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Ramón Rosas Lugo

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Mining in Mexico
Oral History Project

Ramon Rosas Lugo
By Samuel Benavides

November 26, 28, 1996

B: This is an interview with *ingeniero* Ramon Rosas Lugo. The interview, by Samuel Benavides, is part of the Mining in Mexico Oral History Project. We are located at Roberto Madrazo, numero dos, Camino Real Hotel, Hidalgo del Parral, Chihuahua, Mexico. Today's date is November 26, 1996.

Mr. Rosas, I want to begin by thanking you for agreeing to being part of this interview and part of this collection. We think it is very important. So thank you on behalf of the University.

R: Well, I'm very glad to cooperate and answer your questions in this interview.

B: I want to begin by asking you biographical questions. When and where were you born?

R: I was born in Sombrerete, Zacatecas, Mexico. I was born in 1908. My family moved from Zacatecas to El Paso in 1915. My family consisted of my father, my mother, and my young sister, whom you just met. At that time I was seven years old. And at that time, as I said at the interview at UTEP, [The University of Texas at El Paso], we came as refugees from the Mexican Revolution. We were destitute. We didn't have,

between the four of us when we arrived in El Paso, we didn't have one penny in our pocket.

B: What was your parents' name?

R: My parents' name? My father was named Pedro Rosas. My mother was named Esther Rosas.

B: Where were they from?

R: They were from the same town where I was born in Zacatecas.

B: And your grandparents?

R: My grandparents were from the same town. My mother's parents and my father's parents were all from the same little town in Zacatecas; Sombrerete, Zacatecas.

B: Sombrerete?

R: Sombrerete, Zacatecas. It's a small mining town. Well, it was a mining town, but the mine was closed. It was worked out probably. It hasn't been worked since the Revolution. They stopped working at the mine at the time of the Revolution and it never opened up again.

B: Did your father work at the mine?

R: No. My father had, what was in those days, a rudimentary mill. They took ore from the different mines around and he would mill it for them.

B: How would he mill it, Mr. Rosas?

R: In very (chuckles) rudimentary methods. He had what they call a Chilean mill.

B: And what is that?

R: A Chilean mill is a big rock, circular rock, that they pull

with a horse or a mule and it goes around a base of cement. They put the ore and the big heavy rock, the big heavy wheel, goes over the ore and crushes it. Then after they crush it they put in what you know as the *patio* process, where they put it in the ground with mercury and then they have mules and horses to step on it so the mercury will combine with the silver to form an amalgam. Then, of course, they retort this amalgam and then they melt the silver.

B: So it was silver ore?

R: Yes, it was silver ore.

B: Did you work there as a child or did you help?

R: No, at the age of seven years I did not work there because the Revolution came and the revolutionaries took all the horses and equipment that he had and his mercury.

B: And his mercury?

R: (laughing) All the things that he had, they stole it. They even took some of the beams from the house to use for something else. I don't know for what, but since then he could not work anymore.

B: On what day were you born, Mr. Rosas?

R: I was born on the second of February of 1908.

B: The second of February?

R: Yes.

B: Then you moved to Juárez?

R: No. We arrived in Juárez...you want me to tell you about the trip to Juárez?

B: Yes, yes.

R: You see, in those days, in my town, there was no railroad so we had to go on the horse-drawn wagon to the closest railroad station, which was Lo de Mena, about twenty kilometers from my town. In those days there were many bands of revolutionaries. From the moment we left the town to go to the station we were very much afraid that somebody would rob us because there were many bands that called themselves revolutionaries and they were stealing and killing people. We arrived at Lo de Mena and took the train from there to Torreón, Coahuila. In those days the Revolution was very, very risky. The *villistas* and *carrancistas* were fighting. As the train advanced they would have to send an exploratory engine ahead to see how the tracks were because sometimes they burned the bridges or they cut the tracks, so they had to go very slowly. It took us about a week to go from Lo de Mena to Torreón. When we arrived in Torreón there were thousands of refugees trying to go from Torreón to Juárez to go to the United States. We rented a hotel at the railroad station in Torreón to be able to go on a train from Torreón to Juárez, but in those days there were so very many refugees that a train would get ready to go and they'd all get in the train. It would be so crowded that many of them would have to ride on the roof of the passenger cars. So my father used to go out every day at three o'clock in the morning to see if he could get a seat on the train for us. It took us about two weeks to finally get inside a railroad coach

and we had to sit on our bags because the (laughs) train was just loaded, full of people and many people on the roof.

Then from Torreón to Juárez it was the same thing; they had to have a train exploring ahead. In many places they set out the rumor that there was a locomotive that was sent against the train. They called it *locomotora loca*. (laughs) The train would stop and retreat and go back and stop and go back.

B: But it was always a rumor?

R: It was just a rumor. People would set out rumors. I don't know why they did it, but they scared everybody. On the way here, when we got to the State of Chihuahua, I remember that there was the most impressive thing I have ever seen. I looked out of the window and there would be one man hanging from a telephone post. On each telephone post there would be a man hanging; the revolutionaries had hung all those people.

B: In Chihuahua City or State?

R: Along the highway. Along the railroad way. I was, as I say, seven years old and it impressed me very much. I would look out the windows on one side and I would see all of these people hanging from the telephone posts. For about ten kilometers there would be one man hanging from each telephone post. You'd be surprised what an impressive thing it is to see people who have been hanging how their legs and their arms stretch. Then I would get tired of looking through one window; I'd look on the other side of the train through the

opposite window and it would be the same thing. That impression on me lasted such a long, long time that when I was twenty-five years old I still woke up with a nightmare.

B: Yes. What is your sister's name?

R: Amelia.

B: Is she older or younger than you?

R: She is two years younger than me.

B: Did she remember the train ride?

R: I don't know. I think she does. Sure, of course, she does. It took us about two weeks to go from Torreón to Juárez. When we arrived in Juárez there was a committee of people from the City of Juárez who were waiting for all the refugees. When all the refugees got off the train they'd take them to the race track because they had no other place to lodge them. So they'd take them to the race track and they'd give them meat and they'd give them firewood so they could cook their meat and have something to eat. But we had an uncle who lived in El Paso and he was waiting for us when we arrived in Juárez, so instead of going to the race track he put us on the streetcar in Juárez and we crossed over to El Paso to my uncle's house.

B: You didn't have a problem with immigration?

R: In those days there was no immigration. In those days you just got on the streetcar and crossed over and nobody would ask you anything.

B: You say that you were sitting on your luggage and baggage.

How much did you bring?

R: All we had was our clothes, nothing else.

B: And your uncle's house, where in El Paso was it?

R: It was in south El Paso. It was on Stanton Street, Stanton and Sixth Street in El Paso. Then we lived with him for about two or three weeks and finally we moved to an apartment. It was one of the tenement apartments, a two-room apartment in south El Paso.

B: What time of year was this, Mr. Rosas? Was it summer or winter?

R: I don't remember the time, but I think it was summer because it wasn't cold. It was rather hot in Torreón.

So we moved to this apartment. My father was an invalid. He had heart trouble, so my mother and I were the only ones who could provide an income to live on. My mother put up a little store in this two-room apartment in the front part of the apartment. It was a little grocery store. I'm sure her stock in the grocery store wasn't more than fifty dollars. I sold newspapers in the streets of El Paso. That was at the moment we arrived. Then I entered Aoy Grammar School, which is on Sixth and Kansas Streets in El Paso. That's where I started to learn English.

B: What grade did you start in?

R: First grade.

B: First grade.

R: I could not enter a school then because I was seven. In those

years they asked you to present your birth certificate to show that you were eight years old before you could enter grammar school, so for one year I could not go to school. I went to a private school run by an old man, a little private school. At the same time I sold newspapers. Then when I entered school at the age of eight years all the pupils, all the children, in school were refugees. None of them spoke English. They didn't know a word of English. We had American teachers to teach us who didn't know Spanish and so they told us everything phonetically. We learned to read from our school books, but we didn't know what we were reading. We just learned the words by memory without knowing what it was. The teachers taught us to sing. (laughs) We'd sing, but didn't know what we were saying. I was in school for six years and by then I could speak some English. By that time I got a job in a shoe shine parlor on the corner of San Antonio and Mesa Street shining shoes. My mother improved her grocery store. I think by that time her stock was worth maybe a hundred dollars.

B: Well, it doubled in size.

R: Then by that time we moved to east El Paso.

B: Where was east El Paso at that time?

R: East El Paso? We moved to a place on Magoffin and Walnut Streets in east El Paso. It was another tenement place, another two-room apartment. There my mother continued with her little store. In those days I had grown up. I was

fourteen and I went to a school named Austin Junior High. I also got a job with Gunning and Casteel Drug Company as a delivery boy. I was delivering medicine on my bicycle. Also, I had a newspaper route in Five Points from Montana to Cotton Street and back to Piedras on Yandell Boulevard and all of Five Points. When I went to work for Gunning and Casteel, Mr. Gunning and Mr. Casteel both took an interest in me. They liked me very much. They were like my godfathers because I was going to school working at the drug store and they fixed it so I could attend school and work at the same time. I started delivering on my bicycle as a delivery boy. That was the first year when I went to Austin High. Then from Austin I went to El Paso High School. During the years I was in El Paso High School I worked for Gunning and Casteel and all the time they helped me very much. Then instead of being a delivery boy I got a job inside at the soda fountain. I was a soda fountain boy.

B: Where was the store?

R: They had four stores in those days. I worked mostly in the store that was on the corner of Piedras and Louisville Streets. I also worked in the store they had at Five Points. They also had a store on Fort Boulevard. I also worked in a store they had on Cotton Street. In those days when I went to high school they helped me very much. They fixed my working hours so that I could go to school and go work after school. Then when I graduated from high school I went immediately to

the [Texas] College of Mines [and Metallurgy] in 1932.

B: What made you decide that you were going to go to the School of Mines?

R: Well, I decided that I was going to some college and that's the only college that was available to me. I could not go to any other place. I didn't have the money. I didn't have the means to go to another place, so in 1932 I entered the School of Mines.

B: You graduated or you entered in 1932?

R: Excuse me, I entered in 1928 and graduated in 1932. All that time I was working for Gunning and Casteel. I would be in school from 8:00 a.m. in the morning till 5:00 p.m. in the afternoon because we had classes in the mornings and we had labs in the afternoons. We had metallurgy lab and physics lab and chemistry lab. We'd leave at 5:00 p.m. and then I'd go to work for Gunning and Casteel at 6:00 p.m. in the afternoon. Then I'd work from 6:00 p.m. to 11:00 p.m..

B: When would you study?

R: Well, I studied after 11:00 p.m..

B: After 11:00 p.m.? (laughter) I do the same thing.

R: I went home after eleven o'clock. Sometimes I was very tired and I would go to bed immediately and then I'd get up about 3:00 a.m. in the morning and study from 3:00 a.m. to 7:00 p.m. or 7:30 p.m.. Then I'd be ready to go to school the next day again.

B: Mr. Rosas, students still do that today in school because so

- many of them work. Who was the president of the School of Mines? Do you remember?
- R: Yes, it was Dean [Dossie M.] Wiggins. Then there was a geologist named... . I don't remember his name now, but he was a geologist.
- B: What building were most of your classes in?
- R: In those days there was only the Main Building, Chemistry Building, and Metallurgy Building. Also there was Kelly Hall and the dormitory. Those were the only buildings that there were in The School of Mines in those days.
- B: You didn't live in the dormitory did you?
- R: No, I lived at home. At eleven o'clock I'd go home and sleep and prepare my lessons for the next day and study for the next day. I graduated in four years. In my class there were, I believe, about nine engineers, nine or ten. Only two of us, myself and another one, William Ayoub, made the course in four years. The others, more than four. Some, four and a half, some, five years.
- B: And you were working.
- R: And I was working, yes.
- B: How many *mexicanos* were in the school or graduated?
- R: With me there were six. If you want, I can name them.
- B: Name them, please.
- R: There was Adolfo Tres Palacios. Adolfo Tres Palacios was famous here in Mexico because he formed a paving company that paved many of the roads from Juárez to Mexico City. He died

in Chihuahua some time ago. There was another fellow named De La Rosa, Roberto de la Rosa. He was the son of a judge of the supreme court of Mexico. He went to Mexico City and worked for the mining department in Mexico City. There was another fellow named Rafael Mireles. Rafael Mireles had been a graduate of the military school in Mexico. He had been in the army, but his family sent him to El Paso to the mining school and he graduated with us. He worked in several mines here in Mexico; he worked in San Francisco del Oro, he worked in the State of Mexico, and he worked in other places. Then there was Gaspar Cordero. Gaspar Cordero worked in Mexico in several mines. I think he died in El Paso last year. Those were the ones I remember. The others were Americans. I think we were about nine or ten in the engineering class.

