



ORAL HISTORY PROGRAM

Paul Jones: A Career in Industry – Chasing Opportunities and Adventures Around the Globe

PREFACE

The following oral history is the result of recorded interviews with Paul Jones conducted by Hugh Miller on June 30, 2023. This interview is part of the AIME Oral History Program.

ABSTRACT

Paul Jones first realized his love for geology after mistaking chalcopyrite for gold on a camping trip as a child in Oklahoma. His interest in rocks and minerals took him to the University of Minnesota, where he began studying to be a geological engineer before switching majors to a mining degree soon after, as he believed it would lead to better employment opportunities. Since then, Jones has built a career on following new opportunities, always taking chances on the next big adventure. His introduction to professional mining began after a relocation with his wife and two young sons to Guyana, where he began working as a junior engineer for Reynolds Metals at a remote camp operation. From then, his career developed into something he never dreamed it would, giving him chances to lead, advise, develop, and run numerous mines and exploration targets around the world, as well as serving on the boards of dozens of companies and professional organizations. He has held senior leadership positions with Eagle-Picher, numerous utility and energy companies, and several mineral exploration and junior mining companies in both North and South America, as well as Africa, New Zealand, and Eastern Europe. He also served as Chairman of the CMA Summitville Task Force, playing a key role to mitigate the impacts associated with the Summitville mine disaster, and was a founding member of the U.S. National Mining Hall of Fame and Museum. Today, Jones is recognized throughout industry for his impressive work in community engagement, resource and project development, corporate management, and as an advocate of the mining industry. He has been an active decades-long member of AIME, SME, MMSA, NWMA, and CMA, and has served as an officer and on the boards of many of these groups. The greatest lesson that he has learned throughout his career is how to deal with people because, after all, the mining industry is about relationships, working constructively with others, and establishing trust and respect. Learn more about Paul Jones's adventures in industry and advice for young professionals in his oral history.

Readers are asked to bear in mind that they are reading a transcript of the spoken word, rather than written prose. The following transcript has been reviewed, edited, and approved by the narrator.

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00:00:15 Introduction

Today is June 30th, 2023, and we're here at the Colorado School of Mines. It is my privilege to have this opportunity to interview Paul Jones, an internationally renowned mining engineer and corporate executive whose incredible reputation in the junior mining industry is well recognized. His service contributions to the industry are also significant, where Paul has also served as president on the boards of numerous organizations, including the Northwest Mining Association, the National Mining Hall of Fame and Museum, the Colorado Mining Association, and the Mining Metallurgical Society of America. He chaired the Colorado Summitville Task Force and was on the advisory boards of several universities. Paul has received numerous awards throughout his career, including the AIME William Lawrence Saunders Gold Medal. My first interaction with Paul came in the late 1980s when he hired me out of school to work on an exploration project here in Colorado. It was the beginning of a lifelong relationship where he became much more than a boss, but a close friend and mentor.

My name is Hugh Miller, and I'm an associate professor in the mining engineering department at the Colorado School of Mines.

This recording is part of AIME's oral history capture program.

00:01:42 The Camping Trip That Set Me on the Path of the Mining Industry

Miller:

Paul, tell us where you were born and where you grew up.

Jones:

I was born in southwestern Oklahoma, a town called Altus. I grew up in Altus up through high school.

Miller:

What did your parents do for a living?

Jones:

My mother was, up until about a year before I was born, an elementary school teacher. She had been raised in southwestern Oklahoma, about 45 miles from where I grew up. My father was an automobile dealer, ran a garage, sold gasoline, and furnished gas for the municipal power plant.

Miller:

What were the major industries in Altus?

Jones:

When I grew up there, it was an agricultural community. I was born in '38, so right before the war. During World War II, the army built an Army airfield there. So, it had an army aircraft training base there, also. When I moved back there later—we'll talk about that later—it had been reactivated. It had

been closed down at the end of World War II and then reactivated later.

Miller:

How did you acquire an interest in science, technology, and engineering?

Jones

Well, I was always interested in science and mathematics. Just, I guess, by nature. My dad loved to fly fish, and southwestern Oklahoma was not a place to enjoy in the month of August. So, they would come out to Colorado and go fly fishing. They took me to the Natural History Museum, and that's kind of where I got introduced into rocks and minerals and the mining sector, if you will.

Miller:

How did you first become interested in geology, and how did you decide that it was a career direction?

Jones:

When I was growing up as a junior high and high school student, I belonged to the Boy Scouts and Explorer Scouts, and we had a set of Cambrian granite mountains about 25 miles north of us that stuck up out of the flat prairie of western Oklahoma, which was all sediments, and we'd go camping up there. On one of those camping trips, I got out and started doing a merit badge on geology. I don't remember now why I got interested in doing the merit badge, but I found what I thought was a gold deposit in this granite. It was some very gold-looking metallic material in the rock, and I worked hard to get a sample of it. Turned out to be chalcopyrite, which is an iron sulfide. But that was my very first introduction to geology—doing something—and it was my first mineral discovery, even though it was not a very economic mineral.

Miller:

So, regarding your parents, did they expect you to go to college? How did you make a decision on where to go first?

