: Great town, you know. When we were kids there, the resort had just started; it was like we had our own little private ski resort. The world hadn't found out about Park City.¹⁰ There were abandoned houses everywhere. Pretty small; the year I graduated, 1976, I think there were 24 graduating seniors. The whole school, 7th through 12th, might have been 110 kids. You pretty much knew everybody, everybody knew everybody. It was not the town it is now, I tell you! My

¹⁰ Locals rode a mine train up Thaynes Canyon in the 1920s to ski back to town. In 1946 the first ski lift was installed at Snow Park and in 1958 the United Park City Mining Company undertook a study that resulted in the first ski resort, Treasure Mountain--now called Park City Mountain Resort. Park West Ski Area opened in 1968 and in 1981 the Snow Park area became Deer Valley (oldtownguesthouse.com).

dad still lives there, he was raised in the canyon at the head of Main Street if you keep going, that's the canyon. He lived there when he was a kid and he still lives there today.

LB: Does he live in his parents' house?

CM: He moved into his grandpa's house, not his parents'. I can remember he told me, "You know all this money you're making up here at the mine? We ought to buy some ground." He was on the City Council and he knew all this. But when you're 19 and making a lot of money, that's the last thing you're going to buy. Wish I would have! Although I probably would have sold it in 1980, so it wouldn't matter [laughs].

LB: Sometimes kids are too impatient.

CM: They are impatient.

LB: Was there any folklore, any stories you were aware of about strange happenings underground?

CM: You know, not a lot. You hear a little bit about tommy knockers, but I never experienced anything abnormal underground.

LB: What was your favorite thing underground?

CM: I don't know. I think the smell of the mine. I like the smell of the mine. To this day, closing an abandoned mine, when I walk up to a mine it is just kind of a musky smell; it smells like Park City. I don't know what my favorite thing underground was.

LB: What was the worst job as a miner?

CM: I think the worst job as a miner was sanitary engineer. You can use your imagination about what that is [laughter]. Working in the mill was kind of bad, too.

LB: Did you do that, too?

CM: When I was on the surface right out of high school sometimes they'd send us to the mill. It just had all these chemicals, the smell; working in the mill there was always stuff falling off the belt and that was the main job that they needed laborers to clean up. It wasn't a very good job.

LB: Did you have any scary experiences?

CM: No, I don't think so. Nothing too scary. A couple of guys died while I worked there, which really makes you think. When the train would come, you had to kind of find a spot to back up against the wall to let the train go by. This one guy, his name was Joel, he turned his head or

something and his light cord went out [gestures] and the train hooked his light cord and drug him underneath the mine car. That was one fatality; I wasn't there when it happened but it made you really think something could happen. Another guy, he drove the train, and these chutes stick down in the tunnel; you pull the car under them and the dirt comes out and fills the car up. Well, he was driving out one day running the train and one of these chutes smashed his head against the motor that he was running. Pay attention, really.

LB: Did the mine operator have safety talks?

CM: Oh yes, lots of safety. You had 40-hour MSHA, 8-hour refreshers, weekly safety meetings. It was a lot safer for my generation than the ones previous.

LB: Was this a union mine?

CM: I don't think it was. I've never been in a union. It wasn't a union mine. United Steelworks, maybe, because United Steelworkers Union was there. But I can't recall if I was in it or not.

LB: But it wasn't UMWA [United Mine Workers of America] or something?

CM: No. It would have been United Steelworkers at the time. I think maybe it was a union mine, come to think of it. I think I was in the union because I didn't like it, now that I think of it. You couldn't go outside the scope of work, so if you're sitting in the doghouse and a bulb goes off you had to call an electrician, which used to really scrape on my nerves because, you know, I could stand up and change a light bulb. If I had done that I'd get grieved on. I do recall now that it was a union mine and that I didn't like it.

LB: Do you remember what you earned?