B: You were all mining engineers?

R: Yes, all mining engineers.

B: What classes do you remember? Physics, chemistry, mathematics?

R: Yes, I remember.

B: Did you use a slide rule for calculations?

R: Yes, in those days (chuckles) we used a slide rule and I still had my slide rule when I came to work here in Mexico, but I left it in a mine in Costa, Chihuahua. I forgot it in the office when I quit there and, therefore, I lost it. We didn't have calculators or any of the modern equipment that you have.

B: The computers.

R: The computers. There were no computers.

B: And your books? Did you buy your books?

R: Yes, we had to buy our books. That's what I was telling you. Mr. Gunning and Mr. Casteel were like godfathers to me because when I entered at the beginning of the semester they would lend me money to pay my tuition and to buy my books. Then I'd pay them back installments on the loan they had made to me.

B: Do you remember what tuition cost per semester back then?

R: I don't remember, but I think it was about forty or fifty dollars. Mr. Gunning and Mr. Casteel would loan me about one hundred dollars and with that I paid tuition and I bought my books. I always remember that there was another fellow who worked for Gunning and Casteel and also attended the College of Mines, but it took him so many years to finish his studies that he became a pharmacist before (laughter) he finished. His name was Hugh McGow. Mr. Casteel and Mr. Gunning both liked us very much. They liked Hugh very much. Hugh was a very nice fellow, but he didn't take all the courses that he had to take in the year. He took just several courses and that's why it took him about eight or nine years to get his degree in mining. Later he joined the army and became a colonel in the U. S. Army, but I understand he has passed away now.

B: Who were some of your favorite professors that you remember?

R: Well, of course, everybody remembers Captain [John W.] Kidd. He was my favorite professor because he was not only

interested in teaching us, but he was interested in our well-being. He wanted to know what we were doing, how we were getting along, what problems we had, and he'd try to solve them for us, especially for me. In those days I was very much in need of money and Cap helped me. Of course, it was Cap and Gunning and Casteel.

B: Were there very many women attending school?

R: Not many then. I don't think there that as many as thirty percent of the students were women.

B: How did you get to school from where you were living?

R: I had an old Model T car. (laughs) All it had was wheels, a motor, and a seat. I had to crank it to start it. That's how I used to go to school. From school I went to my job at Piedras and Louisville Streets. Then at eleven o'clock at night I went home in my little car.

B: Where did you meet your wife and when?

R: Well, let me tell you another thing, how I got my first job. I was sitting on the steps of Main one day. When I graduated from the College of Mines in 1932 there was a depression in mining in Mexico. Well, in all the world there was a depression. I could not get a job any place.

End of Tape One

Side A

Beginning of Tape One

Side B

B: I was going to ask you why you were applying in Mexico. Why did you decide you were going to work in Mexico when you could have worked in Canada or the U. S.?

R: In those days you couldn't get a job any place. The only place you might get a job was in Mexico.

B: The Americans would apply there, too?

R: All the Americans would apply in Mexico. Most of the graduates from those days from the classes of [19]32, [19]31, and back, all came to work in Mexico. About ninety-five percent of them came to work in Mexico. As I was telling you, I was sitting on the front steps of Main when Cap Kidd walked by on his way from his office to his house and he asked me if I had landed a job. I told him, "No, Cap, I haven't." So then he pulled out a little paper from his pocket and said, "Apply to this man. There's an opportunity here." On the paper he had the name W.H. Sarrels, San Luis Potosí, Mexico. So the same day I mailed an application to Mr. W.H. Sarrels. A week later I got a telegram, a wire, from Mr. Sarrels asking: "IF \$140.00 A MONTH IS ACCEPTABLE TO YOU COME TO SAN LUIS POTOSI." In those days \$140.00 was a king's fortune because the Depression was so strong. People were out of jobs and nobody had money. It was a terrible depression. I don't think there has been anything like it in the United States

like the Depression in 1932. So I went to work for an English company in San Luis Potosí, in which Mr. Sarrels was the mine superintendent. He was very kind to me. He was very nice to me. He taught me many things about mining. He helped me along. He even turned out to be like my godfather again. And that's where I met my wife. My wife was a school teacher in an American company, The Continental Mexican Rubber Company, which was about ten miles from where I was working. All the employees of the company for which I worked used to have parties for the employees of The Continental Mexican Rubber Company. And that's where I met my wife.

B: What was the name of the company you worked for?

R: It was called The Republican Mining and Metal Company, Limited. It was English. The home office of the company was in England.

B: What was it that you would mine there?

R: We were mining antimony, antimony metal. I understand that antimony has lost its market. It's not used very much any more. In those days it had a lot of use in automobiles. The trimmings on the cars were made of antimony.

B: I didn't know that.

R: But now they're made of plastic.

B: What were your first job's responsibilities when you arrived? What did you do?

R: My first job was to look for safety. I was the safety engineer and, at the same time, the surveyor underground.

B: How far down did the mine go?

R: The mine didn't have a shaft. It had only tunnels. The distance from the lowest tunnel, called the general tunnel, to the highest tunnel was about 250 meters.

B: What kind of protective clothing was there for the workers? Did the company provide it or did the workers have to provide it for themselves?

R: They didn't have any protective clothing.

B: No helmets?

R: Yes, they had helmets.

B: Who provided the helmets?

R: They had to provide them themselves in those days.

B: How about shoes?

R: Shoes? Later the mine inspectors insisted that the miners have safety shoes, but in those days many of them didn't have any shoes. Many of them wore those rubber sandals.

B: To be able to see did they have the *lamperas*?

R: We used carbide lamps then. We didn't have electric lamps.

B: Was there electrical power inside the mines?

R: No, (chuckles) there wasn't any electrical power. In that mine we didn't have machines. They drilled by hand. Everything was drilled by hand.

B: How many workers worked the mine?

R: In that mine? Oh, there were about two hundred and fifty men.

B: On three shifts?

R: No, two shifts. I want to tell you something very funny. All

the time I was in El Paso in high school and in the School of Mines I didn't have an opportunity to speak Spanish except with my father and mother. At the College of Mines, of course, we spoke English. When I was at the drug store it was in an American district. All the customers were American, so I spoke English day and night. I spoke to my mother and father only a few words of Spanish when I came home at night and I was so tired I didn't have much time to talk very much. So when I went to Mexico I noticed the people, the employees of the company, they despised me. I found out that they called me *el gringo prieto*. (laughter) They called me the dark gringo because I was speaking Spanish with an American accent. So in about a month I lost the accent and acquired the natural way of speaking Spanish. Then I made good friends with them. They did resent hearing me speak Spanish with an American accent.

B: The same thing happened to me. I grew up in Los Angeles. My Spanish is still not very good. I've had the same experience. For those that may not know too much about mining describe the process used at that mine for blasting. Who selected where to blast? How was it brought out? Describe the process.

R: Well, this mine had what the geologists call *mantos*. *Mantos* are layers of rock that have been folded into the form of a 'U'. In those *mantos*...there were four *mantos* and one of those *mantos* was the one that contained the antimony ore. That's the one where we did exploration and development

drifts. All that the company did was to open up the drifts on the *mantos* and then the men extracted the ore by hand. They were called *buscones*.

B: They didn't blast the ore?

R: They blasted the ore. Wherever we found ore we put the men to work. Each man was assigned to some place where there was ore and they extracted the ore on their own account.

B: What do you mean?

R: They broke the ore. They brought it up to the surface. We'd weigh it and pay them so much per kilo. That's why they were called *buscones*.

B: So they didn't work for the company?

R: Well, in a sense they didn't work for the company, but they were really worked for the company. They worked on what they called *destajo*.

B: I'm sorry, the word is *hermantos*?

R: *Mantos*.

B: Just *mantos*.

R: *Mantos*. Yes, *mantos*. It means blankets.

B: Okay. And what did they use to blast the ore?

R: Well, we used dynamite.

B: Would the company do the blasting?

R: The company did the drifts. They paid the men to run the drifts. Do you know what a drift is?

B: No. What is a drift?

R: It's a tunnel. It's a tunnel on the vein. Of course the vein

can have values all the way. It can have spots, lenses, where you find the ore. Lenses, they were waste. The men would be put to work wherever we found lenses of ore.

B: How did they haul the ore up to the surface?

R: They put it in a car, which was on tracks.

B: How would the cars be pulled out?

R: By hand the men would push them out. They didn't have motors. They were paid according to the number of kilos that they handed in each week. Each week we would weigh the ore and pay them so much a kilo.

B: Do you remember what the production was per day?

R: No, but the production per month was about six hundred tons. About six hundred tons of antimony ore that ran about forty-five or fifty percent antimony.

B: At that mine were there *sindicatos*? Were there unions?

R: In those days there were no unions. At the time I was there the unions were formed. Then they started demanding more rights for the workmen, but at the time I arrived there were no unions.

B: Do you remember how much they paid the men per kilo?

R: I don't remember how much they paid per kilo. I remember that there were men who worked for the mine who were paid seventy-five centavos, Mexican money, for a shift. Yes, per shift. In those days I think the dollar was worth about four-fifty pesos and the men were paid about seventy-five centavos per shift.

B: They were paid in cash once a week?

R: Yes, paid in cash.

B: Was there a company doctor for the men?

R: Yes, there was a company doctor.

B: Was there a company school?

R: No, there wasn't any company school. There was only a company doctor.

B: It was only for the miners and not for the families?

R: The same doctor attended the miners and the staff.

B: What about the families?

R: The doctor attended the families of the staff only and the miners only.

B: The accidents that happened at the mine...were there any deaths?

R: No, it was very safe because, well, I must say that I was in charge of safety and we didn't have any accidents.

B: No fires?

R: No. No fires.

B: No cave-ins or flooding?

R: No. It was very dry and there were no cave-ins. It was good ground and it was safe. It was safe for another reason; the country rock was shale. There was very little silica and you that silica is the one that causes silicosis.

B: Yes.

R: So our men breathed the dust of the shale, which didn't cause silicosis. The doctors that read the x-rays were surprised to

find that the men working in this mine didn't have as much silicosis as the men working in other mines.

B: You would go into the mines everyday?

R: Yes, everyday I would go in and I'd have my assistants. We'd be surveying and plotting the advance of the main area every week or two weeks. We'd plot everything on the maps. We had very complete maps of the mine.

B: When the ore was pulled out was it processed on site?

R: No, the ore was shipped to Texas, Texas City, Texas. The foundry, the smelter, was in Texas City.

B: 'There was no processing at all?

R: No. None at all. All the processing that was done was done by the men who selected the ore in the mine. The ore that they delivered to us, they selected it by hand and we paid them so much a kilo. But no other processing was done.

B: How long did you work there, Mr. Rosas?

R: Five years. And that's where I met my wife and we were married. After we had been married about a year I told my boss, Mr. Sarrels, "I have an opportunity to go to the Philippine Islands and I want your advice." So he told me, "Kid"- he used to call me Kid- "Well, Kid, accept the job so you can get experience some place else. You can see something else in mining besides what you've seen here, something different. You know that if it doesn't pan out you can always have your old job with us." So I accepted the job and went to the Philippine Islands in 1938.

B: How did you hear about the position there?

R: There was a fellow named Joe Thomson who came to work in the mine where I was. Joe Thomson and I got along very nice. He left the job and he got a job as a manager in the Philippine Islands, so he offered me an opportunity to go with him with a better salary. I accepted the job.

B: What did your wife think about moving to the Philippines?

R: Well, she didn't object. She said, "If you go there, why, I have to go, too." At that time she was expecting our first child. I had to go by myself because we asked if she could go and the doctor said, "If she goes it's very certain that the child will be born on the boat." I told her, "Well, you come with me to San Francisco where I'm going to catch the boat. If the doctor on the boat says that he'll attend to you on the boat then you can go with me. If not, you can stay in San Francisco and have the child in San Francisco. But she said, "No, I will not stay in San Francisco because I don't know anyone in San Francisco. I don't know the language. I have no relatives there. I have no one to help me in San Francisco. I'm staying in San Luis Potosí, which is my hometown." So I went by myself and then she joined me three months later. She arrived in Manila on the 12th of October 1938, Columbus Day, with my baby. When she left Mexico the baby was two weeks old and when she arrived in Manila it was two months old.

B: Was the baby a boy or a girl?

R: A girl. My first child was a daughter.

B: What was her name?

R: We called her Esther. She took the child, put it in a basket, and went on the train. In those days there were no planes. You had to go on the train from San Luis Potosí, Mexico to Los Angeles. Then from Los Angeles she went to San Francisco and got on the boat. In those days the boat took twenty-six days to sail from San Francisco to Manila. There were no planes then. So she traveled the twenty-six days without knowing a word of English. She couldn't find anyone on the boat who spoke Spanish, so by the time she arrived in Manila she was speaking a few words of English.

