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University of California
Berkeley, California

Global Mining and Materials Research Oral History Project

A Career in Mining:

Stanley Dempsey on Law, Leadership, Finance, and Community Engagement

Interviews conducted by
Paul Burnett
in 2015

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Stanley Dempsey

Stanley Dempsey is a geologist, lawyer, executive, and entrepreneur whose interest in the environment and outdoor pastimes led him to spearhead collaborations between the mining industry and activists, which anticipated the environmental legislation of the 1970s. Dempsey was at the forefront of developing the mining industry's legal and policy responses to environmental regulation during this early period, and became Director of Environmental Affairs for AMAX, Inc., the first position of its kind in the industry. He was responsible for acquiring land positions and for construction contracts for the Climax and Henderson mines in Colorado. He directed the AMAX part of a multinational joint venture in iron-ore mining in Western Australia. In the early 1980s, he served as Vice President for the worldwide operations of AMAX. After a brief stint at a law firm, Dempsey co-founded a merchant bank called the Denver Mining Finance Company. In later years, he founded one of the first and most successful mineral royalty firms, Royal Gold, Inc. Dempsey continues to serve as a consultant, and is a longtime supporter and leader in many mining associations, including the Mining and Metallurgical Society of America and the National Mining Hall of Fame.

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Global Mining and Materials Research Project

For over twenty years, the Regional Oral History Office (ROHO) produced in-depth oral histories of members of the mining community, under a project called "[Western Mining in the Twentieth Century](#)," which was overseen by Eleanor Swent. The 104 interviews in the project covered the history of mining in the American Southwest, Mexico, South America, and Australia from the 1940s until the 1990s.

ROHO has recently changed its name to the Oral History Center of the Bancroft Library, and with that change we proudly announce a new project entitled "Global Mining and Materials Research," which will focus on key transitions in technology, policy, and geopolitics that have brought mining to its current state worldwide.

Much has changed in mining industries in the years since the Western Mining project was in full production, including the increased globalization of mining operations, the decreasing concentration of mineable minerals in ore, increasingly complicated regulatory environments, new systems of environmental remediation, new technology for exploration, extraction, and processing, and new stories of political conflict and resolution. In addition to collecting interviews about mining engineering, metallurgy, and administration, we also hope to explore the history of information technology and data analysis with respect to mining, as well as the legal, regulatory, and policy history of the industries.

This interview was funded with support from the American Institute of Mining Engineers, Metallurgists, and Petroleum Engineers (AIME), the Society for Mining, Metallurgy, and Exploration (SME), the Association for Iron & Steel Technology (AIST), the Minerals, Metals, & Materials Society (TMS), and the Society of Petroleum Engineers (SPE). We are also collaborating with the IEEE to host these oral histories on the Engineering and Technology History Website, located here: http://ethw.org/Oral-History:List_of_all_Oral_Histories. Thanks also to former Western Mining Project Lead Eleanor Swent, Dr. Douglas Fuerstenau, and Noel Kirschenbaum for their advice and support while the Global Mining Project was being established. Finally, we are most grateful to Stanley Dempsey for taking time out of a busy schedule to speak to us about the evolution of the mining industry over the past forty years.

Paul Burnett, Berkeley, CA, 2015

Interview 1: February 15, 2015

01-00:00:03

Burnett: This is Paul Burnett interviewing Stan Dempsey for the Mining Project for the business series, University of California Berkeley. It is February 15, 2015, and we're here in Golden, Colorado. Mr. Dempsey, this is a life story. With a life story, it's customary to begin at the beginning. Can you tell me a little bit about where you were born and where you grew up?

01-00:00:34

Dempsey: I was born in La Porte, Indiana, but I was raised in Indianapolis, Indiana.

01-00:00:44

Burnett: What did your parents do?

01-00:00:45

Dempsey: My dad was a radio broadcast engineer, and my mother was a telephone operator and a file clerk.

01-00:01:05

Burnett: What year was this?

01-00:01:07

Dempsey: I was born in 1939. We moved to Indianapolis in 1941. I was in Indianapolis until I came to the Colorado School of Mines in the fall of 1956.

01-00:01:23

Burnett: How did you develop an interest in mining? Why were you interested in going to the Colorado school?

01-00:01:30

Dempsey: My interest was sparked at the Indianapolis Public Library. My mother, during World War II, and between then and the Korean War worked, as a telephone operator, she got off work at 5:30 in the evening. My dad started work at 3:30 in the morning, so there was a gap in terms of taking care of me after school. So I rode the bus downtown every day to the YMCA and swam, and then went to the public library, where suddenly I found all these wonderful books about mining, and particularly the biographies.

01-00:02:13

Burnett: Biographies of mining engineers?

01-00:02:16

Dempsey: Mostly mining engineers, people like John Hays Hammond, who was first caught up in a revolution in Mexico in the 1880's, and later participated in the Jameson Raid in the Transvaal, in Africa, in one of the incitements of the Boer War. Hammond was convicted and sentenced to death by hanging, for his part in the Raid. He left the Transvaal when his sentence was commuted, and went on to a very lucrative career, working for people like the Guggenheims, examining mines all over the world. He was probably the most famous mining

engineer of his time. His many adventures seemed romantic to me, and made me want to follow along in that line of work.

A second big influence was my, great uncle, in southern Indiana, Uncle Bill Morgan, I stayed with him and my Aunt Zet. As I described earlier, my folks worked long hours and wanted me to have some supervision when I was not in school. It was harder to do that in the summers, so they had me stay with family members each summer, until I was old enough to go off to camp. I stayed with Uncle Bill and Aunt Zet during the summers of 1949 and 1950. They had a little farm on the west side of Jasonville, Indiana. The house was a typical farmhouse, with electric bulbs hanging on bare wires from the ceiling, a coal range and bedroom stoves, and no running water or inside plumbing. I slept on a pallet of blankets on the floor at the foot of their bed. They were kind, gentle, descent people who worked hard, prayed hard and made a big impression on me. Aunt Zet kept me busy picking strawberries, and was quite a sight when, dressed in her flour sack dress, apron and shawl, sometimes barefooted, she chased down chickens, apparently sensing her intention of having one of them for dinner, catching and dispatching one by wringing its neck.

Uncle Bill was an aging coal miner and farmer. A practical man, he showed me how to call and slop hogs, and introduced me to real work when it was time to clean out chicken houses. Chicken houses and baling hay helped me decide I was not cut out for a career in agriculture.

He was a man of integrity and high moral values. He had one suit, which he wore on Sundays, and on Wednesdays when he made his weekly trip to the bank. He was proud that he had always been a coal miner, working in the company mines around Jasonville. One of my most vivid recollections of him occurred one afternoon when he drove to a large mine on the day when they hired miners. When he came back from his visit, he told me that they said that at age 55 he was too old to work there. I saw tears in that proud man's eyes, ones I could even share right now.

By the next summer, Uncle Bill had started working what was sometimes called a "gypo" mine, a small underground coal mine that extracted coal from old pillars that had been left as supports in the original underground mine in that area. This was called "robbing pillars". That summer Uncle Bill would take me with him to the mine. I sometimes got to light the fuses used with the black powder blasting. I also rode on the coal when it was hauled into town, and delivered for domestic use to houses around town. I have to say, the adventures at Uncle Bill's mine lit my fuse to a mining career.

01-00:03:41
Burnett:

What is a gypo mine?

01-00:03:45

Dempsey: It would be one that sort of an informal group of people would take a lease from the major company that had left the workings. These were un-reclaimed, worked out, underground mines that are only forty or fifty feet deep, around Jasonville, Indiana, which is a major coal field. But the fellows, like my great uncle, would get a lease, and then they would pull the pillars that had been left, and they sold the coal in town. I got to ride the truck on top of the coal pile.

01-00:04:20

Burnett: Given that those pillars are there to support the galleries, would that be a dangerous thing to do?

01-00:04:28

Dempsey: Yes. I think happily, in terms of the scale, and also the expertise of the men—at that time, men—that undertook it, the workplace was safe. They were very careful. He was using black powder, not dynamite. They had a sense of safety at contemporary standards, let's say. So I didn't feel like anybody was doing anything shady or anything.

01-00:05:03

Burnett: Right, right, right, but you had to be careful.

01-00:05:06

Dempsey: Yes, and they were. But they did let me go underground. That would not be legal in a regulated mine.

01-00:05:15

Burnett: So your interest in mining was sparked not only by the kind of non-fiction adventure narrative—did you also read Rickard as well, T.A. Rickard's stuff?

01-00:05:28

Dempsey: Oh, sure, and people like that. Rickard was particularly interesting to me. The third leg of the stool is, after I was about, I think, eleven years old, I went to the Y camp out here in Colorado. I became acquainted with mountaineering and with ghost towns, ghost mine towns, all over Colorado. That nurtured the interest in mining from having seen the old mines here.

01-00:06:03

Burnett: You'd graduated high school, and so you were eighteen, basically, when you went to—

01-00:06:07

Dempsey: Seventeen.

01-00:06:07

Burnett: Seventeen when you went to Colorado School of Mines. What was it like at that time when you went there? What was the—

- 01-00:06:16
Dempsey: It was very rigorous. I lived in the dorm. All the students were serious about their business. I think we had one woman in the class. A lot of people flunked chemistry. I didn't. I did transfer after the first year, to Boulder.
- 01-00:06:44
Burnett: It was an intensive program and there was a certain amount of weeding out in that—
- 01-00:06:50
Dempsey: Yes, you'd have to say that.
- 01-00:06:54
Burnett: International students as well? Roshan Bhappu talked about how there were students from Egypt and Saudi Arabia as well.
- 01-00:07:04
Dempsey: Even then.
- 01-00:07:05
Burnett: Even then, which is kind of surprising.
- 01-00:07:09
Dempsey: It's interesting. As you travel the world in the mining business, it seems like the further you get from Golden, the better the reputation of the Colorado School of Mines, and I think it's largely because the people who came here were probably the top of their classes in Rhodesia or China, and when they got here, they did well in school, and then they ended up, in a lot of cases, as the minister of mines of a country. So they obviously favored the Colorado School of Mines.
- 01-00:07:47
Burnett: If you were bringing in top students, the students themselves drive the reputation of the school, because they're talented, and it becomes an international cohort. We'll talk about this later, too, but the importance of face-to-face relationships. Did you subsequently remain in touch with the students that you lived with and worked with when you were—
- 01-00:08:14
Dempsey: Yes.
- 01-00:08:16
Burnett: It's kind of a small world, the mining industry.
- 01-00:08:19
Dempsey: It is. I didn't retain any particular ties to foreign students at Colorado School of Mines. Back to the point of the reputation abroad. It was a wonderful passport anywhere I went. Somebody would have looked at my background, and doors opened that I didn't even ask to have opened.

01-00:08:49

Burnett: Were there professors there that particularly inspired you?

01-00:08:55

Dempsey: I'd say Professor Leroy, who taught our geology course, which they called geomorphology. He wrote the book, we used in the class.

01-00:09:10

Burnett: So these are the people at the top of their field.

01-00:09:14

Dempsey: Yes.

01-00:09:16

Burnett: You graduated with a B.Sc., a bachelor science in geology, is that right?

01-00:09:22

Dempsey: It is an AB degree in Geology. At Boulder. CU, Colorado University. During the year that I was at the Colorado School of Mines, my freshman year in college, I became acquainted with some seniors who were doing what's called "assessment work". To hold a mining claim requires that so much work be done every year. There were a lot of little gold and tungsten mines in Boulder County, near the university there in Boulder, twenty miles or so from here. The seniors had been asked to do the assessment work in the underground mines in the areas just west of Boulder, and a couple of times I went along to help out. They were earning their tuition, pretty much, by doing that. I became interested in a mine in Boulder County. I had to run the pumps at 3:00 am in the morning, and it was a pretty long drive from Golden. I decided at the end of my first year, to move to the University of Colorado. Like I say, I did pass chemistry. I didn't flunk that, but I didn't have a great grade average, but it was certainly viable for the future at the School of Mines. I think I was also attracted to the University of Colorado because of some of the other opportunities. I'd always been involved in scouting and things like that, but never in student government or activities generally, like homecoming parade and organizing things like that.

01-00:11:09

Burnett: Was that big at the Colorado School of Mines anyway?

01-00:11:12

Dempsey: No. We studied. CSM Miners took pride, in those days, in having the track team from the first class of the Air Force Academy come in to our stadium dressed in really fancy running uniforms, and of course we wore barely jock straps and a cotton T-shirt when we ran. Colorado School of Mines students took a little pride in not being very sociable. [laughter]

01-00:11:47

Burnett: The academics are what matter in that world, for sure.

- 01-00:11:51
Dempsey: Many students wore engineer boots, carried their pencils in a pocket protector, with slide rules hanging from their belts. and things like that. That was probably not helpful in attracting coeds to go out to dates with you.
- 01-00:12:02
Burnett: It's just eminently practical. That's what was—
- 01-00:12:05
Dempsey: I'm proud of that tradition, too, and I'm proud that, later on, of course, I did receive an honorary doctorate. That degree does not make me an alumnus, but it does record my admiration for the school, and for the men and women who have worked so hard to earn their degrees.
- 01-00:12:24
Burnett: They had an experimental mine, right?
- 01-00:12:27
Dempsey: Yes, the Edgar Mine.
- 01-00:12:28
Burnett: And they had a processing plant as well, so you could do kind of on-the-job training, or practical training, at the school itself.
- 01-00:12:39
Dempsey: Yes. Most geological or mining departments require a summer of fieldwork in surveying. Of course, that's a bedrock skill of an engineer or geologist. Some schools will have underground mines or open-pit mines. For example, Freiburg, the major school in Germany, has an underground mine right under the campus. You're in Berkeley, right?
- 01-00:13:26
Burnett: Yeah.
- 01-00:13:27
Dempsey: You'll be interested to know that there is, I believe, a four or five-hundred-foot tunnel near the Hearst Mining Building. It was driven by the mining students at Berkeley, the geology students.
- 01-00:13:46
Burnett: I hope it's secure and stable.
- 01-00:13:48
Dempsey: Apparently, it hasn't fallen in yet. It was about the turn of the century.
- 01-00:13:54
Burnett: Well, there's always room for seismic activity, so we'll keep our fingers crossed. You then completed your B.Sc elsewhere, then?

- 01-00:14:07
Dempsey: That was an AB, an arts degree in geology at the University of Colorado. It's sort of a classical—not engineering—a geology course.
- 01-00:14:25
Burnett: From then, did you immediately enter the workforce?
- 01-00:14:32
Dempsey: Yes. That's a long time ago. I'd started mining on my own while still in college. But the real start of my professional career was when I entered the workforce and went to Climax Molybdenum at Climax, Colorado. That's a very large underground mine, molybdenum mine.
- 01-00:15:04
Burnett: Molybdenum—moly—. Molybdenum.
- 01-00:15:06
Dempsey: We're going to have to straighten you out on that. Mo-lyb-de-num.
- 01-00:15:12
Burnett: Oh, yeah, I'm familiar with that. It was used in color television tubes.
- 01-00:15:20
Dempsey: No, you're thinking of rare earth.
- 01-00:15:22
Burnett: Oh, rare earth. Okay, so this is different.
- 01-00:15:27
Dempsey: It's a hardener and a steel toughener. There's a distinction. Molybdenum is sort of a miracle mineral. It wasn't discovered until the nineteenth century, I think. Obviously, it was rare, but it wasn't identified until then. It's a little bit like nickel, they put it in steel to make steel harder or abrasion-resistant, or resistant to corrosion and also tougher. It has some interesting characteristics. For example, let's say a punch press in an automobile-manufacturing facility is stamping out the hoods for cars. The hood is made out of a big flat sheet of steel. When the plant operator hits it that sheet is formed into its new shape. But if the steel is mild, the hood may be a little to flexible. If the manufacturer wants to stiffen the hood, they will strike the part again, and if there is molybdenum in the steel, the hood will be harder. This type of steel is called dual phase steel.
- Some molybdenum chemicals are used as a fire retardant in clothing.
- 01-00:16:54
Burnett: Protective clothing or things like that.
- 01-00:16:56
Dempsey: Yes, it's used for that purpose. Also, molybdenum sulfide, which is a compound—molybdenum is an element, but molybdenum sulfide can be used

as a lubricant. Because of the way the crystal structure of that mineral is, it will fail along certain axes, and it makes a very good lubricant, a dry lubricant.

01-00:17:24

Burnett: This is a really important—has all these important industrial applications. So Climax was producing that element in abundance.

01-00:17:38

Dempsey: Right. Of course, the reason that it was first important was for making arms in wartime. During World War I, Germans had caught onto molybdenum's value in armaments earlier than we did, and actually smuggled some tungsten and molybdenum, out of the US, to Germany, during World War I. Late in the war, the American Metal Company put the Climax mine together, a very large mine, and put it into production in the wintertime, on about a 12,000-foot level on a mountain that was almost 13,000 feet high. They needed the molybdenum for the war effort, and they needed it at once.

01-00:18:27

Burnett: You began there in 1964?

01-00:18:31

Dempsey: 1960. When I graduated from CU with my geology degree.

01-00:18:43

Burnett: What was your first position there?

01-00:18:45

Dempsey: My first position was Industrial Engineer. Climax was expanding again, partly related to military situations around the world. They needed people to do all kinds of engineering and geology. The ad in the Denver Post newspaper that I answered was for a geologist to become a core splitter, sort of an entry-level job, at \$450 a month. They also advertised for an industrial engineer for \$500. So I suddenly became an industrial engineer. The traditional route for professional geologists starts with core splitting. At Climax, everybody worked underground to start with. I made the choice then to go more into the production and engineering side than in to pure geology. I liked them both, but one paid \$50 more.

01-00:20:09

Burnett: This is a pattern I'm seeing in interviews with folks. But production also has an appeal for many people. Being involved in the action, so to speak.

01-00:20:21

Dempsey: Oh, sure. It's certainly the better route to senior management in any company, any mining company.

01-00:20:32

Burnett: Did you work different jobs to learn more about the overall structure of the company?

01-00:20:39

Dempsey: At that point, my job was to do time studies of labor productivity and equipment-utilization studies. Most of my work was at job sites.

01-00:21:03

Burnett: So you were doing equipment—

01-00:21:05

Dempsey: I was doing equipment—

01-00:21:06

Burnett: Utilization studies.

01-00:21:07

Dempsey: Studies, right. The time studies were of crews working on a particular project, like building and removing concrete forms in underground openings such as a loading cut out or a slusher drift. They were designed to tell us whether there were better, lower-cost ways to do the job. The equipment studies dealt with how many pieces of equipment were required for a given production schedule. Some of the studies compared competing machines, some looked at the value of more equipment in cases where more machines might mean higher levels of production. I went underground about three days a week in order to do the measurements and gather the data that I needed. At the end of about six months—and this is pretty typical of the industry—if somebody shows some interest, they'll start—"they" being management—will start looking at the possibility of you becoming a production supervisor. The typical upward route at Climax was to start in something like I was doing, and then move on to become a shift boss, and then a foreman. By that time, I knew that I was probably going to go back to CU to do law. I wanted to be fair to me and them, to not start a new program that I knew I would have to leave. I stayed with the engineering. Happily, the people that I worked with in supervision, mainly in the Concrete Department, Warren Shriver and Art Vincent were very supportive of me, and were fine mentors. At that time concrete operations were a big deal. We placed about 50,000 yards of concrete underground each year, and they were converting from a mechanical to a hydraulic pumping system, pumping concrete into loading cutouts, slusher drifts and other development features of the mine. It was a very interesting job. It's not unusual in the industry for operating people to be a little bit hostile to engineering people. School boy versus practical men, men in those days. Something new, like time studies, were not well-received. Looking back on it, maybe it shouldn't have been done. It didn't lead to much. But the utilization studies did. The shift bosses on the concrete crews, who were really responsible, were a little hostile and they called the industrial engineers "birdwatchers."

01-00:23:27

Burnett: So just to clarify, the time-utilization studies are like analogous to the time-motion studies of Frederick Winslow Taylor in an industrial operation?

01-00:23:37
Dempsey:

Yes. That was the flavor of the year in 1960.

01-00:23:41
Burnett:

I bet that was controversial.

01-00:23:44
Dempsey:

It was controversial. Some of it, in my judgment, was wasted effort. On the other hand, the utilization studies, backing up the request for capital, I thought they were very good, and also gave me my first experience with the valuation process in mining. So I learned a lot, and then happily, those tough old fellows that ran the operations, most of them practical men who had not gone to school, it seemed, all the sudden, I was writing their reports, in drafts so they could send it on up the line. When I say resistant, these were wise people. They knew how to sort out the birdwatchers versus what really worked. I developed a nice relationship there. Of course, that's part of why I was asked to think about being in supervision. Climax was a wonderful place to start your career. I had been involved in mining, small mining in uranium and tungsten and things like that, again with leasers and small mine operators, but Climax gave me solid experience, both technical and people wise, that could underpin a career in mining.

01-00:25:14
Burnett:

How big was the company? How many employees, roughly?

01-00:25:17
Dempsey:

I think, at that time, there were about 2,000 people underground. It was part of a major company Climax Molybdenum Company, based in New York.

01-00:25:31
Burnett:

It was an international mining firm.

01-00:25:34
Dempsey:

Yes. They produced more than half of the world's molybdenum, and their conversion plant was in Pennsylvania at that time. Even from the very beginning, the American Metal Company, which then was later merged in with Climax, they had the best engineers. They selected the best contractors. Not flush with money, but wisely getting the very best people. Even the practical men that didn't have much education had gotten a lot of education about both technical matters and people in those roles. I had the highest respect for all the people I worked with up there.

01-00:26:25
Burnett:

Separating the birdwatchers from the useful supervisors, you were a good listener?

01-00:26:35
Dempsey:

I hope so. It helped to listen. Some of the "rules of thumb" passed onto me by the wise old owls of Climax and Henderson served me well later in my career.

01-00:26:44

Burnett:

I think that one of those qualities that people talk about—we were talking about trust earlier off-camera. I think if they respected you, it sounds like they trusted that you would take their words and their authority. You would listen to what they needed and what they thought needed to happen.

01-00:27:09

Dempsey:

It was a very proper collaboration. I am always on guard about being co-opted by others, I saw none of that here. I was proud to have the approbation of supervisors like that. You suddenly realize these fellows knew an awful lot about a lot of things. A lot about mining, and maybe a lot more about dealing with people.

01-00:27:29

Burnett:

Is that something that you took with you as you moved up and around?

01-00:27:34

Dempsey:

Yes. I have always been happy that I had worked in really big mines, and as a small mine operator. I had been fortunate in mining, because before I got out of the university, I had operated a couple of mines. In particular, I went to Wyoming with the dean of the small miners in Boulder County, Colorado, Harrison Cobb. He was a romance language graduate from Rollins College in Florida.

01-00:28:17

Burnett:

Like a liberal arts college?

01-00:28:18

Dempsey:

Liberal arts college in Florida. He came to Boulder County in the thirties. During the Depression, of the 1930's gold was valuable and a good thing to mine. As a young man, he put together a stope fill operation at an old mine west of Boulder. It's sort of the equivalent of pillar-robbing. They would go in and remove stope fill in hard-rock mines. Most of these, instead of being horizontal like the coal mines that my great uncle was involved with, these were vertical. They were removing the waste material that had been used, again, to support the walls. Harrison, just before World War II, was probably the biggest supplier of gold ore to the mill at the Golden Cycle gold mill at Cripple Creek. He sent the material from Boulder County to Colorado Springs, and on up to the Golden Cycle Mill. He took me under his wing. I was running a little mine on a lease, and it was tough. I leased the mine from an old mill operator up in Wallstreet, Colorado, Al More. He was an electrician by trade, and of course he couldn't support himself with his little mill. The mill had a big electrical power switchboard. He allowed me to tap into the power. I didn't have any money, so I put insulators up in some of the big pine trees and strung the wire through the trees—we're talking about three or four hundred feet of wire—and down into the mine where I was pumping out the water. So I'm up in that tree one day, and here comes Mr. Cobb, the famous Mr. Cobb. He's driving with Charlie Turner, his pal who'd been working out

in Australia. These guys still wore fedoras and gabardine or corduroy pants. I was honored that they came to my mine, “mine” in quotes.

I went to Montana with Harrison to mine a uranium property in 1959. I had a fair amount of background in mining at that scale and about mining attitudes. Of course, the small miners had different attitudes than the big miners. There’s respect back and forth, but not always harmony. Sometimes small miners get all of the industry into trouble, because they cut corners, not a smart thing to do in this industry. People who do not do the right thing about safety, things like that, environmental issues. But Harrison Cobb and Charlie Turner were the kind of people that did things right, practically. It certainly wouldn’t have met today’s EPA standards, but the outcome was proper. I had that background and I knew those kinds of attitudes.

One amusing incident, and I’ll be short. I was doing a time study at Climax. I noticed a miner having difficulty with a rock drill, a new employee. So I went over to help him for a little bit. Of course, I was a management employee, and he was in the union. I had run rock drills underground before I was out of college. We had a union that didn’t think that management people should go over and run a rock drill. I learned a lot about union-company relations. Boy, did I get chewed out by my supervisor, because the grievance man was right there in the drift. I said, “I’m just trying to help this guy.” He said, “That’s our job, not yours.”

01-00:33:02

Burnett: You’re taking work away from someone.

01-00:33:04

Dempsey: I don’t bring this up as an anti-labor comment. They had their job to do. But I didn’t understand the situation. But again, that was resolved in a non-arbitrary way. I was wrong, and they and my boss helped me understand it very quickly.

01-00:33:23

Burnett: Yeah, in our other oral histories, they talk about, in one company, how, when they introduced the new Swedish drills—I can’t remember what they were called—in the fifties, and they were twice as efficient, and the unions were saying don’t introduce this, but—

01-00:33:38

Dempsey: They were keeping their mission. Lots of employment for their members. I have to respect that.

01-00:33:46

Burnett: But they worked it out in that story. They ended up coming to an arrangement where they could introduce the new technology and they could preserve the work. It depends, again, on issues of trust.

01-00:33:59

Dempsey: Some of the policies, obviously, I wouldn't agree with, because I don't think they achieve what the union leadership at that time wanted to achieve. There may be better ways of doing it, so I'd be critical of some of the policies of organized labor in the United States. I think the results are pretty evident. Defined-benefit pension plans just don't work. Even when I was in senior management at Climax, I always felt that our management was open-minded and respectful of union leaders. Even though they might bitterly disagree and there might be a strike with violence, or the threat of violence, I never saw any of our senior people at Climax become negative. They were not happy sometimes, but they were still on the level.

01-00:35:03

Burnett: In the end, although these are large institutions, these are human relationships and you have to—

01-00:35:11

Dempsey: Some fellows had a brother in management and another brother not in management.

01-00:35:16

Burnett: Right, sometimes there are family connections.

01-00:35:20

Dempsey: Yes. My dad was a life member of the IBEW. These are going to be your employees after the strike, too, and these are going to be your supervisors if you're on the other side. In the context of a remote mine site like Climax, I think we had, at the end, before it shut down the last time, we were doing 44,000 tons a day with about 3,000 people. So there were a lot of people. Of course, some of them had been there a long time. So many people in the public think this is an awful business. We like what we do. The miners, most of them, particularly the fellows and gals now that operate in Silver Valley, Coeur d'Alene, places like that, they'll quit and go someplace else. They're called tramp miners. They love what they do. One morning, you'll just wake up as a supervisor and they're not there anymore, and they leave you a note. They rustle a job at the next mining camp. They'll probably be back in four or five years, or three years, and you hire them back, because they're good miners.

01-00:36:27

Burnett: So they go from mine to mine? Or they travel.

01-00:36:33

Dempsey: There's more to that. I don't know whether they get in trouble down at the bar or get divorced or raise hell someplace, but—

01-00:36:41

Burnett: They take a break.

- 01-00:36:42
Dempsey: They need a little break. Or a change of scenery.
- 01-00:36:43
Burnett: They need a break from the workforce.
- 01-00:36:45
Dempsey: You're very perceptive. [laughter]
- 01-00:36:50
Burnett: So you learned a lot about the work, and you learned a lot about people when you were at—Climax and American Metals Company merged in '57, I think.
- 01-00:37:02
Dempsey: That's right.
- 01-00:36:02
Burnett: And then they become American Metal Climax Incorporated. That's during your period in the sixties. It's American Metal Climax Incorporated.
- 01-00:37:11
Dempsey: Short for AMAX.
- 01-00:37:14
Burnett: They actually officially changed the name to AMAX in '74, I guess. This is mining in the 1960s, and you're in a remote location, but there's a lot going on in the 1960s. Tremendous political change, a lot of political unrest in the major cities. What did the 1960s in the United States and in the world look like from Climax?
- 01-00:37:48
Dempsey: I'd have to start a little earlier than that in my own career. When I made the change to go to Boulder—I keep saying Boulder, but I'm talking about the University of Colorado—one of my friends from my days at Camp Chief Ouray, Tom Brightwell, helped me think through my decision to change schools. I happened to run into Tom, at a party being held at a party venue just west of Boulder. Tom was celebrating his election as a Commissioner of the student government at Boulder. This was a great party up at a place—I don't remember the name, but it was a place where fraternities and sororities would have big parties. I saw Tom and Tom said, "Hey, don't I know you?" We got together and visited there, and later on got together down in Boulder to just have coffee or something. I said, "Boy, everybody in the place was paying attention to you." "Yeah," he said, "I was just elected a Commissioner of ASUC, the student government council." If Tom could do that, maybe I could do something like that. I wasn't after the pride part of it, but I just thought it would be very interesting to be involved in the governance. So I got involved in student politics. I also got involved in the very early conservative movement in the US, college-level student government—student activists, I guess you'd have to say. Young Americans for Freedom. I took a very active role in trying to take the University of Colorado student government out of the

National Student Association, which I think, as you will recall, had a lot of CIA involvement at the time. So I was active nationally as a young conservative, and met many of the people, the Bill Buckleys, the Stan Evanses, and started reading all the conservative literature.

01-00:45:19

Burnett: What years were you in law school? Did you go at night?

01-00:45:22

Dempsey: No, no. Full-time. My wife supported me, in comfort.

01-00:45:30

Burnett: For the record, can we get your wife's name?

01-00:45:32

Dempsey: Judy Dempsey. It's Judith Rose Enyart Dempsey. Enyart is her maiden name.

01-00:45:51

Burnett: You've kept that up. What year were you married?

01-00:45:56

Dempsey: We were married in 1960.

01-00:45:58

Burnett: So right when you finished school, your first—

01-00:46:02

Dempsey: I graduated from college, went to Climax on single status until mid-August of 1960, went back east, married her, and brought her out here. She became a schoolteacher at the Climax School, at almost 12,000 feet. Her first day of teaching is—over on my desk, a little picture—at the Climax School.

01-00:46:30

Burnett: You said you went out east. Is that where she was from?

01-00:46:33

Dempsey: We were sweethearts in high school, in Indianapolis.

01-00:46:39

Burnett: That's great. So you guys were married, and then you finished your—so what years were you pursuing your JD?

01-00:46:49

Dempsey: I left Climax in September of 1961 and went to CU law school that fall, and I graduated in the class of 1964.

01-00:47:06

Burnett: Okay, 1961 to '64.

01-00:47:08

Dempsey: Our class just had our fiftieth anniversary.

01-00:47:12

Burnett: That was an LL.B. degree, or is it a JD?

01-00:47:15

Dempsey: It was an LL.B that was later transformed into a JD.

01-00:47:25

Burnett: You had some early experience at Climax, and then you went back to do your law degree. Sixty-four, you have the law degree. How did that degree shape your career in the 1960s?

01-00:47:43

Dempsey: Do you want me to go back a little bit?

01-00:47:45

Burnett: Sure, let's do that.

01-00:47:48

Dempsey: Because of my interest now in politics, I worked on Governor Love's gubernatorial campaign, in 1962 or '63. After I had left Climax and had started law school. Climax and the head of the Colorado Mining Association, the executive director, Robert Palmer, were not seeing eye to eye; Climax wanted to fire Palmer. By then, I was the chairman of the Boulder County Mining Association, which was a local organization. Because I was on the campaign, I knew the gubernatorial candidate, John Love, he was elected. At one point, through the Boulder County Mining Association and Harrison Cobb, who was very friendly with Bob Palmer the director of the CMA, Colorado Mining Association, they wanted to save his job, and it was a very interesting situation. I was able to make a call to the governor-elect the day before the inauguration and tell him the circumstances. We basically defeated Climax's attempt to kick him out. That would not bode well for going back to Climax. Interestingly, the reward for intervention was that suddenly Mr. Palmer arranged for me to become a director of the Colorado Mining Association. At that time, all the directors were the heads of the biggest mining companies in the state. The Colorado Fuel and Iron Company, Ideal Cement Company, the New Jersey Zinc Company, Climax Molybdenum Company, Telluride Mines, and Union Carbide Uranium Division and *me*. I'm now, what, a twenty-three -year-old law student.

01-00:50:01

Burnett: A young guy.

01-00:50:02

Dempsey: A young guy, on the board of directors of the Colorado Mining Association. At my first board meeting, which was held at the University Club in Denver, guess who my seatmate is? Next seat over is Ed Eisenach, who is the general manager at Climax. As I was being introduced as new director, he said, "That's very interesting." We served together then for a year. I was heading up a number of committees and doing testimony before both state-level legislative committees, and even Senate hearings on things like lead and zinc

policy. I was still a law student, on the board of the Colorado Mining Association. Ed said to me at the University Club in Denver one day—that's where we met—"What are you going to do when you get out of school?" I said, "I'm going to go back in to the mining industry." By then, I was actively seeking employment with other mining companies and was about to go to Kennecott Copper in Salt Lake City, Utah, at the Bingham pit. That was a very appealing job offer. Ed says, "Why don't you come up to Climax on New Year's Day?" New Year's Day, some of the mining people worked, and they did so because they needed to stop some of the [equipment]—like the ball mills, to reline them. They would do it on a holiday. Of course, you also got two and a half times pay on Christmas and New Year's days. Wonderful pay for working that day. I wasn't working; he was. Ed, of course, became a dear friend over the years. I worked for him for many years. He was a man I admired greatly.

I interviewed, and he offered me a job as a lawyer at Climax. It was less money than at Kennecott, and Kennecott had made an offer that was pretty generous, also with a promise of assignments to different parts of the company. It was a fast-track kind of an opportunity for me at that time. But at Climax, you earn your way; you don't get anything for nothing. Ed offered me the job, and—

01-00:52:43

Burnett:

This is Ed Eisenach?

01-00:52:44

Dempsey:

Ed Eisenach. The anecdote I want to tell you before that relates to it, and shows something, I think, about the character of the people in the mining industry that I was associated with. Before this incident that I told you about, and before I was on the board, I was an active member of the Colorado Mining Association, attended conventions, sow-belly dinners, all the goings on. The Association staff knew that I was working for Climax and I was underground and I saw a lot of people when I made my way around the mine. They wanted me to help recruit members. I thought everybody would be okay with that. The foremen's lunchroom—where I would either loaf or eat my lunch, because it gave me propinquity with all the big bosses. So I had membership forms for everybody and gave a little talk, why they ought to join as individual members. The next morning, while I was dressing out in the dry, I got word from the guard, or one of the secretaries, "Mr. Henderson would like to see you." I had seen Mr. Henderson. I had gone to management dinners where he spoke. He was the Vice President of Western Operations in Golden, and he was considered to be next to God, an MIT graduate and a very direct guy. Very opinionated about almost everything, but also usually right—and a tough guy. Wonderful mining engineer. He also had a reputation for acting on his thoughts. Pretty—

01-00:54:45

Burnett:

Directly.

01-00:54:46
Dempsey:

One of the great anecdotes that circulated through the camp (probably apocryphal, or at least greatly exaggerated) was that he fired an engineer coming into the engineering department because he was wearing Bermuda shorts, which had just made their appearance. “That’s not proper attire; get your pay.” He could be a little arbitrary. I’m shaking in my boots now, and I have to go up and see the man on Mahogany Row. That’s where the really big bosses were at Climax. It was called “Mahogany Row.” The only real nice desks in Climax were for the big-shots. Of course, Ed worked for him, Ed Eisenach, but I really didn’t know Ed very well then either. So I went into Mr. Henderson’s—he was always “Mr.” Henderson—Mr. Henderson’s office, and I sit down, and he looks at me directly. No introductions or anything. “I understand you’ve been selling memberships in the Colorado Mining Association in the Storke Level foremen’s lunch room. I said, “Yes, sir, I have.” I didn’t know what he meant by all this. He said, “Let me talk to you a little bit about the Colorado Mining Association.” Then he gave me the whole story, in a polished tone and fairly direct. He said, “We’ve had difficulty with Mr. Palmer, Bob Palmer, who is the executive director.” He kind of gave me the reasons in an orderly way, not hostile or mean or anything. I thought I was going to be fired. But he avuncularly explained the situation. He didn’t ask me for my advice at that point. He said, “Tell me what you think,” which I was very surprised about. I said, “Well, Mr. Henderson, in doing this (soliciting memberships), I thought everybody wanted to support the mining industry and the mining association. I didn’t know about the background you’ve just given me.” He said, “You come back and see me next Monday.” Now his voice was not hostile or mean, but direct. “You come see me at 7:00 am before you get on the mantrip.” I said, “Yes Sir.” I had an awful week.

01-00:57:17
Burnett:

He wanted you to stew and think about it.

01-00:57:21
Dempsey:

I went back to Judy. “I think I’ve really messed this one up.” That next Monday, I walked in there and he said, “Well, I’ve been thinking about this.” Then he didn’t ask my opinion again. He just said, “I want you to go to that foremen’s meeting again, and I want you to sell every membership you can. You’re right.” This is the first time I’ve ever told anybody this story.

01-00:57:51
Burnett:

So you impressed him.

01-00:57:52
Dempsey:

I don’t know that I impressed him, but he sure impressed me! I think his character was very misunderstood. Obviously, his arbitrariness in firing people, if true, was not appropriate for any of us in industry, but what kind of a man is this, that can admit he was wrong? I learned a lot that day. What can I say?