CM: I think I was making \$5.80 an hour in 1976, but I was a miner so I was on a bonus system. Every car of muck that went out or every lineal foot of tunnel that I ran, every set of timber I put in was paid above and beyond the \$5.80 an hour. I think I was making more bonus-wise than I was hourly-wise. I think in 1976 my checks were probably \$800-\$900 every two weeks, which was pretty good in the later 1970s. I know I quit a job in a CONOCO gas station where I was making \$2 an hour, and went to the mine and I was making \$5.80; I was rolling in it! Rags to riches.

LB: Was the operator of the mine encouraging people to become involved in the community activities or anything like that?

CM: Not that I recall.

LB: Baseball teams?

CM: No, but in the high school year book there was always a full-page of United Park City Mines congratulations. I think everything else was city-wise, baseball teams; I don't remember the mine being real influential in that kind of stuff.

LB: Did any of your brothers or sisters also work in the mine?

CM: Yes, my brother Rick worked there. He got laid off maybe four years ago; he worked his whole life there. He's ten months older than me and twice as big. My dad worked there forever. My daughter actually worked there for the Silver Mine Adventure; it was more the tourist thing. She worked on it. My other brothers didn't work there.

LB: What would you like to do if you could go back?

CM: As far as go back in time?

LB: Go back in the mine.

CM: Back in the mine? Like I say, I'd like to drill one more round and shoot it. Just to see if I still can. Nothing too spectacular, though. I've been in a thousand mines since, closing them for the State. [Break in interview]

LB: [Resuming interview] Is there anything else you want to tell us about your experience as a miner that we haven't touched on yet?

CM: I think we've touched on most of it. I do know it was quite a camaraderie between miners that existed there. I think that's why people like the job so much, because of the guys that were there; they all looked out for each other.

LB: No women in the mine?

CM: There were some women in the mine and it was a little contentious. For years and years and years they thought it was bad luck for a woman to be in a mine. But in the late 1970s there were some women that came to work in the mine and one became a miner; she could drill and blast and did a good job. I know a lot of the older guys thought it was wrong for a woman to be in the mine. Maybe that's why it shut down [laughter]. I do know the mining days are over, though, because the Ontario shaft is squeezed shut down at about 700 feet and nobody will ever work down there again. A hundred years gone.

LB: Let's kind of switch gears here and talk about your experience in mine reclamation. You previously said you went to school and your learned something about the building trade and you've got your mining experience, and then you learned about running heavy equipment. So you sort of put all that together as the reclamation guy? How did that happen?

CM: It just worked out that way. Like I say, I was working for a guy who had a general engineering license and that's what is required by the State to do reclamation. But I had worked for him for four years and we got a job reclaiming the old Weber coal mine over in Coalville. I happened to be the superintendent on the job; this was in 1985. I enjoyed doing it. I had talked to the Division [Utah Division of Oil, Gas & Mining] people and they said they had a lot of this coming up, so I kind of set my sights on that. Basically every year since 1985 I've done reclamation work every summer. I've done it in Colorado, California, Arizona; I probably closed over 6,000 abandoned mines. I have mixed feelings about it because there is a legacy there. Maybe there's a value there but it's also a danger. I think it probably needs done, especially a lot of the old shafts. You fall in one of those shafts that's 2,000 feet deep and not only will you die, they won't even get your body out. You can't even retrieve a body if they fall down some of those deep shafts. Back to the point, I've been doing them since 1985; I went and got my own license and thought, "This is what I'm going to do." I'm still doing it.

LB: How do you close a mine?

CM: Generally, you take a trackhoe up there and fill it. If you can get a piece of equipment there, we just fill in the portal as far as we can reach back in there and fill it with dirt. For some of them we hired helicopters and we'd fly stuff in, or I hire mules and we mule stuff in. We'll build walls in them out of block or rock; a lot of them we'll build gates, metal. A lot of them have endangered bats in them, so we'll do a bat gate in them. Various ways; they all have their different ideas how to close them between California, Utah, Colorado.

LB: Here in Utah if you have a vertical shaft, how do you close that?