Jones:

My mother and dad, probably when I was a baby, made the decision that I would go to college, period. No objection necessary. I think it was just assumed that I was going to do that. Oklahoma had two state universities. They had the University of Oklahoma at Norman, which is right south of Oklahoma City, and they had Oklahoma State University, which was about 60 miles, I think, or so, west of Tulsa. It was the agricultural school. So, I knew from going to high school I liked science and mathematics, and I was good in both. I knew that probably the best thing to do would be to go to OU, and that's how I started out there.

00:06:16 The First Economic Decision of my Career – Finding a Work-Study Position

Miller:

Talk about your educational history. Did you have internships?

Jones:

Well, let's back up a little bit. When I had a girlfriend in high school, we dated each other and did things together, and she also went to OU, to college. And after our first year in college, we got married, much to the chagrin, probably, of both of our parents. But when we got married, we knew that I was going to have to work. My parents said they would supply my tuition, and I think her mother did. But we decided we were going to have to go to college in a place where I could work. The University of Oklahoma wasn't a good place because there was, at the time, about as many students at the university as there was in Norman. Wasn't a big city. It was 20 miles from Oklahoma City. We looked at Seattle or Spokane, Washington, University of Washington. We didn't get much information from them. We got some information from the Colorado School of Mines. We considered that. But at the time, and this would have been in 19—early anyway.

Miller:

Probably the 1950s, right?

Jones:

Yeah, the 50s. Yeah. Well, I graduated in '56, so it'd been '58. The city of Golden was 5000 people. It had a small mining and geological engineering school. Maybe 300 students. It was a very small school and had a good reputation. Been here a long time. Denver was basically a 12-mile distance, which now the whole metropolitan area has grown together. So, I thought I was not going to have a chance to find a job around Golden. The University of Minnesota—I don't remember now how we came up with that, but I remember applying to the University of Minnesota. They had a good geology school, and they had a good mining school at the University of Minnesota, and it was a little bigger at the time than the University of Oklahoma was. It was right next to downtown Minneapolis, and Saint Paul was on the other side of it, very close. So, I thought, you know, that's a place I'm going to be able to find a job close by and go to school at the same time. That decision was really maybe the first economic decision in my career—in finding where I could go to school, go to college, and find work at the same time.

Miller:

Excellent. While at the University of Minnesota, you made the switch from geological engineering to mining engineering. Did June and your folks play a role in that decision?

Jones:

No. June probably did, but my folks didn't. At OU, as a freshman, you had to declare a major. I declared geological engineering because I was interested in geology. When I went to Minnesota, I just transferred in as a geological engineer. After I'd gotten up there and got into the school, I started learning a lot more about the mining school there, and I noticed that the kids that even were in geology got jobs. If they got jobs, they got them in the mining sector. So, that was kind of where I got interested. After being there a year or so, I changed my major to mining engineering because I knew when I got out of school, I needed a job and that those were the ones that were being hired, the mining engineers, as opposed to some of the geology. Minnesota's geology school was basically a fundamental basic geology-type curriculum. But the kids were going into mining even though they had a geologic degree, and I thought, well, I need a

job when I get out. I'm going to change my major to mining, so I'll be equipped academically in the mining sector.

00:11:20 College Mentors and an Unusual Introduction to the Mining Faculty

Miller:

So, talk about your mentors in school. Who are they, and how did they help you, particularly in the mining engineering department?

Jones:

Well, it happened by accident. The year after I got up there, at Minnesota, they had a building that the mining department was in. It was probably at least 50 or 60 years old. It might have been 80 years old. They had just built a brand-new building for the mining department to have to move into. So, the first summer after my first year at Minnesota, they were moving the faculty from the old building to the new building. One of the profs—and I don't remember now which one it was. One of the profs asked me if I would come into his office and pack up all his files and books to be moved over to the new building. The university was going to provide the people to move these boxes, but they weren't packing them up. The profs had to pack them up. So, I went over, and I packed up his boxes, and he paid me something. I don't remember. Wasn't much, but he paid me for doing it. He also told his buddies, his other professors, that "Paul did a good job packing me up." The time I was finished packing the rest of the faculty up—I had literally packed the entire mining faculty, and maybe some of the metallurgical faculty, up to move over to the new building. The University came and got the boxes, moved them over, and guess who unpacked the whole bunch? That was an excellent opportunity to really get to know the mining faculty a lot more quickly than a normal student would have learned. And the department head, a guy by the name Gene Pfeider, I got to know him that way. He was a mentor to some degree to me. But geological engineering professor, a gentleman by the name of Yardley—

Miller:

Don Yardley.

Jones:

Don Yardley. He became a mentor of mine, and I did quite a bit of work later for him. He and I explored the northwestern United States, looking for building stone together out of the research. And the rock mechanics professor—

Miller:

Charles Fairhurst.

Jones:

Charles Fairhurst had me break hundreds of two-by-two granite beams to determine the physical properties of granite from a quarry northwest of Minneapolis. I got to know him. He is still alive. The other two have passed on. But Yardley, I think, is supposed to be about 97 years old. Or not Yardley,

Fairhurst. I got to know those three profs [who] really were my college mentors, if you will, going through school. I learned more from working for the two of them, Yardley and Fairhurst, than I did probably in their classes, just from working with them.

Miller:

Definitely three heavyweights in the academic world. That's really cool.

Jones:

Absolutely.

00:14:55 Work, Family, and a Life-Changing Opportunity in Guyana

Miller:

So, what were the challenges associated with going to school while working? Then you were raising a family as well.