- 01-00:58:24
Burnett: He asked your opinion and you made a case at that moment. Briefly—
- 01-00:58:28
Dempsey: I didn't have much choice. I had to say something.
- 01-00:58:30
Burnett: Yeah, you had to say something. It was perhaps a test of mettle in the sense that he knows his reputation and he asked you for your opinion. You could have been a yes-man and you could have said—
- 01-00:58:41
Dempsey: I didn't say, "You're wrong," I just said, "This is what I did," and what I thought. In the second meeting, when he told me to do that, I said, "Mr. Henderson, I work for the company. I'm loyal to my employer. If you tell me not to do it, I won't do it. If you tell me to do it, I will do it, and I'll try to sell all I can." Those were life lessons that are kind of hard to come by sometimes.
- 01-00:59:14
Burnett: You also explained why you were doing it and you thought it was a good idea, and this is why, and in light of this new information, perhaps I shouldn't be doing it, but –
- 01-00:59:24
Dempsey: Right, and I wasn't working for the company when, later, I worked to save Bob Palmer's job, or helped him save it.
- 01-00:59:35
Burnett: Well, you stood by your principles.
- 01-00:59:40
Dempsey: You wanted to ask me about the Cold War experience.
- 01-00:59:43
Burnett: Well, not necessarily Cold War. Cold War is the big picture, I suppose, but you have practical education in industry, training in geology, and now this legal training, and the beginning of positions in making policy, or policy advocacy. What are some examples of the things that were on the table for the mining industry? When you said you were testifying before the state Senate or—
- 01-01:00:25
Dempsey: My first testimony was made to a committee of the United States. I testified on lead-zinc price stabilization, a matter of interest to Boulder County miners.
- 01-01:00:26
Burnett: Yeah, the Senate committee. What was being asked of you?
- 01-01:00:33
Dempsey: Some of the small miners of the Boulder County Mining Association, mined complex ores that would include copper, lead, and zinc. My first Senate

testimony was about lead and zinc, the price stabilization program. At that time the government was subsidizing mining, a little bit like agriculture. I forget now what my testimony was. I think I've still got a copy of it. There were other government programs, like stockpiling. Boulder County has ferberite mineralization. There's a small mining district near Nederland, west of Boulder, where there are narrow-veined deposits of tungsten minerals, hubnerite, ferberite. Those were mined during World War II and the Korean War, mainly because of wartime requirements. The government had buying programs that subsidized the mines. They really had to get the stuff fast. When those programs were stopped, those mines closed, and the tungsten miners and a number of others then turned to the stockpiling program, which the federal government undertook for strategic purposes.

01-01:02:28

Burnett: Strategic minerals.

01-01:02:29

Dempsey: Sure. Like today with rare earth minerals. There still is a stockpile. Boulder County mines were involved with stockpile issues. I don't think a lot of people realize how Boulder County miners would meet in a dentist's office lobby monthly, all sitting around discussing international commodity issues and policy, which—

01-01:03:00

Burnett: Like farmers were.

01-01:03:01

Dempsey: I don't know how the farmers did it, but these miners were internationally oriented and sophisticated people who were marketing material they were mining in Boulder County. At the same time, Climax also had a by-product, tungsten, which was trivial compared to the molybdenum. I'd be making it up if I say I remember what the stockpile implications were for molybdenum, but certainly the tungsten business, if it were to start again, it would have been to sell to the stockpile. Let's see. I'm trying to think of some other examples of laws the Boulder miners followed closely. At the state and federal level, the Mining Law. The Mining Law. It's the General Mining Law, properly described, also known as the Mining Law, or the Mining Law of 1872. I think I staked my first mining claim in the Gold Hill District in 1958. Anybody in this country can go out and look for minerals, and if they find minerals in paying quantities, they can not only mine it, but they can end up owning it, having a fee simple interest in the mining claim. That's a freedom that's pretty unusual most places in the world. Most places in the world, people have to ask their sovereign. We don't have to do that.

01-01:04:53

Burnett: It's Crown Land in Canada.

01-01:04:56
Dempsey:

You would know from Canada. Although, you'll recall that the Yukon Territory, even before the territory, had self-initiated rights, which are not common around the world. My first encounter with the General Mining Law, which was a federal issue, was there in Boulder. If you want an anecdote about that law just to give you a feeling for the attitude of mining people, the first General Mining Law was passed in 1866 as a rider on a ditch bill, a right-of-way bill. Mining law provisions were not voted up and down in the Congress. The 1872 Mining Law then came along and kind of tidied it up some loose ends of the 1866 act. The 1866 law gave continued life to the pre-1866 mining district rules. I'll talk to you about that pretty soon, but I don't want to do that now. That's a great interest of mine. I was first introduced to mining law policy issues, and the Public Land Law Review Commission was about to be set up by Congress, about the time I got out of law school in 1964. Congress said, "we've been dealing with public land matters for more than a hundred years. We need to take a comprehensive look at what we are doing with our nation's public lands, and make any changes that seem to be required by today's land use needs." By 1964, there were a lot of competing land uses, particularly for conservation, or for preservation, or for mining, or governmental purposes, dams and things like that. Anyway, to make a long story short, I was introduced to the General Mining Law and developed a real passion for the freely initiated rights that were a part of that mineral tenure statute. This is what you want to hear, I know. It's the burgeoning of the environmental situation. We had had conservation organizations, like the Forest Service, for a long time, and we really didn't have any land use or environmental-control legislation at the federal level, and very weak, if at all, at the local level. The coal industry was extensively regulated by the states, but there was no federal law requiring reclamation of coal mines at that point in time—hard rock was almost free of regulation. The only exception to that would be that there were some stream standards, statewide. I don't know if there were any federal. Some air-pollution controls, but they covered just a few of emission in the categories like dry-cleaning plants.

01-01:07:50
Burnett:

Right, the really severe and local—

01-01:07:54
Dempsey:

Most environmental problems of the mining industry were dealt with by courts, using nuisance law and equitable remedies like injunctions. Command and control regulation was not really geared to the kind of situation we were in in the industry. Proponents of stronger environmental regulation sought to have legislative bodies impose command and control arrangements on miners. I was interested probably more on the land-use side because of my interest in mountaineering. Most of my friends would have, today, been called "greenies." A lot of them were Sierra Club, early adopters of preservation rather than conservation. That conflict was starting to get out of the professional level of the Forest Service. The BLM was simply the office that administered the Taylor Grazing Act.

01-01:08:44

Burnett: Right, the Bureau of Land Management.

01-01:08:45

Dempsey: Yes, the Bureau of Land Management. They got the land that was leftover when the Forest Service and the national parks and monuments were created. If you'd allow me, I'll give you some background on the situation with people, like mountaineers and wildflower advocates. I like wildflowers, I'm pretty serious about my interest in wildflowers, too. I like to identify alpine plants, and grow some of them in a special garden devoted to alpine. At that time, a lot of people, like my colleagues, were very frustrated. They thought the Forest Service really was run by a bunch of timber people who built more roads than they reclaimed, and that lands, like many of the quality natural areas on BLM land, needed more protection. I felt the same way. The lack of mechanisms for public participation in the decision-making of land-use management agencies, I think, had a lot to do with sparking the whole environmental revolution that occurred.

01-01:10:05

Burnett: And this is happening in the late 1950s into the early sixties?

01-01:10:10

Dempsey: Yes. I attended the first Colorado Open Space Council meeting in Breckenridge, in 1965. I think it was about the time I left law school and went back to Climax. I might have given a paper there, trying to distinguish between land-use problems and environmental problems. Most of the big mine siting battles we hear about today, are the ones that become so controversial, like the Mt. Emmons Permitting Project I managed for AMAX at Crested Butte, Colorado. Most are really largely a land use issue, not an environmental issue. There are related environmental issues of rare plants at the mine site, things like that. Those can be handled. At Crested Butte, the local recreationists didn't want the mine in the town, near the town. It was primarily a land-use issue. But it has become a very useful wedge, or hammer, for environmental activists to say, oh, this is a special place, and all the environmental damage that will be done, no matter how much the mining company is prepared to mitigate or even improve them, impacts the real environmental issues. So underlying it all is land use, in my judgment, in many cases.

01-01:11:53

Burnett: They're using the endangered nature of a particular species, but the fact is they don't want the mine in a particular place.

01-01:12:01

Dempsey: Right. I don't say that some people aren't truly interested, in a particular environmental issue raised by a mining proposal, but I say these are usually secondary to battles over land use. We can probably get to some examples later, of real environmental issues that I ran into in my work in mining after

law school. But these are precursors of things I worked on and attitudes I formed before I was out of law school.

01-01:12:26

Burnett: That gives us some background on the period after you returned to the American Metals Company, the American Metal/ Climax. Perhaps we should take a break and we'll come back.

[break in interview]

01-01:12:48

Burnett: This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project of the Business Series. Last we left off, we were talking about the interest in the early sixties in the Mining Law and updates there, too. Could you talk about what was at stake in those conversations and policy activities?

01-01:13:24

Dempsey: By that period, there had been some controversial egregious road building on national forest lands in Montana; particularly on the Stillwater Complex in Montana, where major mining companies were looking for platinum group metals, which are strategic. One company put several road switchbacks up a mountainside. The National Wildlife Federation went to Congress to see how to stop that. At that time, there were no reclamation regulations at all for hard rock minerals. We in the industry could see that pressure was building. At the same time, the Public Land Law Review Commission was making its studies and recommendations. I was appointed to the Public Lands Committee of the National Mining Association in 1969. At that time, it was made up of the chief officers of all the major mining companies. A lot of them were lawyers, and very distinguished lawyers, who understood the law, and we developed a strategy for getting the commission to endorse retention of the basic principles of the General Mining Law – the 1872 mining law, which are an open-source type arrangement where anybody can initiate rights. We were successful in getting that approach adopted as an exception to the general tenor of the Public Land Law Review Commission report, which was the basis for FLMPA, the Federal Land Management Policy Act. From that point forward, environmental activists tried every year to change the Mining Law to a leasing system.

One feature of the 1872 Mining Law, as it exists today, is that a miner pays no royalties. The compensation of the government is really the finding of a mine for the nation, and then mining it. The reward for discovery is offset by any royalty that you would have under a leasing system. As you would appreciate, there's not much to tax and there's not much of a royalty on a mine that has not been found. There are fundamental differences between leasing minerals, like oil and gas and phosphate and potash. Most of them are minerals wide spread in distribution, and they're easily found—more easily found. Nothing is easy. In the case of hard rock minerals, as I say, there's nothing if you don't

find it. With all of our discussions now in Silicon Valley of open source, it's interesting the original open-source land-tenure laws were the mining district codes established by miners themselves. 1872 Mining Law was created, and it imported those principles. These were adopted in the 1850's and early 1860's, and then recognized by the federal mining statutes of 1866 and 1872.

I'll give you the short version of the history of mining district law-making. It's about two sentences. When people first came to California, the prospectors, the Gold Rush, to California, and even as late as Colorado in 1860, there were no governments, there was no territorial government, no state government, there was no federal government control. California had been acquired about the same month or so as the Gold Rush started with the discovery at Sutter's mill. That's the short version. The academic community, Gary Libecap and people like that, you may know, have written extensively about that analog. I've fought and been involved in the effort through the National Mining Association and its predecessor, the American Mining Congress, since 1969, and have continued to this day to try to keep self-initiated rights because the law has resulted in a lot more discovery than we would have had under a leasing system. The best example is, after World War II, the United States Geological Survey (USGS) was given the exclusive right to look for the uranium that we would need for atomic bomb production in the future. I'm stating it pretty broadly, but basically U.S. government geologists thought that we didn't have the right kind of rocks and there was not going to be much uranium found here. Most of it would have to come from Central Africa. After a few month of government exploration, little uranium had been found, they opened the public lands to entry under the 1872 Mining Law, and two years later, we had a surplus. Everyone prospected, using Geiger counters and scintillometers. A janitor at Golden High School found it where all the professors said it could not be, and the president of the School of Mines, can probably see the dump from that Schwartzwalder mine out his office window.

01-01:18:46

Burnett:

The janitor from Golden High School?

01-01:18:48

Dempsey:

Right. All the big-time professors knew that uranium was found in the sediments on the west slope of the Continental Divide. He didn't know any better, so he found a different kind of deposit than anybody had found before. You can see it out of my window, too. Basically, it worked. The discussion we'd been having, this is one policy. We wanted to find minerals. The only problem I see with the whole system is there are unintended environmental consequences, and everybody has to recognize that's part of it. We have to find a regulatory program for that part of it, but to deny the freedom of the people to find new mineral deposits is not a good idea.

01-01:19:38

Burnett:

It sounds to me like it's not only the freedom of the people to find, which is a political goal, but what you're saying is that hard-rock mining involves a

different kind of substance, with a different risk profile in terms of exploration.

01-01:19:55

Dempsey: And coal versus hard rock is a perfect example.

01-01:20:03

Burnett: Having royalties or placing state ownership restrictions can make sense in cases of abundant minerals, right? Because there's no—

01-01:20:17

Dempsey: Or resumption of operations that are already known deposits that are not being worked.

01-01:20:22

Burnett: You don't need to incentivize that. There's something about the scarcity of a particular mineral, uranium is a good example. It is very difficult to find. Let me pose that as a question. In general, is that a kind of standard position of the mining industry with respect to regulation, that there is so much risk involved in exploration for certain kinds of materials that you're running a risk of disincentivizing? This is something you would come across in the drug industry, that if you impose all kinds of restrictions or taxes on drug discovery, then you're going to disincentivize it.

01-01:21:16

Dempsey: Yeah, same policy issues.

01-01:21:20

Burnett: So this is something that you and your colleagues in the industry wanted to safeguard during this period of increasing environmental advocacy?

01-01:21:35

Dempsey: Yes.

01-01:21:35

Burnett: And environmental legislation. You want to preserve the kernel of this—

01-01:21:41

Dempsey: Reward for discovery.

01-01:21:42

Burnett: Reward for discovery, as simple as that.

01-01:21:45

Dempsey: Simple as that.

01-01:21:48

Burnett: During this 1960s, you're right that there's this increasing environmental awareness and environmental policy pressure. In 1962, Rachel Carson's *Silent Spring* made people aware of the use of pesticides and how that can harm

ecosystems. Did books like that have a similar impact in the mining industry, or were there other examples that were more relevant to mining?

01-01:22:21

Dempsey:

My colleagues and I were aware of the book, obviously. Probably the much more important book from the environmental point of view would be the *Sand County Almanac* by Aldo Leopold. I, through my mountaineering activities, knew a lot of people who were very sincerely interested in environmental protection and thought well of them and read those kinds of books. I think the policy goals for our country were absolutely sound, but I'd like to achieve some of these, and we have not, with command and control, secured what we as a nation wanted. I don't think that the open-source or Mining Law self-initiated rights approaches are the answer for every problem, either in the patent of drugs or in preserving wilderness values—but it can be an effective tool for certain situations. Lined up on appropriate policy goals, private initiation works. It's not good for everything.

01-01:23:41

Burnett:

Subsequently, as you have done research in American history, this is something you see as kind of an American story in terms of its legal—

01-01:23:52

Dempsey:

Not necessarily.

01-01:23:53

Burnett:

Not necessarily. So I wanted to ask you, then, how does this compare? When you started to learn more about both environmental policy and mining legislative acts in other countries, how did it compare? Were there lessons you learned from other countries that helped?

01-01:24:13

Dempsey:

I always like to look at what other countries are doing. I came up with a paper recently that compares the development of the copper industries of Chile, and the mines at Butte, Montana at the end of the nineteenth century. Copper prices began to take off early in the twentieth century, reflecting demand from electric power suppliers and consumers, and the burgeoning auto industry. New mines in places like Butte and Arizona came on line quickly. Chilean miners, however, were pretty slow to reap the boom in copper, even though many of their deposits were of higher grade. The authors of the paper suggested that the self-initiation, use it or lose it, security of tenure, and free transferability features of the U.S. mining law favored faster development in the U.S.

01-01:25:10

Burnett:

Other countries that had environmental advocacy, or other countries that had different legislative models for either the protection or the sanction of the mining industry in those countries.

01-01:25:22

Dempsey:

[Ed. note with respect to timecodes: the following passage was greatly expanded]

Over the years, I've taken an interest in how to make regulations that work. I was very much involved with the creation of the Forest Service's surface-management regulations. I was the chairman of the American Mining Congress Public Lands Committee Forest Service Subcommittee, in the 1970's. We worked with the Forest Service to develop a sensible set of regulations that would work with the self-initiated tenure law, the Mining Law of 1872. I have spent a lot of time looking at various regulatory methods that might be usefully applied to mining. I have been interested in incentive-type regulation, which induces the desired behavior by rewarding those in the regulated community who do the best job, and who may find better ways to secure a particular policy goal. I have also looked at regulatory schemes that would give the regulated party a competitive edge as a reward for innovation. I am wary of regulations that may have unintended consequences. Those, of course, are hard to forecast. [quote attributed to Yogi Berra] Examples of such consequences are not hard to find. Delay of projects is one case in point. While for some activists, delay is not unintended, delay wastes everyone's time and money.

I have also been mindful that regulations that threaten tenure, or property rights in general, will be hard to change. People are very resistant to changes that threaten tenure, so if the objective of a particular regulatory scheme is to continually improve a certain practice, like say, reclamation of mined land, using threats of license cancellation may not be the best way to encourage innovation.

I argue that any environmental impacts or land use conflicts associated with the 1872 Mining Law are unintended consequences of the open source features of that law, and that try to force this tenure law to be an environmental law would result only in degrading the tenure features which are now very effective in securing our nation's policy goal of finding new mineral deposits, while fossilizing in a tenure law environmental regulations which should change from time to time to incorporate innovation and improvement in environmental practices makes no sense. Put tenure in a tenure law. And put environmental regulation in laws of general applicability.

I have always found it interesting to see what other nations do with respect to a particular regulatory objective. We here in the US don't have a monopoly on good ideas. I also found that studying what others have done gave me ideas of how to do what I wanted to accomplish, and that is not limited to government regulation.

I was lucky to be involved in so many projects that were large, complicated, and in some cases novel. When I first started working on multi-million dollar

shaft and tunnel contracts, I spent a lot of time with our engineers and construction people, so that I really understood what we were trying to accomplish, what kind of problems routinely came up during the driving of a tunnel, what was likely to be the biggest worry for us, and for the contractor. I listened to a lot of war stories told by our folks who had actually driven a tunnel or two. Then I read all of the case law I could find dealing with contract issues likely to arise in a shaft or tunnel project. I quickly learned that changed conditions was the biggest cause of litigation in tunnel projects, and that some of the best cases to learn from arose out of dredging contracts. The case law made me realize that our contracts needed to be based upon an appropriate allocation of risk between the parties. Put the objective risks of changed conditions on the company. Put the subjective risks of knowhow and efficiency on the contracts.

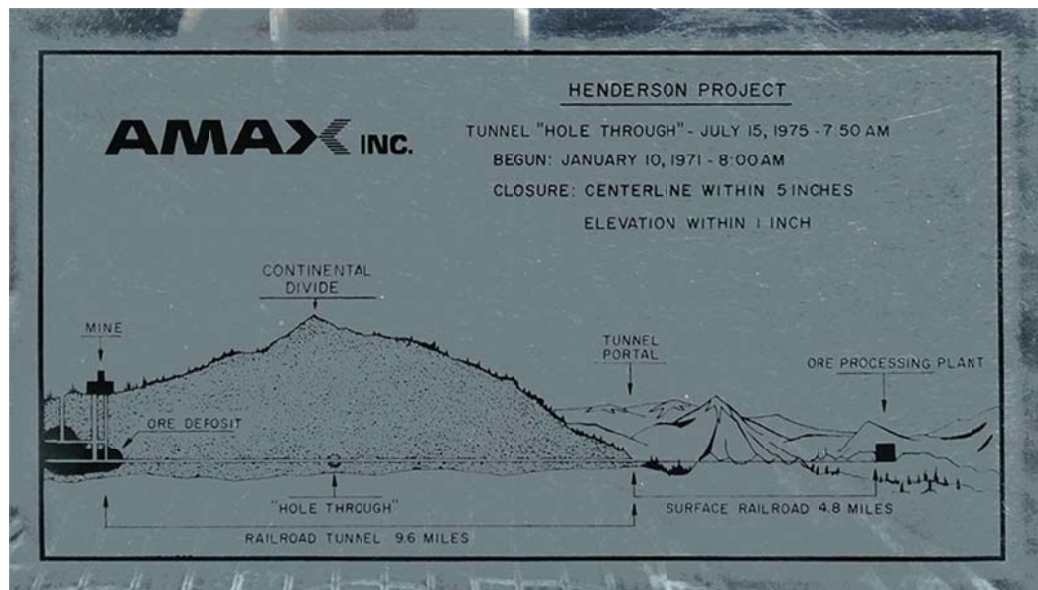
While it seems smart to read the cases, I also remembered that case law is really the pathology of contract practices. You look at the cases first to see what causes trouble, and how courts deal with it when the parties are not smart enough to settle their differences. You look at the cases to see what not to do.

I also used what I called the comparative approach when I had to find a way to secure the rights to drive the 9.6 mile long tunnel for the Henderson Mine. We could find no existing public lands disposal statute that provided for the rights we were seeking. Luckily, I had done some reading about the Sutro Tunnel, a deep drainage tunnel scheme used on the Comstock Lode in Nevada in the 19th Century. Digging around in the old Congressional records, I found a copy of the original special act that Congress passed to permit the Sutro Tunnel to be driven through public lands. We did some additional research, and concluded that we could use a similar approach. I modeled our bill along the same lines as the Sutro act, and was able to say yes, when I was asked at the Congressional hearing on our tunnel bill, "is there any precedent for something like this?"

Over the years I did a lot of study of mining related regulation and legal matters, and always found I learned something from seeing how other people had approached a problem. Of course, you have to take into consideration the differences in culture and political systems. My conclusion, after working in several places where regulation fell more to career civil service professionals, as opposed to political appointees, like in most places where there had been a British-style civil service, the public interest was a little better taken care of, and the outcomes were a little more rational. I also found that most places in the world don't have as much money to squander on overkill studies and delay, as here in the US. I even got quicker results in Bulgaria, where the loud bang of a government seal hitting your paper as the final step in some kind of dealing with government was a most satisfying end to the bureaucratic handling of any kind of legal matter.

I was responsible for AMAX's iron-ore operations in Western Australia, and that in itself is a great story of mineral development. Those are the biggest iron-ore mines in the world, and they ship a lot of iron ore to China and Japan, and the whole world. But there, when you seek permission to build a major project, like the Henderson Mine here, or any of the large mines that are—like the Pebble Mine—any that are controversial, the state actually works with the companies or the bidders for the licenses from the government, after all the package of regulatory matters is taken care of and they have draft permits, parliament passes a law rolling the whole set of permits and rights and obligations into a state action, statutory. Obviously, most of the issues are up front. We, in Australia, had to build an entire town, which in 2006 had a population of 4,245, a 436 -kilometer long, full-sized railroad that's the heaviest hauling railroad in the world because of the heavy iron ore, and a port.

It also has the record for the world's longest train. In this country, we couldn't have done that in four years, as they did at Mt. Newman because of *abuse* of the environmental impact statement feature of the National Environmental Policy Act [NEPA]. Not because of NEPA, but because of the *abuse* of NEPA by activists to try to hold up every project by making the proponent study every plant and animal, and having archaeologists dig up every outhouse on the place.



01-01:28:24

Burnett: The National Environmental—

01-01:28:26

Dempsey: The National Environmental Policy Act of 1970. There are other ways to do it, that's what I'm trying to say. And probably more interesting for your purposes, we became—when I say “we,” the mining industry, and particularly the Public Lands Committee of the American Mining Congress, now NMA [National Mining Association] – we were aware that a lot of people wanted more control over land use, and in many cases, very appropriately. It still seemed to me that too many people were looking at a command-and-control type regulatory scheme for resolving mining land-use control. That is a very expensive way to accomplish something that needed to be done. So in my role as the head of environmental matters at AMAX, I put together a study group to go to the United Kingdom to look at how they were doing land-use planning. The UK has been around a while. They've actually got some ideas, and lots of experience. If you think our activists are active here you should look in on a mine siting battle in the UK. Activists come in all sizes. All of the big international groups like Green Peace, Earthwatch, and IUCN, to very local, very narrowly focused. It isn't just the friends of the monarch butterfly; it's the friends of a monarch butterfly subspecies too. Each has its own group. So trying to permit a mine in the UK is a really interesting operation.

But at some point, my interest was drawn to the fact that environmentalists were complimentary of the way land use issues were handled by application of the UK Town and Country Planning Act to permitting for the onshore impacts of oil and gas drilling in the North Sea. The discovery of oil in the North Sea in 1969 gave the UK a major economic boost, but the port cities that provided infrastructure like repair shops, warehouses, employee housing and oil transportation and storage facilities had to expand quickly as oil platforms were being put into place in the North Sea. The Act apparently helped organize the process of upgrading these cities, while protecting important community land uses, and the environment. The Town and Country Planning Act, is the UK's principal legislation and regulation with regard to any kind of land use, from your garden shed to a nuclear power plant. The permitting process starts with a submission to the local council. Obviously, if it's a major use, like a nuclear plant, it gets what they call “called in” to the national government; it's of national importance. But they don't bring in the garden shed. I am very much a fan of the idea of an impact statement, and as a part of the Experiment in Ecology at the Henderson Mine, which was pre-NEPA, we basically did impact statements before we knew what they were called. They're a good idea. But when they're abused and used to frustrate development, it's not good policy for the United States.

When I decided to take a look at the Town and Country Planning Act System, I was able to enlist the help of a number of AMAX's friends in the U.S. We knew some of the folks at Rio Tinto. My group at AMAX had worked with

them in New Guinea, at Bougainville. In return, I asked their advice about how could we take a good look at The Town and Country Planning Act system and see how it worked for minerals in Britain. AMAX had an advisor, Lord Zuckerman, who had at one time been the chief science advisor to the British government, and also, interestingly, the head of the zoo in London. He was the British equivalent of George Ball in the bombing surveys done during and after World War II, they had worked together on the damage and policy, on whether you should bomb all the houses, or strategically hit just ball-bearing plants, or railroad crossings. This is a man of some thoughtfulness. You probably know him from your science studies.

01-01:32:51

Burnett: George Ball and the Galbraith—

01-01:32:55

Dempsey: That group of people that did the assessments of whether strategic bombing or carpet-bombing would be better. George Ball was involved in that. Zuckerman was his counterpart in the UK. They had the interesting issue of—he was an ecologist—of deciding can we win the war better by strategic bombing, or by Bomber Harris's idea, you blow the hell out of the place. Sorry.

01-01:33:31

Burnett: Arthur Harris's carpet-bombing strategies for Germany.

01-01:33:35

Dempsey: Long story short, Rio had permitting trouble a few years before I put our study mission together, in Snowdonia National Park. They tried to permit an open-pit copper mine, and a gold dredge in a nearby estuary. They ran into a firestorm of opposition. They withdrew the applications for planning permission, and later everyone worked together to set some policies for mine siting. Lord Zuckerman headed up that inquiry.

01-01:34:01

Burnett: Did you go to the UK to visit?

01-01:34:02

Dempsey: Oh, sure, and I've got a full report you can have. I think I've got a copy right here.

01-01:34:07

Burnett: So you met with Zuckerman?

01-01:34:13

Dempsey: We retained him to put the tour together for us, plus an environmental firm. With my national parks background, I was interested to see how the Town and Country Planning Act would work, and I was encouraged, because the environmental community, even in this country, had been complimentary of the application of these principles when they built the onshore facilities for the

offshore development of oil in the North Sea. In other words, where they staged in the towns on the North Sea the planning permission approach—

01-01:34:51

Burnett:

For the offshore drilling sites, drilling platforms.

01-01:34:55

Dempsey:

Worked pretty darn well for both legitimate environmental interests, legitimate land-use interest, not people trying to hold up a project, or extort a bunch of money off somebody. The North Sea oil, it probably bailed Britain out of the going-nowhere economic state it was in, and to have the environmental community—I'm talking about the national and international community—saying complimentary things about the development of an oil facility onshore, it must be something right. I asked Congressman Aspinall, who had recently left Congress, where he had been the House Interior Committee chair, and the chair of the Public Land Law Review Commission, to go on our tour. I asked a lawyer in Tucson, Vic Verity, who was probably the dean of the mining lawyers in Arizona. I invited a woman that worked for me, Diane Rees, who was very broad-gauged. She later was the director of one of the big paper companies. Oh, I also invited, I think, Ray Haik, who had put the Boundary Waters Canoe Area together in Minnesota, and had served on the Trans-Alaskan Pipeline Study Commission before ANCSA of 1971. ANCSA refers to native claims and was enacted in order to settle the native claims up there so that the pipeline could go forward. These were very thoughtful people. They had represented all kinds of interests, but they were mainly people that had the same kind of interests in regulatory policy.

The United States needed the Alaska pipeline, but we sure didn't want to wreck the place. We could have dealt with native claims, one by one, dealt with native claims, as Canada has with First Nations, one by one sued, like we are under NEPA. But in that case, Congress took care of their issues with ANCSA, the Alaskan Native Claims Settlement Act. These are big policy problems for development of oil and gas or mining or anything else.

Our mission started with some briefings by government types, and environmental group leaders. We went from Devonshire and Cornwall. Cornwall is a major tin area of the world. They also used to have self-initiated rights before 1854. We weren't there for tenure issues; we were there for land-use issues. We went to the Yorkshire Dales. Then we went over also to Ireland, all in about ten days or so. We went to the Lake District National Park and toured the Carrock Fell mine. They mine tungsten, just like they do in Boulder, Colorado, in the national park.

01-01:38:38

Burnett:

In the Lake District?

01-01:38:39

Dempsey:

Right. You know the lake? Windermere and all that? Have you been there?

01-01:38:47

Burnett:

No, but to hear that there's a tungsten operation there is—

01-01:38:51

Dempsey:

Yes, and it's accommodated by people working together. Britain doesn't have the resources that most of the world has, mineral resources. They can't waste them on inappropriate regulatory measures. The mine is very compatible with the landscape. The people there also commented that mining has always been part of the landscape of the area, and that today's small tungsten mine is an authentic part of the Park's heritage. More importantly, Cleveland Potash up at Yorkshire Dales, a major underground mine is being operated within the park. [Dempsey and Field, "Mineral Development in the United Kingdom, A Streamlined Planning Process," 14 *Land and Water Law Review* 75 (1979).]

01-01:40:03

Burnett:

And so the difference is the land use Town and Country Act in the UK is structured such that it gathers feedback at the local level?

01-01:40:17

Dempsey:

Starts locally.

01-01:40:18

Burnett:

It starts there, but at a certain point, it's adjudicated that something is in the national interest, and it triggers another response at a central, higher level, and then talks result, and—

01-01:40:37

Dempsey:

Things like mitigation measures are negotiated, or the plant isn't built if it isn't appropriate. But our land-management people in the BLM and the Forest Service today are spending their time on municipal dumps, and all kinds of activities that do not need to be studied. They used to say a fifteen-cent stamp – I think they're fifty now– anybody with a stamp can stop a measure, a bridge repair, realignment in Denver of our I-70 Corridor that you came in on, I think. That's silly. They're stopping the state of Colorado from doing something that really needs to be done. Our I-70 congestion on the way to Vail, the big ski areas up there, it's just a terrible economic problem for Colorado.

01-01:41:40

Burnett:

How does that work in the US context, where you have an inflexible system that's, in a sense, hyper-local, that any individual who's dissatisfied can hold up an operation that's already been approved at some level? Maybe I'm misrepresenting it.

01-01:42:07

Dempsey:

No. There's a couple words there that's not quite accurate.

01-01:42:18

Burnett:

How does the environmental legislation unfold, starting in the late sixties and into the seventies, in a way that undermines the possibility of the kind of

collaborative process that you saw in the Town and Country Planning Act?
What's blocking that?

01-01:42:43

Dempsey:

It's a body of case law that's developed. First of all, let's say the county commissioner of Jefferson County, where I live in Colorado, decides to build—let's say expand its waste dump, where our municipal trash goes. Let's also say that there are a hundred feet of federal land someplace in the project that must be crossed by a federal right of way, granted by the BLM. The BLM is under the gun if anybody tries—they're under the gun anyway, because somebody can bring a suit under the National Environmental Policy Act saying this is a significant impact on federal land. The federal connection is important. Now, they'll probably lose the case, but they'll delay the action for years. Also, it ties up the BLM people that do—let's say there's an archeology site, or really interesting fossil site, like we had up at Snowmass here in Colorado, where they found all kinds of mastodon [fossils] in a road cut. So we should stop to dig them out, but we shouldn't stop road building for ten years. We need a return of common sense.

01-01:44:11

Burnett:

Your investigations are prior to the Environmental Protection Act.

01-01:44:19

Dempsey:

Pre. The body of law that's developed around NEPA, there are categorical exceptions that are sometimes done for, say, the Oil and Gas Leasing Program in Western Colorado at one time. There are ways of getting relief, but they require a lot of political work. Again, litigation is so easy to trigger. Litigation is very rarely completed, because our judicial system is clogged and, it's not very efficient. These cases involve delaying a project until it's either uneconomic or it's just not possible to pay for the permits. An analog would be most securities-fraud cases that are brought in the US are settled, because the cost of discovery in the legal system is so high that it's basically a racket, a shake down. Several big law firms sue people every day. They go out and get you to buy ten shares, or they identify that I have ten shares of General Motors, and they sue General Motors. General Motors is never going to—I'm speaking not as General Motors, but—

01-01:45:51

Burnett:

Hypothetically.

01-01:45:51

Dempsey:

Hypothetically. That's my testimony. I don't think I'd get much argument from people. There's got to be a better way. Back to the time of our study in the UK, the way we did the study, we would first meet with the governance of the park, the people who actually administered the national parks, and who would give us their own views. Then we would meet with the environmental activist groups. They had some very interesting names over there.

01-01:46:49

Burnett: More particular and specific in Britain, I suppose.

01-01:46:51

Dempsey: Right. We met the activists in the middle of the day, or late middle; in the evening, we'd go to dinner with the mining people.

01-01:47:06

Burnett: So you've heard the voices from the different communities, and then you'd try to work something out.

01-01:47:11

Dempsey: By and large, I think everybody we talked to was sincerely interested in doing the right thing, as frustrated as anybody else would have been if they were in our circumstance. The park people were wonderful, as our park people are here.

01-01:47:31

Burnett: So they have an interest in achieving the best outcome in terms of the national interest, in terms of the old founders' principle of the internal improvements of the United States, right? That's kind of the goal, to develop some of these resources, but also preserve.

01-01:47:52

Dempsey: Americans want infrastructure like the Erie Canal. But we would just now be starting it if we had been exposed to legislative and regulatory, and case-law environment. That doesn't demean anybody in the process. I have the very highest regard for both of our public land management agencies, the US National Forest Service and the BLM. I've served on the National Advisory Board of the BLM, so I know their internal problems. I've seen problems with dunes, dune buggies in California. And probably the most controversial program of them all, management of wild horses and burros. I'm not happy about that either. But most of the people that I know that are in the land managing agencies are as frustrated as we who are seeking the permits. Forest Service and BLM professionals don't want to do silly stuff. They want to work on real problems. They're professional people, just like our people in the mining industry are professional. With the Forest Service, as I say, when we collaborated between the Forest Service, the mining industry—the Forest Service didn't have authority to put out the regulations they put out, reclamation regulations on our industry. There was a colloquy in the Senate that allowed them to go forward with the support of the mining industry, a very interesting departure from the normal practice. Then the industry joined with the Forest Service, and a number of environmental groups and, went around the country to teach rangers how to administer the regulations. Not from the point of view trying to bias the application of the new regulations, but to actually put into place a regulatory system that worked. People don't know that.

01-01:49:41

Burnett:

So this was a collaborative—

01-01:49:43

Dempsey:

No. The industry drafted and actually proposed the regulations. Sure, there was some collaboration with professionals in the Forest Service. But, you see, at that time, they didn't have many reclamation specialists in their minerals management group. We didn't have many reclamation specialists in the hard-rock industries. The Forest Service was under the gun just as much as we were. They were the ones to get sued first. We knew that if we didn't have some kind of regulatory system, we'd probably be put off the land all together. That's the point. The coal companies had some experience with reclamation under state laws. And a few companies like Climax Molybdenum in Colorado who were fairly progressive, were working with the Colorado Highway Department and the Colorado Ski industry to develop better high altitude revegetation methods.

01-01:50:29

Burnett:

So you needed to be proactive and—

01-01:50:31

Dempsey:

We needed to be proactive. We needed, both the Forest Service and the industry, to develop a regulatory scheme. We didn't sit down across the table and negotiate a set of regulations. We told them what we were prepared to live with. And they told us what they needed to make regulation work. We proposed a system that we believed worked well under the 1872 Mining Law, a system that made the best use of the skills of each party, was fair to the miner, and gave a ranger in the field the notice and opportunity to prevent damage, and an effective set of enforcement tools. It also incorporated timeliness considerations. Since then, the Forest Service has received authority in case law to be a regulator. They have modified these regulations a little bit, but in general they have worked well, but not in terms of timeliness when NEPA is triggered.

01-01:51:07

Burnett:

We're entering a really complex period in your career. The National Environmental Policy Act purports to regulate a number of areas of industry that affect the environment. We were talking off-camera about a kind of basic problem, where there's a mandate to regulate a specific set of practices to respect certain environmental regulations. But then there's the challenge of how you teach the regulatory authority about the kind of work that you do so that the regulations can be most effective for everybody, effective for the environment and effective for the industry. Can you talk about how that affected—or how you engaged in that work, working for AMAX, for example?

01-01:52:16

Dempsey:

We'll talk about the Experiment in Ecology and the collaborative program some other time. I guess the unifying principle around the work I did for AMAX, two jobs involved sitings of all of their plants internationally during

the period you're talking about. Of course, the Environmental Services Group also worked on environmental issues arising out of existing plants, too.

NEPA, I need to separate out, because NEPA is a different kind of law. It's not really a regulatory law, whereas your land-tenure laws, like the 1872 Mining Law, and your regulations of general applicability, which would be your reclamation law—you certainly don't want to embed a regulatory program for environmental [concerns] in a land-tenure system, because you'll never get it changed. Dean Pound said that at the University of Chicago in 1920. Don't mix up zoning with ownership of the land, because you'll fossilize the whole system. That's one bright place to first analyze. NEPA is a different thing, and I very strongly feel that the structure of NEPA is a very good thing. We do need a mechanism for testing whether we ought to do something, and have the operator come forward with ideas, but we don't need the system that has developed basically through litigation.

