

LISTEN WHILE YOU READ



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DEEP

My First Day Underground

By Robert Archibald



Shift boss in his office a mile underground

First, you need to know a bit about my family's history. My grandfather was born a very long time ago, in

1886. He grew up in Pennsylvania and went to school at Lehigh University to be a mining engineer. When he was a young man, he must have been quite a character. He left the comforts of home and went to Mexico to search for silver, hoping for an adventure. He found both!

By the time my father was born, my grandfather had established a successful silver mining business in the southern Mexican state of Guanajuato. And, during this time, he invented and patented a process for extracting very fine gold and silver particles from rock—a technology still used today.

But Mexico at that time was going through a big political change. By 1928, Americans were no longer welcome. In fact, my grandfather and his whole family (his wife and five children, including my dad) narrowly escaped the country, leaving all that they had behind.

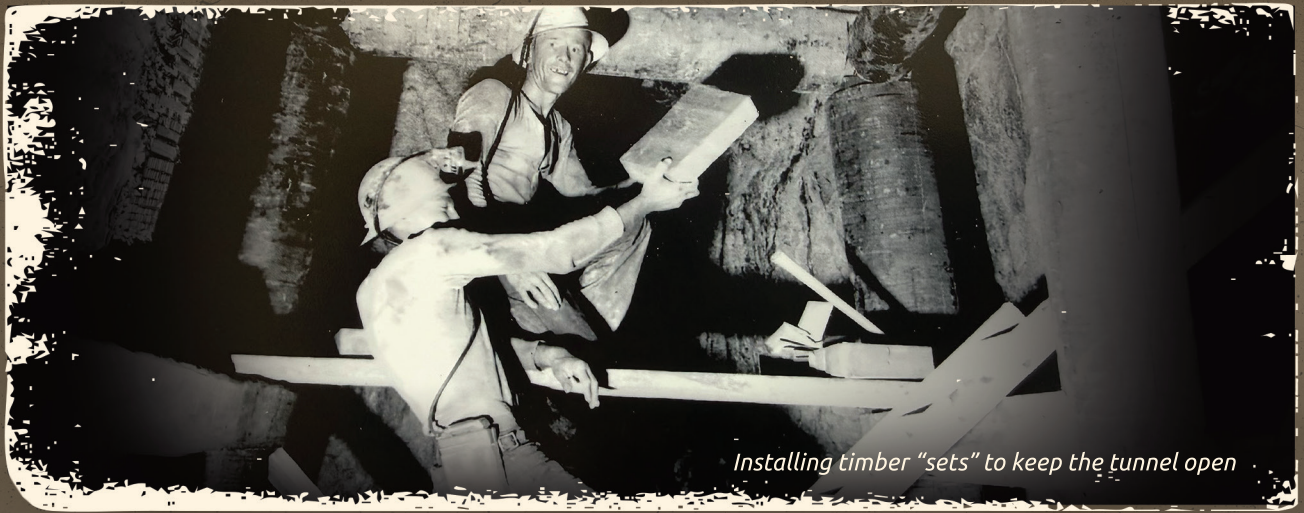
My grandfather must have had a notion of what might happen and had bought some property in Montana that he hoped might have some minerals worth mining on it. So that's where they headed to start fresh.

He had enough money to purchase some used mining equipment from Minnesota. But tragically, it was all lost when a storm came up on Lake Superior and the ship carrying the equipment was sunk.

So, without much mining equipment, but with four sons and a lot of determination, my grandfather was back in the mining business, trying to find gold on his property in Montana. The whole family lived in a cabin on the mine. It must have been a very big transition to go from a wealthy life in southern Mexico to being poor in what was the wilderness of Montana.

My dad and his brothers all worked at the mine. Although my grandfather never made it rich again, the mine provided a good living, and all four brothers went to school at the Montana School of Mines in Butte. Each brother took their experience and their education and used them well. One of my uncles is even in the Mining Hall of Fame because of his work in the copper mining industry in South America. Another uncle went to work for a manufacturer of mining equipment, called Joy Manufacturing, and ran their business in Mexico.

My dad started a business selling mining equipment in the northwest. I have many happy memories traveling with him on his sales calls during the summer when school was out. I got to see mining operations all over the mountain west. I loved listening to the stories about the mines and trying to understand the problems they were trying to solve.



Installing timber "sets" to keep the tunnel open

Always talking about the mining industry around our dinner table, with all its latest news and discoveries—and all its latest challenges—seemed pretty normal. I ended up going to the same school my dad did. In fact, he grilled me on the same test answers he had when he had taken the same courses in school!

That's why I knew I wanted to be a mining engineer for as long as I can remember. And why I couldn't wait to tell my dad about my first day of work that evening.

"How was your first day underground?" he asked when I came into the kitchen.