B: (laughs) And what company did you work for in the Philippines?

R: It was called Soriano.

B: It was a Philippine company?

R: Yes. It belonged to a man who had sugar plantations in the Philippines, Doctor Soriano.

B: What were you mining there?

R: We were mining gold. It was gold ore.

B: Where was it? In Manila?

R: No, no, no. Manila didn't have any mines. It was in the island of Mindanao.

B: Oh, so you were on an island?

R: Yes, the island of Mindanao is the biggest island in the Philippine Islands. It's three days by boat from Manila to Mindanao. I was there for three years.

B: Did you live in a mining camp?

R: In a mining camp. Yes, we lived in a mining camp. I was very happy with the job. It paid good money, I liked the country, I was very much satisfied, but my wife was very, very nervous. She was afraid that the Japanese were coming to take the Philippine Islands. We had very well-educated men working in the mine as laborers and we knew that they were not laborers. They were spies. We had a fellow named Miakawa. And Miakawa, I'm sure, was an engineer and he worked as a carpenter. We could see many, many Japanese around the country. I'm sure they were all taking data for the time of the Japanese invasion. I am sure, I know, that when the Japanese came they had first-class information about everything in the country, so my wife was very, very nervous. She had a terrible heartbeat and she couldn't sleep. She lost weight. I told her, "Since you're very nervous why don't you go to Mexico and I can stay here? You can come back after a nice trip." She said, "No, I won't leave here until you go with me." So I had to leave my job and come to Mexico.

I left my job in the month of July and the following December was the attack on Pearl Harbor, so I left the Philippines just in time. We were in Manila for one month trying to get transportation on a boat because there were so many people leaving the Philippines. There was a big demand for tickets on the boats. Finally, after a month in Manila trying with all the steamship companies we finally got

transportation. We went from Manila to Hong Kong in a Canadian boat, then from Hong Kong to San Francisco in a Japanese boat, the *Asama Maru*.

One thing very funny happened to us when we arrived in Los Angeles. When we arrived the U.S. immigration desk had a long line. We were in line and when we got to the table they saw our passports. He looked all through the pages and showed it to the other official. He looked at all the pages and then they went to another official who, I think, was their superior officer and he did the same thing. Then he said, "Would you please sit over there? We will attend to you in a minute." So my wife and I waited by the desk. After they had seen all the people they told us, "Will you please come with us?" (laughs) So we did and went with them. They had a police car waiting for us.

B: Why?

R: They took us to the Immigration Detention Center in San Pedro, California.

B: No!

R: Yes! (laughs) When we asked why they were taking us there, what had we done, they said, "We don't know. We'll let you know." So my wife was placed in the women's ward and I was placed in the men's ward. By this time my daughter was three years old and she was with my wife. So we arrived on a Friday and were held there in detention Friday, Saturday, Sunday, and Monday. On Tuesday they called us to the officer who was in

charge of the detention camp. He apologized and said, "It was because you had Mexican passports. We understand that the Nazis have a number of blank Mexican passports and they're using them for their agents in Latin America and in the Far East. We apologize. We made a mistake, but we wanted to be sure that everything is all right." We told him that we were very much upset with what he had done to us. I told him that my daughter had contracted a parasite in the Philippines and that we were anxious to get her to a doctor. He said, "Well, the U.S. government will pay for her expenses in the hospital all the time she is sick to compensate for what was done to you." But we said, "No, thank you. We are anxious to get to Mexico." So they let us go.

B: Did she really have a parasite?

R: Yes. She contracted what they call ankistolomas. It's a parasite that enters in your toenails and goes to your stomach. When we arrived in San Luis Potosí we saw the doctor and he prescribed something to help.

B: Let me ask you one other question about the Philippines. What happened to your friend after the war began?

R: My friend, the manager at the mine? He and the rest of the employees of the mine went to the mountains and stayed in the hills with the Filipinos during all the time the Japanese were in the country.

B: Had you not left would you have, too?

R: I would have to do the same thing or I would have been put in

a prison camp, in a concentration camp. My wife has a cousin who was married to an American mill man. They were going over to the Philippines at the time we were there. We wrote and told them not to come because it was very dangerous. They said, "No, they won't hurt us. We're Americans." She was caught, at the time of the invasion, in Bagio. That's where the mines are in northern Luzon. She was in a concentration camp for three years, she and her two daughters. Her husband was an American so he was put in a concentration camp first. She would go and buy food and take food to him in the concentration camp, but when Mexico declared war against the Axis they put her in the concentration, too. She was there until the Americans captured Manila. She was there during the Battle of Manila. They were held in Santo Tomás University. That's where they had the concentration camp and they were there when the fighting broke out.

End of Tape One

Side B

Beginning of Tape Two

Side A

B: Mr. Rosas, you came back to San Luis after returning from the Philippines?

R: Yes.

B: Where did you go to work after coming back to Mexico?

R: After coming back to Mexico about a month later I went to Bolivia, South America.

B: How did you find the opportunity to go to Bolivia?

R: My guardian angel, (laughs) Mr. Sarrels, was manager in Boliva and he offered me a job.

B: With the same company?

R: No, he was with another company. He was with Maurício Hochshield, which was the second largest mining company in Boliva. He was manager of one of the big units that Maurício Hochshield had in Boliva.

B: Where in Boliva were you?

R: In a place called Pulacayo...Pulacayo, Boliva.

B: What was it you were mining there?

R: In that mine we were mining 1,400 or 1,500 tons a day of lead, zinc, and silver ore. Silver was the main metal.

B: What kind of mines were they?

R: It was a very, very hot mine, so very hot that if it had been a few degrees hotter I don't think people could have stood the heat. The heat in the mine was around 90° fahrenheit and in places in went up to 104°. The humidity was about ninety-six percent, so when you went in that place it was like being in a Turkish bath for eight hours. People would perspire continuously. We had a woman in the mine with pots of tea with a lot of sugar. They took the sugar to provide energy.

Then they had to take salt tablets because, you know, the perspiration eliminated all the salt from their bodies. If they didn't take salt tablets they would get cramps. They would get terrible cramps. I must tell you; in mining in foreign countries there are many situations that come up, very different situations besides mining. The mine was very, very dangerous. There were about two men killed every month because there were no safety rules. Nothing was done safe, but when we started there we tried to impose safety conditions and we were able to decrease the number of mine accidents to where we had one fatal accident once every six months.

B: Describe some of the safety implementations.

R: Well, one of them was the way you carry dynamite. You're supposed to carry dynamite from the powder magazine to the place where you're going to use it in a canvas bag. You carry the dynamite in one bag and the caps and fuse in another, separate, away from the other. The miners in that place carried the dynamite in anything they had and they mixed caps, fuses, and dynamite. That's one of the reasons there were some accidents. Other accidents were caused by the fact that the mine was on very loose ground and they took chances. They did not put timber where they should and there were many cave-ins. Many, many men were crushed by big cave-ins and some of them were sometimes buried, so we insisted that the places were timbered correctly and safe. Another reason was on the manways that they had they had old ladders with broken rungs

on the ladders. The men would sometimes fall, so we made them put good safe ladders. And sometimes the platforms the ladders rested on were not there. Sometimes they didn't have any platform. They just had a two-by-four.

B: So they were just some basic common sense ideas?

R: Yes, basic common sense safety rules.

B: And for people who don't know about mining, especially in that area, how did people see in the mines? Were there lanterns placed every so often?

R: No. No, no, no. All the miners had electric lamps.

B: They had electric lamps?

R: Yes. In Mexico where I worked at San Luis Potosí we used carbide lamps, but that's what was used in those days. There were no electric lamps for the miners. The electric lamps came into use sometime after I left Mexico. We had electric lamps for all the miners. Of course, on the main tunnels we had electric lights. That mine was equipped to produce 1,500 tons a day. It had a lot of mechanical equipment. It was a mine owned by Maurício Hochschild. He was an Austrian Jew who came to Bolivia without any money and he formed a mining empire, which was second in South America. He had mines in Bolivia, in Chile, in Brazil, and in Columbia.

B: Can you spell his name?

R: Yes, Maurício. H-O-C-H-shield. Hochschild. Which, I think, in German means high banner.

B: And how long were you in Bolivia?

R: I was in Bolivia six years.

B: Were there unions in Bolivia with the workers?

R: At the time that we were in Bolivia there were no unions, but at the time we were there the unions were formed.

B: Was there a difference in the operations after the union was formed?

R: Well, in those mines conditions were different. Everything was different depending on the place, on the conditions of the mine. Of course, there are some principles that are the same every place, but in this mine which, I tell you, was the hottest in the world, I believe it was the hottest you would find, it was terribly hot, terribly hot. When you're working in a hot place all day people lose their temper. You get mad at everybody. Everybody was fighting. You're affected by the heat.

I was in charge of ventilation in the mine. Ventilation was very, very important because you had to try and lower the amount of hot air and get fresh air to the where the men were working. Also there was another serious hazard. It was that the mine water liberated CO₂. You could see the CO₂ on the ground. It's heavy; there would be a layer of CO₂ about a foot high on the ground. When you walked you would disturb the CO₂. You'd see it. You see, it normally isn't visible, but in this case it was because there was so much moisture. Many of the people who were killed in that mine were due to being gassed by CO₂. As I told you, I was put in charge of

ventilation.

In those days my crew was sixty women. The women worked in the mine just like the men; they worked with a pick and shovel and pushed carts. They did the same work that the men did. The women in Bolivia wear a lot of skirts. The people say that they never take their skirts off. They say that when they buy a new one they put it on top of the old one, (laughs) so they have many skirts and they go down to their ankles. When the women went in the mine it was so very hot that they'd take off their clothes, hang them on a post, and be in underwear. So I had my sixty women and I had to take care of them to see that (laughs) the men didn't come through to try to do hanky-panky with them.

B: So you had sixty women in underwear working for you?

R: Yes.

B: Oh, my goodness!

R: In that very hot place underground.

B: How did you ventilate the mine?

R: We had fans.

B: Electrical fans?

R: Oh, yes. We had very big fans. We had five big fans on the surface. They were sucking all the air from the mine. And all the entrances were where the fresh air would enter the mine. But inside the mine you had to try to get the fresh air to go to the working places. That was my job with my sixty women.

B: What did the women do?

R: The women would clean the drifts that were caved-in and open them up again. They put in timbers and did all the same work that the miners did.

B: What did you think when you got to Bolivia and saw women working in the mines?

R: Well, I thought it was pathetic that women should be working in the mines. But in Bolivia they saw it as something normal and not unusual. In the mornings when we went underground my women would get on the cage and I would see that all of them got in and safely to their working place. Then in the afternoon at the end of the shift I had to see that they all got out safely. I had to count them to see that no one was left behind.

B: Were they young women?

R: Yes, there were young women and older women...women of all ages. Most of them were young. There were a few of them that I would estimate to be about thirty. People don't live very long in Bolivia.

B: Of both the men and the women, how young were the youngest workers?

R: The youngest workers were about nineteen or twenty years old. In that country they don't have child labor laws and they don't have laws like they do right here in Mexico, that if a man gets fifteen per cent silicosis he has to be removed from his job and paid off. In that place the government was the

insurance company. The company paid premiums to the government for insurance, but the government did not provide anything at all. When a man was killed in the mine he received absolutely nothing. He was taken to his family and his family had to bury him whatever way they could. They did not even get expenses for the funeral, but the government was the insurer. And the company was paying around eight thousand dollars a month premiums.

B: Was that per worker?

R: No, for the whole crew.

B: How many people worked at that mine?

R: In that mine we had 2,000 workmen. They worked mainly on two shifts and a few men worked on the third shift.

B: Did the mining camp have a school?

R: No, the mining camp didn't have a school. They had a hospital and doctors for all the workmen and for the employees. They also had what they called the *pulpería*. The *pulpería* was the company store where goods were sold to the workmen at about one-tenth of the price. So they didn't get very much wages, but they had the advantage of going to the company store and buying articles for about one-tenth of the price.

B: Were they ever in debt to the company store?

R: No, the company store did not give credit. It was strictly cash.

B: And where did you live in Bolivia? Was it at the camp?

R: Yes.

B: Did they have separate housing for engineers and the workers?

R: The company had very nice houses for their employees, for their foreign employees. They all had very nice houses very well-furnished. It's very cold in Bolivia. It's a very cold country. Sometimes it snows and the snow piles up about three feet high. All the houses had a sun porch with glass windows. The company provided furniture for the house. They supplied the electricity and for fuel for the fire place.

B: And the workers? Where did they live?