Let's set that aside, but the question I think you're asking me to illuminate on a little bit is that coal and minerals like that currently are regulated under the SMCRA, Surface Mining Control and Reclamation Act [1970]. I engineered with a gentleman in the iron-ore industry to separate, politically, the coal industry and the hard-rock industry, hoping that—well, not hoping—seeking out an approach for the coal, which accommodated the kind of command and control regulation that the coal industry was used to dealing with. They've had coal reclamation laws since the 1910s or twenties. We had never had a law in hard rock. I was hopeful, and I think our industry was successful, in making that break. In the command and control situation, also, from an economic point of view, most US coal at that time was steam coal for power plants, so the cost of reclamation was passed on to the utility customer. That is probably the way markets and value ought to work. For hard rock minerals, where there's a reward for discovery, where the operator is putting in all the capital—again, as unique as a hard rock deposit is, its impacts on the environment are unique to each mine, whereas there are much more broad principles on minerals of widespread distribution [such as coal].

Hard rock was always treated differently. At the time I am speaking of there was no broad federal law on reclamation for hard rock. Since then the Forest Service regulations, and the BLM 3809 regulations, surface management regulations, which are modeled off the Forest Service, have been imposed on hard rock, which take a “manage by exception” approach. So the entire US hard-rock industry on public lands in the West is regulated under the Forest-Service-type regulation, where the operator gives you, as they would in the UK, their plan. The regulator can take exception or deny it, say it's inappropriate totally, and have to say why, but the regulator then has the opportunity to bring in its own experts. In the case of hard rock, it would be really silly to bring in somebody who's good at one kind of mineral, a copper mine versus a salt mine. You see my point. Our industry was trying to get regulation that would protect us against imposition of a top-down regulatory

scheme. A good mine does not pollute. We've got people that know how to make a good copper mine. The Forest Service doesn't. Do you really want them to hire a whole staff for a mine, again, that's not been discovered yet? So that's the basis of our approach. Today, the federal regulation of hard rock minerals is under the Forest Service regulations and the BLM, 3809 regulation, and state reclamation laws. Where NEPA comes in, it's a very good approach. It's more of an umbrella approach to any federal action, but it's not really what I'm talking about on reclamation and surface- damage protection.

01-01:58:09

Burnett:

What you wanted to do was to preserve, in a sense, the domain of expertise, so that if the government is going to make any kind of regulatory claim under the Bureau of Land Management or what have you, it's going to have to do so under the terms of the relevant expertise?

01-01:58:34

Dempsey:

No. I specifically want them to have the ability to hire anybody in the world that knows something about it, not the next G3 or 4. I want them to succeed in doing a good management-by-exception approach. If they see something that comes in from a company like Anaconda or Kennecott or AMAX, and they respect our people, and they also can see that the science is sound, it's by reputable people in the community, they're going to approve it. Why should they have a staff to compete with our people? They should have every ability to bring in the best scientists in the world, best people to analyze, and if those other people have a dispute, there are two outcomes. One, we never get the permit, or we can work together to solve the problem so the American people have the copper that comes out of that place. It seems to me to make sense.

01-01:59:39

Burnett:

But you could have different kinds of expertise. You might have a mining engineer, for example, who says that we've developed a pad for heap leaching that ensures that—

01-01:59:58

Dempsey:

A pad that won't leak.

01-01:59:59

Burnett:

A pad that won't leak, and we promise you that. You might have in that case, hypothetically, they might bring an expert geotechnician who says that there have been failures of this kind of pad in the past, and if there were to be a leak, it would be absolutely catastrophic for this lake system, according to another kind of expert, an ecologist, for example. And so their expertise is not so much in the domain of engineering, but their understanding of the risk of a failure is such that they could make a claim for extra care to be taken or something like that. In other words, the relevant area of expertise can be up for grabs sometimes, or is that not true?

01-02:01:03
Dempsey:

No. What I say is that any reputable engineering firm that works on leak detection and leak prevention in constructing a proper heap leach can come in, be hired, they hire a better engineer than we've got, if they're right, we're probably going to take his or her advice. We're talking about actually doing some business for the country, back and forth. We're trying to secure the interests of the Forest Service on behalf of the public, and our company, who's developing it, whose product goes to the public. But if somebody unqualified comes in and makes a statement like, "Every one of these is going to fail forever," that's pretty broad and I don't think the science is very good to support it. On the other hand, when you get into things like sulfide and the efforts that the environmental activists in Michigan and places like that say that no mine has ever been built, a sulfide deposit, that doesn't have some pollution problems, it's hard to deny. But the next one better not. Do we really want to sterilize all the sulfide minerals in North America? I don't think so. It's our job as a society to figure that out. I'd rather spend the money finding out how to do it, or why we should build the mine, than I would on litigation, environmental activism, making up stories, scaring people.

01-02:02:51
Burnett:

In other words, you're not opposed at all in principle to the existence of NEPA or these institutions, but you're worried and you have found that, in certain instances, an ideological motivation against mining, full stop, for example, might lead people to manipulate a system, to shut down certain operations that they find objectionable. Is that what happened in some of these cases?

01-02:03:36
Dempsey:

Oh, nearly every new mine proposal in the US is attacked. There are organizations attached to law schools whose principal purpose is to stop mines. I can't believe that every proposal is defective. These organizations make money out of a controversy no matter how it comes out; that's what they do. Their performance is measured by contributors and how successful— There is one organization here in Colorado that has brought an objection to every new mining proposal done in the western states for several years. Can they all of those proposals be that bad?

I am very positive about opening up the process, and about sensible impact statements, and there's also a reason why I'm positive. I'm very favorable to public participation, because, again, open-source approach, you know there might just be somebody that has a good idea not thought up by the permit applicant or the government agency, or the activists involved.

I'll give you a quick example. In Western Australia, I hired an academic ecologist to review all of AMAX's properties and tell me what we were doing right and what we were doing wrong, in terms of environmental performance. Very interesting situation. We were exploring a number of metals in Western Australia.

We cleared paths through to bush for claim lines, roads, and drill sites. We also had a camp with tents and caravans. The geologist stayed on site, which was quite remote. There were three hills—Australia is pretty flat—there were three hills that are on or just next to our claim block and camp some meters above the landscape, and they’re about four or five kilometers apart. Those were a great place to take a Jeep or Land Rover up to the top after a shift and drink beer and throw cans around. It was cooler up there, too. We had not a clue that when that ecologist got up there she would find that we had been doing anything wrong—first of all, there have been dissertations done on those three iron-cap hills—they are different, because a microclimate has developed on each of them, and the vegetation is—

01-02:06:01

Burnett:

Unique, I guess.

01-02:06:01

Dempsey:

—unique on *each* one of them. We were on people’s study sites. We hadn’t even caught on to that yet. We were clueless about the importance of these hilltops until it was pointed out to us. They were good for the purpose of going up and drinking beer. Look, geologists are going to do that. But they wouldn’t do that if they knew that that was the situation. They are professionals, and scientists, and it did not take long for our people to be more sensitive about environmental conditions.

01-02:06:24

Burnett:

That was special.

01-02:06:26

Dempsey:

Yes, and our industry had no background in having ecologists in a geologic team. We do now. We also were cutting off water supply to some kind of a frog someplace. We don’t do that anymore. We also don’t build aluminum plants on estuaries as much as we used to either, like the one you’re near in San Francisco Bay. I’ve done studies on San Francisco Bay in connection with aluminum plant sitings in Oregon. It’s just one more set of data and mitigation measure we have to be sensitive to.

01-02:07:04

Burnett:

Right. But the way that the regulatory mechanisms have evolved in the United States produces—people can take advantage of the sclerotic nature of the legal system to really impede the development.

01-02:07:20

Dempsey:

As a lawyer who just received his fifty-year pin from the Colorado Bar Association, I’m very proud of my profession. I’m very proud of my colleagues of the Colorado Law class of 1964. We just had a reunion here at our home. But those of us in the legal fraternity also need to be looking at the possibilities of—well, not the possibility, but the self-evident need for tort reform. And we need reform of class-action suits. That doesn’t mean that class action suits aren’t appropriate in some case, but to just make money off it is

wrong, flat wrong. There's no way to say it any other way. It's corruption. It's corrupting our institutions, so that our country is not able to function. We are not a preferred destination for mineral exploration by the companies overseas, and that's to our detriment, because we have a mineral endowment all over the US that's phenomenal. Americans do not have to go all over the world looking for resources. But just as the banking system, as the securities industry, they've all been, to some extent, corrupted. In the last twenty, thirty years – there's always been little corruption – but we're now talking about systemic corruption. On a scale no one would have ever imagined. And disregard of the rule of law by governments at all levels is not hidden from view.

01-02:08:47

Burnett:

And this corruption is preventing the development of resources in the United States?

01-02:08:53

Dempsey:

Absolutely.

01-02:08:57

Burnett:

Can you talk about an example of a case that you worked on personally where it was clear to you that the motive behind the lawsuit or the litigation was just to stop the mine from going forward, not to work with the mines to produce an eventual product that was safe environmentally and for the public?

01-02:09:27

Dempsey:

First of all, that's not necessarily an illegitimate thing, not to want something in your backyard. So I first accept that if somebody wanted to do an open pit in my backyard here in Golden, Colorado, I might not like it. That's not illegitimate or corrupt, to not want it in your neighborhood. But it is illegitimate when a group of environmental academics, who have a field station near a proposed mine, identify the existence of a rare plant on a sulfide and iron-rich water course, which is forming bog iron, and when a fire breaks out at the mine— a little tiny trash fire on the mine dump—and withholds the information from the operation in the hopes that the miner will be guilty of harm to a rare plant, which their organization was formed to study and protect. Make sure that that happens, they get burned up. That's an example. This kind of fact management does not strike me as virtuous. I can't broadly condemn everybody who wants to stop a mine. The Pebble Project—in Alaska, for several years I had gone to Alaska to fish for salmon and the rainbow trout that follow their spawning runs. The Bristol Bay area is one of the great salmon-spawning areas of the world. Anybody that says otherwise hasn't caught a bunch of twenty-three-inch rainbows, and or a twenty-nine-inch rainbow. It is significant. I've flown over a lot of the territory, and Pebble itself. I have no financial interest in the property. Some of my family was involved in some public affairs activities arising out of the very heated conflict over Pebble. I have a very close friend, who's one of the finest operators in the industry, who's very much against developing Pebble,

because he doesn't think it can be developed appropriately and that a spill there would hurt the rest of the industry. Others feel quite to the contrary. That it would be a great thing for Alaska, and the Alaska Native Corporations, and it's on state land. It would be great for the state. Differences of opinion and spirited advocacy on issues like those posed at Pebble are legitimate, but there are tactics that have no place in civil discourse. As I mentioned, letting a rare species burn up, hoping to hurt the mine. That's not right.

01-02:12:10

Burnett:

So there have been instances of sort of gaming the system to—

01-02:12:14

Dempsey:

Yes. One final thing I'd say about all we've been talking about, the industry is not against regulation. Regulation in the case of the Forest Service regulations and BLM are good for us in the sense that they put some boundaries on the processes required to seek approvals and they organize the disputes. If we were back in the old system, we would be sued in county and state courts all over the country. We don't sit around in the industry and talk like that, but basically, it's my view that it would be better to have the Australian parliamentary-approval system, or a Town and Country Planning Act. If you had to handle land-use conflicts without any institutional framework, it just wouldn't work.

01-02:13:15

Burnett:

It seems like, when you think about what does a mine want, or what does a mining company want, what it wants, from stem to stern, is a kind of predictability.

01-02:13:27

Dempsey:

That's a very good observation. We want to be sure when we invest—we want to know there's a system that applies to everyone, that's transparent, gives the public a good opportunity to participate in the decision-making, because they might even have some ideas. The mining industry does not want to say, "We don't want any regulation." That's not effective. If it didn't exist we'd have to invent it.

01-02:14:01

Burnett:

If it didn't exist, you'd have to invent it. You want to make operations predictable to reduce risk. You want to minimize risk, and you don't want to be blindsided by discovering down the road, after you've invested millions and sometimes billions of dollars—

01-02:14:20

Dempsey:

It costs, sometimes, millions of dollars to test a discovery. Up to \$100, \$200 million sometimes, before you even know you want to apply for a permit to a mine.

01-02:14:32
Burnett: The time for permitting is extraordinary now. Isn't it something like ten years?

01-02:14:37
Dempsey: Yes.

01-02:14:38
Burnett: It can take ten years from the time that you identify a mineral deposit—

01-02:14:43
Dempsey: It will vary from place to place. Even when I was doing that kind of work, we always said to our people, "It's going to be at least a year, because we'll have to have a wildlife study that goes through the four seasons." We already know that. Of course, there weren't any studies then, and that was appropriate. I'm not saying we shouldn't be able to take a year to do that if there is some sound science telling us we need that long. But today, there are often stacks of existing flora and fauna reports, you couldn't jump over, they've not only got an idea of where the flowers are; they've got them numbered one by one. And I'm a guy that likes wildflowers. I use that data sometimes to go look for flowers. They've even got GPS coordinates on many of the plants, which is a question that the people that are interested in native plants worry about sometimes, publishing those GPS coordinates, because somebody will come in there looking to either steal them for a nursery or trample on them, or not be very careful with them, or try to collect seeds for their own garden. These regulatory issues are not straightforward. Just think of the policy issues on just that one set of issues. But back to the short answer, if we really need 12 months or more to study baseline conditions – ok. But, if we are just stretching out the EIS timeline to delay the mine – that's not appropriate.

01-02:16:10
Burnett: The 1970s is kind of a watershed moment in environmental regulation in the United States and elsewhere in the world. NEPA is one of them, but there's also, I guess, the Clean Water Act.

01-02:16:25
Dempsey: Sure, and it mimics the air act. It was a real watershed. Creation of EPA.

01-02:16:33
Burnett: You were on the ground floor of your company's response. You had to—

01-02:16:39
Dempsey: Our industry's.

01-02:16:40
Burnett: And your industry's response. What were some of your encounters with regulation in the 1970s with the Clean Water Act, for example? Was that different or the same type of challenges?

01-02:17:01

Dempsey:

I think the same kind of challenges, and the same kind of response. I tried to lead from the AMAX point of view. Number one, to be positive. Number two, be analytical and thoughtful about how we can make regulation work to achieve appropriate standards and keep the situation permissive for careful industrial activity. There are places where we did not agree with the government on what something like a zinc standard should be coming into a stream. We had, by then, put together a team of environmental scientists. I hired ecologists, lawyers, and put a group called the AMAX Environmental Services Group together to first audit all of our properties and see where we were. Did we have big problems, little problems? You won't believe how big some of the problems were that nobody even knew anybody cared about. There were some big problems. And there were some places where AMAX people were way out in front of the public and the government.

01-02:18:00

Burnett:

And you did this in anticipation? You weren't required to do this, but you—

01-02:18:04

Dempsey:

No, there was no law that required. AMAX's approach, which was to recognize this is coming—I mean, it's not coming; it's here. We also knew that most people that were in the regulatory area, their basic mindset is command and control. That approval involves establishing a new agency including a self-promoting public relations department, we'll hire a bunch of people, we'll put out a bunch of rules, and we'll stop all bad activity. Technical things aren't that simple. Science isn't that simple. Nobody has an absolute answer on many of these. How much zinc will a toad or a mayfly larvae or a catfish in the bottom of a stream tolerate? Well, it might matter a little bit whether the zinc is in a different form or not. It might make a difference in the environment that the mayfly nymph is swimming in. How and where do you measure the zinc level? End of the pipe? With or without a mixing zone? Seasonal sampling?

01-02:19:06

Burnett:

Solubility, right?

01-02:19:08

Dempsey:

Or maybe he's kind of the runt of the litter. How many do we have to protect? There are so many issues. Wonderful thing I had was to inherit AMAX's mines all over the world, no background at all in the kind of things that we were going to have to do. Now, today, I couldn't do environmental audits. The legal department would say, "You're creating a situation where you're putting a gun at your head."

01-02:19:40

Burnett:

You would not be qualified today?

01-02:19:42

Dempsey:

I didn't say qualified.

01-02:19:43

Burnett: I mean technically qualified.

01-02:19:45

Dempsey: No. I'm overstating it a little bit. I frankly don't know where environmental auditing is now. What the AMAX Environmental Services folks put together was a program to go out to each of our mines and make an objective assessment of what we were doing wrong and what we were doing right. What we needed on a go forward basis? At that time, you would find plants where all the wastewater, or all of the plant water—there are several kinds of water in a big smelter or something—a lot of it was going into storm sewers, right into rivers. All the dust that was created in the smelter, all of the process water that was contaminated, all the storm water runoff, was going to a big river in a municipality, alongside the sewage from the municipal plant. No filters. We did have some problems, so did municipalities, and federal agencies. There's a long story and a short story.

01-02:21:08

Burnett: Right, of course.

01-02:21:11

Dempsey: Just for a second on environmental laws. I personally visited every plant AMAX had all over the world, and I took the team, and we would work with the operators. We had plenty of resistance. A lot of the operating types did not want us there. After a while, I ended up reporting directly to the chairman and the president of AMAX directly, in order to have enough leverage with the operating managers. Most of them didn't want us there at all. Years later, they understand why you would do that, and they're part of the bargain. We'd be very welcome. While I was on those trips, I would go to certain unnamed countries, which are some of the biggest countries in the world. I asked Senator Allot in Colorado to make an introduction to me. "I would like to meet their minister of environment." One very large country, appointed one, before I went from Geneva, where I was attending an environmental conference. This nameless nation was so embarrassed by the senator's request, they had to admit they didn't have one. They appointed one before I got there, and he was moving his furniture in to his new office and admitted it to me. We had a good laugh like we're having now. People can't understand how it wasn't just the industry that wasn't prepared; nobody was prepared.

01-02:22:40

Burnett: Well, yeah, that sounds to me like the history of it, was that they were scrambling to figure out what was an acceptable threshold. You're not talking about stopping something entirely. In some cases, DDT—

01-02:22:54

Dempsey: Well, like the military.

01-02:22:55

Burnett: DDT was banned in the United States and other countries.

- 01-02:22:59
Dempsey: A lot of people died of malaria, too. We still have to work on both problems.
- 01-02:23:05
Burnett: Right. That's an interesting example where there are costs and benefits.
- 01-02:23:14
Dempsey: How many are we willing to kill when malaria infested Africa?
- 01-02:23:20
Burnett: The understanding that all they could focus on was that this was a poisonous material that we had invented.
- 01-02:23:29
Dempsey: It made bird eggs thinner. I'm on the side of the birds on that one, too. But I'm not on the side of killing all the people that have died by mindless regulation in the tropical disease area. I'm overstating it for emphasis again. But those are the tradeoffs we're making.
- 01-02:23:52
Burnett: That's an extreme case of interdiction, like, "you will not allow this to happen at all." But the more difficult challenge is thresholds.
- 01-02:24:05
Dempsey: How thick should a bird egg be?
- 01-02:24:07
Burnett: Right. [laughter] Or how many parts per million is acceptable for—and certain things, you don't want dioxin anywhere, but—
- 01-02:24:16
Dempsey: Yeah, there are some things we don't want. But we could probably do a better job of protecting both the public and nature if we could put the debate back onto a more civil basis.
- 01-02:24:18
Burnett: Right, but we need lead, we need zinc. There are all these kinds of demands.

Interview 2 April 28, 2015

02-00:00:00

Burnett: This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project of the business series. We're here in Golden, Colorado on April 28, 2015. Mr. Dempsey, last time we kind of skipped over an important period in your career, when you were doing some advising, international advising, I understand. This is during your kind of law school period, in Chontales—if I've got that right—Nicaragua.

02-00:00:48

Dempsey: Chontales.

02-00:00:49

Burnett: Chontales. How did you come to go there?

02-00:00:55

Dempsey: One of my law school classmates, Curt Winsor, was interested in investing in gold mining, and one of my old mining partners, Harrison Cobb, had talked to me earlier, about a prospect in Nicaragua. I had been out of the country only a few times, to Canada and Mexico, but I thought that this prospect was worth looking at. I told him what it would take to check it out. The story was that there was a tailing pile that contained good grade gold, and that we might be able to put together a small vat leaching plant, and recover the gold from the tailings. I met Curt in Managua, Nicaragua, and we travelled out to the town of La Libertad together. I did a full examination of the tailing pile. The mill tailing was alleged to have had about 0.20 ounces of gold per ton in the tailing itself, which would make it very high-grade, and subject, perhaps, to vat leaching. So I went there. I had to construct the drilling equipment for the augers to use on the site. It was a very interesting trip for me. My first real international trip.

02-00:02:06

Burnett: Did you have to order the equipment, special-order the equipment, or was it part of the company's operation?

02-00:02:14

Dempsey: No, the company was not operating at all. It was a mine that had been closed for about twenty years. In fact, we knew that the metallurgy of the mill was not proper for the type of ore that was used. A fellow who had invented a flotation machine had insisted on using that particular device on the gold ore, so it did not recover most of the gold. He had pushed the use of flotation, on ore that would be better treated with cyanide. The story hung together before we went down, and we were able to confirm that indeed the tailing did have that kind of gold grade, and that it would be amenable to vat leaching. We presented the results to the investor, and he decided not to proceed with building a mine. As I say, I learned a lot on that trip.

02-00:03:04

Burnett:

Can you tell me a little bit more about what you learned on that trip?

02-00:03:11

Dempsey:

First, the language issues involved. To give you a little more detail on the drilling, the fellows at the machine shop in Boulder, where I was in law school, helped me figure out how to do the testing of the tailing, how to drill it, and how to recover a sample. They took an old coal auger and set it up so that it could pull the sand up on the auger blades without losing it. You couldn't core drill this or percussion drill it. They made up the coal augers in a special way, but I had to have the handles fabricated in country, so I had to go visit a Nicaraguan machine shop and communicate to them how I wanted to build these handles. We're talking about a very simple drilling situation. But I needed a drill that would go, I think, sixteen feet. The sections of pipe and the auger had to be screwed together. I did all that and it worked very well, and of course I admired all the work that the men did, and they did a very good job for me. They even painted them, which I didn't really require. Then I took them out to the tailing pond, and I hired a crew of men, in the little town of La Libertad, which I think was near the hometown of the later president of—Nicaragua.

02-00:04:37

Burnett:

Ortega?

02-00:04:38

Dempsey:

Yes, Ortega, President Ortega.

I found out when we got on the site that I had to be able to instruct these men to turn the T-handle with the auger on it always to the right, because if they turned it to the left, I would lose the lower section of the drill. I learned a lot about drilling, but I learned a lot more about language, because I couldn't say "one way". I finally remembered seeing street signs in Managua saying "una via" or "one way". So I yelled, "Una via!" not very well for a long time, and we got through the job, but it was difficult.

02-00:05:24

Burnett:

It was your first exposure to international work.

02-00:05:27

Dempsey:

Yes, it was.

02-00:05:27

Burnett:

And some of the challenges of communicating with folks.

02-00:05:31

Dempsey:

Well, that was communication, but I also learned a lot about being discrete, and keeping your own counsel until you know the full story. Part of my job was to check the title to the properties. I went to the government agency, as I would do here, and I learned that, in fact, the landowner had not paid the rent that was required by the mineral lease, and it was subject to being relocated.

So my client and I could have re-staked the land, but the young man in the government office said, “You’re also dealing with one of the bigger families around here. You might want to think about that before you do it.” In fact, we were negotiating for the mineral rights with the family involved. I had a conversation with the family involved, and they were very patient and had been around a long time. They said, “We don’t pay the rent. But in this circumstance, we’ll bring it up to date.” I learned then that maybe exercising all of your legal rights might not be the wisest course. Of course, I found that might apply in the US sometimes, too. The other thing was just the shock of reality. When the roosters start crowing in the morning and get you out of bed, and the tom turkeys are walking down the street, and the pigs are oinking, and all that, in a rural area of Central America, it’s a different place.

02-00:07:05

Burnett:

Yeah, and impressive in some ways because of its—

02-00:07:09

Dempsey:

The people were wonderful.

02-00:07:15

Burnett:

One of the things I wanted to ask is tailings recovery, or reusing the tailing.

02-00:07:22

Dempsey:

Reprocessing.

02-00:07:23

Burnett:

Reprocessing the tailings. How common was that at the time? Is that something that was started—

02-00:07:30

Dempsey:

The vat leaching process, using cyanide was well known. Heap leaching is the thing that has been developed more in the—seventies and eighties. But vat leaching was a known technology. The other interesting thing I did was to visit an arrastra. I wanted to see the outcrop of the vein. So they put me on a mule, and took me up through the territory, and the jungle on top of the outcrop. All of the sudden, we encounter an old fellow running an arrastra. An arrastra is a device to crush and grind ore. This one was set up to recover gold using mercury. They grind the ore with two rocks that are hanging from—it looks like an ox yoke, which is turned either by animals—or, as in this case, it was by water power. So I had a visit there, and I was surprised to see that the amalgam was such a bright gold color. I knew about the use of mercury, and about amalgamation as a way to recover gold, but I hadn’t realized that the amalgam would actually turn gold color. There was quite a bit of gold in that arrastra.

02-00:08:47

Burnett:

I imagine that’s a fairly dangerous form of mining?

02-00:08:52

Dempsey:

You'd want to be very careful with it. The process of distilling the mercury to recover the gold puts off mercury vapor – very dangerous. The other thing that amused me was I asked him why doesn't he bring in a little bit more modern technology, like a jaw crusher or something like that, and increase his production, and he said to me, "My father ran this arrastra. I'm running it. I get about one or two ounces of gold a month. I'm not legal here. The landowner knows I'm here, but if I start putting a big production in, he'll not wish to have me here." Again, there's some wisdom in some parts of the world that they don't teach us in school.

02-00:09:39

Burnett:

And that country in particular had a really high concentration [of landownership]. I think a very small number of families owned about half the land in the country.

02-00:09:47

Dempsey:

I think they were pretty prominent in ownership.

02-00:09:51

Burnett:

So that leads to a whole different sort of cultural set of expectations.

02-00:09:55

Dempsey:

Right, and I must say my impression was not necessarily negative toward the big families. They were, I suppose in our terminology, patronizing.

02-00:10:07

Burnett:

Paternalistic, I guess.

02-00:10:08

Dempsey:

Paternalistic. Yes.

02-00:10:11

Burnett:

You had that experience early on. Did that whet your appetite for more international work?

02-00:10:18

Dempsey:

Oh, I already had the appetite.

02-00:10:19

Burnett:

Oh, you already had the appetite?

02-00:10:22

Dempsey:

I loved it.

02-00:10:23

Burnett:

Even earlier than that, you had done some prospecting in other states as well, in the late fifties. Can you talk about even the different types of mining, different types of minerals that you were exploring for? Uranium, for example.

02-00:10:40

Dempsey: Primarily uranium. This was at the height of the uranium boom. Small miners could actually ship ore to either an Atomic Energy Commission buying station, or they could sell it to a mill. There was a market for the material. Harrison Cobb asked me if I would like to partner up with him to open up a mine in the Pryor Mountains in Montana, just over the Wyoming-Montana border, north of Lovell, Wyoming. We headed up there in August of 1959 and opened up a small mine on the face of a mountain range called the Pryor Mountains. Again, great adventures. Wild horses. The Pryor Mountains are still known for their wild horse herd, and apparently they've got some genetic evidence that they may actually be related to the Spanish horses that came with the early colonial people. I did the drilling. I'm always drilling.

02-00:11:53

Burnett: Yeah, there's a theme there. [laughter]

02-00:11:56

Dempsey: I ran a jackhammer drill. We're open-pit mining a mineral called tyuyamunite, which is a mineral that occurs in the limestone beds on the face of that mountain range. It's wild and wooly country.

02-00:12:16

Burnett: What a contrast between the wildness of the country, and it's kind of a romantic, sort of Western environment, and you're mining this—

02-00:12:27

Dempsey: Space-Age material.

02-00:12:27

Burnett: Space-Age material, Atom-Age material, literally. These are small operations, right? How many people are we talking about here?

02-00:12:37

Dempsey: Just the two of us. Harrison ran the front-end loader and I did the drilling. So we drill and blast the Madison Limestone, which is full of little caverns, solution caverns, in the limestone. They had been filled with tyuyamunite and calcite. Big crystals of calcite in these caves. There's a piece down in the mineral case if you want to look at it on the way out. It was a great adventure. Harrison was a marvelous mentor.

02-00:13:17

Burnett: You had gone pretty way back with him, hadn't you?

02-00:13:19

Dempsey: I'd gotten acquainted with him probably 1956, '57. He was sort of the dean of the Boulder County mining fraternity.

02-00:13:38

Burnett: When is the last moment when you recall people in your business kind of going out, a couple of people going out, and blasting some rock?

02-00:13:52
Dempsey:

There's still some of it. Actually, I did a study for the American Mining Congress sometime in the late seventies. I am referring to the mining industry as represented by AMC. We wanted to find out—we continually—when I say we, the industry continually trying to keep the mining law together, would tell people that small miners are important. I wanted to be sure this was true. I went out and found out whether they were or not, and we did some pretty thorough research. AMAX colleagues David Delcour and Diane Rees did most of the work. We were surprised to find more small miners than I even thought at that time. We found that most small mines were developed to obtain industrial minerals. Barite is a good example. It's a high specific gravity mineral that's used in oil well drilling. I expect it probably has had recently a pretty good market in the fracking area. Just lately, a number of small frac sand operations have started up to support the boom. I don't know, but I'm just saying that's the sort of market. Barite occurs in these kinds of outcrops on the surface, where two fellows or gals could go out and really do a job on it.

02-00:15:01
Burnett:

Back to what you were saying in our earlier sessions, this is the freely initiated rights aspect of the American mining landscape, that anybody can go out and start digging and find something, and if they do they can lay claim to it.

02-00:15:16
Dempsey:

They can own it. Very much an open-source approach.

02-00:15:21
Burnett:

They can own, right, so not like Crown land, where you're talking about leasing.

02-00:15:25
Dempsey:

No.

02-00:15:26
Burnett:

And that's what was at stake.

02-00:15:28
Dempsey:

We'll get to that.

02-00:15:29
Burnett:

We'll get to that, yeah. There is this sort of romantic portrait of going out and finding things that actually ends up being of great use to the industry because they are, in effect, prospecting. Because they could find something—

02-00:15:46
Dempsey:

They can find the top of a big gold or copper deposit. The beginnings of a major deposit.

02-00:15:48

Burnett: Right, and then they can't possibly mine themselves, and then they can sell that claim to a larger operation.

02-00:15:54

Dempsey: Right, and that's another major feature of the mining law that is important, free transferability without the permission of anybody, including the sovereign, is critical to a successful mineral tenure system.

02-00:16:06

Burnett: That's between you, the discoverer, and the mining company—

02-00:16:09

Dempsey: That's right.

02-00:16:17

Burnett: Before we get to that, I want to jump ahead a little bit to, I guess, the legal work for Climax. You were doing different kinds of legal work. Mostly construction contracts?

02-00:16:38

Dempsey: I did a lot of mining, classical mining law, working on acquiring claims, particularly for the new tailing facility up at Climax, but very quickly after I started working as a lawyer for Climax I was asked to spend some of my time working on construction contracts. Climax was building the Urad Mine. And they were also constructing a large plant to process molybdenite ore at Climax. I did a lot of work on that, including the handling of a complicated construction defect dispute involving welding of stainless steel piping. I was able to put together a compromise, which involved both destructive and non-destructive testing of stainless steel piping. In the process of developing Urad, they made the discovery of the Henderson ore body, which was about 3,000 feet below Urad. So I had all that responsibility for acquiring the land, but I also had responsibilities to provide construction contract advice to the construction people on the site. That was a wonderful opportunity to learn a lot about mining construction at all three locations, Climax, Urad and Henderson.

02-00:17:32

Burnett: One of the things you also discovered, in addition to all of this discovery of ore bodies, you're also discovering these strata of old mining towns, as you become responsible for what's called the disincorporation of these small towns. Can you talk a little bit about that and what you learned from that experience?

02-00:17:57

Dempsey: The first thing I learned was that I should have taken the municipal law course in law school. I hadn't done that; I didn't see why a mining lawyer would need the law of towns and cities. I was sure wrong about that! In fact I have had to deal with quite a few problems with municipal corporations, and planning for things like fly-in – fly-out camps or towns.

The circumstance at Climax was this. The valley of the Ten-Mile River that goes down toward Dillon and into the Dillon Reservoir had several incorporated towns in it by the late 1870s and the early 1880s. The miners rushed in for really rich silver deposits, and they built towns and incorporated them. When we got there to buy up all that land for tailings—and you have to get it all—we also had to acquire highways, power lines, railroad rights-of-way, and graveyards. Official graveyards. Proper graveyards. Informal burials, etc. Churches, a Masonic lodge, and all these incorporated towns, which then owned their streets. These are interesting things to acquire.

02-00:19:13

Burnett:

How many people were living in those towns at that time?

02-00:19:17

Dempsey:

None in Robinson, which was already under a tailing pond. No one was living in Kokomo; it burned in 1881. There were, I think, twelve registered voters in Recen, where the Kokomo train station resided, and the post office named Kokomo. The promoters of Recen offered free lots to those who were burned out in Kokomo. Somehow the name Kokomo seems to have come with these refugees, because the Denver, South Park and Pacific Railroad station, and the US post office were both named Kokomo, despite the fact that they were both within the boundaries of Recen.

02-00:19:51

Burnett:

These are effectively ghost towns. Except that they're—

02-00:19:55

Dempsey:

They have a legal life.

02-00:19:56

Burnett:

They have a legal existence.

02-00:19:58

Dempsey:

A municipal corporation continues in existence until it is formally disincorporated or declared by a court to be abandoned. In fact, at that time we are talking about, Recen was still receiving proceeds from Colorado's ton mile tax, and it still had title to the streets. All of those details had to be attended to. We needed to extinguish the existence of those municipal corporations, and there are statutes in Colorado that allow you to do that, as is the case in every state. When you start working with a statute, you find there are requirements that are difficult to meet. When you have a ghost town, it's hard to have a registered voter bring the petition that the statute requires. Basically, we were dealing with Kokomo and Recen. Kokomo had no residents. I thought for a while about putting a trailer court there and creating my own facts, but that seemed too contrived for my taste. [laughter]

02-00:20:55

Burnett:

You could reside there officially.

02-00:20:56

Dempsey:

I thought that was a little bit off the wall. We went into federal court to secure a judicial declaration of abandonment, for the Kokomo town site. The town itself had been staked under the—now here's where I need to speak very distinctly—the Act for the Relief of the Inhabitants of Cities and Towns on the Public Domain, which was a sort of homestead law for people who, in good faith, had built towns on public land before the law arrived out west. I think parts of Denver were secured by this law. It actually provided for lots to be patented by the United States. Fee simple title went out from the United States to a town site, and the mayor was appointed to distribute the lots. I had to unwind that process before a federal judge. Then, with regard to Recen, we were required to hold an election to accomplish disincorporation. I found a man named Peter Cosgriff a lawyer over in Leadville, to represent the town of Recen. We wanted to be very careful that this was done properly, because a lot of these were employees, and I didn't want anybody to feel we were pressuring them into disincorporation. They were properly represented. Peter Cosgriff was an excellent lawyer, well regarded in the community.

On the designated Election Day, the town of Recen's election judges brought out these old-fashioned wooden ballot boxes. The real thing. Not something you pull a lever on. They're glass and wood, and you can see the paper ballots in there. I think I brought the donuts, and that Peter brought a thermos of coffee. At 7:00 AM promptly the election judges held a formal election, and everybody in the town came in and voted in about fifteen minutes, all the registered voters. I think there were twelve registered voters. By 7:15 am, everybody had voted. Of course, a young lawyer does things to extremes sometimes, so I insisted that we keep the polls open until 7 pm—Peter was a little more seasoned than I was. I believe he counseled us, why don't we all go home? So from 7:00 AM in the morning, it's snowing, and I made him keep the polls open until seven o'clock at night.

02-00:23:51

Burnett:

Democracy in action.

02-00:23:54

Dempsey:

At 7:05 pm, Peter and I asked for the keys to the ballot box and to have the judges open the ballot boxes and count the votes. One of the judges, and his key were gone. The judge was a miner at Climax, and he had gone up to Climax to work swing shift. He was gone. He was underground at Climax. I thought, well, we'll get into his locker. Well, you don't just get into somebody's locker, so I had to get the security people at Climax to go underground and get his permission to get into his locker and to retrieve the key. About midnight, Peter and I pull out of there. I'm a much more experienced lawyer now. [laughter] This really happened.

02-00:24:49

Burnett:

You learned your lesson about due process.

02-00:24:51

Dempsey:

Finally, at about 10 pm, as we pull out of Recen, we have an avalanche go across the road. Not a big one, but enough to block the road for—[laughter]. This was a very long evening. And Judy was with me.

02-00:25:07

Burnett:

And she said, “If this is going to be like this, then—”

02-00:25:13

Dempsey:

That was one of the incidents that occurred during that election. We did have a lot of legal work of that type. We also, of course, moved the Masonic lodge, which was an interesting story, too.

02-00:25:28

Burnett:

That required, also, the same kind of permission?

02-00:25:30

Dempsey:

It did. There was an active lodge in Kokomo—actually, in Recen, but called the Kokomo Lodge. Most of the members were Climax people. The mine superintendent of Climax, Ralph Barnett, was the master of the lodge. I was not yet a Mason. There were a lot of Masons up at Climax. I started looking at the statute. The statute says there are two ways—just like everything—two ways to sell a lodge. One is to get a deed signed by every member of the lodge. So I, jumped to the conclusion that this would be easy. There are only twelve or fifteen of them. Then I read a little more carefully. “All the *living* members, not the *active* members.” So you start running that trail out and you find out Climax was an employer of most of the mining engineers in America usually early in their careers. We found that there were living Masons, Kokomo Lodge Masons, in the Soviet Union at that time, Czechoslovakia, Japan, all over the world, because students from everywhere graduated from Colorado School of Mines, went up to work at Climax for a year or two, and then went home to Japan or China, or Thailand. So we crossed off the idea of securing a deed signed by all living lodge members. Otherwise, I would have had a lot of travel to do. Of course, at that time, the Iron Curtain was still in place.