Jones:

Well, it challenges you to make ends meet. My wife's parents—her dad passed away while we were in college—but they paid her tuition, and my folks paid my tuition. Basically, we were on our own to make things new. We had a little boy, and that kept my wife busy and got her, unfortunately, not being able to take too many more classes. It took her another 20 years before she got her degree by correspondence after we did several jobs around the country.

Miller:

So, you decided to leave school or leave Minnesota and accept a job just a few credits prior to finishing your degree. What motivated you to take this job as your first job as a mining engineer, let alone with that travel out of the country?

Jones:

Well, that was a decision that my wife, June, and I made together. We'd had a second son by the time I finally got around to graduating from college. But we looked at the opportunities. The job seemed very interesting to us. It was a junior engineer's job, and I could have found one in New Mexico, Arizona, Minnesota, or elsewhere in the States, but this was for an American company, Reynolds Metals Company, at a bauxite mine in Guyana, which is in the northeastern part of South America. The job appealed to us. We thought it would be an adventure. We weren't sure that later in life that a higher position we would have that opportunity. So, we said, now's the time to take it, and we did. I think we never regretted the decision. My daughter was born in Guyana, and we made certain that the certificate that the doctor that performed in her birth gave us was registered with the US consulate in British Guyana so that we could get a US birth certificate eventually for her, and she wouldn't be a Guyanese. But that was probably the most important thing after she was born that we specifically did to make sure that she would be a US citizen.

Miller:

So, what did your parents and June's parents think about you dropping out of school early and heading to the jungles of Guyana?

Jones:

They weren't real excited about that for some reason. While the first Christmas after we had gotten down there, June's mother and her brother came to see us. I think it was the first Christmas. It might have been the second Christmas, but they came down to see us. About a year after we'd been down there, we took a holiday or a vacation and went up to the Caribbean, and my folks came down to see us there. They weren't excited that they were being deprived, if you will, of their grandchildren for that period of time. But it was a good work experience for us. I was a junior engineer. We had a staff of basically a mine manager, a mine superintendent, a maintenance superintendent, a chief engineer, a junior engineer, a doctor, and an airplane pilot. And that was the staff that they had down there in a town of about a thousand people, of which those families were the only Caucasians in the group. The rest were all native or Negro in the workforce. And so, it was interesting. We enjoyed it. It was interesting living in a mixed community like that, and you being the minority, if you will. I think it shaped our way we treated all people later differently than we would have if we'd have gone to work here in the States.

Miller:

You know, the mine camp life and as well as the operations itself sound fascinating. What did you learn while living in the camp?

Jones:

I think professionally—I know I've talked to a lot of people out of college after their first year or two. They've got a lot to learn professionally. And I think every one of those things I learned down there when the mine manager went off-site, the mine superintendent became acting manager, the chief engineer became acting mine manager. Everybody stepped up, and junior engineers did what had to be done. I think I got to do a lot more things. I was put in charge after about eight or ten to twelve months of the power plant. We had a power plant for the town. The town was about 1000 people, broken into two parts. The upper part was upon a hill, and that was the staff area. And the lower part was the community itself. On the staff area, we had a staff club, we had a pool table, things like that, card tables—entertainment you made for yourself. We had a water plant up there, a water tower up there. We had a swimming pool and tennis court. The community itself, the employees, lived down below us, about 100 feet elevation-wise and probably about 20 feet above the river level on the way to the mine. They had the same amenities in that, plus they had the general store, which all our food came through. The company owned the town. They had built it about 25 years prior to us moving there, and they were responsible for all the maintenance of it. You had to work for the company to live there. They didn't have any indigenous people that lived there that weren't in some way associated with the community, but it gave us a lot broader view of people, I think, and personally, which has affected June and my life for the rest of our lives.

00:22:27 Problem Solving at Eagle-Picher – A New Job Back in the States

Miller:

After a couple of years, you decided to leave Reynolds, returned to the US, and went to work for Eagle-Picher as well as finish your degree at Minnesota. How did you make those decisions?

Jones:

Well, that's a good question. When we were there, as I said earlier, my daughter was born. We had Carl, my oldest son, and Randy, my second son, and they don't remember much. Carl remembers a little bit about the town, but the next year, he would have been six and would have had to start school. A lot of them, if the kids stayed down there with their parents, their mothers would have taught them probably up through the fourth or fifth grade. But after that, they would have to go back to the States to go to school. Carl was a mother's boy. He was the firstborn. We tried not to spoil him, but he gravitated toward his mother. And kids do. Their dads are out, away, and their mothers are around. June and I were very concerned about her being his teacher because of that, not because she couldn't have done it. She would have been a wonderful teacher. But we thought that's going to make him concrete steel mother's boy for the rest of his life. That wasn't what we wanted of him. We came back because of him, pure and simple. I didn't apply for a job while I was down there in the States, and the reason for that was it was a two-week minimum round-trip airmail correspondence, and trying to find a job through that process would have been impossible.

It wouldn't have been impossible, but it would have been very difficult. We thought it's better to come back to the States and then start looking for jobs. So, we came back. We spent an adequate amount of time with both sets of parents. June's father had died when we were in college. Her mother had remarried. We went and met her new husband and spent some time with her, and let her spend time with her grandkids, and same with my folks. During that time, which was probably about a two-month period, I started looking for a job in the US. I applied to several companies as a college graduate would because that's kind of who I was competing against. The two years was not some credit that the US companies would give you for having had a job or not. They didn't give you much credit for it. Eagle-Picher was a company that I applied to, and they had some openings up in the northwest Illinois, southwest Wisconsin area, where they had several mines, and I got a job there fairly quickly after I opened correspondence with them.