CM: I think the best way is to build what they call a rebar grate over it. That entails putting one-inch rebar on a grid and then pouring it in a concrete footing. That leaves the historical nature there, it leaves the hole there. That's what I think the best option is. Of course, it is expensive so it is not really an option for all of them. A lot of them they'll just fill with a trackhoe.

LB: What about an incline?

CM: Same thing. We'll build grates on them, sometimes we'll build a wall in them. I spent the first years just going up with 4-5 guys filling them with dirt; just shoveling, picking, wheel-borrowing.

LB: And the dirt that you're using, is that off the waste dump?

CM: Yes, usually the waste dump or the immediate vicinity. Right now we're out here in the [San Rafael] Swell closing uranium mines and most of them are walls. You don't want to breathe the dust if you don't have to; we have to suit up out here, wear respirators and Tyvek suits. Uranium is nasty stuff.

LB: Are you also worried about the radon?

CM: We have a radon detector. My guys can't get more than what they call a civilian dose, because we aren't in the mining business. We use radon detectors and we wear TLD badges;¹¹ we keep a close eye on that. And they always wear respirators which protects you from the radon. But to be honest with you, I have a radon detector and the hottest mine I've found is in the basement of my house over in Green River. That is the hottest place I've found. So they [uranium mines] are not real hot down here. I've closed uranium mines in Cottonwood Wash, up on Blue Mountain [Abajo Mountains], Circle Cliff, Temple Mountain. That's one thing--I've been all over the state.

LB: The ones that are in Cottonwood Wash,¹² wasn't there also a problem with contaminated water coming out of some of those?

CM: None of my work did, but they¹³ did quite a few projects there; some other contractors did the work. I didn't encounter any contaminated water. I did repair a tunnel for Colorado that had contaminated water coming out. For years, if you went in there 600 feet there's a drift that goes to the side, and the water always went down that drift and dropped down the shaft. But that drift caved in so it stopped the water and it started coming outside and going into the Dolores River. We went in there and rebuilt that tunnel for the State of Colorado so water could still go down that shaft and not into the river. That is a concern--water coming out of these mines. I'm doing some work for Midway Irrigation trying to get water out of their mine. Back in 1916 they ran the Snake Drain Tunnel [aka Snake Creek Tunnel]. The idea was to run this tunnel in underneath the Park City Mine and solve the water problem. They ran the tunnel in 12,000 feet and they had so much water they had to quit, but at one time 8,000 gallons of water would come out of this tunnel.¹⁴ In the 1940s it caved in and none comes out, so we've been working for them trying to go through the cave-in to retrieve their water. Probably the water is worth more than gold ever was, the way it's looking [laughter]; the way this winter has been.

LB: Didn't Hecla have a big tunnel, too?

¹¹ TLD = thermoluminescent dosimeter, a type of radiation detector

¹² Cottonwood Wash is a braided and sandy section of South Cottonwood Creek, located in San Juan County, Utah.

¹³ This is a reference to the Abandoned Mine Reclamation Program of the Utah Division of Oil, Gas and Mining.

¹⁴ The tunnel was constructed for the Daly-Judge Mine through a joint effort of Jesse Knight and the Daly-Judge Mining Company. The tunnel was egg-shaped with the narrow end down, and lined with concrete. In the 1920s the Midway Irrigation Company and Judge Mining Company were involved in a lawsuit to resolve ownership of the water exiting the tunnel, a precedent-setting case because the water was from a mining drain rather than a stream or spring ("Snake Creek Tunnel," UtahRails.net).

CM: Yes, Hecla's drains into the Jordanelle right there off of US-40. Hecla was a big mine.¹⁵ My dad worked for them. Something unique about the Hecla Mine was it was a hot mine. For reasons unbeknownst to me it was 80 degrees down there. Dad said the water was hot enough in the Hecla Mine that you could put a can of soup in there and at lunchtime you could have hot soup. The Ontario Mine and the Park City Mine were cold and wet. The Hecla Mine has to be fairly close, because Keetley is right there. It was pretty much always 54-56 degrees year-round in the Park City Mine; just the right temperature where you have to stay busy.

LB: When you do mine reclamation is closing the portal the only thing that you do?