02-00:27:01

Burnett:

So they were able to just give you special dispensation to—

02-00:27:03

Dempsey:

No. The second part of the statute says if you operate under Masonic law, if the lodge holds a regular meeting and does all of the things they’re supposed to do under their ritual and bylaws, then the master and the secretary can sign a deed. That’s the course we took. Of course, I was not yet a Mason, and Master of the Lodge, Ralph Barnett and I had to work across what lawyers call “Chinese Walls.” We’re separated, but we were able to work together. That’s how we did it. It was perfectly legal and all certified. Another lesson to a lawyer who didn’t think he would need municipal law in law school.

02-00:28:09

Burnett:

We're going to cover this later, I think, but I just wanted to ask you now, was your interest in the history of the place awakened at that time, or is it later that you decided you were going to pursue research?

02-00:28:25

Dempsey:

No, I had always been interested in history, and I realized that what we were doing was special. I worked on the disincorporation with the mayor of Recen, a woman named Helen Byron. She had all of the records of the town. I thought, gosh. I've always been interested in the history of these towns we were planning to submerge in a tailing pond. Why not preserve that history for everybody to enjoy, rather than just putting those records back in the county vault, or in the secretary of state's office.

02-00:29:02

Burnett:

So it was an early form of historic mitigation. When they're going to sink a town under a reservoir, they interview people.

02-00:29:11

Dempsey:

I suppose that's right.

02-00:29:12

Burnett:

To preserve the history for posterity. You learned a lot about some of the day-to-day legal workings of working for a mining company such as Climax. Let's move ahead, then, and talk a little bit about the consequences of the discovery of the Henderson Mine deposit, how you got involved in that and what the consequences were for your role.

02-00:29:52

Dempsey:

First, a little bit about the discovery. Climax geologists working at Urad had seen during their mapping at Urad, what is sometimes called "drag ore," in this case fragments of mineralized material that looks like it had been pushed or dragged up along a fault from below. They reasoned that these fragments had been broken from a molybdenum deposit at a greater depth. The deposit was confirmed by Stew Wallace and his group of geologists at Climax. It was discovered in a very deep diamond drill hole.

I was fortunate to be present when Stew Wallace came into Bob Henderson's office at Mines Park in Golden. Jack Laing and I were meeting with Bob when Stew, and I think it was Bruce McKenzie were motioned in-and Stew told Bob about a very long, high-grade intercept of molybdenum minerals that made it clear that there was a discovery. There was a very special feeling in the room that day, for all present knew Bob was close to death and we were all grateful that his backing of Stew had paid off. At the time, most of the ground that we needed was covered by patented mining claims of the Urad deposit, but there were areas around it that it would be desirable to own.

First, I was involved in the announcement of the discovery, which of course, for securities law purposes, is important that everybody get the news at the

same time. I labored with New York over the press release, and I got on a plane after we made the announcement and flew to Reno on some other business. Immediately I went to a brokerage house to just look in the window. I didn't have any money to buy stock, and couldn't legally buy any anyway. I just wanted to see what impact our press release might have on AMAX's share price. It went down that day! It was explained to me later that—this discovery is probably ten or fifteen years from actually producing any molybdenum. That was my first look at stock, and how market forces and real value are often not aligned.

02-00:31:02

Burnett:

Something that requires a little bit of patience sometimes.

02-00:31:05

Dempsey:

The discovery was wonderful for my career, because I was at the right place at the right time. As drilling continued, it became clear that the new deposit, now weeks after the discovery, was world class in size. As mine design progressed, it became clear that a very large land position was required for the mine and mill facilities and the infrastructure to service this very large new underground mine. We are talking about three shafts, one 30 feet in diameter and 3,000 feet deep. A 9.6-mile-long full-size railroad tunnel through the Continental Divide, and space for a tailing pond that would need to hold tailing generated from milling 303 million tons of ore.

It was a very complicated land position to put together. The company made the decision to own every bit of the land in fee simple. Most of it was on public land administered by the US Forest Service, and that required more mining claims. But there were also facilities for which we would need to do land exchanges, all manner of acquisitions. It was a wonderful chance for me to get involved.

02-00:31:51

Burnett:

There was some trading, is that right? The mining company exchanged, in effect, public land, some Forest Service land, and sold to the Forest Service some land that it had, that could then be claimed as Forest Service land.

02-00:32:15

Dempsey:

Right. There is what's called the General Exchange Act that permits the Forest Service to work with people to exchange land to tidy up their boundary lines, and for the Forest Service to trade to get rid of inholdings in National Forests. There are a lot of little inholdings, particularly older homesteads or mining claims that were patented years ago. Many of these were in wilderness areas. This is true in Colorado and all the Western states. Colorado ski areas, ranching interests, and even towns also use exchanges, to block up their land position. Of course, if you receive an acre of land at the bottom of a ski slope today, you probably are going to have to give the government thirty or forty acres, which is fair. The exchanges are based upon equal value, as determined by appraisal.

02-00:33:09

Burnett: Right, in terms of land valuation.

02-00:33:11

Dempsey: Climax was in a particularly good position with regard to this new need for forest lands. They had no idea they were going to discover Henderson. But they were using the land-exchange arrangements at the Climax mine itself, which is about forty miles away. They had already done some of this innovative land work before I ever got there. Lawyers at a Denver firm called Dawson, Nagel, Sherman, & Howard, had played a key role in this land exchange program. Don Sherwood, Hugh Burns, Gary Greer, Bill Schoberlien and people like that, had been working with Climax for many years to create a very innovative arrangement that was called a “land bank.” Climax bought up lands that were inholdings within national forests, particularly in wilderness areas. I think that is how the Forest Service acquired Margaret and Luna Lakes in the Routt National Forest, up near Steamboat Springs, or north of Steamboat. Those were inholdings that Climax bought and traded to the Forest Service. It was a mutually beneficial system, because it did let the Forest Service get a lot of the recreational land they needed, and Climax was filling in its land position around Climax. That whole mechanism existed before I joined the company. We all worked together to complete many such exchanges there at Climax and at Henderson as well.

02-00:34:45

Burnett: Was the Forest Service historically—I understand that it was, in part, founded in response to mining companies’ desire to protect lands, because wood was being cut down for their mining companies. It was preventing them from getting access to the wood that they needed, so they needed a Forest Service to manage that. Is that partly correct?

02-00:35:22

Dempsey: I have written and lectured on the role of mining in creating the Forest Service. My paper, “Cautious Support: Relations between the Mining Industry and the Forest Service, 1891-1991,” was published by The Forest History Society. Miners played a very important role in the creation of the Forest Service. That is correct. Obviously, there’s more to the story. There were many interests that were concerned about the wildcat kind of logging that was going on around the West in the late 1800’s. Many thoughtful public land users were anxious to see scientific management of forests. Miners needed wood for mine props and boiler fuel. Most boilers were actually heated with wood, often in the form of charcoal. You often see hillsides in old photos, and like in my painting up there on the wall of my library, that show a lot of stumps. If you look around those barren hillsides you will usually find a row of beehive charcoal ovens, where the enhanced fuel for mine and mill boilers was made. All kinds of people did it, and it was really pretty simple, and a pretty rapacious, way of doing things, in terms of the supply. The major mining companies were concerned that they would not have boiler fuel, because they needed for the charcoal to be locally sourced. They needed a renewable forest.

It probably comes as a surprise to many, that the Homestake Mining Company and a number of mining leaders at Lead, South Dakota, were instrumental in forming the Forest Service, and also in transferring it from the Department of the Interior to the Agriculture Department. They wanted good, reliable science-based management of the nation's forests.

02-00:37:29

Burnett:

That's fascinating. There were these working relationships with the Forest Service in terms of figuring out how to get the right land claims to start—

02-00:37:45

Dempsey:

The very first Forest Service sale of timber was to the Homestake Mining Company in South Dakota. There's always been a very cordial, but very proper, relationship between the agency and the industry. The Forest Service has always been known for being very correct, proper, and effective. Rangers were supported from the bottom up—no top-down management in the Forest Service. Miners saw the first rangers as being knowledgeable, independent, and as having integrity.

02-00:38:23

Burnett:

In terms of just getting the legal groundwork laid for the Henderson Mine, at what point did there arise concern about the siting of the Henderson Mine? When did it become controversial? Is that down the road?

02-00:38:44

Dempsey:

Henderson was never controversial. Climax Molybdenum Company's proactive effort to be open in its planning helped avoid conflicts. I was an active mountaineer and trout fisherman throughout most of my career, and I knew many people in what would now be called the environmental movement. In those days, we were people who really enjoyed the outdoors and wanted to see wilderness protected. We wanted use to be thoughtful, and not unnecessarily damaging to the land. We had not yet been exposed too much of the science of ecology – but the first evidence that there were science based reasons for protecting lands and waters was becoming available. There had been a decision, I think it's called the Parker Decision—it would have been about 1964 or '65—where the Forest Service was sued by a group of environmentalists and had lost the case.¹ Secondly, I had attended the first general conference of the Colorado Open Space Council. I was not there for Climax, but just personally. I heard a lot of commotion about environmental activists being empowered to stop big corporations. I certainly had the knowledge of what we were going to be doing, at Henderson, I perceived that we would have some trouble if we didn't handle ourselves well. That was well

¹ Ed. note: The Parker Decision, which blocked the Forest Service from logging a parcel of land near Vail, CO, was finally upheld in the Tenth Circuit in October, 1971 under the 1964 Wilderness Act, the first case that permitted the United States Government to be sued without its consent. Efforts to make the decision apply beyond the Tenth Circuit were unsuccessful, although it had an impact on the perceived authority of the Forest Service. Dennis Morrow Roth, *The Wilderness Movement and the National Forests, 1964-80*, (Washington, DC: USDA Forest Service, 1984) 19-22.

before the era of major environmental conflicts. I was apprehensive about that and talked to my bosses at Climax about what I saw as a changing situation with respect to community acceptance of mining projects.

02-00:40:11

Burnett:

At what point did you decide that you wanted to find some kind of proactive way of working out any kind of protest, or anticipate any protest, against the Henderson Mine?

02-00:40:28

Dempsey:

Sometime in 1966 or 1967, I was appointed as Climax's representative to what was called a "communications committee" of the Colorado Association of Commerce and Industry, CACI. The idea of a communications committee, was to get a few leaders from business and environmental groups, to start a dialogue—to see if there was anything they could agree upon. One of Climax's law firms was Holland & Hart, and Steve Hart was very politically astute and had done a lot of political work for Climax. He was also one of the most famous mountaineers in Colorado. He was a man of good judgment, and he could see empowerment of public advocates for the environment coming, and a number of people at CACI, and other companies, were starting to feel, just as I did, that there were troubles ahead for our industries. They thought maybe we should be talking with the other side. I think the Colorado Open Space Council was the key participant with CACI, but some of the other environmental groups might have been involved, Audubon, Sierra Club, et cetera, they were around at that time, and they appointed some members. The Climax legal department put me into that spot, and I started attending meetings and working with environmental advocates on ways to open up a dialogue.

I have this knowledge that I'm working on acquiring the big land position and helping build a really big mine, one of the biggest in the world, fifty miles west of Denver. I'm sitting on this committee. I'm supposed to be communicating, right? So we're all trying to learn how each other thinks. One of the people on that committee was a man named Roger Hansen. Roger was a lawyer who had—I think he was the first executive director of the Colorado Open Space Council [COSC]. Roger and I worked well together on the committee. I went back to my boss, Jack Laing, A.J. Laing. Jack was a wise old owl if there ever was one. He listened to my ideas, said, "Well, what do you think we ought to do?" I said, "I think we ought to do the same kind of thing that the CACI and the COSC people are doing, and open up the planning of this mine." Of course, you have to understand, in those days, that was a pretty radical idea.

02-00:42:53

Burnett:

Who are the CACI and the—

02-00:42:56

Dempsey:

The Colorado Association of Commerce and Industry, lobbies for business interests in Colorado. CACI-COSC Intercommunication Committee. I told my boss that I thought something like that could happen, but I was also mindful that the attitude of most mining people was to work directly with any government agencies that had jurisdiction, work with local governments and local business people, but to resist sharing information with people who might oppose a project. They did accept input from others, but only those who seemed to have some “standing” to question the miners. The industry had the power. There were no laws that would have slowed us down at Henderson, so long as we cooperated with the county, state and Forest Service. If we did the right things, we really did not have to open up the process to the public. I could see that public participation was really what most of the environmentalists wanted. They wanted to be able to *say something* about what’s going on in their community. I felt that way, too. I was optimistic about opening up the mine siting process for broader public involvement. I had already tried a couple of things like that in the company and had been able to get them done. I’ll give you an example. For years, the Colorado Mountain Club had wanted to have a ski trip to the top of Sheep Mountain, one of the mountains near the Climax tailing pond. There was a nice cutout in the road, and with just a little plowing of snow you could make a nice safe place for the CMC trip participants to leave their cars. But for years the company didn’t want them in there. Frankly, they would plow the cut out full of snow so no one could park there. Was this a policy from the top level of the company? I don’t think so. It probably came from the security people who kind of made it their own policy, and they were good people, but—

02-00:44:57

Burnett:

So they’d plow over the road so it couldn’t be—

02-00:44:59

Dempsey:

They’d fill it up with snow so you couldn’t get in there. I was involved with the Colorado Mountain Club, and we talked about it. I said, “Let me do some poking around up there.” So I talked to people, and pretty soon—a lot of Climax people were 10th Mountain veterans [a light infantry mountain-warfare division founded in World War II], and we had a ski area of our own for recreation for our employees at Climax. So it made sense for us to cooperate with the Colorado Mountain Club. They don’t have to be our enemy. And it was likely that some of the CMC’ers on the outing were opinion leaders in Denver.

02-00:45:35

Burnett:

You’re part of the same community.

02-00:45:37

Dempsey:

A lot of us were Colorado Mountain Club members. We had some talks around the company. Pretty soon, we decided maybe the security people ought to be cooperative. We all got together with the chief of security. The nice

thing about a really good, tough security person is that when they're on your side, they really deliver. So pretty soon, I would get a call—or I set it up so that security would get the call from the lady down at the Mountain Club. They'd say, "This is our weekend for the climb of"—Sheep Mountain and the guards would go out and plow the parking area open. They would do a great job of plowing. Everybody was happy. Public relations. You couldn't have bought that kind of public relations.

Another thing, the company owned some rights of way that were maybe about as wide as this room for some of our water facilities that we had, and of course we put signs up, "trespassers will be"—whatever. You know the kind. This was barring entry to Clinton Gulch and Mayflower Gulch, which were really beautiful backcountry skiing recreation areas on public lands, summer/winter. I persuaded the company to put signs up that said, "You're welcome to cross Climax's land to get to the public land managed by the Forest Service on the other side. Please do not litter or damage our water facilities." Again, it was just something that worked out so well. It wasn't just me. When Climax does something, they do it right. They put up truly welcoming signs. We didn't have to make everybody mad to protect our interest. That was some of the background. Once I told Jack Laing my views on being open about Henderson, he took it to the resident manager, who, in those days, and still should be, is sort of a deity, and the bigger deity was in New York. I didn't realize it, but actually my idea was taken all the way to New York. Later on, I received a copy of the letter that approved my idea from the chairman of the board of the company, Frank Coolbaugh. Which, for somebody, like me, a new lawyer at Climax, was an interesting thing to have happen.

Interview 3 April 29, 2015

03-00:00:00

Burnett: This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project of the Business Series. We're here in Golden, Colorado, and it's April 29, 2015, session three. We were talking last about the context for the Experiment in Ecology. Can you talk a little bit about what was involved in working with the community to make the Henderson Mine possible?

03-00:00:51

Dempsey: In our last interview, we talked about the lead-up to my first approach to the environmental community, about Henderson. The company had approved my approaching the environmental community, by way of the committee that I was on, the Intercommunication Committee of CACI and COSC. I wasn't quite sure how to make that approach. I was to go to a meeting of the committee, and apparently I had the wrong time on my calendar, and so did Roger Hansen, who was the executive director of COSC. So both of us showed up, and we were a little annoyed that we were at the wrong place, at the wrong time. We talked a minute, and he said, "Well, why don't we go get a beer?" We did. During our very informal time together, I said, "Roger, you're a pretty sensible guy. Tell me, what would happen if a big mining company would come to a group of environmentalists and say, we are planning to build a large new mine, and we're willing to open up our entire planning process to the environmental community on a responsible basis?" He said, "I never heard of anything like that. Big companies don't behave like that." I said, "Roger, what if they did?" He said, "Let me think about that." He went back to his community and got the same kind of approval that I got from the company, and that's where it all began. This was the start of the "Experiment in Ecology".

Now, to be responsive to your question, the experiment was a process that took ten years. Four people that came over from the environmental community joined us in the planning process. They were Roger Hansen, Betty Willard, Bob Weiner, and Bob Venuti. They were all outstanding people in their fields, and in their sincere desire to protect environmental values. Early on, we worked back and forth. Each month, we would meet, and each month, one side would be in charge of the meeting. We took them on tours to Arizona to see the big mines down there, the big tailing ponds that we were going to build in Colorado. We wanted to get the environmental people used to the size of equipment we would use. They took us to see ecologists at work, bird counts, things like that. There were no environmental-impact statements. This is pre-NEPA (National Environmental Policy Act). The experiment started three or four years earlier, so this process took a long time. The kind of things that occurred: at one point, we knew that a new power line would have to be built from Georgetown to the Henderson site, and it would have to go through

an historic district, and it would also have to go over the Continental Divide, and through a lot of timber country and tundra country.

One of the participants chosen by the environmental community, Dr. Beatrice Willard, Betty Willard, marvelous ecologist, a gifted teacher and a wonderful human being. We took a field trip, and we invited the head of the Public Service Company of Colorado, the electricity provider for Henderson, at that time to come with us. We all were sprawled out on the tundra having our lunch, as you do when you're out of breath at high altitude, and we're on Jones Pass. Betty said—this is Dick Walker from Public Service Company of Colorado, now Xcel—“Dick, why do you always have to clear cut for a power line? It just makes an awful sight here in these beautiful mountains.” Dick thought for a while. Of course, every businessman would worry, “I'm finally cornered.” Not Dick. Dick was a heck of a guy. He said, “Betty, I don't know, but I'll find out.” At our next meeting, Dick came back with a couple of his engineers and said, “You know, Betty, we really don't have to clear cut.” And they didn't. There is no scar from the power lines to Urad and Henderson today because of Betty's question and Dick's appropriate response. Those are the kind of changes that occurred because of the Experiment in Ecology. There were good, solid engineering reasons why they did what they did, but there's no scar. Those kind of decisions really make it clear that collaboration with the environmental community, which is now part of our industry's regular approach, really worked.

03-00:05:52

Burnett:

Were they doing the clear cutting before because they were worried about fires and they needed to have a buffer?

03-00:05:56

Dempsey:

They were worried about the lines swinging and hitting the trees. Like any engineer, if two is good, three is better. Instead of cutting them a certain level, they had always cut them all the way down to the ground.

03-00:06:14

Burnett:

So they just made small adjustments that didn't alter the view, thankfully.

03-00:06:20

Dempsey:

Again, when engineers are challenged to do something, they can figure out how to do it. But if you don't push them a little once in a while, they do it the easy way, the lowest cost, pragmatic way.

03-00:06:35

Burnett:

In the course of these meetings, did you develop protocols, ways of doing things? Or was it just, this is an experiment, so we're just going to deal with this on a case-by-case basis?

03-00:06:49

Dempsey:

We did not generate a lot of paper. What we really generated was trust and understanding. All of us in the company learned so much. It's just amazing.

The environmental community, the members of the committee, brought in a man named Dick Beidleman, who was an ecologist. He walked our railroad grade and took us with him as he observed bird life along that right of way. None of us had ever had the sensitivity that he had to that environment. We learned how he identified birds with bird calls and things like that, things that never occurred to us. Later on, we employed a biologist to work with us on the elk herds, which the environmental people also were involved with, where we were able to make places for the elk to pass underneath the railroad track. Those structures are still there today, and they still serve their purpose. That's one of the great places to hunt elk in Colorado. We didn't have to damage things if we understood more about how to do things. We learned a lot about the environment and how to manage it.

03-00:08:22

Burnett:

At some level, it was simply a question of communication and learning to see the problems from that set of perspectives.

03-00:08:31

Dempsey:

Right.

03-00:08:38

Burnett:

What was the outcome of that experiment? Apart from the changes that were made. You made adjustments to particular species, right?

03-00:08:48

Dempsey:

We made several changes. I don't want to represent that every change was because of the environment, or that we pushed something. It really was a collaborative process. We changed the mill site location to a site that the environmental community liked a little better, but we also changed it because of foundation situations, geotechnical issues. So it wasn't just the environmentalists saying—and us caving into some pressure or something like that. And they knew why we were moving it, and I think they would have gone along with the original site. As I say, the principal thing that came out of it for me was that people—maybe we were just lucky, but the people we worked with were dedicated, sincere environmentalists, who had good judgment and were good human beings. I don't necessarily prescribe the collaborative approach all the time. Over the years, it's become controversial. Some environmental organizations do not want to collaborate because they're afraid they'll lose their membership. These folks were taking a chance with their community. They could be criticized. All I can say is the Henderson Mine up there has generated millions of pounds of molybdenum for the world, and millions of dollars of revenue for Colorado. It's also generated many, many jobs for men and women in Colorado. So the benefits of mining have been achieved, and the environmental impacts have been minimized to the degree they can be.

03-00:10:45

Burnett:

We were talking a little bit earlier, just a side note, we were talking about some of the social adjustments that you had to make when you were getting the permits and dealing with the legal side of getting the Henderson Mine through. We talked about the disincorporation of some towns.

03-00:11:08

Dempsey:

We're talking about the Climax mine now.

03-00:11:10

Burnett:

Oh, that was a different set of—

03-00:11:12

Dempsey:

Right.

03-00:11:15

Burnett:

But I did want to go back to that other case, where there was some adjustments that you had to make. There was a graveyard in the way. I wanted to just capture that before we move on. Can you talk about what that problem was and the solution that you had to devise for it?

03-00:11:34

Dempsey:

This is not a unique situation. The coal industry in the Midwest runs into cemeteries fairly frequently, because they have bigger areas of land to deal with. But in hard rock mining, we had not had much experience with this, and when we had to prepare the land for the tailing pond, you have to get everything out of there. What we found is that the legal way to do it is to have the county commissioners sit as a board of health and declare the cemetery a nuisance, which it would be in those circumstances. So there was a legal procedure, but I also found that one of the problems with that is I had to give notice to everybody that had a relative in that graveyard, and of course the graveyard went back to 1878 and '79. There were, I think, 132 bodies. I had to—when I say “I,” our legal group—hired a mortuary to help us. They developed some containers. The mortuary director, when we actually moved the thing, said, “Stan, I’ve never worked for anybody that didn’t want to come down and see what was going on.” I never did. [laughter] But we also had to purchase land in Breckenridge, in an existing cemetery, so we could move all the bodies. There were some fun stories about trying to find the relatives.

03-00:13:20

Burnett:

I imagine that was a little bit challenging.

03-00:13:22

Dempsey:

It was. One relative was in an insane asylum. Another was way out in really hard-scrabble back-of-the-black-stump Colorado, somewhere back of Uravan. I had an old friend that needed a job, so I hired him, gave him a fee to go find all of these people. That’s who you ought to interview. You’d have a great story. The other story coming out of that is one of my classmates, Dan, called me up and he said, “I represent a person who’s very upset about the moving of the cemetery.” I go, “Oh, is that right?” I asked if this relative had ever visited

the cemetery. Dan admitted that he had never visited the cemetery. He said, "Oh, yeah. Going to sue you." I said, "Dan, you're not going to sue me. How much is this going to cost?" "A thousand dollars." We paid up! A true story, though. That's the real world.

03-00:14:27

Burnett:

It ends up being a theme, I think, in all of these dealings. You have to make some compromises.

03-00:14:32

Dempsey:

Compromises, right. And be a little bit tolerant of human nature, including a little greed now and then.

03-00:14:36

Burnett:

The cemetery wasn't moved very far, right?

03-00:14:39

Dempsey:

No, it was moved twenty or thirty miles to Breckenridge, Colorado.

03-00:14:42

Burnett:

Just a few miles away.

03-00:14:44

Dempsey:

I shouldn't be quite so cavalier. We really did take care of the emotional side of it for the people who actually knew their relatives were there, of which were very few. There had been some fairly recent burials. The last burial had been about ten years ago. We worked with them. Burials are really important to people, as we know from NAGPRA with the Native population. I've had experience with that. I don't want to minimize and trivialize this discussion about burials. We did pay attention to that side of it. And the area set aside for the Kokomo and Recen reburials remains nicely done.

03-00:15:45

Burnett:

In the other Henderson Mine context, there's this ecological concern. There's the environment. But it's also a built environment on a lived landscape, with people in them. People leave traces. They leave their bodies behind, for example. You have to take care of that. As an institution, you have to think about the impact that you're making when you alter those traces, when you alter those communities.

03-00:16:12

Dempsey:

As you know, I'm very interested in historic preservation. Over a career, I've been very much involved with it. These so-called ghost towns are important to Colorado, people in Colorado, because of Muriel Sibell Wolle's book, *Stampede to Timberline*. People in the fifties and sixties in Colorado would have her book almost as a bible on their mantel. Everybody in Colorado enjoyed the ghost towns. You're bringing up a very good point. You do have to sit down and think about who else is involved. There are people that collect bottles. Some of them do it nicely, some of them are not so nice. Of course, they visit the parts of the town where the old beer bottles would be thrown out

the back door or down the privy . There are serious bottle collectors who write books, make catalogs. There's an active market in bottles, mining artifacts. There's a mining artifact organization. We did take the time to talk to some of these people to make sure that we weren't destroying something that still had value. As I told you with the Masonic lodge, that was done with a lot of care. It's very difficult for a group of people in an organization like the Masons to see their lodge taken away. Now, let me tell you, that lodge room is still in existence, because it was moved to Leadville, and I sometimes attend lodge there.

03-00:18:01

Burnett: They moved it, timber by timber, or brick by brick?

03-00:18:03

Dempsey: Every board of the interior, every piece of furniture, was moved from Kokomo to Leadville. I'm proud to say that I get to go up on lodge night—once a year, they have a Kokomo night, where that lodge room is separate from the main Leadville lodge room, and we hold lodge in the Kokomo lodge room.

03-00:18:31

Burnett: You said earlier that you weren't a Mason when you were doing those dealings to manage that. So you became a Mason at some point?

03-00:18:37

Dempsey: I became a Mason. I was raised at the Leadville lodge.

03-00:18:42

Burnett: When was that?

03-00:18:43

Dempsey: That would have been about 1968 or 1969.

03-00:18:48

Burnett: Okay, so not too far after that.

03-00:18:49

Dempsey: No, about a year or two. As I told you, a lot of the people at Climax attended lodge. Ed Eisenach, the boss of the whole mine there, was my sponsor there.

03-00:19:04

Burnett: Those are important social networks, in addition to the mine, right?

03-00:19:08

Dempsey: Very much so.

03-00:19:10

Burnett: So it's not just an idle social occasion. It's important to have contacts with the community, and this is the local business community, effectively.

03-00:19:23

Dempsey: It goes well beyond business, as do Knights of Columbus and other organizations like that. They also have something to do with character and virtues, some of the things that people don't like to talk about.

03-00:19:42

Burnett: Community building and cementing those—

03-00:19:44

Dempsey: Community and human building.

03-00:19:51

Burnett: I think we could cover this later just as well, but I'm curious about the meaning of ghost towns for Colorado and the history of the West. These are in films and in literature. This is such a huge story. It's really significant in the American psyche. What is so fascinating or compelling about ghost towns?

03-00:20:18

Dempsey: I could go on all day about that. You asked the right question. I can remember, as a boy, I came to the Y camp in Colorado in 1951 the first time, and I think maybe in 1953, I went up to a ghost town called Waldorf, above Georgetown. The false fronts were still there. We went in some of the old buildings, and a lot of the window frames were gone and we wondered about that. The walls were wallpapered with newspapers, 1880 newspapers. There were still dishes. We climbed one of the peaks there, Mount McClellan, and behind the peak there was a little mine and little cabin, and there were dishes still on the table. Now, of course, again, the artifact folks, some more thoughtfully than others, have removed a lot of those artifacts. It's all gone, that sort of thing. At that time, you could walk around in Idaho Springs and see things like that. They brought the image of the West, and the pioneering, and the freedom of people to go find minerals or to do whatever they're doing. I found later out about the window frames. They were milled lumber, so they were more valuable. People would take them out of the cabin, and then reuse them in their next cabin. People in Colorado were exposed to ghost towns all over the Front Range, and throughout the state.

03-00:22:17

Burnett: It's interesting. I guess in Europe, you've got ruins of old civilizations and Roman stuff. This is much more recent, but it's kind of this paradox of the permanence of impermanence. It's evidence of this rapidly changing society, and maybe that's a piece of it.

03-00:22:41

Dempsey: I guess it kind of evokes in me the opportunity to go to the next one.

03-00:22:47

Burnett: The fast-changing society and the excitement of that.

03-00:22:51

Dempsey:

Of course, with the placer gold mining, typically they mined out a gulch in a year or two, so the resource was exhausted, and they left and went to the next one. To me, that meant more opportunity.

03-00:23:10

Burnett:

So the settlement is almost nomadic. It's just there for a year, and gone. It's just a slice of time. It's a tiny little bit of time right there.

03-00:23:17

Dempsey:

Duane Smith, Professor Duane Smith, down at Fort Lewis College in Durango, has written a book called *Rocky Mountain Mining Camps: the Urban Frontier*, and it was his thesis that mining in the west was an urban frontier. Miners didn't grow their own groceries. As I told you off camera, they had fresh oysters in Leadville in 1879, brought in from New York by train. This was a different kind of frontier than the agricultural frontier.

03-00:23:56

Burnett:

We'll come back to that more when we talk about your turn as a historian. I did want to come back to talk a bit about Henderson. It wasn't just ecology and ecological interests or environmental interests that were in play. Can you talk about the uniqueness of the Henderson Mine and the distance between the milling operations and the actual mining operations? Why was that so unusual?

03-00:24:29

Dempsey:

First of all, the deposit was about 3,000 feet below the valley floor. That's a fairly deep distance. We had to put three shafts down. The main service shaft was about 3,000 feet deep, and the ventilations shaft, the in-cast and the out-cast were 2,300 feet deep. So the orebody was very deep. We were close to the Continental Divide, with Red Mountain, where the deposit occurs. We knew that we would need storage for something like 300 million or more tons of tailing. The engineers put together a map looking at all the possible opportunities for siting that size of tailing facility. We also had to consider water rights, which have very different implications on the East Slope and on the West Slope of Colorado, both politically and legally. The folks designing the mine first of all needed to know where we were going with the tailing, and do we transport the tailing, or do we transport the ore to a mill? Do you put the mill next to the mine or do you put the mill next to the tailing pond? We were very constrained geographically. The decision was made to put the tailing pond on the western slope of the Continental Divide, which was close to fourteen miles west of where the shafts would go down. There's a nearly roadless whole mountain range and the Continental Divide between the two. It obviously required the driving of a tunnel. The 9.6-mile-long railroad tunnel, now a conveyer tunnel, going under the Continental Divide, was necessary to get us to the Western Slope. There were a lot of logistical issues involved, and then getting the water to the mill by exchange with all kinds of other water facilities on the western slope, there was a lot involved.

03-00:27:12

Burnett:

I bet. Was there a consideration of you wanting the tailing pond to be out of sight because people would see the eastern side, or was that a consideration at all?

03-00:27:22

Dempsey:

I don't think it was as much a visual situation as making sure that we could maintain the integrity of the structure itself. Building a facility of that size, you want to be sure that it doesn't fail. The Western Slope provided a variety of things that were helpful. There was some private land we could acquire that helped us get started with the acquisition of all of the land required. Places on the Eastern Slope were very visible, but they were also not very suitable geotechnically. You also had to consider water coming onto the structure, so if you put it in a narrow valley—and of course, we had experience with that at Urad, which were done properly—it would just be less costly and less worrisome to put them on a flatter place.

03-00:28:30

Burnett:

So it was a natural bowl on the western side that—

03-00:28:33

Dempsey:

No, it was more flat land.

03-00:28:36

Burnett:

More flat land. How big is this tailing pond, roughly? Roughly, it's big.

03-00:28:46

Dempsey:

The land for the mill site is 12,800 acres. Big.

03-00:28:48

Burnett:

It's really big, okay. Fair enough. It's a bit of a marvel. It's got this nine-mile tunnel underneath.

03-00:28:59

Dempsey:

The mine is a big mine. The company put together a 33,000-ton-a-day mine. It's one of the largest underground mines in the world.

03-00:29:20

Burnett:

It was a very large mine. It was forty miles west of Denver. There was a burgeoning environmental movement. The idea was to get ahead of the curve a little bit and meet with not just environmentalists, but also outdoors folks, people who liked to do mountaineering and that kind of thing, as you did. It's partly your contact with some of those communities that made that possible in some ways. You knew how to talk to those folks.

03-00:29:58

Dempsey:

I certainly was aware of their attitudes. Which, in some cases, I shared. Being a mining person doesn't mean that I didn't care about the impacts of any kind of new facility, a highway or any railroad. I don't want to see the mountains ruined either.

03-00:30:23

Burnett:

Were there significant added costs in meeting some of these challenges, or were they mostly relatively insignificant changes that were—

03-00:30:32

Dempsey:

There were some additional costs. But they were tolerable. I'm sure it cost more to put the power line in the way that public service put it in, but value is not necessarily captured by accounting treatment.

03-00:30:56

Burnett:

That can have downstream consequences, too, if you build that trust.

03-00:30:59

Dempsey:

I think the value to the owner of the mining facility in having a very well-built mine, over the years, turns out to be worth more than maybe the incremental cost of doing it, quote unquote, "right." As right as we all know it, including the rest of the community.

03-00:31:24

Burnett:

Absolutely. Can you talk about how attention was drawn to this Experiment in Ecology, how people in the company became aware of it, what happened to this experiment, and how the experiment became more than an experiment?

03-00:31:45

Dempsey:

I guess our timing was about perfect, because the whole country was pretty frustrated with the whole situation. Rachel Carson's book *Silent Spring* was read in every book club in the country. Americans had suddenly woken up to the fact that we really had some problems. We had rivers on fire in Ohio. We had industrial problems all over the country. That didn't make any sense. So we started cleaning it up. Nobody knew how to do it. The government didn't know how to do it. Congress didn't know what to prescribe. We were all frustrated. This collaboration on this very large mine, in a very scenic part of the country, suddenly started attracting attention. The first real attention came from a man named Robert Cahn. He was a Pulitzer Prize-winning journalist for the *Christian Science Monitor*. He wrote a big Sunday-supplement kind of story, and it caught fire and was copied all over the country.

03-00:33:10

Burnett:

Do you remember what year that was?

03-00:33:15

Dempsey:

I would say probably around 1969, something like that. But from there on, I have to give credit to the folks in New York with AMAX. They had a man named Arthur Reef running their public relations activities, who was a very thoughtful and genuine guy, who knew how to communicate internationally. I think he may have worked for the airlines at one point in time, international airlines. He really put AMAX on the map, both as a company, and when he got a hold of this environmental story, if there wasn't a fire already, he threw a lot of gasoline around.

03-00:34:04

Burnett:

Wow. Today, when you think of resource companies, like oil companies or something, when they do their marketing, it's open fields of wheat and vistas of the ocean. This is central to marketing in the resource industries, and this is the beginning of that.

03-00:34:26

Dempsey:

This was the marketing the shares of the company. It added value to the company. I ended up on the front cover of the 1971 annual report in one of the little vignettes. It was good for me, too.

03-00:34:40

Burnett:

It was good for Stan Dempsey as well. [laughter]



The Genesis of the Environmental Services Group: AMAX Environmental Planning and Protection Committee, 1970. This photo was taken from *AMAX Journal* with the following caption: "AT THE COMMITTEE'S FIRST MEETING, held in New York last year, AMAX Chairman Ian MacGregor assisted in providing specific directions as to the part the Committee will play in establishing and implementing corporate environmental policies. Then men visible full-face in this picture are, from left to right: Dr. William Opie; H. Stanley Dempsey, chairman of the Committee; Mr. MacGregor; David H. Ackerman; Carl Arend; and Robert Sargent." Source: *AMAX Journal*, summer 1971, Vol. 9, No.2

03-00:34:49

Dempsey:

AMAX was an interesting company, too, because it had some people that really cared about far more than just profits. The Hochschild family was part of it. They were major shareholders of AMAX. They had interest in Rhodesia and places like that, Zambia. They were socially conscious, even at that time. Ian MacGregor, who became chairman, was a man of great vision. He immediately cottoned onto the idea of being open with people, which really probably is the lesson from that activity, is that people make a difference—not just institutional frameworks and laws and regulations—that people make things happen. They also had a man who had been with the Marshall Plan, who sort of travelled around the world and talked to people. He handled many of AMAX's diplomatic relations. So between Taylor Ostrander and Arthur Reef, and Ian MacGregor, suddenly I am thrown onto the international stage, being marketed as one of the founders of environmental management for large firms. They arranged for me to meet with the World Bank. They ask me to speak at the OECD main meeting in Paris with one of my colleagues, Ken Paulson. We make presentations about the Experiment in Ecology. This was about 1980.

03-00:36:22

Burnett:

Early seventies?

03-00:36:22

Dempsey:

Early eighties. Who was at that meeting? The head of Shell Research. Siemens's chairman. Many of the great companies of the world are at that table. I'm not talking about a big audience. I'm talking about the people who really make the decisions in international business. I went from there to Geneva, and I spoke to the UN. I spoke at the World's Fair in Spokane. I was invited to Stanford, where I made a presentation at a major seminar where David Brower from the Sierra Club was a participant. We got a lot of publicity, and it wasn't sought for the purpose of just pumping the company. It was a sincere activity on the leadership of AMAX to confront the problem we all had. All of us in the United States, all of us around the world, suddenly woke up and found out we're doing some damage to our lands, water and estuaries. It's silly. It doesn't have to be that way. But there are also a lot of costs to society in cleaning it up. There's a reason we were exporting our costs to the environment, because it allowed all of us to enjoy \$2,000 Chevrolets.

03-00:37:46

Burnett:

Right. Every two years.

03-00:37:48

Dempsey:

Every two years. Get *that* in your mind.