Miller:

So, talk about your opportunities and responsibilities for Eagle-Picher. If you look at your career, you advanced really quickly within that company, and it was totally opposite of Reynolds. Now, you're operating in underground mines.

Jones:

Yeah, it was. Eagle-Picher had, in Galena, Illinois, which is right in the northwest corner of Illinois, they had a 1500-ton gravity flotation plant. Nearly all their mining was underground. They had a couple of open pits, but they were small producers, and they ran that mill seven days a week. The mines were a mixture of shaft producers and decline producers. Most of the new stuff they were doing was with declines. One of the first jobs I did as a junior engineer—I started out again, if you will, as junior engineer—was holding a stadia rod and holding the end of the tape that didn't have the numbers on it for the chief engineer. I spent about six months doing that and got kind of bored doing that because it

was all stuff that was below what I was doing in Guyana. Then I got given a set of geology for a mine up at Linden, Wisconsin, which is up in the southwestern part of Wisconsin. They had a little, I think, 300-ton-a-day mill up there that they'd mined in years past and closed down. I worked up a mine plan, took it in, and showed the general manager. He looked at it and said, "That's fine. Now you go up there and drive a decline into that and started this decline. We worked our way down. We finally got down to where the ore body was, and no ore. By that time, we'd spent quite a bit of time there, and the cost of driving the decline down onto this ore body. These declines were of a size—they were ten by tens, basically. You could operate a front-end loader in them. You could operate a ten-ton haul truck in them. We got to trying to figure out what was wrong and told my boss; I said, "There's a drill hole on the map about another round"—we were taking ten-foot rounds—"another round ahead of us." I said, "Let me cut that drill hole and see if we can find and see what's wrong here." So, he agreed to do that, and we took that round, and we did an excellent job finding the drill hole because half of it was in the face of that next round. The only problem was there was no zinc in the drill hole. It was barren. We had gone in and made a mistake when we were driving along on grade. When we looked right up at the roof, if you will, at the back of the decline where we'd cut this hole, and there was about a two-inch vein up there was full of zinc, just fine powder.

Eagle-Picher, when they moved to the upper tri-state, or the Illinois-Wisconsin district, from the Oklahoma, Missouri, Kansas district, they'd taken their churn drills. They'd done all their exploration drilling with churn drills because they had a lot of chert down in the Oklahoma area, which we didn't have up in Wisconsin. It was dolomites and limestones. They drill that deposit at Linden with a churn drill. Well, when a churn drill falls, you drop that churn drill down the hole. When the bottom, the bit, hits the ground, it crushes the rock. But the top of the steel wallows around in the hole that you're drilling, and the distance from the floor up to the vein that we saw up there in this hole was just about the length of a drill hole or of a churn drill bit. So, what was happening? That bit was hitting the bottom, and the top was hitting the vein, the two-inch vein, and washing zinc down 10, 12 feet. So, we had a 12-foot set of cuttings that showed there was something there. It was a self-salted hole. That was the end of Eagle-Picher using churn drills in the Illinois-Wisconsin district.

Miller:

That's a good lesson to be learned there.

Jones:

The drill contractor that was doing it wasn't happy, but we went to rotary after that and stayed with rotary.

00:30:57 A New Mentor and a New Mine – Mining for Copper Back Home

Miller:

Yeah, contamination is a bad thing. Did you have a mentor within the company?

Jones:

The general manager of the Illinois-Wisconsin district was a guy by the name of Harold Hayman, and I think he went to school in Montana. He was a mining engineer by education. He'd been with Eagle-

Picher several years. I don't know how long, but he was my mentor up there. I mean, I answered to him when I was working with the surveyor, working with the mine engineer. When I first got there, he was my partner, but he never really served as a mentor. But Harold turned out to be my mentor up there, and he was a good mentor because he would listen to you. Example of taking that next round. He listened to me. Those rounds cost money, and he was ready for me to get the hell out of there. But he said, "Go ahead and take it." So, he was a good mentor.

Miller:

After a few years, they moved you from the tri-state down back to Oklahoma.

Jones:

After I got through at Lyndon, they sent me over to Shullsburg, and I did all sorts of engineering things over there for a few months, and it wasn't more than six, or it wasn't probably six months. During the time, the latter part of the time I was up at Lyndon, they had started the Oklahoma group at Miami and found a copper deposit in a very unique way. Public announcement from the Oklahoma survey, "We think there might be copper down here," about 25 miles west-southwest of where I grew up. That country was cattle country, wheat country. There might be a gravel pit around somewhere, but there was no mining industry in southwest Oklahoma, and never had been. And they'd found this Permian red-bed copper deposit down there. This gentleman was just a rockhound and found this rock out there in the middle of nowhere, cattle country, and sent into the survey and asked them what it was, and they'd sent a geologist down to Altus to look at the deposit, and they'd sent another one to Oklahoma City with a public release that they'd found one. The survey, I think, suspected that it might be some substance to it, but they didn't want to announce it until they'd looked at it, and, of course, when they announced it to the public, Eagle-Picher was down there before anybody else was because Eagle-Picher was up in the northeastern corner of Oklahoma. They had sent a geologist out, and they knew who owned the land. They sent their landman to the courthouse, and they had leased it.