I had already cleaned up after my first shift at the mine. Like all the underground miners, I had taken a shower and dressed in clean clothes at the mine. I was so hungry I could hardly wait for the dinner that was in the oven. It was just the two of us in the kitchen, and he was excited to hear the details.

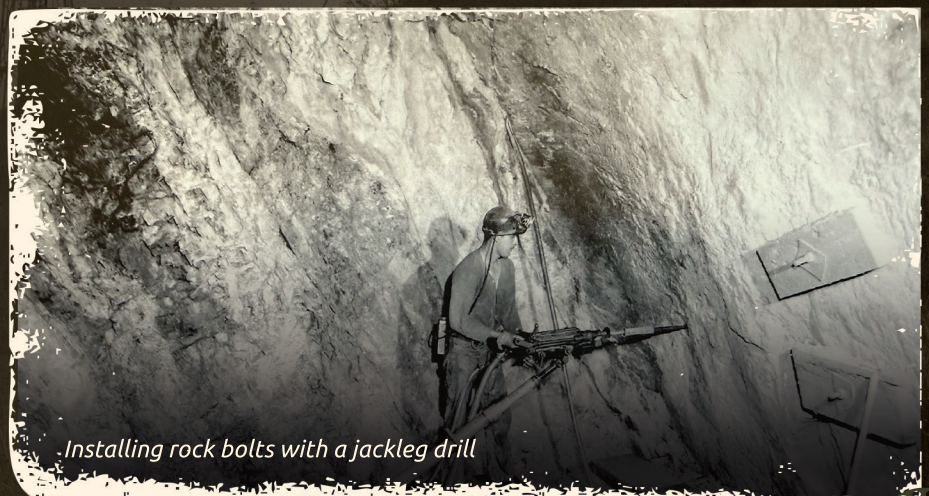
"Well, I reported to the office, got my training, and changed into my diggers. The shift boss was right there waiting to lead me on my first and only task of the day. He asked me my name and then said, 'Stay glued to me.' So, I followed him onto the cage, and we went down to the 5300 level," I told my dad.

Because my dad knew the mine well, I didn't have to tell him that "diggers" are what miners called their work overalls, and a cage is what they called the elevator that lowers the miners down the shaft and into the mine. And he also knew that the '5300 level' meant I went down 5,300 ft below ground into the deepest part of the mine.

I could see my dad's eyes start to sparkle. I think he knew what was coming.

"Wait a minute! You know what my first job was, don't you?" I asked.

"Yep," he said, smiling. "But you tell me. I want to hear exactly what happened."



Installing rock bolts with a jackleg drill

I settled into my chair at the kitchen table and told him the story, trying not to leave out any of the details: "When I got off the cage with the shift boss, we took off our coats because it was so hot in that part of the mine. We were so deep, over a mile deep, that the temperature was more than 100°F and extremely humid."

The shift boss's nickname was Gunner. He had black hair and was about as tall as I was.

"Make sure your cap lamp works! Watch your head," he yelled over his shoulder at me.

We walked single file along a tunnel that was about five feet wide with a railroad track running down the center. The timber frames on the ceiling, called 'caps,' were 5-1/2 ft from the floor of the tunnel. That meant every five feet we had to duck so we didn't hit our heads on the cap.

Between stepping over the railroad ties and ducking, I kept tripping and knocking off my hard hat. It took me a while before I got the hang of it and kept my hard hat on. I was also carrying my lunch bucket and wearing a tool belt, carrying a pipe wrench and a crescent wrench. Back then, we didn't have the additional safety equipment miners have today.

Gunner wasn't one for small talk. In fact, he didn't talk at all during the first hour of walking. Finally, we came to an intersection of two tunnels. He turned to the right.

"Now remember where you turn and in which direction so you can get back," Gunner told me.

We kept walking farther and farther into the mine. Over the next three hours, we came to several intersections. At some we turned left, and some we turned right. Each time, I anxiously worried about remembering for the return trip.

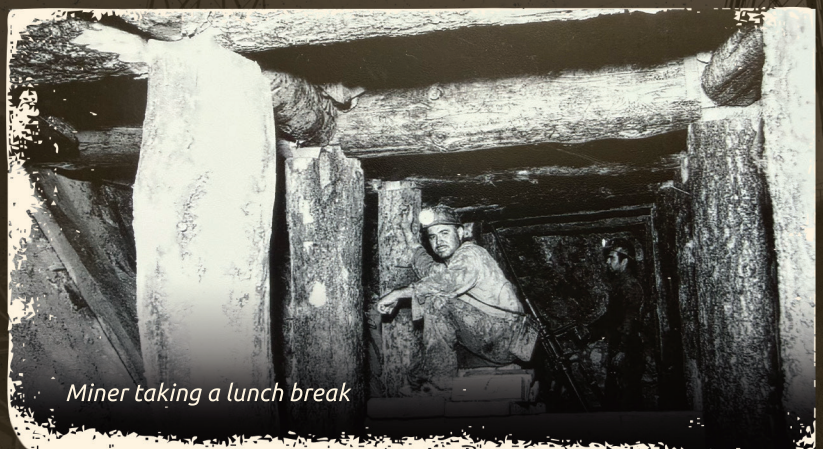
Finally, we turned a corner and came to a place where there were a bunch of large pipes all interconnected. These pipes were all about a foot in diameter and carried the water being pumped out of the mine. This network of pipes and pumps kept the mine dry and workable, and without it, the mine would flood.