03-00:37:57

Burnett:

This follows on the heels of this apex of American modernity, like in the 1950s, you can have it all, and everything—

- 03-00:38:04
Dempsey: And you could if you cheated on the environment a little bit.
- 03-00:38:07
Burnett: Right, and then things were coming home to roost in the sixties with a lot of the pollution and just—
- 03-00:38:16
Dempsey: The emissions in cities. The amount of lead being poured into the air was unacceptable. We were starting to make some correlations between pollutants and human health. There were some health effects.
- 03-00:38:31
Burnett: What was happening inside the company for you and for the Experiment in Ecology? How did that play out institutionally?
- 03-00:38:40
Dempsey: That's an interesting question. When you're in a business like mining, where you're overcoming big challenges and you want to be sort of masculine in their approach, and a bunch of people come around and talk about the birds, that could be kind of delicate.
- 03-00:39:03
Burnett: So people raised eyebrows?
- 03-00:39:05
Dempsey: [laughs] Raised eyebrows?
- 03-00:39:06
Burnett: More than that?
- 03-00:39:08
Dempsey: They might not let you into the saloon. But no, I want to portray mining people as they really are. Most people in mining love what we do, and we love to build big things. If you're talking with a bunch of open-pit fellows and gals at a Christmas party, they'll talk about "playing in the dirt." Those kind of things. But on the other hand, these are people who have all been trained at a university. These are thoughtful people when they need to be. Part of that is sort of like the military. In order to lead people, you have to be kind of bold once in a while. I love it when I'm out at a mine site and the trucks are going by, and things are happening.
- 03-00:40:03
Burnett: It's the action.
- 03-00:40:04
Dempsey: And it's not just phony stuff. I mean you do feel pride—I'm proud of seeing that 9.6-mile-long tunnel at Henderson a tunnel, that is so long that it was surveyed cadastrally because it has to take the curvature of the earth into account. Those are neat things to do, so it's kind of a macho business. On the other hand, it's a pretty serious business when you have an accident. Mining

people can get pretty thoughtful pretty quickly. You asked that question, and that was a seminal question at that time: how do I handle this? As I've got a mining background, I started out underground like everybody else, but also, collect alpine plants, as I told you. A lot of mine managers were very resistant to change, and you want a mine manager who's very pragmatic, day to day, real happy just to get the workforce together for each shift. I would not have asked the mine manager for a tour by the Experiment in Ecology on a Saturday in 1970. A mine manager kind of expected you to—sort of like getting on a ship, a Navy ship, say, "May I have permission to come aboard, sir?" I wouldn't say it's prejudice; it's natural resistance. Mine managers don't do tours on Saturday. That's useful for running the workforce, but over time, we kind of worked some of that prejudice out. A top-notch mine manager of today knows how permit delays can stop a mine start-up or an expansion. Today's mine manager now will do a tour on Saturday. But you still need to show up on time!

I'll just sum it up, to make a short story out of this. There were two sides at Henderson in the engineering and operations group, and the construction group. A lot of people were pretty skeptical. "Oh, Stan, this will never work. These people are crazy." Others didn't want to express themselves, but they thought maybe it was the right thing to involve the community a little bit more in what we were doing. One day, while we were on a tour around the Henderson mine site, —I think I was promoting underground power and utility lines at the mine site. It was just us folks, plus a couple of our outside contractors, and I'm talking about some of the most powerful men in the business, respected by everybody on the mine site. And it was all men at that time. A lot of people are kind of looking out the windows of cars and the office, seeing what we're doing. One of the toughest of the contractors, a shift sinker, leaned down and conspicuously picked up a cigarette butt. Right then and there the Experiment in Ecology gained the endorsement we needed. We never had any more problems at Henderson. I never saw a beer can lying anywhere on the Henderson Mine, after that day, because it was endorsed by the toughest most respected guys in the place. Once it had that endorsement, of course, mining people would really get with it. Not out of fear or anything like that, just because of respect.

03-00:44:08

Burnett:

They know which way the wind is blowing at that time.

03-00:44:11

Dempsey:

Not just what the wind, but what's the right thing to do, because the people they respect are willing to endorse it. He didn't have to make a speech. He didn't have to make a speech. He just picked up that cigarette butt. As we go through this interview, I keep seeing, it's bringing to my mind, that it's people and values that are so important in human conduct. How things really work.

03-00:44:58

Burnett: Definitely the leaders who kind of demonstrate by example. I think that's what I meant, is setting the tone.

03-00:45:06

Dempsey: Yes, tone at the top.

03-00:45:08

Burnett: Set the tone of what was going to happen, what was going to unfold. I can imagine, for those who were resistant, I wonder if they were afraid of a slippery slope. Was that in play? Did anyone ever articulate that? Did they say, once you open the door to the community, you'll never hear the end of it? They're going to want every little bird protected and—

03-00:45:30

Dempsey: Absolutely. That was one of the main contentions. "You can't control it, Stan." I said, "Control isn't what we're talking about, you can't trust the greenies." But I have to say I also got lucky, because, as I told you earlier, I worked with people from the environmental movement who were sincere, dedicated scientists and advocates, and I can't say that I've seen that in every environmental conflict I've been involved in. In fact, I would say that it probably is rare, and that's why I don't necessarily suggest to everybody that they try collaboration. It would not be my first choice in many cases, where I know the other side is after what I would consider to be different motives, whether it's feathering the nest of an environmental organization that has an executive director who makes hundreds of thousands of dollars a year, lives in the Washington area, and looks to his membership, or her membership list, as a source of income for a very nice lifestyle. I'm critical of that side of it. I don't have respect for it. I must say I think there's a lot of it out there. On the other hand, there are some wonderful organizations in the environmental area. I've served on the boards of some of them. I highly respect them.

03-00:47:05

Burnett: One of the problems, lifestyle aside, I think you've mentioned one of the problems is when the orientation of the group is towards interdiction. When they just want to stop something. That's not something you can work with, because your job is to go, and their job is to stop.

03-00:47:24

Dempsey: You're working on the wrong problem if you think you're collaborating. With hardened anti-mine activists, it's sort of like the US and Russia collaborating during the Cold War. It's kind of a dumb thing to do.

03-00:47:35

Burnett: It's a non-starter.

03-00:47:37

Dempsey: I have a different set of tools that I use in an environmental conflict.

03-00:47:43

Burnett:

We should talk about that. But just to track quickly what happens. There's a conference called the MacGregor Conference, and this is Ian MacGregor that you were talking about. They set up an Environmental Planning and Protection Committee that you lead. Is that different?

03-00:48:02

Dempsey:

That's a little bit different. Very early on, Ian MacGregor and Arthur Reef and a number of other people, even at board level, were trying to figure out how AMAX could cope with changing public attitudes toward environmental matters. AMAX produced many different commodities; it had aluminum plants, an aluminum division, a coal division, all these different commodities. How do we deal with it? None of us knew how. There were no models. Although I had received a lot of attention in the company and in the press because of the Experiment in Ecology, the initiative came from New York to form a committee of the senior environmental people from all of the different divisions. They asked me to chair it. I didn't convene it; the New York people did. It was held in Denver, and each division sent whoever they thought was their senior environmental person. Nobody knew what an environmentalist was. The coal division was probably the furthest along. They had done some innovative reclamation. Climax had started work on high altitude revegetation. It might be the chief chemist. It might have been somebody that did something else. Some just fell into the assignment. We had that meeting in Denver, and for some reason, the New York people thought I should become the permanent chairman of the committee. I was asked to do that. The committee met two or three times. One of the things I did with the committee was make sure we met at the sites of some of the worst polluters in our company, and magically, of course, the chairman would come endorse the whole thing, and when the chairman came, the place got cleaned up and painted. [laughter] We achieved a little bit of environmental cleanup, at least cosmetically, pretty quickly.

03-00:50:03

Burnett:

A Potemkin village, maybe.

03-00:50:07

Dempsey:

It certainly was. My first meeting as chairman of the committee was held in New York City. Again, it's all about people and perceptions. Ian MacGregor, chairman of the company sat next to me at the table, endorsing the idea that we were really going to engage positively with environmental issues. We're not just going to fight it; we're actually going to engage and figure out what we need to do to be responsible. Pretty soon, as we got started, it was clear that AMAX needed a full-time environmental function. I was asked to be the head of all that activity, and I started hiring a staff. That staff eventually grew to be the Environmental Services Group.

03-00:51:08

Burnett:

In the staff line, where did that fit? This is the Environmental Services Group. It's a full department. That would be at what level? Or was it just kind of orthogonal to the whole thing?

03-00:51:20

Dempsey:

The Environmental Services Group was a corporate level department of AMAX. It worked with all of the divisions of AMAX.

It was interesting. It was ad hoc to begin with, but from the beginning, I reported to the chairman and the president of the corporation in New York. Plus, I was also General Counsel for the western divisions of Climax Molybdenum Company, so I rode a couple of different horses for a while. That is always good for a lot of corporate politics. In any event, very quickly thereafter, I was elected a Vice President of AMAX.

03-00:51:56

Burnett:

For AMAX?

03-00:51:57

Dempsey:

For AMAX.

03-00:51:57

Burnett:

Full stop.

03-00:51:59

Dempsey:

By that time, I had some additional titles with Climax.

03-00:52:07

Burnett:

That takes us up to 1973 with the foundation of the Environmental Services Group as a full department within AMAX. Let's take a break and we'll come back and follow up.

03-00:52:18

Dempsey:

Good.

[break in interview]

03-00:52:21

Burnett:

We were talking last about the institutionalization of environmental planning and protection. It becomes a full department with a direct report to the chairman of the company. This is a significant turn of events. That's 1973. This becomes known, and people start knocking on the door. Can you talk a little bit about some of the consulting that you did outside of the company, or on behalf of the company, for these other companies that were interested in the work you were doing?

03-00:53:11

Dempsey:

I would characterize it as more of a sharing of ideas with other firms in the mining industry. It was a situation where people like Ian MacGregor and

Taylor Ostrander were involved internationally with business organizations like the International Iron and Steel Institute, organizations like that. The chairman of the major companies—mining is a pretty small business at the top. Everybody knows everybody else, and there is probably more cooperation between firms than people would believe. Learning how to secure compliance with environmental regulation, or to deal with plant siting conflicts, was a challenge to all of us in the mining industry. People would say to Ian MacGregor, “How come you’re getting all this good publicity about the environment?” and basically, “How are you approaching it?” Because they were interested in more than just the public relations aspects of the issue. They wanted to know how to organize their own responses. We were all struggling. We all learned from each other, and none of us wanted to see someone else in the industry have trouble. A bad spill anywhere made it tough on all mining companies.

On one occasion, one of the top people in Conzinc Riotinto Australia (CRA), which is part of the Rio Tinto Group, and one of AMAX’s Joint Venture partners in Australia, asked Ian MacGregor for help with a major problem with a mine they had developed in Bougainville, which is an island in the Pacific, near the main island of New Guinea. Bougainville was an interesting situation, because it was not part of the mainland of New Guinea. So there are all kinds of social issues, political and anthropological studies going on. A very interesting place to develop a big open-pit copper mine. CRA had run into difficulty with the newly independent government of Papua New Guinea. Basically, they were facing an expropriation situation, or the threat of it.

03-00:55:06

Burnett:

Nationalization.

03-00:55:07

Dempsey:

Either nationalization or loss of their license to mine. Many of the objections by the Papua New Guinea government were based on allegations of environmental damage that was alleged to have occurred building the mine. The Conzinc Riotinto people were sincerely interested in doing things correctly, and they were also under lots of pressure to find out, how do we respond to this? It was a pretty novel thing at the time. This was a very exotic place. Ian MacGregor volunteered our services to just take a look.

The first phase of our work with CRA involved a week-long visit by CRA people to our offices in Denver. We discussed all of the issues, and did a lot of brainstorming about next steps, how to fix any problems. All of us were completely open, and we had very interesting discussions.

Equipped with a lot of ideas that came out of our meetings in Denver, the CRA folks went back to Bougainville and restructured their whole environmental management structure. At the end of their first year under the

new scheme, Bob Kendrick and I were invited to tour Bougainville, and discuss with them the results of the new programs they had come up with.

Bob and I spent several days touring the mine and the infrastructure supporting the project. We also had a series of briefings by the CRA people. They had already started to do a lot of things that were very wise. They really did a good job of what they were doing. But Bob Kendrick and I—and Bob had been the general manager of Climax Molybdenum's Climax mine, biggest underground mine in the world, so I had somebody that really knew something about it go with me, and we examined their tailing disposal system, which was basically to pour it in a river and let it go into Empress Augusta Bay, in the ocean. Ocean disposal is pretty controversial today, and probably should have been then.

03-00:56:49

Burnett:

Right, but it was standard practice at the time.

03-00:56:52

Dempsey:

That's the way it was. We looked at the social problems. A very interesting set of problems. That's the sort of thing that we did on a number of occasions. We looked at all kinds of environmental and social situations. I can remember having discussions with the German coal interests, who were actually rebuilding towns, post-mining. They would actually take homes apart, brick by brick, because they don't have a lot of extra land in Germany. They would then mine the coal from giant open pits, refill the pits, and then put the homes and commercial building of a whole town back where they were to start with. We talked to the French. But a lot of that was very informal, but it was also very informative to us, too, because AMAX was not the only company doing things. They were doing things, too and we were learning from other companies. For example, Ian MacGregor asked me one time to go take a tour of the Open-Cast Executive of the National Coal Board in Britain. The UK board, he later became the chairman of that board, and Ian ended up having to handle that very controversial coal strike with Margaret Thatcher. He was the man that was running the Coal Board at that time, and knighted for it, and knocked down by the union as a man of about my age now, seventy-five at the time.

03-00:58:17

Burnett:

Oh, physically knocked down?

03-00:58:18

Dempsey:

Physically beaten by the union people at that time. Very controversial strike, of course. Opencast is the same as open pit. We exchanged ideas on how best to do reclamation, and how to deal with communities and things like that. So I had the benefit very early of those kinds of trips, which were very informative. We learned as much as we gave.

03-00:58:56

Burnett: That was early seventies that you were doing those kind of trips, or even earlier?

03-00:59:03

Dempsey: Early to mid-seventies.

03-00:59:07

Burnett: What year did you go with CRA [ConZinc RioTinto Australia] to Bougainville?

03-00:59:12

Dempsey: March 1975. The mine was eventually taken over by the local people, and the mine staff was basically forced off the mine site.

03-00:59:33

Burnett: Initially, what was your set of suggestions when you went there with Bob Kendrick?

03-00:59:44

Dempsey: First, we spent a couple of days with the people that they had brought in, specialists. They had hired one person from CSIRO, which is the main science, governmental scientific organization in Australia. I think they had recommended, to bring in, on the ground—this is on the social side of these issues—some former patrol officers, or so-called Kiaps, who had then been terminated by the newly independent Papua New Guinea government to work with the local people.

03-01:00:38

Burnett: Were these ex-Dutch colonial people?

03-01:00:40

Dempsey: No, they were Australian colonial, civil servants. These were men who were basically the law in the highlands of Papua New Guinea. Their job would be a combination of policemen, postal service, and every part of government. We're talking about almost places that had first contact between Europeans and New Guinea people as late as 1937. These were road less areas in the highlands of New Guinea. These men had been trained to be everything—that was the point of contact with the government, and there were still parts of New Guinea at that time that were not under control. That means that they were not under the control of the government. They were the point person. These were men that obviously wanted to do well for people, but they were also experienced with people that were used to throwing spears at each other. Not to degrade the people of New Guinea, but these are people that would often just start fighting each other and killing each other.

03-01:02:11

Burnett: There was a lot of conflict between the tribal groups?

03-01:02:14

Dempsey:

Yes. I think it was very wise in bringing in former Kiaps—because some of these same things were still going on in Bougainville, and the kind of problems that were caused by environmental damage—say, the rivers being used to dispose of tailing, in some places, it had actually cut off villages from their traditional place to go get fish. The company acknowledged it and was trying to figure out what to do about it. These Kiap fellows were very practical. We had the experience of going into where they were having the local people that were not employed on the mine raise chickens and grow vegetables for the commissary. This was at the mining camp on Bougainville. They provided chickens, and they made some money so they could support themselves, and also so they would be busy. It was interesting to watch the interaction of the Kiaps and the people. It was sort of a tough love approach. And it had to be.

03-01:03:37

Burnett:

Kind of a carrot and stick. A little bit of stick.

03-01:03:43

Dempsey:

It was interesting. I thought the most interesting thing we heard was that the highway that had been built into the mine site itself had a huge road cut, and one day it slumped. Big landslide. The mine staff was mystified. The geotechnical people said, “There’s a lot of water getting in here.” “Well, how’s the water getting in?” “There are a lot of gardens up here.” “What do you mean there are a lot of gardens up there? There are no gardens up there.” The wives of the workmen that were living in the company-owned housing had nothing to do all day, so they went up on the top of the road cut and made little taro patches. This was part of their culture. Taro is a plant that they liked to eat. These ladies had been planting their taro gardens on top of the road cut. They had gotten enough irrigation water into the taro to lubricate the whole road cut, and it all fell in and closed the mine for a couple days.

These are the kind of socioeconomic impacts we talk about. These are real issues. Certainly, the CRA people would acknowledge—they were the ones that told us about it. They could recognize these are not environmental problems, they are social and economic issues too. How do we engage the spouses? We had the same problems in Leadville. All of us in the industry were trying to figure out what to do. Gillette, Wyoming. How do you make sure, whether it’s a man or a woman, is the other partner—what do they do all day while you work at the mine, and you’ve got a wonderful job out there driving a truck, but you have to think about educational opportunities, things like that. Those issues were all there. Everything from the most dramatic environmental insults that you could ever think about versus issues that I just described. We all got to work on all that while we were out there. It’s a very exotic place. There’s a volcano going off all the time out there. At the staff dinner they entertained us at, instead of telling us bear stories like in Alaska, they told us crocodile stories, and we were very wary the next day when we visited Empress Augusta Bay. Wonderful people.

03-01:06:42

Burnett:

I want to continue on this thread of environmental accommodation and socioeconomic and cultural accommodation by talking about the time in Australia, because I understand that you were also given responsibility for the operations of the mines of AMAX in Australia. It's more than that?

03-01:07:12

Dempsey:

I was asked, in 1980 or '81, to go to Australia. I was promoted to an operations position. I was no longer in charge of the environmental function in AMAX. I left the Environmental Services Group entirely, and I became Chairman of AMAX Iron Ore, and chairman of all of the activities of AMAX in Australia. At that time, we operated with different divisions. Our iron-ore division was active. Our coal division was looking for opportunities. It had actually acquired two major coal deposits. We were one of the largest explorers in the country. AMAX had a very large presence. We also had an interest in the iron-ore mines in Western Australia, the Mount Newman project. Mount Newman was a very large, very profitable part of AMAX. It is probably fair to say it was one of AMAX's "crown jewels."

By way of background, I went to Australia in 1981. This is a time when the mining—mining is cyclical, and this was not a happy time for mining. Everything in the world of mining was kind of going to pot for the industry, and everything was very political inside and outside of the company, and nations are worrying. Of course, Australia particularly, because its economy is so tied to mining, I think largely because AMAX had responsibility in the joint venture on the iron-ore mines for the political work—which is interesting, because the biggest steel company in BHP was the operator of the mine. We were the political people. So we're the Americans; they're the big Australian. It was very wisely set up, and of course we had two Japanese partners, and we had a British partner. This big multinational group, plus all of our regular divisions. I think I was chosen for this job, partly my political background in the company, in terms of dealing with political and external issues. Plus, I was trying to get free of a functional specialty. I enjoyed my work in the environmental function, but I didn't want to hurt my chances of becoming an operator. I wanted to be in general management. So the opportunity to organize everything in Australia was wonderful, although it was challenging, particularly from a corporate politics point of view. I'd had plenty of the corporate politics with the Environmental Services Group, because, as you can imagine, maybe the coal division—of course, happily, I was from the Climax division, so we didn't have any problem with them. But it's just natural. If you're running the oil division, you really don't want the corporate people around telling you how to run your operation. I had to deal with all that. By that time, of course, it was Pierre Gousseland who was chairman. We thought maybe I had the background to help bring all of the various activities in Australia together. I must say it was a challenge, and I'm not sure how well I did with it.

03-01:10:54

Burnett:

When you say bringing all that together, there's the different companies that are coming together to do something. Give me a picture of the whole technological system that is involved, because it's not just mining iron ore. There are different pieces of this. Can you give me the landscape of the operation and how it fits into the global picture?

03-01:11:25

Dempsey:

What we're going to do now is divorce this discussion from trying to get AMAX sorted out in Australia. Your earlier oral history series had a man, Frank Joklik. In fact, we were going to go back and check on Frank. Did we?

03-01:11:47

McCasky:

We did, yes.

03-01:11:48

Dempsey:

Did he talk about Mount Newman? I bet he did. He had a lot to do with it.

03-01:11:51

McCasky:

It's the first thing that was on his bio, I think, was Mount Newman.

03-01:11:55

Dempsey:

He's such a great leader of mining companies, and had so much to do with Mt. Newman. He's the one that I'll tell you about, he and Ian MacGregor. I had my first exposure to Mt. Newman when I performed an environmental audit in 1975.

Mt. Newman was one of the earliest multinational joint ventures to develop a huge iron-ore mine, maybe the largest in the world at that time. These were mines that were discovered in the fifties, sixties, something like that. They were out in the West Australian desert, with no infrastructure. These ventures came in and built these huge mines, town sites, railroads, and ports. You ask what is the scope of one of these ventures. In that situation, AMAX had 25 percent of it, CRA had part of it, BHP had part of it. The Japanese and a British firm had small stakes. They operated under a joint venture. Of course, joint ventures were kind of new at the time. There were a couple of reasons they did what they did. One was they needed to assemble the amount of capital required. No individual company really had what it took, and the banks helped them understand that even better when they applied for loans. So they joined together. I think at Mount Newman, there were some very fine legal people in New York at the time that put together this joint venture, and a lot of really good thinking. People like Joklik. They came up with this model of a joint venture, where they're not liable for each other's business, but we'd all work together.

That venture had a management committee, which met, I think, quarterly. One of my tasks in Australia was to serve on that joint venture board, which always met in the BHP building in Melbourne. It was interesting to watch how it all worked. They had developed a system of communication by Telex. If

BHP, as the operator of the mine, wanted to sell a piece of scrap, say \$50,000 worth, even that would get joint-venture approval by all the ventures, or at least the larger holders. Before the days of the Internet and all that, we had all that ability to communicate pretty rapidly between us. But my Telex in Sydney would go all the way out the door sometimes. It pounded away.

03-01:15:08

Burnett: Because you had so many things to sign off on.

03-01:15:13

Dempsey: It wasn't burdensome, but it was very meticulously managed by all the parties. They got along pretty well. There would be times when there were differences of opinion, but they were sorted out in very much a gentlemanly way. [break in audio]

03-01:15:53

Burnett: When we're piecing together what happens to the mining industry over the last thirty years, obviously consolidation is a huge part of it. You seem to be suggesting that, as mining sites become more remote, and as perhaps maybe the grade of the ore goes down when people are looking for it—the really easy copper is no longer available, or it's in the middle of a desert. So you need this *massive* capital to build an operation. Is that kind of the driver for the globalization of the mining industry? They need big partners all over the world to—

03-01:16:36

Dempsey: I think so.

03-01:16:38

Burnett: That's something that's happening at this time. In terms of the market for this—I don't want to get ahead of your explanation—this iron ore, where is it projected to go?

03-01:16:50

Dempsey: I was going to speak to that.

03-01:16:52

Burnett: Let's do that in good time.

03-01:16:55

Dempsey: It probably should fit in here pretty quickly. AMAX was also the sales agent for all of the iron ore from that mine.

03-01:18:06

Burnett: This is also a story of the massive growth of the steel industries in Japan and Korea, right?

03-01:18:13

Dempsey: Yes.

- 03-01:18:14
Burnett: So they're in that hemisphere.
- 03-01:18:17
Dempsey: I've spent a little time in Japan and Korea. [laughter]
- 03-01:18:20
Burnett: There's a ready market there for iron ore going out. This is a story of not just the globalization of the mining industry, but everything that the mining industry feeds as well. So that's part of the equation.
- 03-01:18:36
Dempsey: These are a big deal. Joklik was on the front end of it. He was the pioneer. I wasn't.
- 03-01:18:53
Burnett: But your role, as you said, was you were known for this political experience. You knew how to deal with touchy, thorny issues.
- 03-01:19:04
Dempsey: I can do the Sierra Club. I'm not sure I can do AMAX Coal. [laughter] But seriously, AMAX had splendid relations with its joint venture counterparts in Australia. There certainly was some diplomacy in my job in Australia.
- 03-01:19:15
Burnett: We should talk about that, but there are these ingredients for this operation. It was iron, and it was also gold, I guess.
- 03-01:19:25
Dempsey: Starting to be gold.
- 03-01:19:26
Burnett: This is setting this up. Frank Joklik was actually kind of putting together the kind of site itself, I imagine?
- 03-01:19:35
Dempsey: That was ten years before I got involved.
- 03-01:19:39
Burnett: So this is kind of setting up the joint venture?
- 03-01:19:43
Dempsey: I wasn't involved in setting it up. No, no, I was in ore year fourteen, I think. I was involved in managing it, not creating it. I'll take a lot of credit for creating a lot of other stuff, but those guys did that.
- 03-01:20:00
Burnett: It all was more or less in place.

- 03-01:20:03
Dempsey: It was running, up and operating, sure. The thing that Australia did for me was get me not negotiating joint ventures, and not writing them, but managing them.
- 03-01:21:18
Burnett: You moved out there, is that right?
- 03-01:21:20
Dempsey: Yes, my family and I lived in Sydney at first, and then we moved AMAX's headquarters to Perth.
- 03-01:21:22
Burnett: From when to when did you live there?
- 03-01:21:23
Dempsey: Eighty-one to end of '83.
- 03-01:21:29
Burnett: Can you talk about some of the technical or technological/environmental problems of managing the ore operations and the port and all of that kind of stuff?
- 03-01:22:07
Dempsey: In terms of the environmental issues, I really identified the environmental issues at Mount Newman with very good cooperation from some of the people at BHP, years before I actually lived in Australia or had responsibility for anything in Australia. One of the first things I did with the Environmental Services Group was audit the environmental performance of each property of AMAX all over the world. I personally went on each of those trips, and I would take people with me that had specific background in the type of mining that we were doing. I visited Mount Newman in the early seventies, probably '75. At that time, BHP had appointed a man—his name was Hugh Jones—who was a very thoughtful young man, who was trying to do kind of the same thing I was doing in AMAX. We had very good relations and shared ideas on how to organize and manage an environmental function in a very large corporation. He traveled with us. BHP opened up every part of Mount Newman.
- There were two or three issues that came up. One was dust from the mine. Secondly dust from ore stockpiles at the port blow over to stockpiles of pure white salt at a salt making facility next door. They had a salt producer next to them that ended up with sort of a red-colored salt. Our ore was red. Theirs was white, their products. BHP sorted that one out, and they put the measures in place to not have that problem. There was also a second kind of ore that would be produced that had different dust qualities than the kind of ore they were mining now. They weren't planning to mine that for many years, but they started working on different dust control measures for that very early. That was an interesting project to work on. Probably the most notable one in my

mind was they were having difficulty with the dredging of the port. Port Hedland is one of the big ports of the world in terms of tonnage. Mount Newman loads directly from the railroad—this is ore that is not processed anywhere. It's naturally good feed for blast furnaces in Tokyo, or in Japan, Korea.

03-01:25:08

Burnett:

It doesn't require a lot of processing?

03-01:25:10

Dempsey:

No. Ore arrives on trains and is placed on stockpiles at the port. The ore is later reclaimed from the stockpiles and load it on ships. Some of the very largest ore carriers in the world. When you have that situation, you typically, in a port, will have what's called a turning basin, where the ships can turn. That has to be deeper than most of the rest of the port. You also, in many cases, have to have a channel out to the deep water to get the ship in. Tides and currents can cause erosion of the headlands, with the result that turning basins and ship channels fill up with sand. It was costing millions of dollars over the life of the mine to repeatedly do maintenance dredging to keep those open. The dredge would come up from Holland to Western Australia to do that work. So it's not inexpensive.

03-01:26:09

Burnett:

On an annual basis? They'd come every year?

03-01:26:13

Dempsey:

I'm reluctant to commit to that, but it was pretty frequently, and it was a lot of money. People were saying, "Why does this channel keep filling up?" They finally identified that it was just erosion of the shoreline. Why is the shoreline doing what it's doing? Well, the vegetation is dying. Why is it dying? I'm not sure whether BHP initiated it or whether AMAX did, but we worked together and brought in an expert who had been involved in defoliation in Vietnam during the Vietnam conflict. He came in and immediately identified mangroves as a problem. Apparently, the iron ore was getting into the pneumatophores of the mangrove plants. With a die-off of mangrove—and I don't want to overstate it, it's not that great—but it's enough to create issues with regard to dredging. At that point, people started to figure out how to take care of mangroves a little bit better. Of course, from an environmental point of view, the ecologists, botanists—well, I guess botanists—all of them say mangroves are at a place where also, like an estuary, kind of an important place in the ecological cycle, because a lot of marine organisms come in there to breed. Environmentally sensitive to begin with, but as a practical matter, if it's filling up your turning basin, you want to take a pretty good look at it, too. There's another interface between what you need to do to make a mine work and do it effectively, and the environment.

03-01:28:26

Burnett:

Those environmental changes can affect the mining operations.

03-01:28:30

Dempsey: So there is now a lot more attention to taking care of the mangroves.

03-01:28:39

Burnett: You're in the Environmental Services Group, but you were also interested in management. AMAX got you some training, because you had been trained as a geologist and engineer and a lawyer, but you're now in these management positions. Can you talk about the training that you got that was specific to management?

03-01:29:03

Dempsey: AMAX, and I think most of the major companies, had a lot of training on site, but they would select people from time to time. AMAX did send at least two people a year to the Harvard Business School for grooming for higher management. I was chosen, in 1969, to attend the Program for Management Development. That was a wonderful experience. Very broadening. I even learned how to do cash flows.

03-01:29:37

Burnett: How long was that certificate program?

03-01:29:40

Dempsey: Sixteen weeks.

03-01:29:42

Burnett: And you were with other people, other executives? It was like an executive MBA in its day?

03-01:29:48

Dempsey: Yes. There were people from all over the world, from all kinds of industries. Banking. There were two lords from Britain. There was a fellow who ended up the vice president of Portugal. The general counsel for Citibank. And interestingly, the first CIA agents that were allowed to register under their own names and their own agency. Before that, there had been covert members of the class. Our class also had one covert that we didn't know about for about twenty-five years. It was an interesting mix of people. Some people owned their own businesses, were family businesspeople. Some of us had come up the hard way. All manner of people.

03-01:30:51

Burnett: Did you take away from the academic management training useful knowledge that became applicable in your work, in your career?

03-01:31:02

Dempsey: Sure. Of course, as I quipped, the first thing they do is train you about accounting. It was amusing, because there were some other engineer/lawyer types in one of the other dormitories. They lived in the basement and they had big pipes, and they had labeled all the pipes to develop their cash-flow model. We finally got it. On the academic side, computers were just starting to make

their appearance. We did a business game with computer returns each day. Things like that were very helpful.

03-01:31:46

Burnett:

You did some simulations, some real-world simulations.

03-01:31:49

Dempsey:

Right. My group had a traffic-light company. I was in charge of finance, which I had no background in, and one of the bankers was the head of manufacturing. We had many fights. I had to meet some particular requirements, because I needed to do a public offering of shares, and our VP of Manufacturing wanted to spend all our money putting in new machines. Get that!

03-01:32:19

Burnett:

So you were teaching each other your respective domains?

03-01:32:22

Dempsey:

Right. Of course, the computer was punishing each of us, every day, for our bad decisions. We cut advertising one time, and we agreed on that. Everybody knows that you should not cut advertising. Of course, it cut our sales. I couldn't make my ratios for the public offering. We weren't doing too well there, either.

03-01:32:45

Burnett:

So you took away from that you need to take care of all parts of a multi-unit business enterprise. I wanted to ask you—because many people do not ever get this chance—what is it like to operate a highly complex institution, a very large corporation? Was it daunting when you got the call to manage, let's say, the iron ore operations?

03-01:33:13

Dempsey:

I don't think it's daunting, but I think the takeaway from Harvard was there's a reason to respect every person on the site. If you don't, they ought to be gone. Every function. I don't care whether it's somebody cleaning the bathroom or selling iron ore in Japan. Every one of those people is worth knowing, thinking about, understanding what they do, how they do it, because you have to have respect for every function. Of course, when you come up through the operations or you're the company's lawyer, you get to be kind of smart aleck about this or that, and "the bean counters" (accountants) bear the brunt of the kidding. When it was time for me to do a public offering in real life, I had the background, the respect for the people who really knew what they were doing. That came from that Harvard experience, largely.

03-01:34:09

Burnett:

Knowing how to rely on people, and on whom to rely, I suppose. Those are the keys.

03-01:34:16

Dempsey:

There's an element of that, too.

03-01:34:20

Burnett:

Nineteen seventies are, most people would describe that as a period of prolonged crisis. You have the OPEC crisis in '73. You have stagflation. You have a stagnant economy in the United States and rampant inflation, wage and price controls, and then a second oil crisis in '79. You talked about the mining industry being cyclical. That must have been a particularly difficult cycle to run through at the time. AMAX's expansion into this joint venture, was that an effort to deal with some of the, I guess, cash-flow problems in the industry?

03-01:35:15

Dempsey:

No. Mount Newman was before. It was developed in the late fifties, early sixties, or during the sixties. The real responses of the industry to the issues you're talking about came just after Mt. Newman started production.

[break in interview]

03-01:35:42

Burnett:

This is Paul Burnett interviewing Stan Dempsey for our Global Mining Project. It is still in our third session, April 29, 2015. You were about to tell us the real response of the industry to the financial crisis in the 1970s.

03-01:36:04

Dempsey:

The late 70's and early 80's were tough. It was a very difficult time to plan, either short term or long term, because a lot of the events of the seventies were certainly disruptive. The institutional arrangements of everything were sort of up for grabs. I guess my conclusion is that planning was almost impossible. It wasn't a matter of execution. We knew how to execute stuff. We just didn't know what we were going to do.

03-01:36:32

Burnett:

Right, and especially mining is such a path-dependent industry. You're talking ten years, fourteen years, between permitting, or initial idea, to the final profit-making institution. In a context where you had two crises, oil crises, in '73 and '79, five, six years apart, it's—

03-01:36:56

Dempsey:

Right, and interest rates jumping all over the place before Paul Volcker came in as fed [US Federal Reserve] chairman. A mine like Henderson took ten years to build, so your feasibility study was done eleven years before you actually had production. Almost all of our expansions and things like that were problematic, because you couldn't predict what the market was going to do, how much of anything, whether you're a copper miner or an oil company. It put a lot of stress and strain on everybody.

03-01:37:38

Burnett:

In that period, in the late seventies, one more piece of the environmental work that you were doing was the planning for the Crested Butte mine site. Can you talk a little bit about how that evolved and how you made kind of accommodations for environmental demands?

03-01:38:05
Dempsey:

We are now talking about the Mt. Emmons molybdenum deposit in Colorado. That was an interesting project, because, as you say, it was sometime later than the other matters we were talking about. We are now talking about events that occurred in the mid-1970's. By then, the environmental community was different and much more sophisticated in terms of trying to stop the construction of mines.

The conflict about developing a new molybdenum mine near Crested Butte, Colorado. The power that was put in the hands of the public was in response—we talked earlier about the fact that—you asked me about permitting of Henderson. We really didn't have much in the way of permitting requirements at Henderson at all, because Henderson was largely complete by the time passage the National Environmental Policy Act was passed, and before the adoption of the Forest Service regulations. We owned the land and we had a little zoning here or this and that. There was no EPA. None of those things existed.

Mount Emmons was a far different story. AMAX Exploration discovered a major molybdenum deposit at Mt. Emmons, and we were now in a situation where we had a massive federal presence in terms of regulatory agencies. We had a number of state agencies, we had county agencies, and we had municipal agencies, all of whom were, in some places, in a little bit of strife, because, as we talk about a corporate political situation, you have the same thing with governments. Congress put together a number of statutes, and of course then the administrative agencies, like the EPA, the Corps of Engineers, people like that, put together regulations and tried to work out their arrangements with the states. Crested Butte was a special place. [As an aside, it seems like every place I worked in was a "special place". It is an easy tag line for activists. Having said that, I must admit that I, too, think of the Gunnison-Crested Butte area as pretty special!] It's a beautiful town and ski resort area, which is built on the back of an old coal mining town, and is populated by a few folks that used to be in the mining business, and a large number of people who make a living from tourism. It's an absolutely spectacular mountain setting, in the middle of Colorado. It's a challenge to think, just how are we going to do this? There is a market for the product. We can see that it is feasible to build a mine here. That was our challenge.

03-01:40:59
Burnett:

It also seems like there's the environmental movement on the one hand, which you seem to be suggesting is more dedicated to interdiction. So it's not so much about accommodation or let's make a few changes here and there but we'll go ahead, but it's more about preventing a mine from going forward in certain instances.

03-01:41:20
Dempsey:

I would frame Mt. Emmons as an environmental conflict caused by interests that are really land-use interests, not environmental interests, but who use

environmental issues to gain their land-use purpose. One must distinguish environmental groups from national organizations. Many of the environmental national organizations are quite sincere and quite effective, and as I say, I belong to a lot of them, and I believe in them. So I don't want in any way to say that a lot of the environmental organizations are not doing the right thing. At least one major national environmental group stayed out of the battle over Mt. Emmons. I think there are others, both national and local who have special interests in land use that are contrary to industrial development, or the development of infrastructure that would support it, of any kind. This country has a similar situation with the nuclear waste site in Nevada, which has been opposed strongly and strenuously by people for a variety of other reasons than necessarily the environment of the site.

03-01:42:35

Burnett:

I guess we forget how much changed between, say, the early sixties and the late seventies. It's a remarkable period. In Colorado, the mining industry is very, very strong, and a very, very strong contributor to the economy. But I imagine something else that's changing in that period is the rise of tourism in Colorado. I don't know enough about that history, but if Crested Butte is a ski resort and you've got Vail and Aspen that become these really important places, and they become important contributors and drivers of the Colorado economy, and that grows during this period. In the sixties, there were plans to do not hydraulic fracking, or fracturing, but using nuclear weapons. The government was testing using hundred-kiloton bombs to try to do fracturing of natural-gas deposits, and there were experiments in this.