R: It was a very hard thing to see. There was a canyon. On one side of the canyon were the houses of the employees. There were about seventy-two families living in this camp. Across the canyon on the other side was the place where the miners lived. The poor miners lived in huts made of tin and scraps of whatever they could find. It was something that hurt you to see. The miners in those times were getting twelve *bolivianos*. Twelve *bolivianos* was equal to about fifty cents American money for an eight-hour shift. We foreigners were making very good wages. We were being paid very well and bonuses. Every month when we produced 500,000 ounces of silver the company would send us a check for about one hundred dollars to each of us. This bonus check was besides the very good salaries we were being paid. If we produced more than 500,000 ounces they would send us a \$150.00 bonus. It was mailed directly from the company office in New York. It was mailed directly to us. The American IRS, [Internal Revenue

Service], didn't know and the Bolivian government did not know, so we didn't pay taxes on the bonus.

B: What did you do with the bonus? Did you save it?

R: Sure we saved it. We sent it to the bank in the States. That was one of the reasons why the Bolivian miners hated us. They saw the discrepancy between their condition and ours as foreigners. Foreigners in their country were getting such tremendously high wages and so many facilities from the company while they had to work hard under very difficult conditions and get very, very low wages, so there was always contempt for the foreigners.

B: How about the women that worked for you? Did they like working for you? Did you take care of them?

R: Yes, I took care of them. They liked to work. They were satisfied because other people didn't treat them so well, but I took good care of them. I saw to it that they were well cared for as far as I could. I couldn't do anything more like give them more wages. I could only try to help them in their job.

B: What other responsibilities did you have there?

R: Well, I was in charge of ventilation for about a year. Then I was made Assistant Mine Superintendent and then I had more to do with operations. Then after that I was made Mine Superintendent.

B: You were the mine Superintendent?

R: Yes, I was the Mine Superintendent of 1,500 tons. That's

where I had the most struggle. I had the most struggle on account of this that I'm going to tell you. The mine had four different sections, four shafts. There was a shift boss on each section on the day shift and a shift boss on each section on the night shift. There were eight shift bosses under me. The eight shift bosses were Americans and one was an Argentine. They didn't want to have any difficulty with the workmen. About this time the workmen were learning about unions and about protests. They were about to form a miners' union. The shift bosses didn't want to have any trouble with the men, so they would come to me and say, "Rosas, I want you to fire this fellow." So I took the responsibility of laying the men off. When a man was laid off he received a note in the pay folder on blue paper. It said they were dismissed. They would ask, "Who dismissed me?" They were told, "Rosas." So I used to dismiss three or four men each week. Those poor men didn't have any money. They didn't have any way to leave camp, so they stayed in camp and got by whatever way they could.

But, finally, there were about fifty or sixty of them that got together and came to the company and said, "We want you to remove Rosas. We don't want him." The company would not listen to them. So then they got together one day and they came and put up a platform about a hundred yards from my front porch. They put a loudspeaker on it and a man got on the loudspeaker and said, "We're going to hold a trial, a

trial for Rosas. Anyone who has anything to say in favor or against please come to the microphone and let us know." But nobody would talk in my favor because he would have been in a bad position with the rest of the miners. So the miners started to go to the microphone. One fellow got up and said, "Rosas kicked me in the rear and told me I was a stupid Bolivian." Another man came and said, "Rosas hit me with a hose and he called me a stupid Bolivian." A lot of them came. About ten came and aired their complaints. Finally, one man came and said, "Rosas says he shits on the Bolivian flag." How could I ever think such a thing? How could such an act mean anything to me? But to the Bolivians that hurt their national pride deeply. They think of their country like patriots. So when he said that the men all said, "Let's go get Rosas out and we'll kick him out all the way to Uyuni." Uyuni was the nearest town, about twenty-seven kilometers from the mining camp. They were all coming to my house to get me out of the house and kick me all the way to Uyuni. My wife and I were at the window and when we saw the crowd coming her knees began to shake, but my guardian angel was on the job again. You know something happened that only happens in the movies...where the hero arrives at the very last moment and saves the heroine. At that very precise moment, Lechin, the general secretary of the mining union, arrived at the camp right at that place where the miners were coming to take me out. He got on the microphone and said, "*Compañeros*, come

back. Don't do it. I assure with my head that Rosas is going to be removed out of here, but we're going to do it lawfully. We're not going to do it with violence." Just like a movie. So the miners went on strike. That was the first strike. They said they were going to stay on strike until I was removed from the job I had.

The officials from the company came from La Paz. La Paz is the capital of Bolivia. They came and they had talks with the secretary of the miners' union and they made a compromise. The compromise was that I would remain for three months and in three months I would very silently quit. The miners agreed, but they said, "We don't guarantee that Rosas will come out alive." They asked me, "Will you remain three months under those conditions?" I thought it over and said, "Yes," but in those three months I was afraid they were going to kill me someday. I used to go in the mine with the men on the cages to go underground. There would be two or three hundred men and I would walk among them to show them I was very brave, but I was afraid. You can't imagine how afraid I was that something was going to happen to me. I was serene and walked among them and gave orders as usual and they obeyed me. No one hurt me in those three months. In three months the company paid me six months that I still had on my contract and they paid me transportation back to the United States. They paid everything. I still had six months to go on my contract. We used to sign contracts for three years. You see, my first

contract was for three years. At the end of three years if the company wants to continue with you and you want to continue with the company you sign another contract for another three years and they would give you three months vacation with wages and expenses paid to the States. At the end of three months you go back to start your second contract. So, you see, I had two contracts and I still had six months to go on the second contract.

On the second contract I was sent to Argentina to a mine that Maurício had in partnership with some Argentineans. It was a mine producing tungsten. They wanted to increase production, so they sent me to the mine in the Provincia de la Rioja. In that mine we were producing shielite. Shielite is tungsten ore. I was very surprised to learn that the ore we were producing was being shipped to Buenos Aires and that the Nazis had such a need for tungsten that they sent submarines to Buenos Aires to pick up the ore.

B: What year was this Mr. Rosas?

R: It was 1944.

B: 1944. Let me ask you another question. After your experience in Bolivia...did they teach you any of that at the Texas (laughs) College of Mines?

R: Teach you what?

B: You know, about mine management and dealing with people?

R: Yes, we had a class on mine management, but those conditions did not come up. Another condition that never came up in

class was this: when we were at the mine there was a revolution in Bolivia. A mob broke into the presidential palace in Bolivia and went up to the second floor and threw the president out the second floor window.

End of Tape Two

Side A

Beginning of Tape Two

Side B

B: Okay. You were talking about throwing the president out the window.

R: When the president landed another mob took him and hung him from a lamp post. The people at the camp were all in favor of the deposed president and they decided they were not going to submit to the new government that was formed. The new government sent troops over to subdue them and they decided they were going to fight the troops, but they had no guns. They went to me and made me open the powder magazine and give them dynamite and fuses. They decided they were going to throw sticks of dynamite at the troops. That night before the troops came they decided to give me a lesson. All night they threw sticks of dynamite at my front porch. They broke all the windows, all the glass in the sun porch in my house, and

killed my poor dog.

B: This is when you were superintendent?

R: Yes, this is when I was superintendent.

B: How many children did you have at that time?

R: I had two.

B: Esther and who?

R: Roberto.

B: Where was Roberto born?

R: He was born in Buenos Aires. He was one year old at the time and Esther was four.

B: (laughs) And they didn't teach you that back at school?

R: (laughs) No, they never covered those conditions in school. Finally, the troops came in and subdued them.

B: Where did the company get the dynamite from?

R: Oh, Maurício Hochshield, he shipped in all we needed.

B: What kind of transportation was there out from the mine? Was it roads?

R: Yeah, there was a road and we had cars. We had what they called a *tranvía*. It was a car, with a motor, that ran on the railroad tracks.

B: Describe a little about the mine in Bolivia. Once again, include the blasting and the pulling out.

R: You see, this mine was a Chilean mine. It belonged to Chilean stockholders, but they had come to a point where they were relatively broke. They didn't have any money. So Maurício Hochshield bought more than fifty percent of the shares and

took charge of the mine. Then Maurício Hochshield had his own company which was Maurício Hochshield, S.A.M.I., which means Sociedad Anonima Minera Industrial. He provided the technicians. All of us were working for Maurício Hochshield. We were not working for Huanchaca. So Maurício provided all the timber, all the dynamite, all the expenses, and he provided all the technical men to run the mine. He charged Huanchaca for those services. Huanchaca never made a penny, but Maurício made all the money. (laughs) That was the setup they had there.

It was an old mine. At the time that the Chileans worked it it was very rich. They didn't have a mill, so in the stopes they cleaned and selected the ore by hand. Of course, selecting the ore by hand they left a lot of ore in the mine. They left it as fill, so we had to go in there and remine all this fill. It was very, very dangerous because the fill was loose and you had to have stopes where the back would come in and hurt men.

B: For the people who hear this and don't know, explain what the stopes and the backs are.

R: The stopes are the place where you break the ore. Then you send it down a chute to a lower level where the cars are in the tunnel. You keep going up and filling and going up and filling. In the old stopes that they already worked we had to work again and take out all that the old miners had left and fill it with fill. Fill was something that was broken on the

surface and taken into the mine. It was just fill...dirt.

B: So you were pulling the old stuff that was left behind?

R: Also, we were working on new veins that we found. We did exploration with diamond drilling and found new veins which we worked.

B: Did they do diamond drilling before you worked there or was that something you brought in?

R: When I went to this mine they had it. The mine had been under the jurisdiction of Maurício Hochshield for some time. All of that was established.

B: All of the carts were pushed out manually?

R: No. No, no, no. You couldn't bring out 1,500 tons by hand. (laughs) They had big, heavy cars with electric motors. There were four shafts, as I said. There was one level where all the ore was hoisted to that level which was the tramming level. That's where the cars would take the ore out to the mill. Maurício set up a very modern mill.

B: What did the mill have? Did it have crushers?

R: Oh, yes. Like all mills, it had the crushers and the flotation machines where they separated the lead concentrates, zinc concentrates, and copper concentrates.

B: Once again, for the people who may not know too much about mining, the crushers just break the ores down to smaller, smaller, and smaller sizes.

R: The first thing you have is the jaw crusher which breaks them down to the size of about three inches.

B: They come in sizes of about a foot?

R: No, they come in about five or six inches. Big rocks like this don't come through the channels. Then from the jaw crushers they go up to the ball mills. The ball mills have a return that returns all the big ones back to the ball mills.

B: The steel balls for the mills...were they out often enough that you would have to change them every day?

R: No, you don't change them everyday. They last a long time. Of course, you see, I didn't know anything about the mill because I had nothing to do with the mill. I worked only with the mine.

B: So you were just the mine superintendent and had nothing to do with the mill?

R: I was just the mine superintendent. I had nothing to do with the mill. Another person, Mr. Sheedy, was the mill superintendent.

B: Who was above the superintendents? Was there a general manager?

R: Yes, the general manager was Mr. Sarrels. He was the one who gave me my first job in San Luis Potosí.

B: Was he there when they were dynamiting your front porch?

R: No, he had left. Another man had taken his place. His name was Jack Ward.

B: Then from the ball mills it would go into flotation?

R: Yes, from the ball mills it went to a thing that raked the sand and returned it to the ball mill.

B: Was it a separator?

R: Well, I forgot the name. In the ball mill you get metal that goes through a very fine sieve for the flotation machines. You don't put any sand in the flotation machines.

B: Once again, for the people that don't understand flotation: the mineral or metal you want to recover inside of liquid holding tanks either floats to the top or stays on the bottom.

R: Well, the details come out at the bottom and the metal is floated by bubbles up to the top. You're a mill man.

B: For the benefit of those that don't know, like my wife...she won't know what you're talking about because a lot of people don't know too much about this. Was it ever brought up to the mine people by the mill people that the ores were not that rich or that mine production was not equal to the mill production?

R: No, we never had any problems like that.

B: The quality of the ore was never an issue?

R: The ore was always the same. Sometimes our ore had more gold than at other times, but that never made any difference in the mill because you never saw the gold. The ore carried about four ounces of gold per ton and sometimes it would carry about eight or ten ounces, but you never see it. It went with the lead concentrates. The lead concentrates contained all the silver and the gold.

B: Was there a smelter on site?

R: No, from there it was shipped someplace. I don't know where.

Of course it was shipped to a smelter and they had to ship it to a refinery.

B: So it left the mill and mine as concentrates?

R: Yes, we had a railroad. It was loaded on the railroad and shipped to someplace in Chile to the smelter.

B: To Chile?

R: Yes. Chile is the neighbor of Bolivia.

B: So from Bolivia you went to Argentina?