CM: Generally. It is our intent just to keep people out of the mine, so we don't reclaim the dumps or do any of that. We usually address the hazard, which is going in the mine or falling in the shaft. We usually don't reclaim the waste dump or any of that stuff.

LB: Do you remember which mines you reclaimed on the Blues [Abajo Mountains]?

CM: I don't remember their names. There were probably 15 of them up there and we used to come right into that road in Monticello and go up there. Actually, while we were doing those mines MSHA, who are the regulators of active mines, came up and videoed us. If you look on the MSHA website, it shows me and my crew packing cement and blocks and doing stuff up on the Blues. Most of my work has been up north, all the Wasatch Mountains. It would surprise you how many mines there are from Parley's Canyon to Provo Canyon and into Heber in the Wasatch Mountain range. There are probably 1,500 that we did in that mountain range. We've done a lot of work in the Tintics, up by Eureka. We probably closed 1,000 out by there between all the projects. There are a lot of mines south of Wendover out at Gold Hill, out in that country. One of the most interesting places I've ever been is Silver Reef. That is one of the only places where they ever got silver out of sandstone.¹⁶ There are 300-400 mines right there within a five or six square mile area. Interesting place.

LB: What kind of equipment do you use?

CM: Mostly I have a trackhoe. Wheel borrow and a shovel! [laughter]. Today we set up a tram and we hauled block and mortar up about a 500 foot cliff, and we just started a wall up there. We mix everything by hand, so water, block, and cement. I use a lot of cables and pulleys; I'll set

¹⁵ In 1961 the Mayflower Mine was leased to Hecla Mining Company, who constructed a concentrator mill that in 1962 began processing a 3-year reserve of ore already stockpiled by mine owners New Park Mining Company ("New Park Mining Company, Mayflower Mine," UtahRails.net).

¹⁶ Located about 20 miles northeast of St. George, Utah, Silver Reef was most productive between 1878-1882; attempts to revive the mines continued until 1950 but were not successful. Originally called Rockpile, Silver Reef once had nine grocery stores, six saloons, five restaurants, its own newspaper, and a Chinatown. Mines in the area produced about \$25 million in silver ore, the only place in North America to yield silver from sandstone formations ("A History of the Establishment of Silver Reef, Utah," on Utah's Dixie at utahsdixie.com).

trams up. We've done everything. We've used boats down on the Colorado River where there were uranium mines down in Mineral Bottom, the Hey Joe Mine is down there. We'd haul stuff across in boats then tram it up the mountain. A lot of ATV use, we use ATVs a lot. It is just physical work.

LB: What is your favorite part of it?

CM: Seeing the mountains, seeing the mines. I had a guy ask me what I'm going to do when I retire and I says, "I can't wait to retire so I can go explore these old mines!" I've been doing it my whole life. It is just a good history.

LB: Have you been back to any of the mines that you've reclaimed to see how they look a few years later?

CM: In my free time I like to go back and look at stuff. You know, we have a lot of vandalism. You close a mine off, somebody has been going past it for years and they wonder what we're hiding in there. So they dig it back open or they'll break the wall back down. There are groups that are against the State closing them. There are people who like to explore abandoned mines and I kind of feel for them. It is sad that the government has to protect people from themselves. I've enjoyed doing [reclamation], it has been a good career.

LB: Kind of looking at it from both sides of the coin.

CM: Yes.

LB: Poking the hole and then filling the hole.

CM: Yes. Maybe some of my grandfathers dug these holes and there I am back up closing them off [laughs].

LB: Anything else about reclaiming mines that you want to share with us?

CM: I don't think so. It has been a good job; I've enjoyed doing it. I've seen a lot of mountains, probably every mountain range in Utah. I am the safety person when we go look for bats. Not only do I close them but any of them that might be bat habitat there's a biologist from Arizona and one from Utah; I'll go in as their safety person. I'm the canary--"If you see me fall down, don't come save me because that means there's something wrong up here." I take my air testers and my lights; I'm very conservative when somebody else's safety is in my hands. It is not worth dying for.