03-01:43:43

Dempsey:

They did it here in Colorado.

03-01:43:45

Burnett:

Right, not too far from—

03-01:43:47

Dempsey:

Not very far from I-70, west of Glenwood Springs.

03-01:43:51

Burnett:

That was shut down because it was considered to be infeasible in a number of senses.

03-01:43:57

Dempsey:

It had some problems. Frankly, I'll tell you that my Environmental Services Group monitored that shot.

03-01:44:06

Burnett:

The Rulison test.

03-01:44:09

Dempsey:

There's a memo in the file.

03-01:44:14

Burnett:

Think of that confidence of “we can use technology, we can engineer our way to the future.” And on the other side of the 1970s, you’ve got this context where we’re reaching some limits, and we’ve got multiple players and multiple stakeholders in this story. In Crested Butte, there were environmental questions. Was it also a land -use issue because it’s a ski resort site now?

03-01:44:44

Dempsey:

There were some legitimate environmental issues at Mt. Emmons, all of which I think the company could have dealt with appropriately. You can never say that a mine is not going to have some impact. It is. Then you start going out into the penumbra of other issues, like landscape view, spiritual matters. These are more subjective, yet should not be dismissed out of hand. I was challenged by the mayor of Crested Butte, Mitchell, to tell him about subsidence that would occur on the mountain if the mine was built. I said, “Mayor, I’ll tell you what I’ll do. I’ll get some engineers and we’ll do a 3-D graphic, and I’ll show you what it will look like.” I did, and the issue went away. I think the issue went away because I told the truth, not because—I thought it was going to look bad, but he didn’t. At least it wasn’t a useful issue [to him].

But I think, to draw the whole point together, in this country, we do want public participation. I want it, you want it, everybody wants it. But we’ve institutionalized public participation in a way where we have the capability of stopping everything in the country. I don’t care whether it’s widening of I-70 in Colorado. Whatever it is. A new county landfill. We can stop anything. But it seems like, we don’t know how to do anything. I think that’s a problem. That’s why I reached out so much in comparative laws studies to look at what other countries do, because we simply cannot stop the construction of infrastructure, for example. We can, but that would be a pretty difficult thing to do. Back to the ski areas. Yes, they’re a great economic generator. Also, you would want to measure the relative values of various things. The I-70 Corridor services a tourism industry. Is it valuable? Yes, it is. There’s a lot to the issues we’re dealing with here.

03-01:47:13

Burnett:

How did things pan out at Crested Butte in terms of working with—

03-01:47:28

Dempsey:

There’s a little bit of background there that you need to have. There were a lot of people in Crested Butte that were from the East or had big connections around the country. That group was very effective in publicizing their complaint. They wanted to stop the mine. I think they still have the Red Lady Ball. I’d love to go to it sometime. They’ve got a record. I’m going to find it. They wrote a song that was developed to fight the mine. The basic outcome was that we got the permits, or were about to get the permits, when the market fell apart. It’s ironic. On the other hand, you have to give it to the Crested

Butte people. They got the *New York Times* going, which had an effect on the wives of our senior executives in New York, which was difficult.

We finally found out through some of our modeling of environmental conflict that many of our issues were not necessarily with the radical activists in Crested Butte. We'd originally put our office there, and we had some difficulty. They shot the windows out and things like that. We got through that period and accommodated it. We accommodated some interesting approaches to substance abuse. Once we got through those, we suddenly found out that our real issues were not—they weren't going to win if we did the right things. We found out that the people who really could stop us were our friends, the people who looked and dressed like we did, the people that we thought were our friends. These are people that had legitimate concerns, some of them, some of them prejudiced. We would go to the Rotary Club meeting in Gunnison, and sit with a group of businesspeople, and they say, "Oh, we're all for the mine. It's good economics." Then you do some polling and you find out that that's not really what they think.

03-01:49:51

Burnett:

In terms of your intelligence analysis, you're using polls and posing questions, so you get anonymous feedback from the community, and it tells you a different portrait. You're getting data from different sources, and you're also doing some kind of systems analysis of the community, of environmental conflict, to understand it. You're bringing different tools to bear on the problem, to really find out what the real question was.

03-01:50:26

Dempsey:

We did use polling and other fairly sophisticated techniques for managing the conflict. There were really a couple of questions there, too. Obviously, from a management view, if you look at this as a political campaign, we were probably pioneers. I used an awful lot of—when I say "I," I mean we. We used a lot of outside consultants. There's also a second question: what's the right thing to do? What do people really think? You can't be arrogant enough to say this is good, or this is bad, or this is good for you or you. What *is* on people's minds, and are there some things that we could all agree on if we really were collaborating? Even though, under the current circumstances, either you're going to fight us or you're going to tell us you like us but you're still going to fight us. How do you get the truth? What is the truth? Those are questions that were in our minds at the time. We had a very thoughtful man that was teaching in Switzerland—I think he was at NYU at the time—who was doing some of the pioneering work in modeling environmental conflict on an international basis. He was looking at disputes all over the world. I retained him. In fact, he actually made a trip to the site one time after doing all of his analysis. I had him do a little bit of a barroom kind of polling. It was wonderful for him and wonderful for me. I think he's teaching in the Northeast now.

03-01:52:10

Burnett: Do you remember his name?

03-01:52:12

Dempsey: Dr. Thomas Gladwin. He was a very helpful person, very thoughtful. He was modeling environmental conflict from every direction. We were able to use this as a prototype and really kind of understand where we were in the whole system. It was very helpful, and we were able to focus more on the real problems and not the ones that we thought existed. We thought the fellow down here was against us for the following reasons. We were totally wrong on a lot of it. We were able to adjust all of our approaches to really work on the right problems. That's why I think we got to where we got to. For example, with the county, we ended up working with the county on the basis that we provided some money for a computer so that they could finish their land-use plan, which they'd wanted to do for years. We made an arrangement with the State of Colorado. The State of Colorado had a man named Dick Lamm as their governor. Governor Lamm had challenged Climax Molybdenum in a severance-tax battle that, frankly, we won. It knocked him out of control of the entire legislature. But he's a man of great insight, a man of good character. We knew it at the time, and we respected him. We battled him on the severance-tax front. Governor Lamm and Harris Sherman, his Natural Resources Director—this is where we were collaborating now with the state and the county. We put together with them what was called the Colorado Joint-Review Process. You remember there was an effort during the seventies to try to expedite all permitting? This was done on a state level, and it actually worked. It got a lot of acclaim. We were able to work on the right problems because of Thomas Gladwin's work, and because of the effectiveness of Governor Lamm and Director Harris Sherman, a lot of other people. It was a thoughtful approach, and I'm proud of what we did there at Crested Butte.

03-01:54:32

Burnett: Panning out a little bit from the county and state level up to the federal level, there's changes on the horizon at the federal level.

[break in interview]

03-01:54:51

Burnett: This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project. In our morning sessions, we were talking about the end of the seventies, the instability of the 1970s, and I was about to get you to pan out and talk about the conservative turn in federal politics, and what impact that had on the mining industry as a whole, or the impact it had in particular on the work that you were doing.

03-01:55:36

Dempsey: I'd have to say—if you're talking about the change of the Reagan election?

03-01:55:43

Burnett: Right, yeah.

03-01:55:47

Dempsey:

It's interesting. I was on President Reagan's task force after the election, to help put some of the policy together. I can't say it really made too much difference to the industry. The one thing I will note, some of the appointees of the previous administration had taken the opportunity to try to defeat—or not defeat, but make it unworkable, the General Mining Law, unworkable, by doing cranky legal structures. There was Solicitor John Leshey, a very bright lawyer, a law professor from Arizona, was the solicitor for the Department of Interior, and he had written a book very much against the mining law. He attempted to use his position to repeal the mining law without benefit of Congress, to put it pretty directly. As I say, he's a friend and colleague. That took up a lot of the energy, I think, of the administration trying to make that happen, and I think the industry did a pretty good job making sure it didn't happen. Then the new administration came in and administered the law properly. My point would be the time involved, and the energy, of the Department of Interior to take care of a personal agenda and an agenda of special interest groups, just didn't make sense to me. But that's a direct political statement on my part. And I mean it.

03-01:57:39

Burnett:

Right, sure. To which you are entitled.

03-01:57:42

Dempsey:

That's as direct as I can make it. I do want to say one thing as part of the interview. I often say "I" or "me," and I want to make it clear, a company like AMAX doesn't work with one person. There's certainly leadership opportunities. There are times when you do make a difference. But I had the benefit of the finest people in the world to work with. When I talk about the battle on the severance tax in Colorado, David Delcour, one of the finest political people I know in the world, really should have much of the credit for the outcome that the company enjoyed. There are a lot of times when I use the first person—is it pronoun?

03-01:58:34

Burnett:

Yeah. The first person singular when you mean the first person plural.

03-01:58:42

Dempsey:

In any event, I just want to make it clear that there are a lot of people involved in these things. I was privileged to work with wonderful, thoughtful people at Climax and AMAX, and I had the pick of the world's greatest consultants. I must also say that I also had the privilege of working with and against some very fine people on the other side in many conflicts. With a very few exceptions, I found that many of my opponents in legal and public affairs matters were good people, and in some cases I have mentioned them in this interview. In many cases I have been thrown together with opponents and competitors long enough to get to know them. It is hard to hate people you know.

There are some particularly talented and caring people in the national and international environmental organizations, and on several occasions I reached out to such people to help my firm or my client. I did this not to co-opt them, but in a genuine effort to enrich my sides feel for matters. A good example is Ray Haik, a fine lawyer from Minnesota who had been very effective as an advocate for creation of the Boundary Waters Canoe Area. We retained him to work with us on our project to explore a copper nickel deposit in the iron range country just south of the Boundary Waters. He went on to work on a lot of our matters all over the country. There are many more examples.

I am happy, too, that as I come to the end of my career, that I can call so many opponents friends.

03-01:58:47

Burnett:

Absolutely. One of the things that is discussed in the history books is that the Reagan Administration kind of worked to remove some of the teeth from the EPA. I don't know much more about it than that. Did the EPA become less of a thorn in the side of the industry, or was it about the same, or was it—

03-01:59:26

Dempsey:

I don't think it would be good to characterize the EPA as ever being a thorn in the side of the industry. They were administering laws that they were directed to by the Congress. Sometimes those laws were difficult to deal with. There are certainly people who had personal agendas in all of the agencies. I had the opportunity to be one of the applicants for the position of administrator of EPA at one point in time. I would have been very happy to take that job. My classmate, Anne Burford, did become whatever you call the top person in the EPA, the administrator. There are a lot of very fine people working in EPA. I think the charge that the administration tried to defang EPA is not really a very worthy subject. It just doesn't make any sense to me.

03-02:00:33

Burnett:

In the sense that it's not true, or in the sense that it's—

03-02:00:35

Dempsey:

I don't think they could do it anyway. Why would you try and waste your time?

03-02:00:41

Burnett:

That's great. That's that. During the early 1980s, you're winding down at AMAX. Can you talk a little bit about that?

03-02:01:03

Burnett:

Can we talk a little bit about your transition out of working managing mines to working for a law firm? How did that take place? That took place in 1983, is that right?

03-02:01:17

Dempsey:

Eighty-three. When I came back from Australia with my family, to Denver, I at first looked at an investment banking opportunity, and then had a discussion with Arnold & Porter about going to work with them. Harris Sherman, who had been the natural resources director for Colorado for Governor Lamm was the top person, the managing partner, of Arnold & Porter's Denver office. Arnold & Porter, I think, was, at that time, and I think is today, probably the largest law firm in Washington, D.C. They have very much of a global reach and a wonderful reputation. Harris had been hired after he left government, about the same time I left AMAX, to join Arnold & Porter. We had obviously been involved together in developing the Colorado joint review process, had a lot of respect for each other, and it looked like a pretty good match. The Arnold & Porter had certainly been looking at the so-called energy boom, commodity boom, which was starting to go flat right then. That was part of the motivation for the Denver office. Of course, I had some background, and Harris had background. Harris had also had lots of environmental background, which was appealing to me to be able to partner up with somebody that had real credibility in the environmental community, and I hoped had some credibility in the mining community. It was a natural fit. I practiced there two and a half years or so. Enjoyed it thoroughly. I have the highest regard for the firm. I worked mainly on public land issues, doing a land exchange with the Forest Service for the Keystone ski resort. I was peripherally involved with a dumping case involving the Chilean copper industry, and a number of other interesting cases.

03-02:03:51

Burnett:

The dumping case was a Chilean company that was in violation of a trade agreement?

03-02:03:56

Dempsey:

They were alleged to have been. My soon-to-be partner at Denver Mining Finance had been very close to Codelco and all the Chilean copper producers, so we were able to help bring that case into Arnold & Porter. That's a good thing for lawyers to do, is to generate business.

03-02:04:22

Burnett:

So you were able to draw on some of your contacts to—

03-02:04:26

Dempsey:

Make business. They called them rainmakers. [laughter] I helped with at least a small drizzle.

03-02:04:37

Burnett:

So they had people in different sectors, lawyers who had work in different sectors and had the talent to bring stuff in. During that time, there's kind of a—I guess it never really went away, but a kind of resurgence of your entrepreneurial spirit, I suppose. I think one of the cases came your way that was interesting, and got you thinking about your next project.

03-02:05:18
Dempsey:

While I was in Australia with AMAX, the gold boom started. Part of my responsibilities in Australia were to help finance the company's future. A lot of investment banks around the world would call on AMAX and talk to us particularly about an innovation called gold loans. Instead of borrowing money, you borrowed gold. I thought that was very interesting. As a budding financier, I finally would bring out my yellow pad and I'd listen to the banker once, and then I'd say, "I still don't understand it. Let's do it again." After about the third page, it finally started sinking in on me how that worked. Obviously, borrowing gold and paying back gold with a hedge to the bank to ensure that they get it back was an interesting way to finance a gold mine. I was also on the board of a company called Australian Consolidated Mines, ACM. Some of the brightest people in exploration in Australia were involved there, and they were developing gold mines and doing gold loans. I had the opportunity to see all that in action.

After I got back to Denver and had practiced law for a while, I finally decided that maybe instead of practicing law, I'd like to start an investment bank or a merchant bank. A merchant bank is one where it's very much like an investment bank, but they are set up so that they can invest directly in their own products. In fact, we were a merchant bank, prepared to raise money and also put some of our own into operations, into financial products. I partnered up with a man named Ed Peiker. Ed was a very fine engineer that I worked with at Climax for many years. Ed had traveled the world looking at all manner of deposits, and he was one of the best valuation people I knew. The heart of an investment bank really is knowing what things are worth, and then maybe selling them for a little bit more.

03-02:07:57
Burnett:

That's your margin. Your margin is that.

03-02:08:02
Dempsey:

I thought, with the breadth of both of our contacts in the mining world, and with the urgent need for finance for everybody in the world, with a collapsing—not collapsing, but collapsed—mining industry, almost everything was for sale. Every mine in the world was either in trouble or available for sale. One of the things that big companies do when trouble comes, they'll sell what's called their non-core assets. These would be not the best mines, but some that are a little bit less—some of them are marginal, and some aren't any good at all. The nice thing about working with Ed was that he really would know a mine that had promise for the future. Together, with our different skill sets, we were able to put together the bank, and very quickly, because of our contacts, we did have a number of mandates to do particularly merger and acquisition work. People like Pierre Gousseland, who had been the Chairman and CEO of AMAX, would bring us, for example, the French nuclear agency, who were interested in acquiring a source of uranium. France is about 70 to 80 percent nuclear power, and at that point, they need a lot of

uranium from all over the world. A lot of this uranium production in the US was available for sale. We were able to work in that area.

We had all manner of mandates. We had private investors. Because of the gold boom, too—we were perfectly qualified to do the work in gold. Of course, I'd been involved with ACM in Australia, and AMAX itself was looking at gold mines all over the world. Very quickly, we migrated into picking up old gold mines, and gold mines that were either producing or about ready to produce, and that worked fine. We were retained by an investment group in New York to look for things in the former Soviet Union. We ended up at Zod in Armenia, looking at the old tailing pile there, and just a wide variety of projects. We were hired by a Greek company to help them understand the gold potential of the island of Milos. It became kind of a thriving business. We secured an interest in the Camp Bird Mine in Colorado, which is one of the famous gold producers of all time. Very high-grade mine. Great stories about it.

03-02:11:36

Burnett: When was it active before?

03-02:11:37

Dempsey: It was active in the 1890s to about 1935. It produced about 3 million ounces of gold from narrow veins near Ouray, Colorado.

03-02:12:00

Burnett: Just to pull back a bit from that, that flat market for the mining industry worldwide, was that kind of unique? Because you said it's cyclical, but was this particularly bad? It seems like it resulted in the end of some old companies and, as you said, the mergers of new companies being born from that. Is the 1980s and nineties the birth of the industry that we see today?

03-02:12:39

Dempsey: I think that it would be a pretty fair characterization. The grand old companies like, the Asarcos, Anacondas, New Jersey Zinc, Union Carbide, and AMAX, all gone.

03-02:12:55

Burnett: Why couldn't they adapt? What was outmoded about how they did things?

03-02:13:06

Dempsey: As a student of history, I've always been interested in how mines were financed, and I've always been very interested in Herbert Hoover. As you would know from being in California, Herbert Hoover was a graduate of Stanford, a mining engineer who was hired by a merchant bank in London called Bewick Moreing about 1897. Hoover's wife was in the first class in geology at Stanford, and also became a very prominent person in her own right. As I studied Hoover, I could see that he became what was kind of called a mine doctor. He could go in and fix things up, technically, commercially, and every other way. In Western Australia, they had some wonderful mines at

Kalgoorlie, and the Sons of Gwalia, north of there, Laverton. A typical situation would be a bunch of people from London or from Sydney would come in and so-called stock the mine. They would sell the mine at a terribly inflated price to investors, and it would collapse and create a bad reputation for mining in Australia, for Western Australia in particular. They really did do that kind of stock promotion. They didn't bring in really quality people to do the mining. Hoover changed all that, and Bewick Moreing. Bewick Moreing had been involved in some of those stock-jobbing programs, and they were the kind of firm that worked for sizable, sensible people. They put the engineers to work to figure out, these were good mines; why are they failing? Hoover and Bewick Moreing found the answers, technically, and turned those into some of the world's best gold mines. I've always studied Hoover. I dug around in the files of his presidential library and found his original employment agreement with Bewick Moreing. He had a little share of the production, and that was a good thing for him. He made a grand fortune. He was also a collector of mining books, technical books, and he also had a little bit of an interest in the mining law. On all fronts, I was very interested in him.

What I was going to say, how that connects to mining finance, is that we find that the typical way to finance a mine in those days, around the turn of the century, the nineteenth to the twentieth century, was to put a single mine together, and not build a mining company. You would have a corporation operate the mine. In some cases, like on the Comstock Lode, even a little earlier, they would finance a mine with what's called assessable shares. Assessable shares are a share where you can get a dividend, but you can also receive an assessment. If the company runs out of money, the stockholder can be asked to put in more. Without any derogatory implications to the Irish, and I have some Irish in me, they were called Irish dividends on the Comstock Lode, in popular culture. I think they were outlawed in most jurisdictions, at least in the United States, but they were a way of basically doing a rights offering. If you didn't pay your assessment, you lost your stock. The protectors of widows and orphans would say to you this isn't fair. They've been diluted out on an improper basis.

On the other hand, if you really study it, and if you talk about qualified investors, not widows and orphans, it wouldn't be a bad way to finance a mine. But when you talk about a mining company that owns a lot of mines, you've got another issue coming in here. Does some company that finds a wonderful mine someplace waste all of the money in the future by buying mines that will never be as good? We have rules of thumb in the mining industry. I suppose they do in every industry. But it's a common discussion in pubs in London and bars in San Francisco: should a particular company, who is very successful with a particular mine, buy another one? There's a lot of evidence that most of the companies that we're talking about should never have bought the second mine. Part of my inquiries into the Hoover situation, the financing of Kalgoorlie in the early days, the financing of the Comstock Lode, I really dug into all this to really understand how this gold-loan business would work.

Is there a better way? That's basically where we came up with the idea of using royalties to finance gold mines. There are some special characteristics of that we can formulate later. Back to your main question, that's what got me into the mining finance area.

03-02:19:25

Burnett:

So that there was something structurally unwieldy about how mines were financed. There was not enough of a way to hedge against bad times?

03-02:19:38

Dempsey:

Well, yes. Your situation is this. A major company, it will argue management should stay together, because we're so smart, we bought the first mine and we made a lot of money, we can keep doing it. And some do. I won't specify which ones, but certain companies have been very good at replacing reserves, making tough decisions. But some of those decisions that I participated in over a lifetime have suggested, well, we've got these wonderful people over here that know how to do this, metallurgists or construction engineers. Let's don't shut the mine down, or buy another one so they will have something to do. That sort of keeps you from thinking about the main chance. What should you really be doing with that investment? Those are good ideas if they work, but a lot of times they don't. A lot of companies have not replaced the first good mine. In the back of my mind, I always wondered, would it be better to put each mine in a separate corporation? That was also an issue on the Rand in South Africa. Each of those was a separate company, and there were all manner of problems with that. The same at Ballarat and Bendigo in Australia. It's still a work in progress, happily. Meaning there are opportunities for everybody. But it was a grand time right there in terms not of working at a big company, but it was a grand time for looking at opportunities.

03-02:21:29

Burnett:

Yeah, because there were fire sales on companies. But there was a tremendous risk, too, in that, because of those sales of people buying up companies, the mergers are at risk of becoming the non-paying behemoths that were there in the past.

03-02:21:55

Dempsey:

More often, we worked on new companies. We formed new companies. We didn't form them, but we would put somebody into the mining business for the first time.

03-02:22:13

Burnett:

So it was a heady time and there was a lot of change. There were a lot of opportunities. You were beginning to explore the development of a finance company with a new kind of model, right?

03-02:22:32

Dempsey:

Really not so much a new model as Denver Mining Finance was set up to exploit the contacts we had and the skills we had, combining the legal and the technical. It was just a good opportunity to be where things were happening,

the change of ownership of various mines. Later on, of course, we had a mandate from a company called Royal Resources, which was an oil company. Like everyone else in the mining industry in the early eighties, I thought maybe I needed an escape hatch. [laughter] A man named Mike Owen, who was a very prominent entrepreneur in Denver, who had been appointed by the federal court to become the administrator of a company that had been in a securities fraud case, the John King bankruptcy and securities fraud case. The court took the company away from King Resources. They had been doing master limited partnerships and had been involved in a securities fraud litigation and then in a bankruptcy. At that point, he and an engineer and a lawyer were involved. There was also some big litigation that involved class actions, one of the biggest ever class-action cases in Denver that came about through the collapse of the oil industry. It had been sort of a pyramid scheme. In terms of the oil and gas reserves and opportunities for the company, they were pretty good, as King had a lot of money to spend. Mike and his group were successful in getting the court to grant them an exemption from registration under the securities acts, so that they could go public with the new company, the newly formed company, Royal Resources, to take over all the old King exploration and production properties. He invited me to be on the board of that company. I thought, "Boy, this is my chance to learn the oil business. I'm going to be a wildcatter." [laughter] And it would have been a wildcatter.

At that point, serving on their board, they came to me one day and they said, "You've got a new merchant banking firm with Denver Mining Finance. Give us a business plan for getting Royal Resources out of the oil business. We don't care what business we want to go into." Of course, like everybody else, they wanted to keep their jobs. We said sure, and we did a very objective analysis of their value as an oil company, and they had some value. We said, "There's a magnificent opportunity in mining," so we put them into the Camp Bird Mine. Pretty soon, they came back and said, "We believe there's a great opportunity here, but we don't know how to run it. Would you run it?" So Ed and I sold Denver Mining Finance to Royal Resources for shares. That gave us a stake in the company, and then we became employees of the company, and the rest is history.

03-02:26:31

Burnett:

And that becomes Royal Gold?

03-02:26:33

Dempsey:

Royal Gold. We changed the name. Our first approach—

03-02:26:41

Burnett:

Let's take a break, and then let's come back and talk about that in more detail.

03-02:26:45

Dempsey:

All right.

Interview 4 April 30, 2015

04-00:00:04

Burnett:

This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project in the business series. This is our fourth session and it's April 30, 2015. We were talking yesterday about the beginning of Royal Gold. You talked about the early years and the discovery of the mine in Nevada. Can you talk about how this was different from the other forms of financing mines? What was the real value added for this system?

04-00:00:51

Dempsey:

As a mining lawyer and deal maker, I had dealt with the issues surrounding royalties, which were very common in land-tenure arrangements. There were legal issues like implied covenants to explore, and to produce. Technical legal issues like whether covenants run with the land, and the application of the rule against perpetuities. On the deal side, what are the economic consequences of net-profits interest versus gross or net smelter return formulas? Financing which involves bank lending brings up questions about things like subordination of the royalty payments, etc.

I didn't come at it so much from the financial point of view, although increasingly over my career, I became involved more and more with mine finance. I certainly was exposed to the explanations of gold loan financing while I was in Australia with AMAX. All the senior banks from around the world made presentations to us and to other producers, trying to sell us on gold loans and hedging gold. I was on the receiving end of these pitches about "new" "finance products," I became increasingly interested in finance, but I'm still a miner at heart. Of course, there are many old prejudices about royalties, that they constrain ore reserves or that they're too big a piece of the pie, and operators are reluctant sometimes to do royalty financing. Having the background with land tenure, deal making, and the background with finance at this point, particularly gold finance, I was in a good position to work with miners to see how we could put a deal together involving the best points of the new financing methods, while minimizing unintended consequences. I kept saying to myself, why isn't a royalty more effective in terms of dividing up the risks and the rewards of a gold mine than the types of financing that's going on right now? I was always wary of debt, and the covenants that protect lenders when the going gets rough.

I was not the only person in the world who was contemplating that. There were groups in Canada that had lots of mining experience as well, and all of us are interested in trying to align the interest of the financial partner with the interest of the producer. I came at it from the point of view, how could we be the friend of the miner, not somebody trying to just speculate or take a piece for providing a financial product? How can we work together to make this work? Because there's a lot of uncertainty in mining. Obviously, the price of the product, particularly in terms of gold, because gold markets are so volatile.

You finally get to the point where you say to yourself, what are the big risks in a mine? One of them is ore reserves. Another is the capacity of the management to accomplish either the construction of the mine itself and the operation of the mine. There are different skills involved in building a mine versus operating a mine. I had been lucky enough in my career to have seen and been directly involved in each one of the states of mine construction and operation, stages including, construction, contracting, procurement, driving tunnels, and being at the face of the tunnel when decisions were made whether to go from a fixed-cost contract to a cost-plus because of uncertainty. Again, sharing of risk. Everything in my career had something to do with sharing risk. I said to myself, a royalty is really a piece of the equity of a mine. I am not talking about the equity in a mining company, but of the mine itself.

I had communication from time to time with some of the Canadians. They got a faster start, and one of the first companies in Canada, Franco-Nevada, did a great job. They were very successful in the marketplace. Seymour Schulich and Pierre Lassone the founders and Craig Haase, a first-rate mining lawyer from Nevada, knew what a mine was. I have the highest respect for their abilities and the highest respect for their company. They are a competitor. I'll have to say, we compete head to head every once in a while. I was sitting there in the late 1990's, in a situation where Ed and I were involved in a producing company, and I'm very conservative about issues like safety and health and environment, and I found that running medium-sized or smaller mines was very difficult. It was hard to finance the things you need to do before you get production, and stay in production. If you're going to do ore reserves, you have to do a lot of costly drilling, you have to do metallurgy, you have to do analysis of the data that you receive from all of that. It takes months to do, before you have any cash coming in the door.

I finally concluded with Ed and our board that we were certainly doing a capable job of running gold mines. We'd also bought a number of working interests, where we didn't have to operate, but we received part of the gold being produced. We were running a reasonable company. I just didn't see a big future for that model. What I did see was that we were going to have a wonderful royalty at Cortez, coming out of the South Pipeline pit, and then eventually out of South Pipeline and the rest of the Pipeline deposits.

04-00:06:40

Burnett:

That's the Nevada property?

04-00:06:41

Dempsey:

That's the Nevada property. I knew that that was going to be a very substantial cash flow, or revenue stream, with almost no cost to us, because these were gross royalties, and smelter-return royalties are actually close to being gross royalties in Nevada. Given the fact that we would have a big revenue stream, that was what I would have called a major royalty. That gave

us credibility to become a gold royalty company, ready to do battle and suit up to be in the royalty space with companies like Franco-Nevada.

04-00:07:27

Burnett:

So the Nevada property was important to the establishment of Royal Gold and what it became later? You needed that—

04-00:07:36

Dempsey:

It was key. Without it, I probably wouldn't have wanted to enter the royalty business, because I don't think we would have been credible. Buying up a few small prospector royalties or a few non-core royalties from a major—just would not have gotten us into the leagues that that the Royal Gold folks are in now. Given that background, I knew that the Cortez royalty was for sure and it was going to be big. Then we went full steam ahead, sold off all of our operating properties, and farmed out our exploration properties. We continued to do a little exploration in Nevada. Ed and I have always felt that you'd be a darn fool to buy too many lottery tickets in exploration, but if you don't have one or two, you're not in the game. The big step up in value of a prospect is discovery. That's the first place there's a big revaluation of the land. You make a discovery and it's worth a lot more. That's a great place to capture value. All of my thinking in this area starts with value, much more so than profitability or the total value. What can this really bring back? As we went along, it became clearer and clearer that it was going to be hard to sell the idea of royalty financing to the major mining firms. Ed and I, and then later on, Tony Jensen and Bill Heissenbuttel and people like that, who had strong relationships with the senior managements of all the major companies, could get in the door, but it didn't take too long to be given lunch and then shown to the exit.

04-00:09:31

Burnett:

So if you didn't have that initial credibility—

04-00:09:34

Dempsey:

Well, we couldn't have gotten in the door to start—well, they were always courteous to people. We got an audience with the people we needed it with. Royalty financing was not even—it just wasn't in the minds of most financial types.

04-00:09:52

Burnett:

Can I ask you, when did you sell off those properties and transform the company into—

04-00:10:00

Dempsey:

That would have been about 1990, '91, something like that.

04-00:10:04

Burnett:

So about four years in.

04-00:10:06

Dempsey:

Four or five years in. We had assembled a bunch of good, small mines, and some that weren't so good, some that were really good. It was a lot of work to operate mines. We were spreading some human capital around that we probably could have employed on more rewarding tasks, as has been proven.

04-00:10:37

Burnett:

To just really zero in on the distinction, can you, with an example, illustrate the difference between a royalty—from the perspective of your client, let's say, of a mine, what do they get out of a royalty operation or exchange or a contract that they don't get from, say, a commercial construction loan or working with a bank?

04-00:11:10

Dempsey:

Probably the major advantage is that we do not require a hedge of the product, and we don't require repayment. That's a fairly major issue. If the mine turns out not to be there, we lose our money. We're not there to foreclose in that circumstance. A royalty owner is very much aligned with the success of the mine. I think the major distinction, I think why it's finally dawned on everybody that royalty financing really is aligned with the producer, and that's why the major companies, I think, are now looking at—well, not looking at—they are doing that kind of financing.

04-00:12:01

Burnett:

The sensitivity, it seems to be really clear. When you talk about the really long period between exploration, discovery, and then the permitting and all the metallurgy, it can be ten years before the mine is profitable. Then there's the volatility that you explained with operations, the risk—

04-00:12:27

Dempsey:

Permitting risk.

04-00:12:28

Burnett:

Underestimation of the reserves. All these things can happen, and yet a bank that lends money demands a payment, or demands some kind of regular—

04-00:12:40

Dempsey:

They want to be sure they get paid back. That's why they're different. They do examine the risks, but they're not exposed to the same kind of risks we are. A royalty company really needs to understand how that mine is going to operate. If they don't, then that's a great barrier to entry into the royalty space, too. A group of folks that really don't know much about mining could probably lose a lot of money in that space, because you really need to understand the ore reserves. You need to understand the permitting risk, which is now one of the biggest risks in mining. You need to understand the risk of the marketplace, the currency risk. The same things the banks need. For example, in mines where there's commingling, meaning ores from different mines coming into a common mill, you really need metallurgists who can work out the protocols to deal with commingling. You have other

situations. How much of the gold in a copper mine is in what part of the pit? These minerals are not necessarily uniformly distributed like raisins in Raisin Bran.

04-00:13:59

Burnett: Yes, that's true. Being really closely in touch with the risks of an operation gives you that advantage. But not everybody knew that.

04-00:14:15

Dempsey: Well, that's right.

04-00:14:18

Burnett: There's a growth phase for your business in the early nineties, and you're in the door, as you said, with the Nevada property. You've demonstrated you are involved with a property. As you get into the royalty space, as you say, what were some of the hurdles and what were some of the triumphs in the nineties that really took Royal Gold to the next level?

04-00:14:46

Dempsey: Really is, from the early nineties, the first thing, of course, that helped us a lot, we had one of the largest French banks come to us and ask to take a placement of our shares. They had analysts that could figure it out. We were traded on the NASDAQ national market system, and they had analysts look at gold all over the world. One of the very best mutual funds in France was operated by Societe Generale, which is a very large bank. They came to us and said, "We'd like to take a placement of shares in your company." We were happy to sell it, because we needed cash to bridge the time until our royalty came to us from Cortez.

04-00:15:33

Burnett: When was that? When did they come to you?

04-00:15:35

Dempsey: They came to us sometime in the early nineties.

04-00:15:41

Burnett: You went public—

04-00:15:43

Dempsey: We were already public when Royal Gold first came in—

04-00:15:47
Burnett:

Late eighties.

04-00:15:47

Dempsey: When it first was changed [from Royal Resources into Royal Gold].

04-00:15:50

Burnett: So there was initial support from this bank in France decided that they were going to support and invest.

04-00:15:59

Dempsey:

Cash and a major position in our stock. Of course, that gave us additional credibility. Our share price was moving right along as it should, reflecting the value of the company. Of course, we had the expectation of major funds coming, a revenue stream, from Cortez, so things were looking pretty bright. One other thing I didn't say about the alignment of interests issue in royalty financing, we want the operator to win. There's no benefit to us to have any problems with the mine. We're more or less on their team. Over the years, we've been involved with a number of experts that sometimes we work together with the operating company back and forth to make sure something good happens, so it's a win-win situation for both. It's a happy collaboration between the financier and the miner. We're not just trying to get our money back. We're trying to get our money back by making them successful.

04-00:17:18

Burnett:

What is happening over this period to the price of gold? If the price of gold had gone down significantly, would that have affected—

04-00:17:28

Dempsey:

Gold was confined in a narrow, low range, until about 2000. Thereafter it climbed steadily until just recently. Obviously, our share price appreciated dramatically because gold prices went up. That was a good thing.

04-00:17:35

Burnett:

That was a good thing, yeah. You, I think, talked earlier or wrote—

04-00:17:40

Dempsey:

I didn't take any credit for that either. [laughs]

04-00:17:43

Burnett:

One of the initial reasons for getting into gold is that there was kind of a second gold rush in the early 1980s. A real boom. That's occasioned after prices bottomed out in the early eighties. Things started to rebound significantly, especially for gold.

04-00:18:05

Dempsey:

Yes, toward the beginning of the eighties. President Nixon took us off of the gold arrangements at Bretton Woods. Basically, we ended up with a free market, so gold prices immediately climbed rapidly up into the sky.

04-00:18:28

Burnett:

[break in audio] Can you talk a little bit about the team that you needed to build? Because you knew a lot about mines and you knew a lot about finance and land tenure law, but you can't know everything, I suppose. How did you build the expertise to make this a viable operation?

04-00:18:52

Dempsey:

I did have plenty of background in mining and in mining law, and I had been exposed to finance. I'd learned a lot about the mining financiers in Toronto and London, but I knew what I didn't know, too. Secondly, in terms of mine

operation, while I had been involved as a board member at places like Mount Newman, I had never run a major mine. Of course I also had a good relationship with Ed Peiker. Ed and I had worked together at Climax. Ed was a very seasoned engineer, and he had a good way of dealing with technical people. I was also fortunate to make the acquaintance of the mine manager at Cortez, Tony Jensen, who was a man of good character, and great expertise. He had both the mining background and finance. He had been a mine manager and treasurer at Placer Dome in Chile. He and I got friendly over the time that we were working together. Tony had just become manager of Cortez. Of course, I'm the royalty owner and he's the operator of the mine, so you start out with a fairly frosty first meeting, and then it gets a little better and better as we assess each other's strengths and weaknesses in negotiating et cetera. I came to have a lot of respect for him, and I think he came to have a lot of regard for the way we did our business and the model we followed. Very bright man. We finally made an arrangement for him to come into the company. I was hopeful he might be a successor, and of course he has been, and a very successful one, building a much bigger company than I had.

My lack of real knowledge and experience in finance was pretty clear to me, and clear to Tony as well. We were both in agreement that we needed to get some people in to Royal Gold that knew what they were doing. I could buffalo my way along pretty well, but there's a time at which you do have to know what you're doing. We were fortunate to find Bill Heissenbuttel, who had solid background with the mining finance group of the Rothschilds, the well-known banking family out of the UK. He had been in the offices here in the US, deeply involved in all manner of bank financing. He's a man of broad vision, and has been able to take us along in a way that I'm sure we wouldn't have done if he had not been there. We were also fortunate to bring Bruce Kirchhoff, a lawyer who had a solid background in mining law. It's interesting, for a company that today has about a \$4 to \$4.5 billion market capitalization, they have only twenty employees.

04-00:21:54

Burnett: Twenty employees?

04-00:21:55

Dempsey: Twenty. Twenty.

04-00:22:00

Burnett: Four-and-a-half billion dollars.

04-00:22:00

Dempsey: A lot of wonderful consultants, but twenty employees.

04-00:22:08

Burnett: That's a different kind of model, it seems.

04-00:22:13

Dempsey:

It really revolves around, I think, a shared view between Tony and I that people make a difference. People and people's character. Over a lifetime in the mining business, both of us have seen—Tony has obviously run La Coipa, which is one of the big mines in Chile. He's been in the finance section in Chile. Speaks fluent Spanish. Has all the attributes of a great mining man. He knows what he knows, and he knows what he doesn't know.