R: Yes, I went to Argentina and we produced about twenty tons of tungsten ore a month. This tungsten ore was shipped to Buenos Aires. I cannot see how Maurício Hochshield, being a Jew, and seeing such things performed by the Germans on the Jews, how he could provide this which was direct help to the Nazis, giving them tungsten ore! He was a Jew and, yet, he was doing this!

B: What was tungsten used for?

R: It was used to make tungsten steel.

B: In other words, it was a stronger steel?

R: It's the strongest steel you can find. It's the steel they use on a lathe for the cutting tool. I don't know if the Nazis used it to make tanks or what they used it for, but they had a craving for tungsten. Maurício was supplying it to them! I just couldn't understand it.

B: Did you ever meet him, Mr. Rosas?

R: Oh, sure. Maurício wanted to keep his staff happy, so he would visit the camp often. He'd have a chat with all his

employees and provided money so that the general manager would have a party for the employees every two weeks. So every two weeks we had a party at the manager's house where we had drinks and dinner and music. All the employees were there. I mean, just the foreign employees.

B: Where did he live?

R: Maurício?

B: Yes.

R: He lived in La Paz, but he was never in La Paz because he was always traveling from one place to another. At one time they kidnapped Maurício and all the charity organizations in La Paz were protesting because Maurício was giving money to many of the orphan schools, old people's homes, and many of the schools in Bolivia and in other countries in South America. They had kidnapped him and it was said that someone in the government had kidnapped him. Finally, though, he was liberated.

B: Do you know whatever happened to Maurício?

R: I don't know. I'm sure he's dead now because at that time he was around forty-six years old and this happened around 1946.

B: Can you describe the mine in Argentina? What kind of mine was it?

R: The mine in Argentina was a little mine. Just a little one, with a production of about twenty tons a month. There was a German in charge of the mine and I went over his head to help him. We got the production up to about twenty-five tons.

They had a little mill, a little gravity concentration, where they had jigs and tables to make tungsten concentrate.

B: How many men worked that mine?

R: Oh, there were about fifty or sixty men.

B: (laughs) There were no women?

R: (laughs) No, no women. Argentina was different.

B: Mr. Rosas, as far as you know, was Bolivia the only country that had women working in mines?

R: I don't know if they had any in Peru because Peru and Bolivia are so very similar. But I don't know if they had women working in Peru. At that time, though, they had women working in all the mines in Bolivia. I understand that now it is prohibited and that they don't work anymore in the mines.

B: I've asked other people we've interviewed about working in the mines and women working in the mines. When I asked them they almost feel insulted. They say, "No, never." And you were telling me that you had a female crew working.

R: I had sixty women working as my crew.

B: In Argentina did they provide the homes for you, also?

R: Yes. In Argentina the homes were very rudimentary. We didn't have homes like we had in Bolivia because it was a little mine that was owned by two Argentines who operated in partnership with Maurício. The Argentines didn't have homes for the employees. All we had were two or three room huts and it was very, very cold. (laughs) We had snow there.

B: Going back to Bolivia...were there any uniforms provided to

the workers: you know, hard hats, safety equipment, and shoes?

R: They had to buy their hard hats.

B: They bought them at the company store?

R: Well, they bought them wherever they could. Sometimes they bought them from each other. The company did not provide shoes or anything for them. It was discriminatory because the company provided many facilities for its staff, the foreigners. We could buy American shoes and American clothing in the company store for the price it cost in the States. The Bolivians couldn't buy them because they didn't have that much money. They earned so little that they could hardly get by with what they earned.

B: How about the illnesses? Were there any lung illnesses?

R: Yes, but they were not paid off like they were in Mexico and other countries. They worked until they could not work any more. When they could not work any more they would just go home and die. They were not paid a penny for disability. Here in Mexico you are supposed to retire a miner when he has fifteen percent disability. He can ask to be retired and the company has to pay his unemployment insurance. If he has twenty percent disability then the company has to, by law, retire him and pay him off. But in Bolivia the miners would have eighty percent disability and they would still be working in the mine until they could not work any more.

B: And in Argentina?

R: In Argentina in the little mine where I worked it was so poor and so small that we didn't have any facilities either for the men.

B: Medical...was there a doctor?

R: Not even a doctor.

B: Was there a school?

R: Not even a school.

B: How about your children? Where did they go to school?

R: No, my wife stayed in Buenos Aires. I was there by myself.

B: Did you welcome leaving the tension of Bolivia and going to Argentina?

R: Yes, because Argentina is an entirely different country from Bolivia. Bolivia has about ninety-five percent Indian population and only about five percent white people. In Argentina about sixty percent of the people are of Spanish descent, about thirty-five percent are of Italian descent, and the rest are Europeans.

B: So who were the workers? What nationality or race were they?

R: Of all races.

B: Of all races? Indians?

R: There were no Indians in Buenos Aires. The Indians lived up north in the provinces that border Bolivia, in La Quica. But in Buenos Aires there were no Indians. There were no negroes.

B: You were superintendent in Argentina, also?

R: Yes. Well, there was only this German and myself and I was his boss.

B: How long did you stay in Argentina?

R: One year.

B: One year?

R: I quit because I could not see how Maurício could help the Germans.

B: Did you know for a fact that it was being sold to the Germans or was it just stories?

R: No! I knew for a fact that they were doing that.

B: How did you know for a fact that they were doing that?

R: I knew it from the owners of the mine. I knew it from the Argentine owners of the mine.

B: And Maurício did not own the mine? He just provided the needed expertise?

R: No, he provided expertise and was a partner with the Argentine owners.

B: You knew the Argentine owners, too?

R: Yes, they lived there in a little town close to the mine called Londres.

B: Londres, Argentina?

R: In the province of La Quiaca.

B: They would tell you they were selling this to the Germans?

R: They knew where they were shipping their ore.

B: This is what made you quit?

R: I felt bad. I didn't stay a whole year. I stayed about eight months and I asked to be taken back to Bolivia. So I went back to Bolivia.

B: How were you hearing the stories about the Jews that were coming out at that time?

R: All the world knew. You could see them arriving in Buenos Aires on the boats, thousands of Jews. The poor people were so poor and so hungry that they would be standing at the windows of the shops in Buenos Aires with their mouths open just looking at the products that the Argentines had. You know the Argentines have first-class meat, first-class poultry, and first-class fruits. These poor Jews would just be looking at all these things in the shop windows and, of course, they had no money to buy anything.

B: Did you think about being a refugee yourself at one time, too?

R: I don't think so. I forgot about being a refugee at one time. It had been such a long time since I had been a refugee that I never thought of it that way.

B: So you left Argentina to go back to Bolivia?

R: Yes.

B: To what mine then?

R: To the same mine.

B: To the same mine? Did they remember Rosas?

R: No, that happened after I returned.

B: Oh, after you returned. So you returned as the superintendent?

R: Yes, I was a superintendent. They sent me to Argentina and I came back as a superintendent. Then I, as I told you, only had six months to go on my contract when this happened. I was

superintendent for about a year and a half when this trouble happened. That's when I had to leave and that's when I was paid off.

B: Where did you go from there, Mr. Rosas?

R: I came to Mexico. I came directly to this district. I came to San Francisco Mines of Mexico, which is right here close to Parral.

B: Mr. Rosas, let's stop there for the evening.

R: (laughs) Yes, I think so.

End of Tape Two

Side B

Beginning of Tape Three

Side A

B: This is a continuation of an interview with *ingeniero* Ramon Rosas. We are now located the ranch of Mr. Rosas in Búfalo, Chihuahua. Today's date is November 28, [1996].

Mr. Rosas, before we continue I want to ask you to describe a couple of things: one is when you were young and working in El Paso at the drug store working the fountain. Describe serving Coca-Cola.

R: Well, in those years we received the Coca-Cola syrup in wooden kegs. Then we put the syrup at the fountain where we drew an

ounce of Coca-Cola syrup into a Coca-Cola glass. Then we added chipped ice and carbonated water. Then we stirred it. Finally, we served it. And that was the way we served Coca-Cola in those days because there were no bottled Coca-Colas in those days. If people wanted a Cherry Coke or a Lime Coke all we did was squeeze a little lime or squirt a little cherry syrup in the Coca-Cola. That was the way we served Coca-Colas then.

B: I also want you to describe the chapel in the mine in Bolivia.

R: In Bolivia we had a tunnel where we went in to the mine. It was about five meters wide and about two and a half meters high. It was all lined with rock and cement. We went in about fifty meters from the entrance. To the left was an excavation where a chapel was made. The chapel measured about ten meters by ten meters. It had an altar and a few seats. That was the mine chapel. That is where they took the men who had accidents. That is where their families picked them up and buried them.

B: They buried them in the chapel?

R: No, they picked them up from there and took them to the cemetery.

B: Were regular services held there?

R: No, there was no priest there in those days. The church in the mining camp had burned down and had never been rebuilt, so there was no priest or church, only this small chapel inside the entrance to the mine.

B: Did the chapel have a name?

R: No, they just called it La Capilla, meaning the chapel.

B: When we last spoke you had just left Bolivia and you were coming to Mexico. Where did you go in Mexico?

R: When I left Bolivia I had a job with the San Francisco Mines, so I came directly to San Francisco Mines.

B: How did you find out about the job?

R: When I knew I was going to leave Bolivia in three months I started writing to mining companies applying for a job. The best offer I had was the one from San Francisco Mines, so I accepted the offer they made me and told them I would be there in November, 1946. It has been fifty years this month. I arrived in Frisco the twentieth of November 1946, fifty years ago. The last twentieth of November was fifty years that I have been in this district.

B: Did you only apply to Mexican mines?

R: Well, I only applied to mines in Mexico because I didn't want to go to another country any more. My wife wanted to come back to her country. She was tired of being in foreign countries where we had been for ten years. She wanted to come back to Mexico to her people.

B: You had never been to San Francisco before?

R: I had been to San Francisco once. I was offered a job once at the San Francisco Mines and I went, but I didn't accept the job. They told me to come and visit, but I didn't take the job and took the job in Bolivia instead.

B: Was the company an American company?

R: It was an English company.

B: What was the name of the company?

R: It was the San Francisco Mines of Mexico, Limited. Their head office was London.

B: What were your responsibilities? What was your first job?

R: In San Francisco my first job was as a mine foreman. They always start you as mine foreman.

B: Even though you had been a superintendent?

R: Even though you had been a superintendent, they always take you on as a mine foreman to test you and see what your abilities are. When I had been in San Francisco Mines for three months they made me superintendent of the Clarines Mine. That's the job I held until I retired.

B: Describe a typical day when you were a mine foreman.

R: In the morning the first thing you do is to change clothes. Change your street clothes to your work clothes. Then you go to a place where you have an office and the miners come to you to get instructions on what they are going to do. You give them their instructions and vouchers so they can get their equipment; they have to get shovels, picks, nails, and whatever they need. You give them a voucher and they go to a warehouse and get it. Then they go underground. When all the men have gone underground you go underground. You go to the places in your section that you have to see. You make your run from about nine o'clock to about twelve o'clock. At

twelve o'clock you come up for lunch. Then you go to the office and have lunch. You have a heater there to warm the lunch they bring you. At one o'clock you go back down underground again and continue your run through the working places that you have in your section. At three o'clock you come up again and you're ready to meet the men who are coming to work on the second shift. You give instructions to the men on the second shift and you leave the mine at about 4:30 p.m. and the second shift goes down to work.

B: How many men did you supervise as a mine foreman?

R: As a mine foreman I had about one hundred and fifty men. I had sixteen working places...sixteen stopes and headings that I had to see everyday.

B: As a mine foreman did you only work the day shift or would you sometimes work the night shift?

R: No, the mine foreman at Frisco only worked the day shift and there was no mine foreman on second shift. There was one man on second shift, his name was Williams, and all he did was to lower the timber, equipment, and supplies we needed for the next day. We would leave a note with Williams and it would tell him what we needed. It was his duty to lower that on second shift and have it ready for us the next day.

B: You had left a hot mine in Bolivia. What was the average temperature of the mine in Frisco?

R: Oh, the average temperature in Frisco was agreeable. It was nothing like Bolivia. (laughter) No, no, no, it was nothing

like it. Bolivia, I think, was the hottest mine in the world. There were probably more mines, but they could not be any hotter because people would not be able to work in that temperature.

B: As a shift foreman you had men to supervise. If you wanted or needed more men did you do the hiring or did they just send them to you?

R: As foreman in Frisco all I did was ask for more men and the fellow in charge of personnel was the one who hired the men.

B: There was no *sindicatos*, no union?

R: Oh, yes, there was a very strong union in Frisco. It was a very, very strong union. The men in Mexico are all organized in unions and they are very strong. They demand and get a great deal of attention from the owners.