Ironically, the person they'd leased it to, or leased it from, had been my Sunday School teacher when I was a kid going to high school. Her family had a ranch down there, and it was on their ranch. It was a very unique copper deposit. It was covered. It was about a six-inch-thick or six- to 12-inch-thick shale member, red shale, that had chalcocite as the copper mineral in it. It would grade about 2% copper. It was covered by a one-foot-thick gypsum layer, a horizontal gypsum layer over the entire deposit. And then, above that, you had alternating shales, gypsum, and dolomites on top of that for 200 feet. The topography where they started it was about 15 foot deep; the mineralized zone and the mine operated for about ten years and went to about 45 foot depth. So, two inches on a 45-foot depth is a terrible stripping ratio, if you will, in the mining industry. Phenomenal. But it was just coincidence. If that gypsum layer had not—a one-foot layer had not been there, there would have been no deposit. I mean, the copper had been there, but it would not have been mineable in any way, shape, or form.

Miller:

One of my favorite stories is how you told your folks you were moving back home.

Jones:

Oh, yeah. My boss called me in his office, and he said, "We want to send you down to Creta." That was

the name that we gave the deposit. "We're going to send you down to Creta as a mine engineer," and it was a promotion. Different mining method, but certainly a promotion. So, I called my dad and mother on a Saturday night. My mother was an avid bridge player, and she was having a bridge party that night. She'd gone into the kitchen to get refreshments for the bridge party, and the phone rings, and it was right by the kitchen door, the hall door in what was their dining room. And my dad answered the phone. And when he heard it was my voice on the phone, he went through that door, closed the door, and sat down in the hall or in there where he could talk to me without the group hearing. A lot was going on, and he didn't come back. He didn't come back, and she started worrying about him, and she thought he'd had a heart attack while she thought that, I don't know. But she goes in, and he was sitting on the floor talking to me, and we'd probably been talking five minutes when she found him.

Well, he told her what I told him. I said, "I'm coming down next week. I'm going to bring Greg down with me." Fourth boy, the youngest boy. And I said, "He can stay with you. I'm going to be working out at the copper mine for a while, and then I'll bring him back up here." I said, "I'll be back down there," I said, "But in June"—this was in the spring. I don't remember what month—I said, "but as soon as the other kids get out of school, I'm coming back and getting them. We're moving down there because they're transferring me down there." Well, I think Mother was in on that part of the conversation, and I think both of them damn near had a heart attack. They'd never dreamed that their son and grandkids would come back. Frankly, my wife, June, and I never dreamed we would go back there either. But it was a good job opportunity, a good promotion, and I worked my way up at that mine to be a mine manager for several years.

00:38:31 Unions, New Political Climates, and the Lessons School Doesn't Teach You

Miller:

So, as a young engineer and supervisor, what important skill sets did you have to learn, and how did you acquire them?

Jones:

Well, going to engineering school, you learn a lot about the technology. You don't learn much about human relations. I would say when you go to work for a company, you can work your whole career as an engineer and not have to learn to deal with people. Normally, people don't do that, and if you want to get promoted into management, you got to learn to deal with people and to get the people that are working for you to do what you want them to do, and likewise learn to do what your management wants you to do. So, I think that college engineering degrees don't deal with those types of subjects. They deal with the technology, geology, or engineering, but they don't deal with personality and personal relations. I think, in my career, I was lucky enough to do that, and it may be I may have absorbed some of that from my dad, who was a car dealer, and he certainly had to deal with people in that. But I think that was the main thing, the technology side. You learn that you can deal with those things. You can go to a book and learn those things if you don't have other resources. But you don't go to books to learn to deal with people, to learn to deal for a harsh boss, or to learn to get an obstinate employee to do what you want them to do.

Miller:

So, this was all in the late 60s and early 70s. What were the major professional, social, and political

challenges at the time?

Jones:

Well, I think prior to about 1970, in this country, we had labor unions, but we didn't have environmental regulations that affected industry, and we didn't have political issues. Regulation occurred during the late '60s and early '70s, or started evolving. And that grew up as I grew up in the industry, both of those things, the personnel relation type things, and the regulatory system that we are governed by today in the mining industry. And industry fought them to start with, but they found out very quickly that you can't fight the government; they're going to come. So, I think that was the major thing in the mining industry that I think evolved. Labor relations was another area. Our mine at Creta was unionized because of some of the employees we'd had and because of a previous manager that we'd had. He was actually there when I went down, but he did some things that riled up the troops, and I had to deal with those. And we ultimately got a union and negotiated a union contract. And Eagle-Picher itself had it up at Illinois, Wisconsin, and they had it at Miami. But it started anew with that copper deposit because of some of the actions that the first manager did.

00:42:45 Trading Copper for Coal – Career Transitions and a Growing Reputation

Miller:

So, you then made the next major transition in your career. You went from a major metal company to the energy sector, where you ended up exploring, managing, and operating both coal, uranium, and lignite operations. How did that happen?