04-00:22:44

Burnett:

Right, which is crucial.

04-00:22:46

Dempsey:

We've been fortunate enough to have good relations with the men and women that worked for us over a lifetime. Of course, a lot of them are classmates from places like South Dakota School of Mines, where Tony has been a spark plug in revitalizing their mining engineering department. You do meet a lot of people. It's a small industry at the top. We've been able to bring into our teams, as we do due diligence in mine analysis all over the world, wonderful people that we've had exposure to. I've had exposure in Australia. Tony has had all the Latin American experience. I'd worked a lot in Europe. It's been wonderful to be able to work together, and to find people that we can absolutely rely on. When they go to a property, they're respected. It isn't like sending in somebody, "Tell me this, tell me that." Our consultants are well known in the industry, you, as maybe a person at one of the big mines of the world—say you're in Chile and you're a mining engineer. In walks one of the great mining engineers of America. You're happy to see them. They work together, not trying to make something off of each other. We love what we do, and it probably shows when we get down to the mine.

I have to tell you one amusing story. I'll tell it on my competitor, Franco [Franco-Nevada]. This is for you, Pierre. We were once in an awkward situation. A particular mine would only allow firms bidding for a royalty, to do due diligence on one day, so both of us had to conduct our due diligence together on the same day. When you're in an underground mine, there are not many facilities, so we had to do it together. Here, the mining engineers and metallurgists and all the different specialties were all touring the mine together, and we had a very good time doing it. Of course, they won the bidding, but it was a good time for all. That's part of the spirit of it. I think it's been a great sales tool in the long run for both companies that we really are miners, and we're trying to do mining finance. We're not just trying to speculate or earn a quick fee. Our interests are aligned with the operator and we work together all the time with the operator.

04-00:25:24

Burnett:

You're trying to minimize the risk, because you have that—

04-00:25:28

Dempsey: If they succeed, and if they get bigger, we get bigger. Obviously, the real benefit to us is that we basically pay on the basis of a particular ore reserve. If it gets bigger, we get all the benefit of that in the future.

04-00:25:46

Burnett: Right, because you're getting a percentage of that.

04-00:25:48

Dempsey: Yeah. So our interests are aligned.

04-00:25:53

Burnett: Can you talk about the evolution of streaming as a financial instrument? How did that get going, and can you talk about an example of the first big streaming arrangement that you had?

04-00:26:10

Dempsey: Sure. The streaming I think may be the first one was originated in Canada, and I'm not sure it was Franco either. I'm not sure who did it. It might have been Silver Wheaton. The concept was to pay a certain amount, to buy a certain amount of gold, a certain percentage of the gold in an ore deposit. Many of these deposits are either a byproduct or co-product. Most royalty companies are trying to keep as much gold in their portfolio as possible, because the market tends to pay more for the gold content, but all royalty firms have royalties that include—for example Royal Gold, has nickel royalties, they have potash royalties. The Royal Gold folks have a very large component of gold. Gold and copper will occur together. Often a lead mine will have silver. When I say co-product, sometimes the co-product is worth almost as much or more than the primary—you call it a copper mine and you find out that there's more gold value. Of course, there are rules of thumb there—anyway.

04-00:27:29

Burnett: But there are challenges there. You need to know how that's going to be processed and separated. It's a big—

04-00:27:38

Dempsey: Right, you really do have to understand the technology and the metallurgy. Commercially, what the marketplace has told the industry is they'll pay more for gold than they will for copper. Copper is an industrial mineral. It's priced totally differently than gold. Gold investors are willing to pay more than copper for a particular stream of income. We end up with a situation where a big copper mine with a small gold component is getting valued in the stock market at a rate for a copper mine. They aren't getting all that they could get if they could sell the idea that the gold is a different gold mine. In our situation, the streaming people, and then Bill Heissenbuttel and others, improved, I think, a little bit on the model and said to an operator, you really could maximize the value—which is different than income or revenue or anything else—value, what's the value of this property, by separately valuing your gold stream from your copper stream. The lightbulb had come on a long time ago

with the financiers, but they didn't know how to do it, and the royalty streamers taught them. Likewise, the financial people in the big copper companies, learned how to do this. As they became more comfortable with it, the larger companies have now adopted these approaches. Royal Gold's first big one was with Teck in Canada. Again, a former Rothschild person, who was at the time that was their chief financial officer and was wise enough to see how that worked, and worked with Bill, and they all worked together to figure out how to do it. Royal Gold put together, between the two companies, between Royal Gold and Teck, a streaming arrangement that's very beneficial to both companies on the Andacollo Mine in Chile. That's a very large copper mine with a good-sized gold credit. It had always been our hope to get the major companies to realize that that would be a good way to revalue their operations, and it is working.

04-00:30:16

Burnett:

I didn't realize that your wedge was this complex arrangement where the co-produced product was bundled, in essence. Before, it was bundled with the—

04-00:30:32

Dempsey:

We just didn't get any value for it.

04-00:30:33

Burnett:

Right, and you were able to just separate that out.

04-00:30:35

Dempsey:

Other than the regular stock market for copper.

04-00:30:38

Burnett:

You were able to separate that out and create a distinct kind of financial product that would meet that and increase the value of that separate element.

04-00:30:48

Dempsey:

It was good for both. I think the innovation came again. It started in Canada, successfully, and then we improved on the model, and others probably are improving on ours. It is becoming a very standard approach to mine financing of the very large mines of the world. It just makes sense.

04-00:31:17

Burnett:

We talked off camera about how there's an element of excitement in this job, because you're going around the world looking at new properties, looking at new possibilities. Can you talk about entering areas that had been kind of closed off for a while for political reasons? What were some of the—we could call them adventures—that you had going into some of these new areas and—

04-00:31:47

Dempsey:

Adventure travel.

04-0031:48

Burnett:

Adventure travel, as part of this business.

04-00:31:52
Dempsey:

Of course, the collapse of the Soviet Union and all of the related areas created kind of a golden age. A lot of us that came from the exploration and mining side, so we admire Indiana Jones. The opportunity to go to the far places of the world is always there in our minds. It was a time when the whole world was available for us to travel, whether it was Kazakhstan or Siberia or anywhere in the world, Eastern Europe, I was fortunate enough to have been retained by a company called Silver and Baryte, which was a very fine Greek industrial mineral firm that produced bauxite, bentonite, and perlite. It was headed up by very fine people. Great educations at the great mining schools and the great business schools of Europe. Classy people, and classy technical operators. They wanted the best safety for their people. They retained us because there had been a gold discovery on the island of Milos, where the Venus de Milo was discovered years ago in an ancient Greek theater. They had operations all over the island. It's not a very big island. Beautiful place, and so interesting historically and mineralogically. It was just a treat to be hired to basically look at the issue, if they were going to allow some major US or British-based or Australian-based firm to come in and explore that gold discovery, how should they do it? Again, they were smart enough to know that they didn't know how to do that.

We had become acquainted with one of their people, and they retained Denver Mining Finance as a consultant. We negotiated an agreement with one of the major Australian companies for them to come in and explore that gold deposit. We also did some broader things. As we worked together, we learned that that company had had counter-trade with Russia since 1953, trading bauxite, which was used to make carborundum for the military, a very highly secret place in Ukraine at Zaporizhia, which is a big industrial complex that was a major industrial complex for the Soviet Union near a big dam. They produced power. Steel mills, aluminum plants—

04-00:34:56
Burnett:

To make aluminum, basically.

04-00:34:58
Dempsey:

Great place, if you like industry. They found out about my environmental background, so then I did environmental consulting for them. Had a wonderful trip into Zaporizhia to look at the aluminum plant and the carborundum plant, as they had incredible pollution problems. They invented pollution. The head of the plant was sick because of emissions from his own plant. They finally said, this is enough, and asked the Greeks, can you find us somebody in the West that knows something about how carborundum is made? The amusing anecdote there was that I was taken around by a wonderful woman engineer who—I was so happy to see that they were taking care of women in the workplace. She gave me a big lecture on how carborundum is made. I got home and went to the Colorado School of Mines library, looked it up. It's the same way that Edison and his coworkers first patented the way to

make carborundum, and they have not made one single improvement since. Just unbelievable.

04-00:36:22

Burnett:

Was this one more piece of evidence for your understanding of central command control of—

04-00:36:30

Dempsey:

It probably has influenced my attitude a little bit. From then on with the Greeks, we finally put together a joint venture to explore Bulgaria, and to some extent, Romania. We looked at the Rosia Montana deposit, which is so controversial in Romania. Now a Canadian company is developing it. Major open-pit gold mine with all kinds of issues.

04-00:36:59

Burnett:

Like pollution? Pollution issues?

04-00:37:01

Dempsey:

There are major issues that they're addressing. There's a town built on top of it and things like that, and there are underground workings that are caving in. It's also a major source of revenue to the local people and the government. Every issue you could have in mining, they've got. It would have been fun to take that one on, but I'm glad I didn't. [laughter] Silver & Baryte had an extraordinarily talented man named George Xydous, who I worked with most of the time. We formed a company up in Bulgaria. He and I traveled to a number of places in Russia, and we had opportunities to work with the very top people in the government. They also had a relationship with a firm. The way their industry was set up, they had institutes, they called them, and that's where most of the research and big-time design of aluminum plants, for example, were done. The Greeks had bauxite deposits near Delphi in Greece. Another thing I worked on a lot was mine land reclamation, because their mines are near the monuments at Delphi, and had to be very thoughtful about the local conditions. Because they had aluminum ore, bauxite, they had been negotiating with Russia to build a major aluminum plant in Greece to operate with the bauxite I had gotten acquainted with all their personnel, and pretty soon we were looking at all kinds of issues with the Russians. The institute that does aluminum plants is kind of like a Bechtel. It's a really big outfit with really smart, really trained engineers. Typically, if you build a mine, a major state-owned mine there, you would use somebody like this particular institute. So the benefit of getting all that background. But flying and driving around Siberia was interesting.

04-00:39:21

Burnett:

One of the things that I remember coming out at the time, the end of the Cold War, people were astonished at how time had stopped in some industries, basically. As you mentioned, your Edison example that you were talking about, a process that was a hundred years old. It hadn't really changed. Was

that in evidence? You said they were really smart people. They produce incredible mathematicians and scientists.

04-00:39:57

Dempsey:

The people were wonderful. The thing I found also, is that I had no basis for understanding them at all. I knew that going in, but I was still trying to figure it out. I finally figured out our cultures are so different. I certainly learned some of the same things in Australia, how different Australians and Americans are. I also learned not to do any commerce in that part of the world. [laughter]

04-00:40:28

Burnett:

I think others have learned that as well.

04-00:40:29

Dempsey:

But back to your question. I came away with a terrible impression of their ability to do anything. Ed Peiker was a great engineer, and everywhere we went, Ed would say, “Look at that hotel over there. There’s a cold pour in the foundation.” *Nothing* that they built was good that *we* saw. We’re driving along the Trans-Siberian Railroad, on their service road, and they’re building a new road. Here they are transporting little tiny Japanese cars—what is it?—5,000 miles maybe on those service roads. There’s no Trans-Siberian Highway yet. They’re trying to build one with oil money. Here they’re driving with gypo drivers over to Moscow. When you buy a car in Moscow—

04-00:41:32

Burnett:

It has 5,000 miles on it?

04-00:41:33

Dempsey:

It’s got about 5,000 miles on it. They put masking tape over the headlights so that gravel from the road won’t knock them out. Of course, the cars are all chipped up by the time you get there, because the state railroad rates are too high for them to take them—we’re driving right along the railroad! Oh, and Phelps Dodge became our partner in the joint venture in Bulgaria. We had very good relations with them. We did manage to make a discovery in the Russian Far East, in a place that’s totally isolated. No roads. That was an interesting place to visit. We did visit mines in the middle of Siberia. There were also some new mines being built. AMAX ran a mine in Russia, and Kinross. So there were some things going on, there were some positive things. They’re good people with good training, but if I was sort of market-oriented before I got there, and freedom-oriented, and open-source-oriented, I’m much more so now. I didn’t go there looking to downgrade them. I wanted to see opportunities and try to align with them. The way of thinking and the way of doing things, it’s going to take a lot of effort to harmonize. As a commercial person, I decided no. As a student of policy and institutions, I was horrified. Oh, I should also say that Ed got to take a trip to look at gold mines in the Kolyma region in the Russian Far East near the town of Magadan. I didn’t get to take it. I think I had to go to New York and sell stock or something.

04-00:43:31

Burnett: This is Ed Kendrick.

04-00:43:32

Dempsey: No, Ed Peiker. As I say, Ed was a pretty salty operator. We knew a man up in Alaska who had gotten involved with the Russians. Alaska Airline put an airline connection between Anchorage and Magadan. Magadan was the place where a lot of forced-labor camps of the Gulag were located. This is in the Kolyma region, where one sees camp after camp after camp, barbed wire and all that. Many of the camps were organized to house prisoners who were forced to work placers for gold. We knew a fellow up in Alaska, David Heatwole, he had been with ARCO. Very credible geologist. He'd gotten into trade with people in Magadan, selling ice cream to them. They did real well in the wintertime, and summertime he thought he'd make a fortune. Found out they didn't have any refrigerators. So sales were great in the winter, but not in the summer. He was a fine geologist, David Heatwole. He took Ed to Magadan and they went up to this old Gulag area, which apparently still had some unworked placer gold. Dave and Ed thought there were lots of opportunities, but as Ed described the conditions—the now abandoned camps, a lot of them are still there. The barbed wire and the whole bit. It's horrifying. It was horrifying.

04-00:45:17

Burnett: You were seeing vestiges of the past.

04-00:45:20

Dempsey: Ed was not only seeing it, but meeting it. A lot of the people who were in the Gulag are still there. They didn't go home. They were stranded after their release.

04-00:45:31

Burnett: Right, they populated that town.

04-00:45:34

Dempsey: Sure. It was an eye-opener for all of us. On the other hand, as I say, I *love* the people, but I wished I'd had read the book about Peter the Great and more about the Gulag before I went. I should say, I did not go on the Magadan/Kolyma trip, so I did not see them first hand. But Ed was a remarkably keen examining engineer. If he said the remains of the camps were still there, I believe it!

04-00:45:48

Burnett: Maybe that's a good place to take a break.

[break in interview]

04-00:45:53

Burnett:

This is Paul Burnett interviewing Stan Dempsey for the Global Mining and Materials Research Project of the business series. It is April 30, 2015, and we're in the afternoon session, session five, audio file audio file nine. I wanted to ask you, when Royal Gold really gets going in the nineties, what is the larger context of—there's globalization, and there's the mergers of the big mining companies. How does that larger context play into the growth and development of Royal Gold?

04-00:46:46

Dempsey:

It was very important for us, in our strategic planning, to look toward the bigger companies for bigger royalties. It takes about as much time to administer a small royalty as it does a very large one. Of course, when you deal with the major mining firms, you're also working with the very best people in the business, in most cases, with the larger companies, technically and operationally. That was a big part of our strategy. In terms of globalization, of course, the unrelenting requirements for more and more metal around the world—I mean, with the population growing at the rate that it's growing, no matter how you calculate the future, there's clearly going to be a lot of demand for materials. I think all of us in the industry have discussed issues coming out of the Club of Rome study, which did not provide very accurate forecasts. Everybody would like to have more information to plan with, but we also asked questions like, what's happening with the average grade of mines around the world? And it is declining. Can we continue with getting bigger mines with lower-unit costs? That trend, can we keep doing that? Are we going to have so many land-use conflicts with surface mining that we have to find more of our copper underground, or more of our gold? Those are questions that a lot of economists and academics are looking at, and the geological community. CSIRO in Australia is doing some important research on looking for deep targets. I think most of us who have thought about it very much think there's an abundance of mineral deposits still in the crust that we can find within economic reach.

Certainly the development of the Internet and much faster computers with cloud storage has changed a lot of things in the industry. We're able to do calculations at a rate we never could. I can remember, very early in my career, a mine plan would be a five-year plan. I'm now seeing people at very large mining companies with underground gold mines that are looking at changing their plans for driving drifts underground almost in real time. They're getting information back, for example, from a strain gauge to tell them what the underground condition is right now, and whether or not the whole plan needs to be shifted a little bit to take advantage of existing stress in the rock, or to reduce the risk of falling ground. These are all new issues that are created as you go along. It's marvelous.

04-00:50:20

Burnett:

That's a completely different game, it seems. The information seems to be more reliable, so that the prediction of reserves is more accurate, and at least, if they're not more accurate, then they're flexible and adjustable.

04-00:50:38

Dempsey:

There's always been a lot of argument between geologists as to whether a computer generated ore-reserve calculation is as good as one done manually. I think most people would say that you need a blend of judgment and computerization, but I think, undoubtedly, the more computer-generated information available, the human judgment is better informed by it. I don't see a real war there anymore. I can remember situations where we would examine a mine where people had relied entirely on computer-generated ore reserve models, and we would either happily find out beforehand, or not so happily find out afterwards. Going even further back, I can remember a situation with uranium mining where I was involved with people who had drilled out a uranium deposit in the Uravan mineral belt where they seemed to have been able to hit all eight tiny pods of ore on the property. They were about as big around as the drill hole, and that's all there was. Projecting those, no matter how good your geostatistics, it didn't work out very well.

04-00:52:02

Burnett:

Sometimes your sampling is not as random as you would like.

04-00:52:06

Dempsey:

Maybe.

04-00:52:12

Burnett:

I imagine that certain things have become more expensive as a result of the declining grade of ore, for example, and there are other factors. There's the human factors and the institutional factors, such as increased regulation. That puts a brake on the flow of the permitting process. Can you talk about the changes in regulations during the time of Royal Gold? Because you talked about it in the seventies and eighties.

04-00:52:47

Dempsey:

There hasn't been a great change in the regulatory framework during the years that you just specified. What has changed is the use of tactics to stop mines for other purposes, legitimate or illegitimate. Many of the conflicts that are described as environmental really are not. They're land use, or they're some other reason why somebody just does not want a mine. In my judgment, most of the regulatory framework is in pretty good shape. I have been a fan of the National Environmental Policy Act from the time it was started, because I've always believed in having more public participation. I often told people in those open hearings, when they were questioning our mine, our proposals, I would say to them, "There's a doctrine of corporate infallibility, and I'm here to tell you everything that you need to know. But just in case maybe we aren't infallible, maybe you've got some ideas, too. I'd like to hear them." Of course, for persuasive purposes, that kind of changed the mood of the meeting.

04-00:54:20

Burnett: A little humor goes a long way.

04-00:54:21

Dempsey: Beyond that, I was sincere about that. Over a career, there are some people that knew some things we didn't know.

04-00:54:31

Burnett: Humility is maybe—we can tack that on the list of—

04-00:54:35

Dempsey: Virtues.

04-00:54:35

Burnett: Of virtues.

04-00:54:39

Dempsey: Yeah, a little bit of it.

04-00:54:41

Burnett: Knowing what you don't know, as you said.

04-00:54:43

Dempsey: I think that's one of the benefits of public participation. If there is a rare and endangered species of plants in the place where you're going to put a road, and you can move the road, why wouldn't you? Why damage something, not just because it's not the right thing to do, but also because you'd get caught at it. Likewise, a properly scoped environmental impact statement, honestly completed should be a help to the mining proponent.

04-00:55:12

Burnett: Are there some other changes—when you talked about the decline in the grade of ore. Capital costs are increasing because of the distance. You have to build. You're talking about building new infrastructure in places like Siberia or Western Australia. Or is that kind of a constant?

04-00:55:30

Dempsey: That's been pretty constant. The fact of remoteness. Freeport's Grasberg, mine in Irian Jaya, for example. Ok Tedi in Papua New Guinea was another big one. All the big mines in Chile. Those are pretty remote locations. That's been going on for a long time. Costs have been escalating dramatically. Mines that used to be talked about in terms of maybe up to a billion dollars are now costing five billion.

04-00:56:06

Burnett: To get started.

04-00:56:07

Dempsey: On the positive side of that, mine automation—I was interested to hear a fellow say the other day, "Your industry is out in front." I don't often hear that. I was so happy. I said, "What do you mean?" He said, in automation of

vehicles and mobile equipment of all kinds—and this was somebody from the National Research Laboratory here on energy—that the automation of both surface and underground mining is probably a little bit advanced over many other industries. For example, I believe Rio Tinto has a major activity going in Western Australia, in the Pilbara, where 100 million metric tons of iron ore have been shifted, so far with complete automation, from the drill to the loading to the rail transportation, offloading, reclaimed and loaded on to the ship. Unbelievable.

04-00:57:22

Burnett: No people.

04-00:57:23

Dempsey: No people. No operators on the machine itself. I believe they are running most of the operations from about 700 kilometers away in Perth, near the Perth airport. They do send service people once in a while up to take care of some particular issue, but automation has really come to the industry. That's going to help us keep pushing the big production operations for a while.

04-00:58:01

Burnett: When I spoke with Roshan Bhappu, he talked about how the Department of Energy financed some studies in the seventies about just getting a sense of doing an energy audit, which I imagine the industry now does as a matter of course, because it's obviously expensive to—

04-00:58:17

Dempsey: Well, we've been doing them for quite a while. I was still doing them with AMAX, some form of energy audit. I've always thought one way to look at a mine to develop an input/output model where you calculated everything that came through the gate in terms of energy, and then everything that went out the other end. I did this first for environmental reasons. I wanted to kind of know what residuals— There was a time when people talked a lot about residuals management, residuals being tailing, air emissions, cardboard boxes from Amazon that you put out on the wood dump. Just do as you do in your home. Everything that comes through the front door or the garage, where does it end up? Then you take that on into units of energy. Most of what we do in mining is applying energy to liberate a mineral, an economic mineral that we can do something with. You start with the laborer. How many calories a day? How much heat goes in—how much of that do you have to ventilate out of a workplace? We have enormous fans underground, and the ventilation people, they get together at SME meetings and decide, oh, if we would line those drifts so that they didn't have rocks, sticking out of the sides of them, the air goes through much easier, so you don't have to have as big a fan. You take all those variables. Okay, now you bring in explosives. In most cases, probably ammonium nitrate, fuel oil. That's energy. When it blows up, some of the energy is used to break the rock. The rest is heat and noise. Just go through everything you do. Everything you do in a mine is energy breaking rock to get it down to the size where we can get the economic mineral out of it. Then

back to my input/output model. In some cases, it's kind of interesting to find out how much emission there is from a plant, but you can figure it out from what you bring in. It's got to go someplace. It's either product or it's residual. What's the fate of all those individual things?

04-01:01:18

Burnett:

You can also make adjustments in terms of when you discover that something is particularly costly. You move it somewhere else in the system to take advantage of—like moving the rocks out of the way, for example.

04-01:01:31

Dempsey:

In the Pilbara, we shipped direct-shipping ore, because it was high enough in grade to go directly to the blast furnace. Many places will make a first cut of concentration. A gold mine is a good example. You end up with a doré, which is partly gold and partly silver. You ship it to the refinery, but it doesn't cost much to ship a bar that size to a refinery compared to shipping all the ore.

04-01:02:04

Burnett:

Some preliminary processing. We talked off camera, too, we were speaking of the Western Australian operations. That's the dawn of container shipping, too, and that makes—

04-01:02:15

Dempsey:

Not containers. These are bulk. Really big bulk ships.

04-02:02:21

Burnett:

That's an energy savings, too, in terms of—this mine is close to the shore, or you're able to transport it efficiently. Then that goes directly to your market, and that's a huge cost savings there.

04-01:02:37

Dempsey:

A lot of what engineers do is trying to figure out how to reduce energy inputs. I've always, as a financier, wondered if we couldn't do a better job of valuing a mine, eliminating the currency risk issues and things like that, if we calculated the value in BTUs instead of dollars. I've got a challenge out to all my good friends in the discounted cash-flow world.

04-01:03:11

Burnett:

I think Roshan Bhappu talked about that. In the seventies, the Department of Energy wanted to get a calculation of the British Thermal Units of certain forms of processing.

04-01:03:20

Dempsey:

I'm glad they're catching up with us.

04-01:03:24

Burnett:

That's a brilliant way to look at it. Royal Gold is successful, and successful now. It was a little dicey at the very beginning.

- 04-01:03:41
Dempsey: To say the least.
- 04-01:03:42
Burnett: To say the least. It was quite a gamble. But it was based on strong fundamentals that you had faith in. You were Chairman and CEO until, say, 2008, about, and then you're Chairman of the Board, I guess.
- 04-01:04:07
Dempsey: I was chairman until June of 2014.
- 04-01:04:11
Burnett: Can you talk a little bit about how your role in the company shifted over those years?
- 04-01:04:18
Dempsey: Once I was no longer CEO, Tony Jensen took over the leadership of the company, the management of the company. I took over leadership of the board. They're two very different functions. Most of my time was to make sure, with the help of all the other directors and with members of the staff of Royal Gold, and outside counsel, that we were in compliance with all of the various laws, particularly the securities laws. We had fine in-house lawyers at Royal Gold who helped us, and also a wonderful outside lawyer, Paul Hilton, from Hogan and Hartson there in Denver, who had also done a lot of work for Royal. There's a lot to do now in terms of compliance, and I felt it was a good thing to keep as much of it off of the CEO as possible, so that the CEO could build the company and do the things that were necessary there. Tony was involved in every part and led many of the compliance activities, and set a good "tone at the top," but I tried to be helpful in handling routine compliance. There are two independent people there working on different functions. I think it worked very well. Tony built the company much larger than I had built it. He's a wonderful manager. I just have accolades for Tony. US governance, the board of directors is in charge of the company. It sets the policy, it hires the management, and it raises the money. So it was an independent board in that sense, but the harmony of the place was wonderful.
- 04-01:06:22
Burnett: Again, the reliance on good people.
- 04-01:06:25
Dempsey: Good people.
- 04-01:06:30
Burnett: Things wound down for you about 2014, which is a little over a year ago, I guess.
- 04-01:06:35
Dempsey: Maybe they wound up.

04-01:06:37

Burnett:

Or maybe they wound up. Well, I'll let you tell me that.

04-01:06:43

Dempsey:

I've had some health issues that I've been working on. Happily, I think some of the things I've been dealing with there are working out. My wife has some health challenges. We're working through those issues in a positive way and trying to apply some of the same principles we did in business. That's a little hard to do at home, but I'm getting there. I'm continuing to be involved in the industry non-profits. I was chairman of the National Mining Hall of Fame and Museum for three years. I've been out of office there three years. That was one of the things I did after I retired from the board. I've been active in History Colorado, which is the old Colorado Historical Society. I have been a director emeritus there. I've been on that board for about thirty years. I'm still involved in many professional activities. I also do some trout fishing. I was doing a little mountaineering until fairly recently.

04-01:08:07

Burnett:

You were a mountaineer kind of all over the world, weren't you?

04-01:08:11

Dempsey:

I was. I have to say this, I was a pretty active climber in the Tetons and in the Colorado Rockies, in the Wind River Range, when I was a young man, and a very active backpacker in places like Yellowstone Park. After I got busy in my career, I was not an expeditionary climber or anything like that. I was associated with the American Alpine Club. Bob Craig, the very famous K2 climber that died recently, was a very close friend. I'm proud to say he sponsored my membership in the American Alpine Club. I've enjoyed those relationships. What I've tried to do about mountaineering is, all over the world, any time I had a day off—and after this interview, I think you'll understand I didn't have too many of them—I tried to work in some climbing or something to do with the mountains. I love the entire mountain environment. The flowers, the birds, the trees, the lakes, the fishing, hiking, the camaraderie of people that do things like this, even the literature and art associated with mountaineering. I would sneak off in London to the Lake District, Lake Windermere, for a day. When everybody else was out sightseeing in Hyde Park, I'd jump on a train and run up to the lakes. On one occasion, I went up to Snowdonia National Park in Wales. A geologic consultant I'd worked with lived there, and he and I climbed Mount Snowdon, which is the highest mountain in Wales.

04-01:10:08

Burnett:

Yeah, I think so.

04-01:10:10

Dempsey:

Anyway, pretty close. But a nice trip. This is a hike, but it's still an outing. In the Alps, I managed to get to the Chamonix and Zermatt from time to time. I didn't get to do any major peaks, but I did occasionally work with a guide or something that would—I never had very much time. I mean, like twenty-four

hours. Sometimes a guide would get organized and we might do a four or five-hour hike or climb. I hiked up and all over Mount Kosciuszko in Australia. Some parts of it have a boardwalk for a trail. Anyway, you get out and enjoy the mountain environment, compare the tundra in Australia versus the tundra here. I enjoyed the mountain environment. I climbed Mount Fuji. It was an interesting climb, because my office in Tokyo set up the arrangements, and the father, who worked in our office, had climbed. A very serious climber before World War II, and his son was sort of a climber. They made arrangements for me at a beautiful hotel. I went out in a limousine to the base of the mountain. We slept and took off and climbed the whole mountain. Later on, I found that most people go halfway up, sleep, and then finish early the next day. I got a good workout. That mountain is over 12,000 feet high. But you're starting much lower than you would for Longs Peak. Of course, you're humbled, because you'll see ninety-year-old women that have wanted all their life to come up on this mountain, and it's a religious pilgrimage for them. Have you done this?

04-01:12:10

Burnett: I have not. I'm from the prairie.

04-01:12:15

Dempsey: It was a wonderful experience culturally, and I was awful glad to get to the top just at sunrise when you're supposed to. We made it, but, boy, I was tired.

04-01:12:27

Burnett: I bet. I was thinking, because mountaineering is a big deal, often, for executives. I had never put together, until you just said it the way you said it, that if your leisure time is maybe a twenty-four-hour period, in a long period of work, you want to make it count. There's an intensity to that leisure practice.

04-01:12:58

Dempsey: It's like being alive.

04-01:13:02

Burnett: Climbing Mount Fuji is a religious experience, and—

04-01:13:06

Dempsey: Turned out to be one for me, too.

04-01:13:08

Burnett: Honestly.

04-01:13:09

Dempsey: Honestly, yes. It was inspiring to see the sun come up on Mount Fuji.

04-01:13:21

Burnett: In other words, does it kind of restore something for you when you're working very hard and very long. Is there something about the mountains that gives something to you?

04-01:13:30

Dempsey:

I suppose it did. It always does. I can remember as a kid climbing Longs Peak and finding we couldn't get to the top because we couldn't find the cables when they were still located on the north face of the peak. We laid around on rock slabs at place called Chasm View, there until sunrise, freezing and looking up and out over the east face of Longs Peak and seeing the sun hit the first time. I remember that to this day, the emotions I felt. You felt like you were about to die up there. You look up, and all the sudden there's the sun. My God, that's wonderful. The mountains are a special kind of thing. So is seeing a beautiful trout come out and take your fly.

04-01:14:18

Burnett:

Fishing is a different kind of—I suppose it's perhaps more meditative? I don't want to put words in your mouth. What does it mean to you to do fly fishing? What do you get out of it?

04-01:14:33

Dempsey:

I think a couple of things. There is an aesthetic to it, certainly, and a feeling of accomplishment. It's a pretty delicate sport in some ways, fly fishing. In terms of stress management, I'll tell you this. That's about the only thing I can do without thinking about something else all the time. When I'm fishing, that fly has my entire attention, because I only have a few milliseconds to set that hook, the way I fish. I'm not thinking about the energy inputs in the Henderson Mine when I'm fishing.

04-01:15:24

Burnett:

So there are reasons why these are pastimes for people who have busy lives, I suppose.

04-01:15:30

Dempsey:

I don't know whether they start for that reason, but I think anybody that's fished very long will understand what I am saying.

04-01:15:36

Burnett:

You realize the benefits of that. Absolutely. From the lofty heights of the mountains, after we break, we're going to descend back down to talking about some of the political engagement over the course of your career.

04-01:15:52

Dempsey:

Sure. [break in audio]

04-01:15:56

Burnett:

In earlier sessions, we talked about the Experiment in Ecology and your approach, your collaborative approach, to environmental cooperation with environmentalists and other stakeholders in mining and in land use and in communities. But let's return back to, say, the 1970s and talk a little bit about some of the stuff that's not only environmental. Sometimes there are other interests involved. Can you talk a little bit about the colloquy that took place, in the sixties, in fact—or is it the seventies?—on the Forest Service—

04-01:16:43

Dempsey: Would have been in the mid-seventies.

04-01:16:44

Burnett: Yeah. The Forest Service Management Regulation. What was at stake there?

04-01:16:50

Dempsey: The situation was this. As late as the mid-seventies, the public land managing agencies, the Forest Service in particular, had no authority to regulate the surface impacts of mining activity on the lands that they administered. There are a number of exceptions that were passed after 1872 statutes that always exempted the mining industries, and subordinated everything to the general Mining Law of 1872. A number of things occurred in the early nineteen seventies, some situations where prospectors, and even major companies, had put up some roads in Montana that, we would have to admit, were pretty intrusive on the forest, on forest resources. Certainly visually.

04-01:17:53

Burnett: So like a big zigzag of a switchback?

04-01:17:54

Dempsey: Like a big zigzag of switchbacks on a mountain. I think something like thirteen of them. It was a pretty big road. The industry understood that the world had changed a lot, and the public now, under NEPA, had a lot more to say about the management of our public lands, and rightfully so. The industry was concerned that pressure to repeal the 1872 Mining Law was building because of these matters. The 1872 Mining Law itself is a land tenure law. It's not an environmental law. It was not intended to, and it wouldn't be a very good one if it was. It implements a sound mineral policy for a nation, because it provides for self-initiated rights. As we said before, it is an open-source approach to finding the nation's minerals. But it does have the problem, by being ad hoc, that it can interfere with land use plans of other folks, or the Forest Service itself for timber management or for recreation.

As pressure built up on the issue of surface management of national forests, the board of directors of the American Mining Congress [AMC — now the National Mining Association —NMA]. AMC's Board of Directors asked its Public Lands Committee to take a look at the issue, come up with an assessment of the situation, and to make recommendations for action by AMC. Our committee took a hard look at the legal side of the issue, and concluded that at that time the Forest Service had no authority to regulate the surface impacts of mining operations on forest lands. We also learned that government lawyers had come up with the same conclusion, and that the Forest Service acknowledged that it lacked such authority. We also felt that there was a risk that Congress might grant that authority by amending the 1872 Mining Law, or by way of a comprehensive reclamation law, or, even by way of a national land-use planning act. We recommended working constructively with the Forest Service to give the Forest Service what they

reasonably needed to stop the kinds of problems they were having, like the road in Montana, hoping that would keep the issue from causing a complete revision of the nation's mineral tenure laws.

I was asked to chair a Forest Service Subcommittee of the Public Lands Committee. At that time most of the members of the Public Lands Committee itself, were CEO's of the major mining companies. CEO's like Charles Barber, of ASARCO, and George Munroe, of Phelps Dodge. Top lawyers from those companies, and other like Anaconda, and Union Carbide served on my Forest Service Subcommittee.

The AMC Board approved our recommendation to find some way to work with the Forest Service to provide them with some tools for working with explorers and miners to make sure that forest lands would not be unduly harmed by mineral activities. Our Subcommittee had sort of an awkward assignment, but someone, and I don't remember who, suggested using what is called in Congress, a "colloquy", as a way to go forward. Our committee had some contact with the Forest Service, and with members of Congress from states and districts where exploration and mining takes place, and a colloquy was arranged.

We worked hard to help come up ideas for a regulatory regime that would be compatible with the self-initiation of rights, and use it or lose it provisions of the 1872 Mining Law.

The colloquy took place with the Chief of the Forest Service and I, together with Senator Melcher from Montana having speaking parts.

The Forest Service, in that colloquy, admitted that they had no authority, and the industry agreed, but by way of that colloquy, the industry said we would look favorably upon the Forest Service doing something in this area, and would cooperate with the Forest Service industry. We gave some ideas to the Forest Service. They had their own ideas of what ought to be done. The outcome of this process was a regulatory system that was more of a bottom-up approach than is normal today in most regulatory activity. Most regulations are pretty much command and control.

04-01:22:04

Burnett:

Top-down, from the government to—

04-01:22:06

Dempsey:

Top-down. Under a top-down system, the Forest Service would figure out how you should reclaim. It was not so much that we didn't want to be told what to do, but it was more that it would be a good policy to first find out from the miner what the miner thought the miner wanted to do, and let the government take exception if they thought the plan would not work. Hire their own experts, do whatever was required, rather than to hire a bunch of folks who were foreign to the Forest Service culture to come in and start building a

mining bureaucracy to design mines and reclamation for miners. The final outcome, was a set of regulations which were promulgated by the agency. The industry supported the roll-out of these new regulations. In fact, we made talks to our own associations, our state associations, all during that period. We had joint training sessions between, say, the Colorado Mining Association and the Forest Service here in this region, to train both the forest rangers and the people responsible at the mines or in exploration departments. It was a roll-out that worked very smoothly. For many years, there were very few difficulties back and forth. The Forest Service exercised its authority, and if they had a bad situation, it was taken care of. The Bureau of Land Management was under a different authority, and they might have had authority to promulgate regulations, and the congressional pressure there brought about regulation, but they basically adopted the same procedures that were being done by the Forest Service. Almost all hard rock exploration in the West, and mining development, is done under this type of regulatory scheme.

04-01:24:10

Burnett: Right, and it's distinct from the regulation of the coal industry, which is a different—

04-01:24:15

Dempsey: Right.

04-01:24:16

Burnett: And that's BLM, and I guess NEPA, also.

04-01:24:21

Dempsey: NEPA applies to both.

04-01:24:28

Burnett: What was achieved then was a separation of policy for hard rock mining and for the coal industry.

04-01:24:37

Dempsey: That's correct. I believe that by making the effort to establish a proper foundation for regulating the surface impacts of the coal industry and hard rock industries, one that recognized how very different were the geological and market fundamentals of each, we set the stage for developing surface management regulations that were practical, reasonably efficient, reasonable cost-wise, and effective to achieve the policy goal of mining with more care for environmental values, and for reclaiming lands disturbed by mining.