B: You had worked in safety before, too. What did you think of the safety practices at this mine?

R: In Frisco they had a safety engineer. They had to have a safety engineer by Mexican law. The safety engineer was always on the job in Frisco. He visited all the working places and he saw that they all met safety standards. Besides that there was an inspector from the Department of Mines of the Mexican government who came periodically about every three to six months to an official inspection of the mine. Each time he made a written report of what he had seen and he had approved or disapproved of the conditions in the mine. It was an official mine inspector. Sometimes it would be one

inspector or another inspector. It was not always the same one.

B: The ore would be pulled out in carts that were on a rail?

R: Yes.

B: So the farther in you dug you would have to build more track?

R: Yes, as we continue with the drifts- do you know what a drift is? A drift is a tunnel on the vein and the tunnels in Frisco were driven about two and a half meters wide and about two meters high. We would drive these tunnels on the vein. And that is a drift. As we continued drifting we continued putting track so the cars could come right up to the face. After they blast all of the ore that is broken it is loaded into cars with air shovels.

B: Air shovels?

R: Everything is mechanical.

B: At Frisco?

R: Yes, at Frisco. Everything was mechanical. You couldn't do much work by hand because it was very slow and the men are not used to working with a pick and shovel any more. People have the impression that the mines are worked with pick and shovel, but that is not true. They are all worked with modern equipment.

B: How would they push the cars out?

R: With an electric motor.

B: So in Frisco they had electric motors on the cars?

R: Yes, of course, they had electric motors. They had cars that

had a large capacity. There would be one motor for every ten cars and each car had a capacity of about ten and a half. So on one trip they would take fifteen tons to the shaft where it was loaded to the surface.

B: Where did Frisco get the power for the equipment? Did they make their own power?

R: No. All the companies buy electric power from the Mexican Electric Company. They don't have their own electric plants in Mexico. They all buy it from the Comisión Federal de Electricidad, or the Mexican Power Company.

B: When you moved to Frisco did you live in the colonia?

R: Yes, yes. There are two colonias in Frisco: one was called San Antonio and the other was called San Luis. The employees who had a high category were all in San Antonio and ones that had lower jobs were located in San Luis. The company provided houses for all its employees. Of course, the houses in San Antonio were much better. They had better furniture and were better equipped than the ones in San Luis, but the ones in San Luis had nice homes, also. They were furnished, also.

B: Being new did you live in San Luis?

R: No, in San Antonio.

B: Oh, in San Antonio. Then after you were mine foreman what was your next position?

R: Mine Superintendent. I was mine foreman for only two months and then I was promoted to Mine Superintendent of the Clarines Mine.

B: How many mines were there?

R: There were two mines: one was Frisco mine and the other was Clarines mine. Clarines mine was close to the town of Santa Bárbara. There was a distance of about ten kilometers from Frisco to Clarines. The ore from Clarines that we produced in Clarines was shipped on the tramway to Frisco, to the mill in Frisco.

B: What was the ore?

R: The ore was lead-zinc, lead-zinc-copper.

B: Lead-zinc and a little bit of copper?

R: Yeah, a little bit of copper. It contained about one percent of copper. It had a little gold, very little gold, and it averaged around two hundred fifty grams of silver per ton.

B: As mine superintendent, how many men did you supervise?

R: As mine superintendent, I had four hundred in the Clarines Mine.

B: On three shifts?

R: No, we worked two shifts in the Clarines Mine. It was a mine that was producing more tonnage per man-shift. We had 400 men and we were producing over 800 tons a day. That means about two tons per man-shift.

B: Why was that?

R: Well, because we were more efficient. (laughs)

B: What makes a more efficient mine?

R: A more efficient mine means giving the miners an incentive to work, having them believe that if they work harder they will

get more pay.

B: Did they?

R: They did. Yes, they did. The miners in Clarines were making much more money than the miners in the adjacent mine of the American Smelting and Refining Company, [ASARCO]. They made so much more that the authorities in the town of Santa Bárbara would also arrest them and put them in jail (laughs) to charge them because they said the men in Clarines have money. "The men from AS&R don't have money." (laughs)

B: Were they paid once a week?

R: Yes, they were paid once a week.

B: In cash?

R: Yes, in cash. Every two weeks they were paid their contract. Their wages were paid once a week and their contract was liquidated every fifteen days and that was when they got the most money.

B: So every fifteen days they had a new contract?

R: Yes, we'd liquidate their work. You see, the work they did was measured by the engineers to see how much ore they had broken. The engineers carried a map and they would survey the mine. Then they'd give us a note telling how many cubic meters the men had broken and we'd pay them so much per cubic meter. The men on the drifts were paid according to how far they had advanced and were paid so much per meter. They had an incentive to work because they knew they were going to get more money. The incentive was so good that some of the men on

day shift would stay in the mine sometimes twelve or fourteen hours. The ones on day shift would stay and wait for the second shift. Sometimes they would continue working with the second shift for about two, three, or four hours more just to be able to produce more tonnage and get more pay on their liquidation.

B: With regards to many of the workers in the mine, did you ever see any problems with alcoholism?

R: Well, the miners in Mexico are all very similar. They get paid very good wages on Saturday and the first thing they do is go to the whore house. (laughs)

B: They did this in San Francisco?

R: They did it every place. They were the same. They would get their good pay and go to the whore house.

B: Married? Old or young?

R: It didn't matter, married or not, old or young. In the whore house they spent most of their money. When they had no more money and they put them out of the whore house they would go home without any money.

B: Did this ever cause any problems on Mondays when it was time to begin the shifts?

R: Yes, on Monday many of the men would not show up because they had a long weekend with the girls. They would rest on Monday. They would call it San Lunes. (laughs) They would come to work around Tuesday or Wednesday.

B: Did that affect production?

R: Oh, yes, that affected production. But then after they came to work they would try to make up for the time they had lost and worked harder. All the money that these men made in the mine, which was very good money, went to the bars and to the red light district...very little money to their homes. They spent it that way. That's the way the miners are in Mexico all over the country.

B: Concerning job safety, how often were there accidents when you first started to work there?

R: In Frisco we didn't have accidents very often; probably one a year. Sometimes there would be a whole year without an accident.

B: Were there any deaths?

R: Fatal accidents? Oh, there were small accidents. Some fellow had a piece of rock fall on him. They were small accidents where they didn't lose working time. The most they might lose was a day or two in the hospital.

B: The hospital belonged to the company?

R: The company had a very well-equipped hospital with very, very competent doctors; they had three doctors.

B: Could the families of the workers go there or just the workers?

R: No, only the workmen.

B: Is that the same hospital that was for you?

R: That's the same hospital that we, who were on the staff, went to. It was a very nice, well-equipped hospital with modern

equipment and with very competent doctors. They attended only the workmen and not their families, but they attended to their employees and their families. My son Ramon was born in that hospital.

B: How many children did you have?

R: I had a daughter and two sons.

B: Your other son was born where?

R: My first son was born in Buenos Aires. His name was Roberto. My second, whom you met, was named Ramon. He was born in the hospital at San Francisco del Oro. My daughter was born in San Luis Potosí in the city of San Luis Potosí, as I told you, and my wife took her to the Philippines when the child was two weeks old.

B: Was there a school provided by the company?

R: Yes. Yes, there was a school in San Francisco for all the children of the workmen and there was a separate school for the children of the employees. It was an American school because most of the employees were American and they had an American teacher.

B: Your children attended school there?

R: Yes, my children attended school there.

B: The school for the children of the workers that the company provided, was that because they had to provide it or because they wanted to?

R: No, that's because Mexican law provides that they must have school for the children. They had a very nice school. They

didn't have high school, but they had grammar school. That's what the law provides; the company must have a school for the children up to the seventh grade.

B: Were they good schools?

R: Yeah, they were good schools. They had teachers from the government and their studies were recognized the same as if they had been in a public school.

B: How long were you superintendent at that mine, Mr. Rosas?

R: I got stagnant there. I was there for eighteen years.

B: Eighteen years? Were you there during what is called Mexicanization?

R: Yes, I was there. I was there about a year after the Mexicanization.

B: Can you describe what Mexicanization means and what it was?

R: Mexicanization came about like this. The companies were taxed very heavily by the government. All the mining companies were taxed very heavy. All the big mining companies belonged to foreign countries; they belonged to American investors.

AS&R was the principle owner of mines in Mexico and they were also owned by English investors. Pachuca and Real Monte were owned by English investors. San Francisco del Oro was owned by English capital. There were some mines on the Pacific coast owned by French interests. All of those mines were taxed very heavily by the government. Then the Mexican government proposed that if the mines were owned by Mexican nationals the taxes would cut down almost ninety percent, so

many of the companies decided they were going to sell fifty-one percent of their stock to Mexican investors so they could get the benefit of the lower taxes. That's how Mexicanization came about in Mexico. Nothing changed; the same officials, the same technicians, continued to work in the mines.

B: But why do hear that the foreigners, the Americans, left soon after Mexicanization?

R: Soon after Mexicanization many of the companies decided that they did not want to work where they owned forty-nine percent. So they sold the forty-nine percent to their Mexican partners and they became all Mexican. They all became Mexican mines. Being Mexican mines the owners started hiring Mexican engineers and the Americans started to leave. Now, the majority of the staff of the mining companies are Mexican engineers.

B: Did you notice any difference between the time a few years before Mexicanization and a few years after Mexicanization?

R: No, the production has been the same. The only difference is that the people who are now employed in the mines are people who were previously in a lower social class. The Mexican people who came to the mines belonged to a lower social class. They had an opportunity to study in Mexico. They didn't have the education that the former people had. In the time that the Americans ran the mines there was much social life in the mining camps.

B: Can you describe a little about the social life?

R: Yes. For instance, in Frisco there were about thirty-two American families. There was good relations between the families so, therefore, there would be dinners very often. Usually, every Saturday afternoon and every Saturday night one family would have dinner for several of their friends. Another family would have dinners for some others. There were many dinners, dances, and parties on Saturdays.

End of Tape Three

Side A

Beginning of Tape Three

Side B

- B: Okay, you were talking about the parties on Saturdays.
- R: On Saturdays there would be dinners at different houses. Each one would invite whoever he wanted, but there would be two or three houses who would send out invitations to their friends. Sometimes about every two or three weeks they'd have a picnic at the swimming pool. At the picnic they'd serve bar-b-que, beer, and dessert. You'd be out in the sun and swimming. All the colony would be there.
- B: Was there any hierarchy with the general manager, the superintendents, and the other people?
- R: No, the superintendent in San Francisco was Mr. Creigie. His

name was Hugh M. Creigie. He was a very smart person and very diplomatic. He knew how to manage so there would be no friction between the employees. He was a man who learned many of the Mexican sayings and he knew the language very well.
(laughs)

B: Oh, the colorful language?

R: Yes, all the colorful language. I can't say some of them here.

B: You had mentioned that some of the Mexican engineers had studied engineering here and now were working in the mines. You had studied at Texas College of Mines. By this time you had worked all over the world and had years and years of experience. When these people came to work what did you think of their education and preparation compared to the one you had gotten?

R: I noticed one thing. The men who came from the Mexican schools, usually they came from the Guanajuato School of Mines- that's the main school for a mining career- most of them were lacking in general instruction, general education. Their vocabulary was not very extensive. When writing they made many spelling mistakes. It was to such a extent that the Mexican engineers were criticized because they would never admit that they made a mistake.

B: This lack of writing skills, was it in English or in Spanish?

R: In Spanish. Most of them didn't speak English.

B: What about their technical skills?

R: Their technical skills were okay. Only they had this condition that if they made a mistake they would never admit it. They'd always try to explain that this thing happened on account of this or that. You know, that's something that the doctors do, too. All the doctors in Mexico will never admit they made a mistake. They always say they were right. Mr. Creigie, who was the manager, used to say, "If we cannot get quality in a Mexican engineer we'll get quantity." So he hired more men and paid them less. He paid them less than he paid us. Of course, we were experienced. We were not in the same category as the fellows who had just come out of school. I'm talking about the engineers who had just come out of school. Of course, there were Mexican engineers who had experience and who were competent, but the ones who were just out of school were really not well-prepared, not well-prepared, for two reasons: first, they came from the poor families and didn't have much education; secondly, because they were people who had not been around very much.

B: Up until Mexicanization, during that period, did you hire any graduates from UTEP?

R: Yes, the company hired many. I can name some of them.

B: Please do so.

R: One of them was Rafael Rangel; another was Cleave Stover; another one was Eddie Douglas; and there was another fellow, who's name I can't recall right now, but he was married to a girl named Leola Lovelace. (laughs) I can remember his

wife's name, but I can't remember his name.