Jones:

That was a two-step event. I knew the mine was going to mine itself out, be mined out, in about two years, in the late '73 timeframe. I knew I was going to have to find another job or do something else. There was a consulting firm, a civil engineering consulting firm, that was there, and they offered me a job. They were looking for a good engineer, and I knew how to run a transit and so forth. I knew enough of the mining industry that I thought I could maybe gin up some consulting work in the mining industry that would benefit them. So they hired me, and I left Eagle-Picher about two years before the mine closed down. During that two-year period, when I was with Eagle-Picher, I'd eat breakfast with the wife at a local restaurant because I got up early and had to be out there early. And the local manager of Public Service Company of Oklahoma, which was a utility that provided electricity for that part of the state, he'd eat breakfast at the same place, and we became good friends. I was his second-largest customer, the mine, and the largest being the city of Altus, which was a town of 20,000 people by that time.

He called me after I was working for the civil engineering group, and he said, "The president of public service in Tulsa wants to talk to you." I said, "What does he want to talk to me for?" And he said, "That's all right. He wants to talk about coal and uranium." And so I agreed to take a day off and go to Tulsa and meet with the president of the Public Service Company of Oklahoma, and went up there and had a one-hour-long meeting. He asked a lot of questions. I answered a lot of questions. They were basically general but about the mining industry, and [I] went back to my job, was a civil engineering group. Didn't hear anything for a year, and my friend at the public service called me again. "Newman wants to talk to you again. He wants to offer you a job in Denver." In the meantime, he had gotten himself a coal and

uranium geologist out here in Denver to look for coal and uranium deposits. And they'd bought a coal deposit up at Sheridan, Wyoming, and they had an active uranium plant going on. So, he wanted to send me to Denver to start up that coal mine at Sheridan. I came out and tried to fit into a group of geologists that I was the only engineer, and this fellow that was running this group was offended that Newman had sent me out there—out here. And so, it kind of evolved from there.

Miller:

Well, talk more about your career in the energy sector, going from utilities to a true energy company.

Jones:

That was the start of it. We started a mine up there. We had a 50-foot seam or 55-foot seam of coal and then 100-foot of interburden below it, another 100-foot seam. When we got down to the first seam and were ready to start producing it, and Public Service of Oklahoma's coal contract supplier informed them, "You can't use that coal. You've already contracted for your demand," and that kind of stopped that. But in the process, this geologist that was running the office in Denver, he had quit. He and I got along as far as I was concerned, but I think he saw me as a threat, which I wasn't. But that meeting and that position evolved into the four sister companies—public service and three sister companies—forming a new group to find coal for the other three companies, plus BSO. And BSO was also trying to build a nuclear power plant, trying to permit one, which never got permitted. But they were trying to do the uranium for that, and that evolved into a fuel company for Central Southwest Corporation, which was the owner of Public Service of Oklahoma, Southwestern Power and Light, Shreveport, West Texas Utilities in Abilene, and the fourth one is down in Corpus [Christi].

Four electric utilities that are today all coal burners. They were, at that time, all gas burners. I stayed with that group until it became very evident to me that they weren't going to be in the mining business. And, in the process, they'd moved me to Tulsa, back from Denver to Tulsa, back to Denver because that was a mistake, and then they moved me to Dallas, where the holding company was, and then they hired a new financial officer who said, "You can't build all these power plants and all these mines. You don't have the revenue to do it." At that point, I said, "The wife and I are going back to Denver and finding another job," which I did before I ever told the people in Dallas we were leaving. I had lined up a job with a company here in Lakewood that had active mines in Colorado and Missouri.

Miller:

What kind of position was that?

Jones:

Oh, it was a president of the air-fuel company or as a president of that company.

Miller:

So, interestingly, in the early 80s, then you'd make another transition in your career where you've now gone from mining bauxite, surface to underground lead zinc, the surface copper, and then a number of years in the energy sector. Now, you make the transition to the junior precious metal market. And you run, in your career, five to six junior mining companies. How did that happen?

Jones:

Well, it happened through a friend I made with a fellow here in Denver who's retired, as I am, by the name of Rodney Knudsen. He was a lawyer, and a bunch of his clients were in the mineral sector. Rodney and I had met—I don't remember now how we met, but it was through a connection to a connection, if you will. He had a guy that lived in Houston that was trying to develop a bunch of gold and precious metal properties by the name of Mark Jones. Mark knew absolutely nothing about mining or geology, but he could sell anybody anything, whether they needed it or not. But he needed somebody to run the company and do that, and that's kind of how I got shifted over into the back end of the exploration development sector. It was an interesting few years because there were two Joneses, and [they] weren't related in any way, shape, or form. Never knew each other before Rodney connected us, but it was an interesting deal, just a coincidence that we both had the same last name, and we were totally different personalities and different backgrounds.

Miller:

Yes. So interestingly, both here in Denver and in Toronto, you gained a reputation for fixing companies, particularly in the junior sector. Talk a little bit about that.

Jones:

You and I have talked about this before, and it came up. I'd never really thought of that thing. I think it evolved with Crown Resources, which is Mark Jones's company. And I just kind of found out that I could make deals with people better than I'd given myself credit for. It just kind of was an aptitude, I guess I had not realized I had, and took advantage of. It worked fine for several years, and then toward the end of it, which was about in the late 1990s and early 2000s, I ran into a fella that was South African by birth. He'd come over as a young man to the US when they were driving the Eisenhower Tunnel and worked as a miner up there. And he'd set up a gold company in Toronto, and he found me. We got well-connected, and [it was] beneficial to both of us. But I used the skills I learned in dealing with people more than I ever give credit to myself for.