There was a lot of discussion within the industry about the issue. If Congress, in its wisdom, decided to impose new surface management and reclamation requirements, how should it be done? Of course, the coal industry operates under a different land-tenure system than hard rock. They have had leasing forever, and they've had a regulatory scheme that is much more top-down, and they were more used to that sort of circumstance, and that may had fit a little bit better—I'm not convinced entirely, but—coal is considered a mineral

of widespread occurrence. When you mine a coal mine, it covers a lot more territory. A gold mine may not cover nearly as much territory as a big coal mine. So there are differences in the mechanisms, the technology, the whole bit. Most of the coal at that time had been done not on public lands. That changed rapidly. Congress passed SMCRA, Surface Mine Reclamation Act. That was a separate, entirely different approach. Another reason was that the coal companies could pass through their costs to the utility-rate payers who consumed electricity. They were a little less resistant to command and control than we were in the hard-rock industry, because our minerals are priced in an international market. There were no pass through of costs for the hard rock people. So there were differences in geology, there were differences in technology, differences in pricing.

04-01:26:51

Burnett:

And in markets.

04-01:26:52

Dempsey:

Markets. There were good reasons for differences.

04-01:26:57

Burnett:

This results in the Forest Service Surface Management Regulation. Around the same time, getting a little bit away from environmental issues, there was also an issue—and maybe it's not entirely separate from environmental issues—there was an issue of taxation during that period on the mining industry. Can you talk a little bit about how that rolled out and what the solution was?

04-01:27:28

Dempsey:

Sure. Mining taxation is different than environmental issues, or environmental conflict. I had a fair amount of experience with mining taxation even from when I was in law school. I had been involved with the Colorado Mining Association, and I was hired by the Mineral Board of Colorado to do a study of how Colorado imposed ad valorem property taxes on mines. They had one particular issue dealing with two counties in western Colorado, there was dispute between San Miguel and Ouray Counties. Each had roughly one-half of a mine that had a tunnel through a mountain. They had to figure out who got what. In doing that, I believe those two counties had been sort of at war with one another. They had taken it to one of the tax counsels or some experts. They wanted somebody that had some mining background in that kind of mining to help resolve the dispute, I already had some underground mining experience in narrow veins, and I also had an interest in mining policy. I had a small contract from the state, and I had written a report about how the state of Colorado should tax mineral extraction. It's hard to appraise a mine. I've been involved in mine valuations from the very beginning. I was appointed, by agreement of both counties, to be an arbitrator between the two counties to divide up the baby. In the years that followed, I often worked on mining tax matters. I always look back to the time I had with Harold Ballard, a true

Colorado tax expert. A former San Miguel County Treasurer, he joined Climax about the same time as I did. He was a mentor in taxes.

04-01:29:29

Burnett: What year was this, about?

04-01:29:32

Dempsey: Would have been 1964, before I was with Climax. While I was still in law school. The arbitration hearing was held in the pretty little courthouse in Ouray. Judy and I drove over there from Boulder with our brand-new baby, moved into the motel. I'm going to hold court in the little courthouse. That's been arranged by Ouray County. I'm going to be the sole arbiter of this thing, because they knew I had studied the issue, and had written on the subject. They thought I was trustworthy, and both of them agreed. Judy and I went down to one of the cafes that morning, and here were the lawyers and the county commissioners of San Miguel County at one end of the restaurant. At the other end of the restaurant were all Ouray people, and nobody would even come talk to us. Nobody had ever done this kind of arbitration. They were not sure how to address an arbitrator, so they all ignored me. Also, I meet for the first time this big time lawyer from Denver called Don Sherwood representing one of the mining companies that was the taxpayer in the case, who later I worked with for years, and his wife, Connie. It was kind of fun at this time in our early married life for Judy to see all that going on. From Indiana, she thought this looked like the Wild West, and it was!

04-01:30:48

Burnett: It was the Wild West a little bit.

04-01:30:51

Dempsey: We made a finding at the end of the hearing, and it was agreed to by both counties. Everything worked out just fine, and we were able to apply things that I had picked up looking at taxing in other states. Here we go again, with comparative analysis of what other folks have done.

My next major involvement with taxation of miners involved an effort by the Governor of Colorado to impose a severance tax on molybdenum mining in Colorado. In 1970 Denver was selected to host the 1976 winter Olympics. Then in 1972, a group of citizens concerned about the cost to the public in terms of taxpayer funds and environmental impacts, successfully voted down taxpayer funding for the games, causing the games to go elsewhere. The group's leader, Dick Lamm helped us better understand that the environmental ethic in the public was starting to really roll along. He rode that victory on into the governor's chair in 1975. One of his first measures was to say, I'm pretty good with these ballot issues; so now it's time to get this mining industry to pay its fair share. So he proposed to place a severance tax on molybdenum. Not any other mineral, just molybdenum, just Climax. That's the only mine in the state, and practically at that time in the US, that produced molybdenum.

04-01:32:36

Burnett: Just for the record, a severance tax is?

04-01:32:39

Dempsey:

It is a tax imposed on the removal of a mineral. Basically, a tax on the right to remove the material. Sever. So, the proposal on the ballot was to replace the Colorado sales tax on groceries with a severance tax on molybdenum. At that time, groceries were subject to sales tax. That's a pretty compelling argument to most families. "Gosh, let's let that mine pay for the groceries." The bumper stickers from that side of the issue were "Tax molybdenum, not milk." We were presented with a little bit of a challenge. It was a grossly unfair, discriminatory tax in our view. It was a very high impost that would have affected the economics of the mine, the livelihoods of 3,000 people that worked there. We were not amused, to put it mildly. It obviously was a corporate matter all the way back to our headquarters in New York, and the board of directors of AMAX and the ultimate parent company of Climax. We fought that tooth and nail. We even litigated the words in the ballot initiative. Everything we could do to stop that. Happily, the rest of the Colorado mining industry joined with us in the fight against the severance tax, the way it was put together.

One of my jobs as the lawyer at Climax was to help organize the effort to stop it. We had help from one of Climax's top people in New York, Tom Sawyer, who came out a lot to help us out. One of the other lawyers in the department, David Delcour, who had a lot of experience with political matters as an assistant to Congressman Don Brotzman. He had just recently joined our law department. Dave took a lot of the lead in developing the political strategy, and I supervised the entire effort in Colorado, including the public relations, all the effort to defeat the ballot issue. It was an aggressive, well-funded program on behalf of the entire industry. It was successful. We defeated the measure, not just a little bit, but a lot, basically using the theme, because we were at the time of Watergate, be careful what you do here. It may look better than it might turn out. Because, in our judgment, it was not a good thing for Colorado. It would have hurt the molybdenum industry, which was one of the biggest employers and one of the biggest purchasers of electrical power, cement, and steel. The CF&I steel mills at Pueblo were one of our principle suppliers. They were right on the edge at that time of not being in very good economic health, and of course they went out of business later on. So did the cement company later on. All of them were just sort of hanging on by their teeth at that time, and to have us slow down would not have been a good thing for Colorado. I felt not only my client wanted me to do it, but I felt it was the right thing to try to stop the measure.

We used a lot of the approaches that are used in this modern era. Polling, local polling, and we undertook probably one of the first really big television programs to work with the public to persuade them to do something different than the governor wanted to do. I've always had respect for Dick Lamm, and

more pragmatically, I knew that he was very popular after his victory in the 1974 election. The last thing we should do is attack his credibility or his personality. So we never said a bad word about the governor. I wouldn't to this day. But we made the case. I did reach into Minnesota to learn about their taconite initiative, where the industry had gone to the people to lower the tax on a new type of iron ore that could not have been developed without a tax reduction. There was precedent that I could work with. They had used television advertising in their campaign. They sponsored Sunday night movies uninterrupted for the public, and they would tack on their message at the end, telling people why they should support the taconite initiative. I used that precedent. It had proved very successful. Of course, I got a lot of attention in the company, because a lot of our folks, even on the board of AMAX, thought it was just unbelievable that you could ever be able to defeat a proposition to "tax molybdenum – not milk."

04-01:38:44

Burnett:

You talk a little bit about the initiatives for education, for example. It was not just a direct argument against it, but there was also a kind of positive, promotional side to the face of Climax.

04-01:39:07

Dempsey:

I was fortunate to be able to manage the case for Climax when I did. My predecessors had placed Climax into a good spot. Climax had a lot of friends, and they stood up for Climax when it needed help. The company had been a pretty rough and ready outfit during the 1930s. Hard-nosed hiring and labor practices, safety issues, bad relations with the governor, bad relations with counties. Men like my boss, Jack Laing, were called in and asked, "We've got a terrible reputation; what are we going to do about it?" These were people from Climax Molybdenum based in New York at the time. New York folks came out and said, "What's going on out here? What are we doing wrong? This is not working." One of the people who worked on that program, the company hired Stephen H. Hart, a Denver lawyer who was one of the founders of Holland & Hart, one of Denver's top law firms, and one of the great mountaineers of Colorado. He had been the first to climb some peaks. Steve was also counsel to the Ideal Cement Company. He represented the Colorado Cattlemen's Association. He was a man of broad contact and broad judgment, vision. He loved Colorado.

He said, "I'll tell you what. The people you're going to have the most issues with are going to be educators. They have to finance education. Those are the people who are going to want more money out of every source that there is in Colorado. They're going to be watching your performance." He built a number of institutions like Climax's scholarship program for young people to go to college. They put out four-year full ride, tuition, board and room, everything, for students to go to school. They had extra ones for the three counties, Lake, Eagle, and Summit, up near the mine. That was administered by a group of people including a judge from the U.S. Tenth Circuit Court of

Appeals, any number of prominent people in Denver who were part of the Denver establishment, or Colorado establishment, who really had their hearts and minds in Colorado. That program started twenty-five years before the events of the severance tax, but gave a lot of people in Colorado the knowledge that Climax was not necessarily a mean, foreign company from New York, that we were a part of Colorado, and we really were. I say “we,” Climax. Even more importantly, they had given special scholarships to people who wanted to be school administrators, because the county people would tell Climax, “One of our problems in Colorado is that we don’t have a good administration of many of our rural schools.” By the time the severance tax came along, there were many, many school superintendents all over Colorado who had had Climax scholarships, and they were a little resentful when some newcomer like Dick Lamm got in the governor’s chair and started beating up on Climax.

Climax didn’t expect anything back from those people. We didn’t call them; they called us, asking “What could we do?” We answered, “Tell it like it is. We’re not going to hand you talking points. You folks know us. If you trust us and respect us, we’re telling you, we don’t think it’s good for the Colorado economy, and we’re prepared to fight for it. We’d be glad to have your support. If you feel that way, do it.” A lot of the reason that the severance tax was defeated came from those kinds of things from years ago. Ironically, as I mentioned to you off camera, a year later, Ian MacGregor, the chairman of AMAX, came back to Denver and directed me to get busy figuring out how to pass a severance tax. He said, “All of us back here have thought it through a long time. We’ve thought there is some level of severance tax that we think would be okay in the Colorado model. You go back in there and pass a severance tax that makes sense.” I said, “Mr. MacGregor, we pulled out all the stops. Our hearts were in it to defeat a severance tax. We’ve used every vote we could get in the legislature to help us out. How in the world am I going to go tell a legislator we want a severance tax?” The more we talked, the more I realized the wisdom that he had. They really were thinking about the state. Climax was expecting to be here, and they still are.

04-01:45:05

Burnett:

So a long history of good corporate citizenship preceded the severance tax controversy, even after AMAX took a leading role to make sure that the reputations of Climax and AMAX were intact after that.

04-01:45:30

Dempsey:

That’s right. Of course, it’s not all altruism, either. When you operate a mine in a place like Lake County, one of the things you want to do is keep your workers. It takes a long time to train somebody to be a good miner. If his or her spouse is not employed, or the schools aren’t any good, they aren’t going to stay. Another thing that the company did, and I think a little bit independently of Steve Hart, was suddenly decide, thirty years before the events of the severance tax, we need to strengthen the schools. Climax paid

about 60 to 70 percent of the taxes, property taxes, in Lake County. We basically were building the schools anyway. They hired Harold Ballard, a former county assessor from San Miguel County, full-time staff person, to do nothing but work with the school districts in those three counties, and to work at the state level to make sure that schools had enough money. They wanted to build the capacity. It's not all altruism. Basically, it's part of the business of running a big mine. In fact, Lake County had a primary school and a high school in Climax, the camp. Judy taught there the first year of our marriage.

04-01:47:06

Burnett:

On the theme of engagement with larger political contexts—and this is a technical context, but it's also political—from your work in the seventies, or the early eighties, in Australia, you learned a lot about the assessment of ores and defining ores, and how ore estimates are disclosed to the public. I want you to talk about your associational engagement with SME on the issue of ore definitions, because that's also a story of the reputation of mines and the reputation—

04-01:48:04

Dempsey:

Of people.

04-01:48:05

Burnett:

And of people. What was at stake there, in Australia first, and then we can walk through it in the United States?

04-01:48:15

Dempsey:

First of all, ore reserves are the key element of a mine. I've been involved with ore-reserve calculations since I was about sixteen years old. I was involved with the engineers and geologists at the Henderson Mine because the ore reserve calculations had a bearing on which mining claims we could patent under the 1872 Mining Law. It's been a personal interest over the years. The Australian side of it is that, in Australia, there had been a number of big mining stock frauds on the stock exchanges, particularly arising out of the nickel boom that occurred in the nineteen sixties in Australia. All kinds of promotions and bad conduct. The Australian professional organization, (AusIMM), the Australian Institute of Mining and Metallurgy, together with the Australian stock exchanges, put together a program for regulating the disclosure of ore reserve estimates. That document looked through to how you do it, and how you disclose it. A principal part of their system goes beyond the definitions of ore, and goes on to require the appointment in every case of a qualified person to certify that the representations made as a part of the disclosure were accurate and true. I was for many years, a member of AusIMM, and I knew many of the people who were involved in work on the Australian system. When I returned to the US, from Australia I decided that we needed to be doing something along the same lines, in the US. Some of my merchant banking, investment banking activity, also involved taking companies public, including one in Idaho that would have taken one of the large underground mines in Idaho public. It had a number of definition

problems. I had been meeting with the SEC's ore-reserve specialists in Washington, and I knew that they were working with very antiquated approaches. That's thirty years ago. And they still are.

04-01:50:46

Burnett: The SEC was? Right, yes.

04-01:50:48

Dempsey: Yes. Basically, they have said, over time, that they didn't have enough staff to address it. They were busy revising the petroleum-reserve estimates and the—I know some of those people that are fine professionals that probably don't have what they need to work with, but this country still needs disclosure on a—because we fear the same kind of fraud situations here, which don't help our industry raise capital. I asked SME, I sent a letter suggesting that we undertake to do something—at least study what Australia had done. They established what they called Working Party Seventy-Nine. That's sort of an initial effort in SME to study something. I chaired that committee for maybe a year or two. Then J.M. Rendu, a very fine geostatistician from Newmont, took over the committee. Very shortly thereafter, Canada, the Ontario Securities Commission, announced that they were also doing something about ore-reserve disclosure. They put out their 43-101 program, which is a model for much of the world, because a lot of the money in mining comes from Toronto, through the stock exchange in Toronto and Vancouver. I was involved in that. I've always been interested in it. I'm not involved in it now, but it was an interesting professional activity.

04-01:52:39

Burnett: It speaks to your concerns about—you were talking about fundamental values in your profession and in business in general. Your ideas of what counts and what matters. On the one hand, you need freedom, the freely initiated rights, to go find ores and have ownership over them.

04-01:53:03

Dempsey: And transferability.

04-01:53:05

Burnett: And transferability, so that you can actually sell it when you realize what you've got. And freedom from a certain level of what you perceive as undue regulation, or ineffective—

04-01:53:21

Dempsey: Right, or interference with exercise of our legitimate rights, whether it be by a population of people that occupy the land illegally, as with artisanal miners. Those are sensitive issues the industry is working on. I've never worked on that problem, happily. I've certainly seen the situation on the ground. Environmental conflict is a major cause of difficulty for the country and the mining industry.

- 04-01:53:57
Burnett: You mentioned that, after these early periods of the Experiment in Ecology and reaching accommodation with some well-meaning folks, that it either was a bit anomalous, even for the time, or, subsequently, positions hardened after the passage of NEPA and the Clean Water Act and all sorts of—
- 04-01:54:26
Dempsey: They were empowered, so they took advantage of the power.
- 04-01:54:29
Burnett: Right, and then that led to more conflictual encounters, I suppose.
- 04-01:54:38
Dempsey: Outright conflict.
- 04-01:54:42
Burnett: This ore situation also speaks to an interest you have in accountability, it seems. People are free to do this kind of exploration, but you want there to be responsibility and transparency in these kinds of engagements. The Canadian situation was extraordinary, and you've mentioned off camera the Bre-X—
- 04-01:55:10
Dempsey: The Bre-X scandal.
- 04-01:55:11
Burnett: The Bre-X scandal occasioned the mining regulation in Canada. That was a \$6 billion collapse right there, in a much smaller sort of mining market.
- 04-01:55:24
Dempsey: It certainly didn't help the industry raise capital.
- 04-01:55:28
Burnett: Did that have worldwide consequences for the mining industry?
- 04-01:55:30
Dempsey: Oh, yeah, sure. That's not the only one that's been perpetrated. I'm a little bit of a student of that, too.
- 04-01:55:44
Burnett: Trust is important. Freedom is important. But in order to have trust, there needs to be accountability and responsibility. You're interested in—
- 04-01:55:55
Dempsey: And transparency.
- 04-01:55:56
Burnett: And transparency. You're interested in what kind of either associational or regulatory mechanisms to strengthen that and make that better?
- 04-01:56:07
Dempsey: I am very interested in the development of institutions that would be part of the commercial framework of mining.

04-01:56:19

Burnett:

Panning out from that, can you talk a little bit about values and character in leadership, and how you conduct yourself, and what you have appreciated in the people you've worked with?

04-01:56:41

Dempsey:

I'd have to say that, as you go along, you more and more realize that you can't rely on a contract being enforced, or even an ore reserve estimate by somebody that you don't know. Almost anything in life, when it comes down to it, is, does that person have integrity? They represented there's an ore reserve here, or that they can do the following, or that they will deliver so many goods to you. You can sue somebody all you want. You still aren't getting the mine built. Is it on the level? At the end of the day, I think values and virtue is not something to giggle about. It's something that's probably the foundation of most of our transactions. I don't do business with some people, because I don't trust them. But I do do business with most people on the basis of trust. The contract is interesting, and I know that many of my colleagues will disagree with me in the law business, that they think that they can write a contract that's air-tight. I've never been of that view. I now have to tell you that, as a lawyer, if I were serving a client, I would do what they do. I don't believe that's the best thing for the world, or this country.

I had a situation where the owner of the mine was a geologist who had discovered the mine. He had done his own ore-reserve work, and he was one of the best we ever had at Climax. He was on his own now. It would have been to his benefit to have the mine come into production. He knew Ed and I were negotiating to buy the mine. He came to Ed one day and said, "Ed, I hate to tell you this, because it's going to hurt my situation, but the new company that came in has done their ore reserves entirely with computers. I've got to tell you, I don't think they understand the ore body." So I found a commercial way around it, but when the mine was mined, the geologist was correct. Integrity was everything. Can you imagine a man doing that? There are still some that will.

04-01:59:33

Burnett:

That has value long term. You've spoken about these relationships. Many of the people that you've worked with, you have worked with for over thirty years. Is that a fair assessment?

04-01:59:44

Dempsey:

Oh, yes.

04-01:59:46

Burnett:

And not just work with, but contacts that you have relied on to give you information about different localities and different properties.

04-01:59:54

Dempsey:

Everybody is fallible. One of these great colleagues could, at some point in time, have a bad day, too. The other side of it is, also, that a lot of people that

I've had difficulty with over the years, even people I've sued, or vice versa—and I've only brought three or four lawsuits directly in my life. I've done a lot of it for clients. The ones I've brought were pretty good-sized ones. They've settled, and I'm very friendly with the people on the other side now. You don't have to hate somebody to be in litigation.

04-02:00:47

Burnett:

Maybe the other word we throw in there is honor?

04-02:00:51

Dempsey:

Honor is something I would aspire to, and I hope everybody else would. I don't want to come across as naïve. I think J. Paul Getty said "the meek will inherit the earth, but they will not get the mineral rights." There are times in a litigation where you have to do what you have to do. Secondly, I would say that our values and our ideas about virtue are not necessarily universally held around the world. I've worked in a lot of other countries where it would be observed in ways that we might not find comfortable. Others, I've found they wouldn't use them at all. I like to talk about honor and integrity and truthfulness and openness, but I think anybody engaged in mining also has to be very careful, very thoughtful, about everything they do. Trust, but verify.

04-02:02:10

Burnett:

Stan Dempsey, I want to thank you for taking the time to speak with us.

04-02:02:14

Dempsey:

Thank you.

[End of Interview]

STANLEY DEMPSEY

BORN: August 12, 1939, LaPorte, Indiana

EDUCATION:

Colorado School of Mines..... 1956 - 1957
University of Colorado 1960
A.B. (Geology)
University of Colorado 1964
J.D. (Law)
Harvard Business School..... 1969
Certificate Program for Management Development
Australasian Institute of Mining and Metallurgy Board of Chartered 2000
Professional (Management)

BAR ADMISSIONS:

Colorado 1964
U.S. District Court (Colorado) 1964

BOARD MEMBERSHIPS:

History Colorado.....1978 - 2007
Australian Consolidated Mines, Sydney, N.S.W., Australia.....1981 - 1983
Mineral Information Institute..... 1983 - 2007
Royal Gold, Inc., Denver, Colorado..... 1984 - 2014
Golden Bounty Resources N.L., Perth, Western Australia.....1986 - 1991
Hazen Research, Denver, Colorado..... 1993 - 2002
Dakota Mining Corporation, Denver, Colorado..... 1993 - 1995
Behre Dolbear, Denver, Colorado.....1994 - 2002
National Mining Association.....1994 - 2006
Colorado Historical Society Foundation..... 1997 - 2015
Governor, National Mining Hall of Fame..... 1997 - 2015
The Gold Institute..... 1999 - 2003
World Gold Council.....2000 - 2008
Northwest Mining Association..... 2001 - 2002
Nevada Mining Association.....2001 - 2003
Taranis Resources Inc..... 2006 - 2012
CHS, Inc.....
Colorado School of Mines Research Institute.....

STANLEY DEMPSEY

CURRENT POSITION:

2014 – Present Principal, Dempsey & Company

Provide consulting services in mining, including expert testimony, promote my book Mining the Summit: Colorado's Ten Mile District, 1860-1960. Published by the University of Oklahoma Press, a second printing of the first edition issued in 2014.

PREVIOUS POSITIONS:

2008 – 2014: Chairman, Royal Gold, Inc.

2006 - 2008: Executive Chairman, Royal Gold, Inc.

1988 - 2006: Chairman and Chief Executive Officer, Royal Gold, Inc.

2002 - 2003: President, Royal Gold, Inc.

1987 - 1988: President and Chief Operating Officer, Royal Gold, Inc.

Accomplished a reverse takeover of a publicly traded oil and gas exploration and production firm, Royal Resources, Inc., and then transformed that firm into a gold exploration and production firm, Royal Gold, Inc. Managed gold exploration and development activities, resulting in a major gold discovery in Nevada. Subsequently sold the discovery property to a major gold producer, retaining a significant royalty on all future production. Restructured Royal Gold, adopting a gold royalty business model for the firm. Expanded Royal Gold by acquiring more royalties. Secured funding for expansion through private placement and public offerings of common shares, and obtained a \$75 million line of credit. Market capitalization reached approximately \$1.5 billion in 2008.

1986 President, Denver Mining Finance Company

Co-founder of the Company, a merchant bank providing merger and acquisition and funding services to mining firms.

1983 - 1986: Partner, Arnold & Porter, Denver, Colorado

Private law practice.

1981 - 1983: Vice President, AMAX Inc.

Chairman, AMAX Australia Limited

Chairman, Executive Committee, AMAX Iron Ore Corporation, Perth, WA

**Deputy Chairman and Director, Australia Consolidated Mines Ltd., Sydney
N.S.W. Australia (1981), Perth, WA (1982-83)**

Responsible for AMAX's interests in Australia, Papua New Guinea, and parts of Indonesia. Included AMAX's 25 percent interest in the Mt. Newman iron ore venture (total 1982 sales approximately \$560M - AMAX share \$140M); sales representation for all Mt. Newman export sales to Japan and Europe; coal, oil and gas, base and precious metals exploration and development.

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Objectives for 1981-82 were centralization of all AMAX activities in the area (replacing division structures directed from U.S. bases) and organization of an Australian public company.

1979 - 1981: Vice President, Director of Environmental Affairs and Deputy Director, Office of Communications and Public Affairs, AMAX Inc., Greenwich, Connecticut.

Responsible for public relations, investor relations, governmental relations, and environmental matters for AMAX environmental program, including plant siting matters in Florida, Colorado, Minnesota, Washington, and the United Kingdom; legislative and regulatory matters, and clean-up of a hazardous waste site.

1977 - 1979: Vice President, Director of Environmental Affairs, AMAX, Inc. and Senior Vice President, Climax Molybdenum Company (a Division of AMAX Inc.)

Responsible for all environmental matters of AMAX, Inc. Very active in plant siting, compliance with air and water quality laws, developing reclamation programs for coal and metal mines, and environmental policy development at local, national, and international levels. Managed a staff of up to 25 environmental professionals plus outside contractors in a systematic management program.

The Climax Senior Vice President position was additional to my corporate level environmental responsibilities. It involved management of all public relations, technical information, governmental relations, and environmental matters for Climax Molybdenum Company, AMAX's molybdenum mining, conversion, and sales division. This division consisted of mines in Colorado and British Columbia, roasting plants in Pennsylvania, Iowa, the United Kingdom, Holland, and Italy, and marketing facilities in the U.S., Europe, and Japan. Approximately 4,500 division employees worldwide.

1970 - 1977: Director of Environmental Affairs, General Attorney, Western Area, AMAX Inc.

Responsible for developing a corporate-wide environmental staff function. Developed environmental assessment techniques programs for helping prepare environmental impact statements, compliance programs, and environmental audits; participated actively in legislative and rulemaking proceedings.

As General Attorney, I was responsible for all legal matters for AMAX's environmental and exploration groups worldwide, and for Climax Molybdenum Company's mining operations in the Western U.S. and Canada. The Climax work included emphasis on construction contracts for major mine development, and work with labor law issues of both organized and non-union mining operations.

1968 - 1970: General Attorney, Western Operations, Climax Molybdenum Company (a Division of AMAX, Inc.), Golden and Climax, Colorado.

Responsible for all legal work for Climax Molybdenum Company mining operations in the Western U.S. and Canada. Assigned to securing land and water for the Henderson molybdenum mine, a \$500 million plus new mine built west of Denver, Colorado, during the period 1966-1976.

STANLEY DEMPSEY

Also responsible for obtaining all environmental clearances for this mine and for all construction contracting.

1964 - 1968: Resident Attorney, Climax Mine, Climax Molybdenum Company, Climax, Colorado.

Responsible for all legal matters rising out of operation of the Climax Mine, a large underground molybdenum mine employing at that time approximately 2,500 people. Emphasis on water rights, land acquisition, construction contracting, labor matters, and development of compliance arrangements for new environmental laws.

1962 - 1964: Legal Research Assistant, Rocky Mountain Mineral Law Foundation, Boulder, Colorado.

Legal research on mineral law issues.

1960 - 1961: Engineer, Climax Molybdenum Company, Climax, Colorado.

Industrial engineering at an underground mine. Time and motion studies of mining operations, optimization studies, and equipment purchase justification analysis.

1957 - 1960: Independent Mine Operator.

Operated small gold, tungsten and uranium mines in Colorado and Montana.

PROFESSIONAL ACTIVITIES:

2011 – Present	National Council Member for the National Museum of Forest Service History
2010 - 2015	Member, Enhancement Committee of the CSM Department of Geology and Geological Engineering.
2007 - 2008	Board Member, The Natural Resources Law Center, University of Colorado Law School
2007 - 2015	Director Emeritus, Colorado Historical Society
2004 - 2006	Chairman, Lands Committee, National Mining Association
2004 – 2012	Member, Supreme Court Historical Society
2004 - Present	Honorary Member, Colorado School of Mines Alumni Association
2000 - 2002	Trustee, Northwest Mining Association
2000 - Present	Member, Honorary Board, Thorne Ecological Institute
2000 - 2002	Chairman, MINEPAC, National Mining Association
1998 - 2000	Member, Natural Resources Law Center Advisory Board, University of Colorado School of Law

STANLEY DEMPSEY

1997 - Present Lifetime Member, Board of Governors, National Mining Hall of Fame and Museum

1996 - Present Member, International Mining Professionals Society

1995 - 2000 Chairman, Public Lands Committee, National Mining Association

1992 - 1994 President, Mining History Association

1991 - 1994 Chairman, History Colorado

1989 - 1991 Member, Board of Directors, Geotechnical, Energy and Materials Corridor, Colorado School of Mines

1988 - 2014 Member, Society of Mining Engineers Working Party #79 - Ore Reserve Definitions

1988 - Present Member, Mining and Metallurgical Society of America

1985 - 1988 Member, Board of Directors, Colorado School of Mines Research Institute

1985 - 1987 Trustee, Colorado Outward Bound School

1984 - 1986 Alternate Member, Colorado Forum

1983 - 1986 Member, National Board of Directors, Trout Unlimited

1983 - 1986 Member, Board of Directors, ACCORD (Environmental Mediation Organization)

1983 - Present Member, Board of Directors, Mineral Information Institute

1983 - 1987 Member, Natural Resources Advisory Committee, School of Law, University of Colorado

1982 - 2015 Member, Australian Institute of Mining and Metallurgy

1980 - 1981 Member Strategic Minerals Task Force, President-Elect Reagan Transition Team

1979 - 1980 Member, National Board of Directors, Trout Unlimited

1979 - 1980 President, Rocky Mountain Mineral Law Foundation

1979 - 1980 President, Colorado Mining Association

1979 - 1979 Chairman, Society of Mining Engineers/The Materials Society Joint Committee on the Environment

1978 - 1980 Member, Ford Foundation Board of Visitors to the Office of Environmental Mediation at the University of Washington

1978 - 1978 Member, Mining Task Force, National Coal Policy Program

1977 - 1979 Member, Western Regional Council, Chairman of the Issues Committee

1976 - 1980 Member, Environmental Committee, International Bar Association

1976 - 1978 Member, National Advisory Board of the Bureau of Land Management

1975 - 1979 Member, Council of the Mineral Law Section, Colorado Bar Association

1975 - 1977 Chairman, Hard Minerals Committee, American Bar Association

STANLEY DEMPSEY

1975 - 1994	Member, Public Lands Committee, American Mining Congress
1972 - 1978	Trustee and Treasurer, Thorne Ecological Institute
1971 - 1980	Chairman, Forest Service Subcommittee, Public Lands Committee, American Mining Congress
1969 - 1977	Supplement Author, Chapter XIV, "Exploration Contracts," American Law of Mining, Rocky Mountain Mineral Law Foundation
1969 - 1971	Member, Placement Committee, University of Denver, College of Law
1967 - 1968	Secretary-Treasurer, Continental Divide Bar Association, Colorado
1966 - 2014	Member, Public Lands Committee, National Mining Association
1966 - 1976	Trustee and Vice President, Rocky Mountain Center on Environment
1962 - 1990	Member, Board of Directors, Colorado Mining Association
1960 - Present	Member, Society of Mining Engineers, AIME

PRESENTATIONS/PARTICIPATION:

Keynote Speaker, Colorado School of Mines KGHM Executive Academy, September 2014.

Paper, "Thoughts on Regulatory Mechanisms for Natural Resource Development: Alternatives to Command and Control, Including a Look at Open Source Approaches, Participant at Martz Symposium, April 2014.

Paper, "An Operator's View of Public Land Issues," Society of Mining Engineers, February 2001.

Paper, "The Mining Industry, Environmental Ethics and Risk Assessment: Visions vs. Delusions," Northwest Mining Association, December 1998.

Article, "Royalty Financing, An alternative Equity Financing Mechanism", The London Bullion Market Association, Alchemist, Issue Thirteen, Monday, November 30, 1998.

Statement before the Subcommittee on Energy and Mineral Resources of the Committee on Resources regarding the "Effect of Federal Mining Fees and Proposed Federal Royalties on State and Local Revenues and the Mining Industry," May 1998.

Paper, "Legal Update on the 1872 Mining Law," Society of Mining Engineers, Industrial Minerals Section, February 1997.

Paper, "Mining Finance: Some Perspectives of the Small Miner, International Mining Investment and Regulation - Direction and Development of the Mining Industry," presented at The Centre for Petroleum and Mineral Law and Policy, University of Dundee, Scotland, July 10, 1996.

STANLEY DEMPSEY

Paper, "From Nye County to Yellowstone to Where? Changes in Public Land Administration," presented at the 42nd Annual Rocky Mountain Mineral Law Institute, July 18, 1996.

Participant, "Challenging Federal Ownership and Management: Public Lands and Public Benefits", University of Colorado, Panel Member, Critique of the Proposals, Alternatives to Disposal: Using Market Forces to Improve Public Land and Resource Management, October 12, 1995.

Article, "The Third International Mining History Conference Comes to Colorado!" Mining History News, Volume 5, May 1994, Number 2.

Statement before the Subcommittee on Mineral Resources Development and Production of the Committee on Energy and Natural Resources regarding S.1125, "The Mining Law of 1989," American Mining Congress, September 13, 1990.

Statement of the Colorado Mining Association before the Subcommittee on Public Lands and Reserved water of the Committee on Energy and Natural resources, United States Senate, September 18, 1984.

Paper, "Classification and Reporting of Ore Reserves: Current Practices in the United States," presented at the Australasian Institute of Mining and Metallurgy, Symposium Ore Reserve Estimates: The Impact on Miners and Financiers, March 7, 1990.

Paper, "Update on the 1872 Mining Law", presented at the AIME, Access to Mineral Lands Session.

Participant, United Nations Interregional Conference on "Mining to the Year 2000," January 23-27, 1989.

Paper, "What Financial Institutions Look for in Small Mines Development," Society of Mining Engineers, August 30, 1987.

Statement before the Subcommittee on Mining and Natural Resources and Insular Affairs regarding the General Mining Law, American Mining Congress, June 23, 1987.

Paper, "Trends in Precious Metal Financing including Bullion Loans, Hedges and Futures Trading," presented at the American Bar Association, March 14, 1987.

Presentation, "Early Mining Law Matters, Ten Mile Mining District – Summit County, CO, presented January 9, 1987

Paper, "Ins and Outs of Asset Disposal," presented at the American Mining Congress 1985 Mining Convention, September 24, 1985.

Paper, "Obtaining Surface Rights to Non-Mineral Federal Land by Purchase, Exchange, Permit and Location," presented at the 31st Annual Rocky Mountain Mineral Law Institute, July 19, 1985. Co-authored with Harris D. Sherman and David S. Neslin.

STANLEY DEMPSEY

Paper, "Innovative Financing: Back to the Fundamentals," National Western Mining Convention, February 15, 1985.

Paper, "Mineral Location and Leasing Around the World," presented at the Public Lands Session of the American Mining Congress Convention, September 12, 1983.

Moderator, panel on Canadian Foreign Investment Review Law, Rocky Mountain Mineral Law Institute (July, 1983).

Paper, "Balancing Environmental and Mineral Policies," presented at Annual Meeting of AIME, Las Vegas, Nevada, February 27, 1980.

Guest Lecturer, Management of Environmental Conflict, Business School, New York University, 1978-80.

Presented paper on mining and environment to a meeting of environmental ministers from various countries at a meeting sponsored by OECD in Paris, 1980.

Participant, Conservation Foundation conference on "The Impact of Environmental and Land Use Regulation on Regional and International Location of Industry," Washington, D.C., June 21, 1979.

Organized an All Institute Program on the subject "Boom Towns: Managing Growth," for the Annual Meeting of the Society of Mining Engineers of AIME at New Orleans, Louisiana, February 19, 1979.

Guest Lecturer, Environmental Law, University of South Pacific, Suva, Fiji, 1979.

Participant, Seminar on Environmental Policy, International Institute for Applied Systems Analysis, June 18-21, 1979.

Participant, American Bar Association National Institute on World Mineral Resources, Washington, D.C., April 14-15, 1977.

Guest Lecturer, International Environmental Management Seminar, Center for Education in Environmental Management, Geneva, Switzerland, 1977.

Paper, "Public Participation in Corporate Environmental Planning," National Association of Manufacturers Environmental Quality Committee, Washington, D.C., March 25, 1977.

Member, U.S. delegation to Economic Commission of Europe preparatory meeting for a ministerial level meeting on environmental considerations in economic development, Geneva, Switzerland, 1977.

AIME White House Conference on Increasing Production by the Domestic Mineral Industry, May, 1976. Presented paper on environmental issues.

STANLEY DEMPSEY

Participant, National Defense University National Security Conference III. "Long Range U.S. - U.S.S.R. Competition: Future National Security Implications," held at the National War College, July 12-14, 1976.

Presented paper on environmental law to Environmental Workshop of Australian Mining Industry Council, Adelaide, South Australia, October 12, 1976.

Participant, Conference on National Strategies for Environmental Control and Human Development, Bled, Yugoslavia, 1975.

Member, Subcommittee, Panel on Project Independence Blueprint, U.S. Department of Commerce

Paper, "The Evolution of the Mining Royalty," 53 Rocky Mt. Min. L. Inst. 30-1 (2007), with Randy L. Parcel.

PUBLICATIONS:

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Cautious Support: Relations Between the Mining Industry and the Forest Service, 1891-1991, University of Montana, National Forest History and Interpretation Symposium, June 1991.

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HONORS:

2008 Colorado Section Lifetime Achievement Award, Society of Metallurgy and Exploration

2007 William Lawrence Saunders Gold Medal Award, Society of Metallurgy and Exploration

2007 St. Barbara Commemorative Medal, Colorado Mining Association

2006 Colorado School of Mines, Honorary Doctor of Engineering

2005 Distinguished Service Award, Northwest Mining Association - For Outstanding Professional Leadership and Service to the Mineral Industry for more than Four Decades

Distinguished Alumnus Award, School of Law, University of Colorado

Rodman Paul Award, Mining History Association

Honorary Life Membership, Colorado Mining Association

Medal of Merit, Mining Foundation of the Southwest

Honorary Life Membership, Colorado School of Mines Alumni Association

CLUBS:

University Club, Denver, Colorado

Rolling Hills Country Club, Golden, Colorado

American Alpine Club