B: You said you had a stagnant period there as the superintendent, but during that period were there any significant changes in equipment?

R: No. No, there were a few small changes, but not anything to really make a difference. It just stayed the same. I say that I was stagnant because I was superintendent and as superintendent I never had an opportunity to be promoted to a higher position.

B: You wouldn't be involved in laboratory work, would you?

R: No, no, no. My experience all the time was in production and operations. That's where the companies paid the most money.

B: Who would give the directions as to where you needed to drill?

R: The geologists would give us a geological map of the area. Then we would do the work of drilling and running the drifts according to where we thought the ore was based on what the geologists had on the map. Of course, that was not very difficult because we always stayed on the vein. We seldom lost the vein and the geologists, more than anything, depended on what we were doing. He mapped according to what we were doing because we stayed on the vein. Of course, when we opened a new level we would have a map showing where the vein dipped and where we would find the vein in the new level. Once we got on the vein we never lost it. We did all the drifting on the vein.

B: Were there any changes in the bits or equipment used during

that time, like diamond bits?

R: There were no changes to the present day in drilling with diamond drills, you mean?

B: Right. No changes?

R: No changes. It is exactly the same right now and has been the same for the last forty years. You have a bit that has diamond cutters and you drill and get a core, which is an example of the country you are going through, that you are drilling through.

B: How about equipment that the miners used?

R: No, the equipment is the same.

B: It's been the same.

R: The only thing which has changed is that in the old days they used carbide lamps and now they use electric lamps. Each man has his own electric lamp. He uses it during the day and turns it in so they can charge it during the night. Then they give it to him the next day when he comes to work.

B: You said once that a mine that has silicon would lead to lung disease. Was that prevalent?

R: Yes, sure. In all the mines that I worked in the veins were on silicon. They were on silicon rock, except the one that I told you about in San Luis Potosí, which was calcite.

B: Were the workers retired if they had their fifteen percent?

R: Well, by Mexican law when a miner has fifteen percent disability he can go and ask for retirement. Then the company has to retire him and pay him off. If he wants to continue he

can. Then when his disability reaches eighteen or twenty percent the company has to, by law, retire him and pay him off and get him out of the mine.

B: When they pay him off how much salary is that?

R: Well, they pay him three months' wages. That is how much it is by Mexican law. Lately they give them, I think, about two days for each year they worked for the company. So they get about four or five months' wages at the moment they are retired. That's in Mexico. In other countries they don't get anything.

B: How come some miners work many, many, many years in the mines and some don't?

R: Many miners will work in the mine and they don't get silicosis that advanced, but in other miners the silicosis advances very, very fast. Some men can stay in the mine for ten or fifteen years while other men in the same conditions will only last one or two years.

B: When you worked in the mines were you affected at all?

R: Yes, sure. When I left Frisco I had eighteen percent disability and I still have it because you don't recover from it. The silicon gets into your lungs and makes a wound in your lung that stays there. All the men have to be x-rayed once every six months. That's the obligation of the company; to have an x-ray of each man every six months to see how his lungs are. Of course, that's how they know what amount of disability he has. That's in Mexico. In other countries they

don't have that. In other countries the men work until they die. Or if they retire they don't get any pay. They just go home.

B: Did you have a ventilation system in place in San Francisco?

R: Yes. Yes, they have ventilation, but it's not as hot as other mines. They don't need much ventilation, but they do have ventilation in the form of blowers and ventilation hoses. The ventilation hose is made of canvas and its about ten inches in diameter. The blowers blow air right to the working place... fresh air.

B: Was water ever a problem?

R: Water was not a problem. There was very little water. It all collected in one place and then it was pumped up to the surface. This is the water used in the mill and in the houses and in some parts of the town of San Francisco.

B: Concerning maintenance of equipment, did you shut down the plant or parts of it to maintain any of the equipment?

R: No, you never shut down because the company has a shop where everything is repaired. The only time they shut down in Frisco was one time when they had a fire.

B: What happened in the fire?

R: Well, they had to put it out. They had to extinguish the fire. During the fire they stopped production about fifty percent.

B: How did the fire start?

R: It started because they had a great deal of rotten wood

underground that they did not pull out. That's what I noticed in Frisco. You know, in Bolivia we used to haul out all the rotten wood and in Frisco they did not do it. They just left it around. Whenever they changed a frame they left it in the underground and it would rot. As it rots it produces gas. That's what caused the fire.

B: Did they start pulling out the wood after that?

R: Yes, after that they did. When I went to Frisco I told them, "This is a very dangerous condition. We must get all this wood out of here." But, they didn't listen. They didn't pay attention to what I told them. (laughs) You see, I worked in the Frisco mine for two months. Then from there I was promoted to mine superintendent and went to the Clarines Mine. Of course, in Clarines I saw to it that they got all the wood out and we never had any trouble there.

B: Did you still live in San Francisco in the colonia?

R: No, I had a home at the mine. It was a very nice house. It was a house that had belonged to the governor of Nueva Viscaya. In the time of the colony all of the district from Durango to Chihuahua was called Nueva Viscaya. The Spanish governor lived in that house and the company had taken over all that property. They had remodeled this old mansion and that was my house.

B: Is it still up today?

R: Yes, it's still there. It's a two-story house. They didn't change anything on the outside. It's a big adobe house.

Inside, though, they made it a modern home with electric lights and everything, of course.

B: How long were you at this mine?

R: I was there for eighteen years.

B: Did Mexicanization affect you?

R: No, it didn't affect me in the least because I left about a year after Mexicanization.

B: Did the mine change ownership? Did it become a Mexican mine?

R: Yes. Yes, it's a Mexican mine now. Before it was called San Francisco Mines of Mexico. Now it's called Industria Minera de México.

B: Where did you go after there?

R: Well, I was retired. I didn't go anyplace.

B: You've mentioned several times that they retired you. Did you not want to retire?

R: No, it was the policy of the company to retire you when you reach sixty-five. I think it's a very poor policy because at the age of sixty-five you have a lot of experience from working in the mines, but the head offices of the companies make these rules that when you reach sixty-five you must be retired. So I was retired in 1973 when I was sixty-five and, of course, after a while I acquired a job with a group of investors from Los Angeles who had an interest in the mines in the hills of Chihuahua. I was with them for about a year in a place Batopilas. It was a place that had been mined during the time of the colony and had produced ore, but it was

periodic. It was a feast or famine mine. In the time of the colony it was owned by a group of investors from Cleveland, Ohio. (taping stopped and started again)

B: You were speaking of the feast or famine mine.

R: Yes, that mine during the period that Porfirio Díaz was president of Mexico it was owned by a group of investors from Cleveland, Ohio. The men who ran the mine never paid dividends because they would come to lands that were very rich. They would have much silver to sell. Then the lands would peter out and they would have nothing and so they were broke. They had to carry over from one period to the next and they never paid a dividend. These investors from Los Angeles decided they were going to buy it and produce. But when I went there I saw that the thing was worked out. There was nothing left. I wrote a report and told them that their money would be better spent if their money was bet on the horses instead of on this mine, but they had already spent over a million dollars buying the mine and paying off all the expenses. They had the geologist from the College of Mines, Mr. McAnulty, there as a consultant and he charged them a very high price. I was getting one hundred dollars a day and I don't know what McAnulty was getting.

B: What happened?

R: They decided to give up and write off their losses. But, anyway, I worked with them about one year. I was making that good money...one hundred dollars a day plus expenses. I was

the one who got all the gravy. (laughs)

B: I know that one hears so much about how old the mines are in San Francisco and Santa Bárbara are. Do you know the history of the mines? Who started them? Who founded them?

R: Yes. Yes, the mines in Parral were discovered by Biasma, a Spaniard who's statue you saw in Parral. He came to Parral looking for mines. He was a Spanish explorer. He found the mine that they called La Negrita. La Negrita is the mine in Parral on top of the hill. He worked the mine for all of his life until the day he died. Then it passed on to his heirs and then finally they worked it, as I told you, working on the dioxides, the surface mines which were worked with the patio process. Then sometime around 1908 or 1910, or before, they sold it to an American company, The American Smelting and Refining Company. The mines in Santa Bárbara were discovered by a Spaniard named Francisco de la Loza. He came from Durango searching for mines and found the ones in Santa Bárbara and San Francisco del Oro. They were worked by him all his life. And then his heirs continued and they kept passing it on from hand to hand until about 1980 or 1990 when the American and English company bought it and came in control of the mines. That's when they put up the mills, rotation mills.

B: When you were in San Francisco did they know how long and how rich the ore body was?

R: Yes, of course.

B: It's no longer working today is it?

R: San Francisco is working today.

B: Oh, I understood that one of the mines is closed.

R: The one that's closed is the one in Parral. That one is worked out according to the men, but I don't know if it really is worked out or not. Anyway, it's closed. San Francisco is working today and so is Santa Bárbara, both of them are working and employing a number of men. They're producing about the tonnage that they were producing about ten or fifteen years ago. They have been worked now for about four hundred years.

B: When you were superintendent were there any environmental issues like contamination of water or contamination of air?

R: No, nothing at all because in the mine where I was superintendent we didn't contaminate at all. There was no way that we could contaminate.

B: As a superintendent were you given budgets to work with, like, equipment budgets and maintenance budgets? If you wanted to buy or replace something how did that process work?

R: If I wanted to buy anything I had to consult with the general superintendent. Usually the company was so wealthy that we didn't have any trouble in getting whatever we needed.

B: Did you get to work or did you have to work with a union?

R: Yes, yes. You see, that was one of the big problems. I was underground in the morning. I went right after the men went down and I'd come out at noon, at twelve o'clock. Then we'd

go home for lunch and then I'd go back to the office at one o'clock. Then every afternoon from about one o'clock to about 4:00 p.m. we met with the union leaders. They would bring in their complaints, petitions, and business they wanted settled. They had so much that it took all afternoon every day of the week.

B: You were the one to talk with them?

R: I had to arrange all the petitions they made. The petitions were, like, the man who had worked on a contract and had not received the pay that belonged to him. Another petition was that the one of the shift bosses had mistreated a man.

B: How would you mistreat a man?

R: Well, in the mine the shift boss could kick a man or insult him and that was cause for complaint. Even sometimes when the shift boss didn't say "Hello" to the men they said he had treated them in a very bad manner. They had complaints sometimes about things that didn't mean anything.

B: Did the shift bosses kick people?

R: No, no.

B: If I were a worker and I'm working in the mine what would be the process for making a complaint?

R: You go to the union secretary. Then he comes to me and says, "Sam says that you beat him up, that you kicked him in the rear end." And I say, "I've haven't done such a thing." Then it is discussed that this is not the right way to treat people and so forth or this man says that he's not getting enough

equipment to work, he's not being given gloves or boots or a hard hat. Maybe even that his hard hat is no longer good and he wants a new one. Many little details were handled like this.

B: Most of those were resolved by the end of the day?

R: Yes, some were, but many were not.

B: The ones that weren't, what happened to them?

R: The ones that weren't settled would go to the main office with the personnel manager and he would try to settle it. If they weren't settled there they would go to the labor office in Parral. In Mexico it's very difficult to fire a man. A working man cannot be fired unless you have justified reasons to fire him. You must have the proof that he stole or that he did something that's a violation of the law. If you fire a man you have to make an affidavit with two witnesses. The two witnesses are very difficult to get because they're all union men and they won't testify against their union brothers, so when I fired a man I always managed to find some men as witnesses that were in my favor to testify against them. They would sign the affidavit that the men had committed whatever violation he was punished for. I remember a man...

B: Mr. Rosas, let me switch the tape here.

End of Tape Three

Side B

Beginning of Tape Four

Side A

B: Okay, we were talking about how you would fire someone.

R: Yes. Well, one time I was talking to a man and he insulted me. There were two miners there, also, so I made an affidavit. The two miners signed it as witnesses that the man had insulted me, so I fired him. He was fired. He was out, but the two men who signed as witnesses were punished by the union for one month. They had to stay out of work for one month and lose one month's working days, but I managed to pay them their wages even though they did not work. That was a very rare case, being able to get two men to testify.

B: Were the contracts with the union every year?

R: They were every two years. Every two years the workmen make demands for better pay and better working conditions. They have to go to Mexico City and have a new contract signed before the labor department and approved by the labor department. Many times they don't come to an agreement on a new contract and the men go on strike.

B: Were you ever involved in the contract negotiation?

R: No, I never was involved. Usually, the one who went to Mexico City was the manager and the mine superintendent of the Frisco mine.

B: Over the years that you were there, besides the issue of pay, did you find that throughout the years there were more and

more rules placed by the union?