00:53:15 You Need to Have Those Connections – Time in Professional Organizations

Miller:

So, during this time, you also held numerous leadership positions with professional organizations, including being president or on boards for Colorado Mining Association, Northwest Mining Association, the Mining Hall of Fame Museum, and MMSA, and you were a long-time member of SME. How'd you get involved in these organizations and why?

Jones:

Well, when I was in college—it goes back to Minnesota. When I was in college, our professors encouraged us to join this outfit called the Society of Mining Engineering, or AIME. I joined AIME, I think, while I was still up in Minnesota before we ever went to Guyana, and I've been a member ever since. It's over 60 years. We would go to meetings up in Minnesota. We'd go to meetings in Minneapolis when

they had the national meetings up there. They had section meetings at the University of Minnesota for that. I enjoyed it. You learn to meet people, and you learn things at those meetings. They were educational in their nature, and when we came back from Guyana, they had SME up in Illinois, Wisconsin area, and we started going back there. When we went down to Altus, southwest Oklahoma, I wrote SME and said, "I'm moving down to southwest Oklahoma. Is there a section down there?" expecting there would be none. Well, they come back and said, "There's a petroleum engineering section down at Wichita Falls," which was 90 miles away. And I thought, I'm not interested in petroleum engineering. So, I didn't while we were down there, but once we moved back from down there, we moved out here, and I've been a member out here ever since.

I got involved with CMA. I was an officer. I was president of CMA; I was chairman of CMA, I think. I don't remember now. Their hired individual that runs it has one of those two titles; I was the other one. When Summitville went down, and I spent a tremendous amount of time, my time, basically doing damage control for the industry. That was a disaster that should have never happened. It happened because the regulatory system in Colorado was a fledgling and hadn't been properly nourished by the state and properly guided by the Department of Natural Resources and had let Summitville do things they shouldn't ever have let them do. Secondly, it was a junior company that had run out of money in the middle of December, or in the middle of March, I guess, closed the thing up at 11,000 foot. So, it was a system that had run amok. But I spent probably two- or three years doing damage control on a volunteer basis for CMA. I'm, right now, finishing up a book about that old incident and what had happened. Northwest, I got involved there when I had some properties up in the northwest, again, because they're the regional mining group, and they've got connections, and you need to have those connections. So, just by then, it was natural.

Miller:

So, one of the things that directly impacted me when I went to work for you right out of school in the mid to late 80s, you told me that you required all young engineers to belong to a professional organization as well as a civic or service group. And so, consequently, while I was a member of SME in school, I joined as a young professional at that time, and I also joined the Golden Kiwanis Club because of that. It was truly great advice and a great move. Where'd you get this idea of requiring your young engineers to do this?

Jones:

You know, you've mentioned this to me before, and I don't know where the hell I got that idea. It was natural. I had done it, I guess, and it had benefited me. I like this graduate student by the name of Hugh Miller, and I thought he'll learn something from it. I guess that's why I did it. But it was natural. It was something that I was just passing on something I had learned to somebody that could benefit from it. And I probably have done that for other people in similar ways.

00:58:19 Reflections on a Life of Love, Work, and Travel, and Plans for the Future

Miller:

Yeah. You served as a mentor for an awful lot of people. 2004 was a tough year. You had been married to June for 47 years, and she passed away—

Jones:

Very suddenly.

Miller:

Very suddenly. While the dynamics of that really had an impact of your career at that point, along obviously with personal and social. And I mean, you'd been married a long, long time. Can you describe where you went from there?

Jones:

There was a period of about two or three years that I probably was wandering around, not knowing what that wall over there is. You know? That is a shock. I mean, we had been high school sweethearts, and we'd raised four kids, and I'd come in from Toronto on a Saturday morning to find her down on the floor in a terminal heart attack, and that affects you. I had had, by then, probably the better part of a 50-year career in the mining industry, and it started to taper off. I was still interested in it; I'm still an SME member. I'm still a CMA member; I'm still interested in what goes on. But I started at about that time. I had made associations up in Toronto that were this group up there. So, my career started to tail off in activity from there. Three years later, I was introduced to a young lady. We got married.

Miller:

2008.

Jones:

In late 2008, which has been a good situation. She'd been married and divorced years before and lived by herself for a long time. We met each other, and it's evolved into a nice situation. But I have still had an interest in the mining industry and still kept up with what's new in the industry. I had some mineral properties down in Argentina and other parts of Latin America. We had some interest in Africa. I haven't tried to go back and figure out where they fit in. But, over the first five or six years of Karen and my marriage, I wound those things down and sold them off and kind of got to full retirement. But it's been a great career. I've enjoyed it, and a lot of people can't say that of their career.

Miller:

So, let's just go back a little bit, regarding June. One of the things is you guys were truly a team. You were a great partnership, and she allowed you to be able to do all the traveling and all the stuff that you needed to do while she took care of everything at home. And that was truly inspiring.

Jones:

Now, that is an absolute good statement. In our years in Guyana, we could have stayed down there for another two years, and I'd have been moving up with Reynolds. We came back because of Carl Evan, our oldest son. She was going to have to start teaching him the next year. He was going to be six, and she would have had to homeschool. So, we collectively said, let's go back, let's go back and not do that. But she was a true blessing for me, and most of the credit of what I have accomplished is because of her.

Miller:

You know, we were ecstatic that you met and found Karen and got married and all the great stuff, and you've traveled the globe in addition to work and everything else. But you guys have traveled extensively. Where are some key places you still like to go?