Years later, I was there when the pumps were turned off, and the underground mines in Butte were permanently abandoned, but that is a story for another day. Anyway, back to the story I was telling my dad.

"I'm going to send you back here in about a week, and I'll want you to turn this valve a quarter of a turn clockwise," said Gunner. He pointed to a valve and, with a crescent wrench, he turned the valve carefully.

We sat down on one of the pipes and ate our lunch. The only thing Gunner said the entire time during lunch was, "You don't need to bring a full thermos of coffee. Just bring instant coffee and use the water coming out of the rocks."

I watched him hold his thermos up to the water that trickled down the side of the tunnel. Once full, he put the lid on the thermos and swished it around. He finished his lunch and drank up the hot coffee.



When we came to this part of the story, my dad chuckled. He knew Gunner and wasn't surprised.

When we finished lunch, he asked, "You're going to remember how to get out of here?"

"Sure," I said, trying to sound confident.

"Let's see. You go first," said Gunner.

I nervously started back. Each time I came to an intersection, I tried to remember which way to turn. Every once in a while, after a turn, I noticed he wasn't behind me because I had turned the wrong way. I would have to quickly go back to the last intersection and catch up. It was nerve-racking, but such an important lesson. You had to keep a mental map in your head of where you were heading and how to get there. This was long before GPS and all the mapping tools we have today.

My dad smiled at the thought of me hurrying to catch up to Gunner.

"He taught you something very valuable," he chuckled. "Never forget it. One day, you will have someone depending on you like you were with Gunner today."

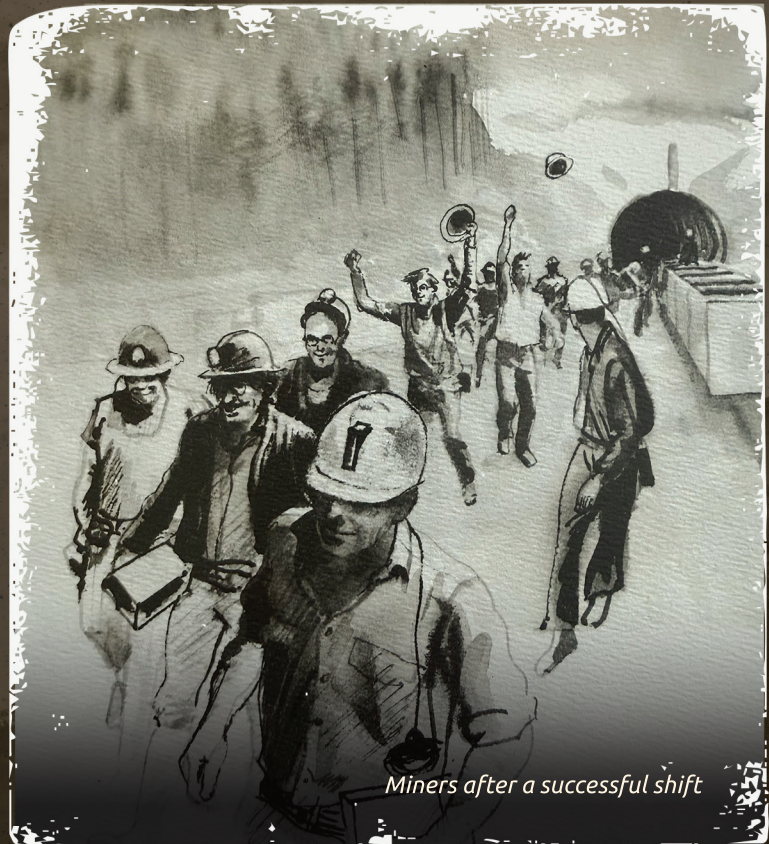
"I bet we walked 10 miles!" I said.

"I think you probably did," he said.

I could tell my dad was proud of me. Proud of the fact that I was following in his footsteps, as he had with his father.

The next week, I went back to that valve all by myself. I was very relieved when, after four hours of walking, I found the place where all the pipes were. I was also very relieved when, after turning the valve a quarter of a turn clockwise, I found the right way back.

To this day, I love being underground. It's a proud profession, and I'm proud to be a third-generation Mining Engineer and underground miner.



Miners after a successful shift