R: Yes, the union always wanted to gain something for its men. They always demanded that more men be put on jobs on the surface, many of which the company did not need. For instance, in the compressor room there was one compressor man to watch the compressors and they demanded that he have an assistant. So to finish the contract the company decided to put a man in as the assistant to the compressor man. In the hoist room there was a hoist man and they demanded that there be a second hoist man so one could rest and the other one could run the hoist. That way they tried to get more men on the surface where they would get wages. Even though they were not needed the company decided it was wiser to accede to those demands rather than prolong the negotiations and have them go on strike.

B: Did they ever go on strike?

R: Yes.

B: For how long?

R: During the time I was at Frisco they went on strike one time for two months.

B: What did you do during the strike?

R: During the strike the union has to provide men to run the pumps so the mine won't become flooded. They also have to supply men to run the hoists. So they were supplying men for the hoists and the pumps. After that we didn't have anything to do.

B: Did you stay at home or did you go to office?

R: I went to the office just to see what was going on and stayed at the office for a while. Then I went home.

B: What year was this strike?

R: I don't remember exactly, but I think it was about ten years before I was retired. I think it was around 1964.

B: When a man entered to work as a miner what was his first position?

R: *Peón*.

B: What did a *peón* do?

R: A *peón* was a man who worked cleaning the drifts and cleaning the ditches. He did the dirty work, we'll say.

B: Then from there what did he do?

R: From there he was promoted to assistant machine man. Then from there he went to machine man and after that he went to contractor.

B: What's a machine man?

R: A machine man is the man who runs the drills. He's the one who drills the holes for dynamiting.

B: And what is the contractor?

R: The contractor is a man who is given a contract in a stope and he has ten or fifteen men working with him. They all break so much ore and they're paid for the amount of ore they break. Then the profits are divided among the men who work with him.

B: The contractor is not part of the union?

R: The contractor is a union man. Yes, he is. The men went from

peón to machine man's helper to machine man to contractor.

B: Was it real political, Mr. Rosas? Did you have to know somebody to even work in the mine? Were there always more workers than work or were you always looking for workers?

R: No, we had a stable number of men. You see, in Mexican law if a man has three absences during the month without permission he loses his job, so we had the same men all the time.

B: What about the Mondays that you said they would miss?

R: They tried to not miss three in the same month. They knew that and tried to not miss three days in the month. Of course, some of those men were so useful, they were so well trained, that we didn't want to lose them either. We'd excuse them. We wouldn't fire them just because they had been absent three days. Also, there was another thing that they did. There was a doctor in Santa Bárbara who gave them a certificate that they had been sick. The doctor didn't attend sick men. He just made certificates for them signed by the doctor. And the doctor charged fifteen pesos for each certificate. (laughs) It became such a thing that he would ask how many days they had been absent. If it was three days the charge was fifteen pesos. However, if he had been absent five days the charge was twenty pesos. (laughter) We had to accept those certificates because he was a doctor. He was a registered doctor.

B: What was his name?

R: I don't remember his name.

- B: You mentioned about surface jobs. Did the miners want to have surface jobs?
- R: Oh, yes, of course. Staying in the mine means you always acquired silicosis. They wanted to have a job on the surface with good pay. They wanted to be watchmen. They wanted to be assistants to whatever jobs were on the surface. They wanted to be assistants to the carpenters, to whatever man there was working on the surface.
- B: They were paid better on the surface?
- R: No, it wasn't better, but they didn't have to stand all the troubles and conditions that you suffer underground.
- B: Did it ever bother, Mr. Rosas, about getting any diseases?
- R: Of course it bothered me, but I didn't notice it. I notice it only when I do heavy exercise that I breath heavier. I get excited, that's all.
- B: When you were in Bolivia you mentioned there was a lot of animosity between the workers and the foreigners. Did you see that in Mexico?
- R: In Mexico there was not so much, but there was some because the men in Mexico made more money than the Bolivians. There was a difference in their pay and the pay we got in dollars; we were paid in American money, in dollars, and they were paid in devaluated Mexican pesos. They resented some of that, but they didn't express it as much. Also, the difference was not as much as in Bolivia.
- B: By and large, what did you think of the Mexican mine workers?

R: The Mexican miners are very, very competent miners. Mexican miners are known all over the world as very resourceful men that can compete with any miner any place in the world. I have a friend who was a graduate of the University of Texas who worked in Chile. He used to say, "If I should meet a Mexican farmer in the drifts I would put my arms around him and kiss him." (laughs)

B: After Mexicanization were you still paid in dollars?

R: Yes. Yes, we were still paid in dollars. Now I think they are not paid in dollars anymore. I believe they are paid in pesos. That was long after Mexicanization.

B: What year did you retire?

R: In 1973. When I was sixty-five.

B: What day?

R: What day? (laughs) I don't remember the day. It was, I think, some time in March or April.

B: Mr. Rosas, we're going to take a break here. Okay?

R: Yes, okay. (taping stopped and started again) I have to tell you what I did after I left Frisco mines and I worked for this group of people from Los Angeles in Batopilas. I also worked at the San Joaquín Mine close to Casas Grandes for El Paso Gas Company.

B: What were you mining there?

R: The same thing: lead, silver, and zinc. El Paso Gas Company had an interest in a mine in San Joaquín. It is twelve kilometers from the city of Casas Grandes. I got a job there

as mine superintendent. The mine had been closed because it had been owned by an American named Mr. Fink. Mr. Fink had lost all his money and didn't have the resources to pay the workmen, so they went on strike and closed the mine. Then when the El Paso Gas Company took it over I was placed there as the mine superintendent. El Paso Gas Company, though, would not pay the back pay owed to the workmen because that belonged to Mr. Fink. We worked there for about six months and found that the mine didn't have any value, so the El Paso Gas Company gave it up.

B: It was an underground mine?

R: Yes, it was underground. Yes, they had a shaft and all the underground drifts, tunnels, and stations.

B: Are there any, besides the ones we've already talked about, moments or incidents that you recall that you would like to describe? It doesn't matter if they are good ones, bad ones, humorous ones, or special ones.

R: No, no. All I can describe is something in San Joaquín Mine about a graduate of the School of Mines. His name was Joe Brown. He was in San Joaquín before I was there. They tell me the story that on payday he did not receive the money to pay the men. He put up a notice that said, "MEN: WE DON'T HAVE MONEY TO PAY YOU. VIVA MÉXICO!!" (laughs)

B: I guess he didn't last very long there, did he?

R: He didn't last very long. (laughs) The men all were insulted when he put up that sign.

B: That's another thing they didn't teach in mine management, did they?

R: No.

B: I want to end this interview and thank you on behalf of the University.

R: If you'd like, I'd like to tell you about my boyhood.

B: Sure. Yes, please do.

R: Let me tell this. I was born in the little town of Sombrerete, in Zacatecas. When I was about five years old I was put in a school that was run by Catholic nuns. It was a kindergarten. Sombrerete is a small old mining town where the mines have been exhausted. It had a population of about five thousand people. It was during the time of the Revolution. There are hills on each side of the town. During the Revolution, when I was in school, there were two factions. There were the *villistas*, who were on the side of [Francisco "Pancho"] Villa, and the *carrancistas*. There was always fighting between the two factions. The *villistas* would be in town and the *carrancistas* would come to drive them out of town. When the *carrancistas* came there would be firing from the hills into the town and then they would come to try and run the *villistas* out of town. When the shooting started the nuns would open the door of the school and all the school children, five or six years old, would all run out and head for our homes. By that time the shooting was going on and we could hear the bullets flying. I remember that I would run

out of the school and run to my grandmother's house about three blocks from the school. It felt like I would never get to the house. It felt like I was stepping on cotton. When I got to the house the door would be closed and locked because the people in my grandmother's house were afraid. I'd be anxious for them to open the door because I could hear the bullets flying all around me. So I'd take (laughs) a big rock and knock on the door so that they'd hear me. Finally, they'd open the door and I'd run in. That was the way I lived from the age of five to the age of seven when we left Mexico.

After the battle was over you could see the men passing by the house. Sometimes they would be carrying the dead on horseback. Some were passing wearing bloody bandages. Sometimes the *villistas* would run the *carrancistas* out. Sometimes the *carrancistas* would be in town and the *villistas* would come and attack them. It was a very, very serious hatred between the two factions. When the *carrancistas* captured *villistas* soldiers they would arrest them. The next day they would parade them through town to the cemetery and put all of them before the firing squad. You could see the men going to their death because they would march them down the main street. If the *villistas* captured *carrancistas* they would do the same to them. It was terrible! The Revolution in Mexico was as mean as any revolution that happened in Russia or in Spain. People go to their animal instincts. They'll rob, kill, and rape. They'll do horrible things to

the weaker people. That is what I saw as a child in Mexico during the Revolution.

I remember, very well, that one time I was sitting in my mother's house by the window and a fellow came on a horse. He had a fellow tied with a rope around his neck and the man was running at the speed of the horse. There was a lamp post in front of my house and they hung him right there in front of me. I could see the man. I could see him when they strung him up. Those impressions stayed with me for many, many years. When they hoisted him up with the rope the men around him started shooting him. A five year old child is very much impressed with a thing like that. Also, I saw when they were taking some of these men to the cemetery to the firing squad. I saw that they were taking a boy about thirteen years old. He had been captured with the opposite faction as a soldier. This poor kid was crying and begging them to spare his life and they would not do it. They just kicked him on and kept kicking him on so that he would march with the rest of the men that were going to be executed. That was something that affected me so much to see that cruelty. Also, the only time the revolutionaries would come to town they would ask who the wealthy men were in town. There were always people who were anxious to give them information. They made a list of the men. Then they asked how much the men were worth, how much property, and money they were believed to have. Then they had all the men come to the office of the revolutionary who was in

charge and he asked each man for a loan based on what it was believed he had. He would ask for ten, twenty, or thirty thousand pesos and if the man refused he was executed. That was one of the atrocities committed by both factions.

B: Was your father with either one of the factions?

R: No, that's why we suffered. We who did not take part in the Revolution were the ones who suffered from both factions. You had to be in one faction so that you would not be hurt. If you were people who had no sides you were always subject to attack by both factions.

B: When you left did your grandmother stay behind?

R: Yes, my grandmother stayed. My grandfather had died. That was my father's parents. On my mother's side, my grandfather and grandmother had died.

B: Did you have any relatives that died in the Revolution?

R: No, none of my relatives went into the Revolution. That's what I was trying to tell you: revolutions are something where people just vent their anger on each other and they commit horrible crimes, really horrible crimes, because there is no authority. One man becomes the head of the group and he has nobody to check him, to hold him down. Each man commits crimes.

What I was telling about the Revolution, when we were on the train when we went to the state of Chihuahua, there was a man hanging from each post. You could see at night with a full moon the men hanging. Their arms and legs became long by

almost a foot. Also, the stench, the terrible stench of rotting flesh all through there from Escalón to close to Chihuahua. The telephone poles are all along the railroad line on either side. I would look out the window on one side and was horrified, so I look out the other side and it was the same. The revolutionary factions were just fighting to eliminate each other. They just killed each other like killing an animal.

B: Is there anything else you want to say about your years at UTEP or Texas College of Mines?

R: No, the years at UTEP I was very happy. I was very well satisfied. I had classes in the morning until noon. I had algebra, language, geometry, and metallurgy all in the morning. Then in the afternoon after one o'clock we had lab: physics lab, chemistry lab, and metallurgy lab. I would be in school until 5:00 p.m. in the afternoon till the watchman came to close the lab and told us to leave. Then at 5:00 p.m. I would go to Gunning and Casteel and started to work at 6:00 p.m.. I would work from 6:00 p.m. to 11:00 p.m.. At 11:00 p.m. I would go home and go to bed. Then I would wake up, study, and get ready to start the same routine. I did that for three years in high school and four years in the College of Mines...seven years.

B: Where was the cafeteria at the College of Mines?

R: It was in the dormitory. The cafeteria was downstairs and on the second floor was the dormitory.

B: The library...where was there a library?

R: Library? No. No, I don't remember a library.

B: Mr. Rosas, I want to ask you one last question. What words of advice or what would you say to a young engineer out of school who was off to a career as a mining engineer?

R: I would tell the man that he had a very hard life before him. He probably made a mistake. (laughs)

B: Or young lady because there are lady engineers, too.

R: Yes, because there have some graduates who are women. I would tell them that they made a big mistake by choosing that career. He will only suffer in foreign countries. He would have been better off if he had stayed in the States. The companies where he will work are always thinking of gains, of profits. They did not care a thing about his life or conditions. The companies were very cruel and only think of profits for the management.

B: Mr. Rosas, on behalf of the University, once again, I want to thank you for all of your time and you hospitality. This ends this interview.

R: Well, I'm very glad to have cooperated with you and I hope that I have not bored you.

B: No, not at all.

End of Interview