Jones:

Well, that's a hard question. We've been talking recently about maybe taking a cruise up the Maritime provinces in Ontario. We talked about going down and traveling across New Mexico this last spring and didn't do it. I don't know. We've seen a lot of things in my professional career, and Karen and I—she'd done some traveling herself before she met me. But we will probably take a trip or two, but I said my career has lasted well over 60 years. I've traveled. I've worked on mineral properties from the tip of South America to the Arctic of North America, and from the tip of South Africa up to the Mediterranean. That project I did in Estonia reviewing a mine there; I think you helped me on that one [to] do some calculation of mine plant. And I've worked in Australia, and I've worked in the islands of New Zealand. Karen and I visited the islands of New Zealand on one of these trips we took, and we'll probably go someplace, but we're probably not going to go too many places.

Miller:

But in Alaska, for example, between work and play, I think there's not a part of that state you haven't been to.

Jones:

I've been all over. Well, there is a part. Alaska is a big state. But I've been out to the Pacific. Karen and I spent five weeks up there the last year that I really was active with Saint Andrew Goldfields, and we traveled. None of it was on Saint Andrew's expense. I'd seen part of the state, and I said, I'm going to go see a lot of the rest of it. We traveled from Anchorage to the west coast of Alaska, to the northwest corner of Alaska, the north Arctic portion of Alaska, and down to Juneau and whatnot. But you could go back and spend another five weeks and not go anywhere we'd been before in that state.

01:05:20 The Importance of People Skills For a Career in Industry

Miller:

What are some of the biggest challenges you faced in your career? How did you overcome them?

Jones:

I think probably the biggest challenge that was new to me was when our copper mine got unionized down at Creta. I had not dealt with labor relations in my career up to that point. The fella that was the predecessor to me as manager had been a construction contractor, and he didn't have too many people skills. He could build anything, and he could dig any size hole, but he didn't deal with people well, and he created a situation where we got unionized. I don't blame the union or the employees for unionizing. Looking back at the time, I wouldn't have said that, but I think that was one of the biggest challenges.

Eagle-Picher had a union negotiator on staff, and he did the negotiation. But I sat in on every one of those meetings because I was going to have to administer whatever came out of it, and I needed to know why it was formed that way. I think dealing with that is probably the biggest challenge, dealing with people.

Now, that was the only time I've ever really had a people problem, if you will. Once we got it unionized, I had one employee that was just a devil, and he did things maliciously, and we fired him, and the union came in to protest. And I said, one, two, three, four. Here's the deal, and no, I'm not going to reinstate him, and they went back and told him that, and that was the end of the subject. They didn't push. They knew they had to represent him. They did their duty, and I understood that they had to do their duty. I'd learned to work with people. I had to accommodate union employees. In Illinois and Wisconsin, we had a union. We didn't have the problems. Reynolds, we didn't have a union. That was a totally different situation. But we had to satisfy the people that lived in that town. We had to provide food and water for it, if you will.

Miller:

Yeah, we haven't discussed this in a long time, but there's been a number of major challenges I could think of that you've had to deal with—everything from the example of artisanal mining in Africa to working with some state-owned mining companies. Some of those experiences, given the context, is very unusual for most mining engineers to deal with.

Jones:

I've never thought of those things that you're just enumerating, but I think part of that I inherited from my dad. My dad had a high school education. He worked as a mechanic when he got out of high school. The guy he worked for sold Ford automobiles, and this is back in the 20s. He moved him to Altus and put him in charge of selling cars in Altus and starting a dealership. Dad did that for several years, and then he started his own dealership, and he sold people cars, and he bought cars, and he learned how to deal with people. I think I maybe inherited part of that, but I also observed a lot of what he did and didn't realize it at the time that that's a learning experience. And so, I'd give him a lot of that credit.

01:09:50 The Mining Industry Isn't a Dirty Old Job – Advice for Young Engineers

Miller:

Can you sum up your career legacy in a couple of sentences?

Jones:

Well, it's been a fantastic career. I've traveled on business, not as a tourist, looking at mineral properties, meeting people, dealing with people, and those things all over the world. Little did I dream that my career would evolve like that when I got out of school at Minnesota, but it's been a great career and a great life.

Miller:

And it all started with that mineral discovery of pyrite, right?

Jones:

Yeah, absolutely.

Miller:

In Altus, Oklahoma.

Jones:

I know the difference now.

Miller:

What advice do you have for young engineers and professionals?

Jones:

Well, I think the best advice is to keep your eyes open to opportunities. Listen to your mentors. Find a mentor. Find a series of mentors. Listen to what they have to say. Try to figure out how that fits them. In any argument or in any negotiation, remember the other guy has a reason for his views, and you've got to accommodate to get an agreement. Things of that nature. Always be willing to learn.

Miller:

That's a good one. Any final words as part of a conclusion?

Jones:

Well, I want to thank SME and AIME for doing these videos. I never dreamed I'd be videoed, but I think it's a great way to maybe use these videos to encourage young men and women of today that the mining industry isn't a dirty old job. It's got a lot of excitement about it. It's got a lot of things that you'd never dreamed was in it. It's all [about] dealing with people, and you've got to deal with people to have an honorable life.

Miller:

Well, thank you.

Jones:

Well, thank you. Thank SME and AIME again. I really appreciate you being my interviewer.