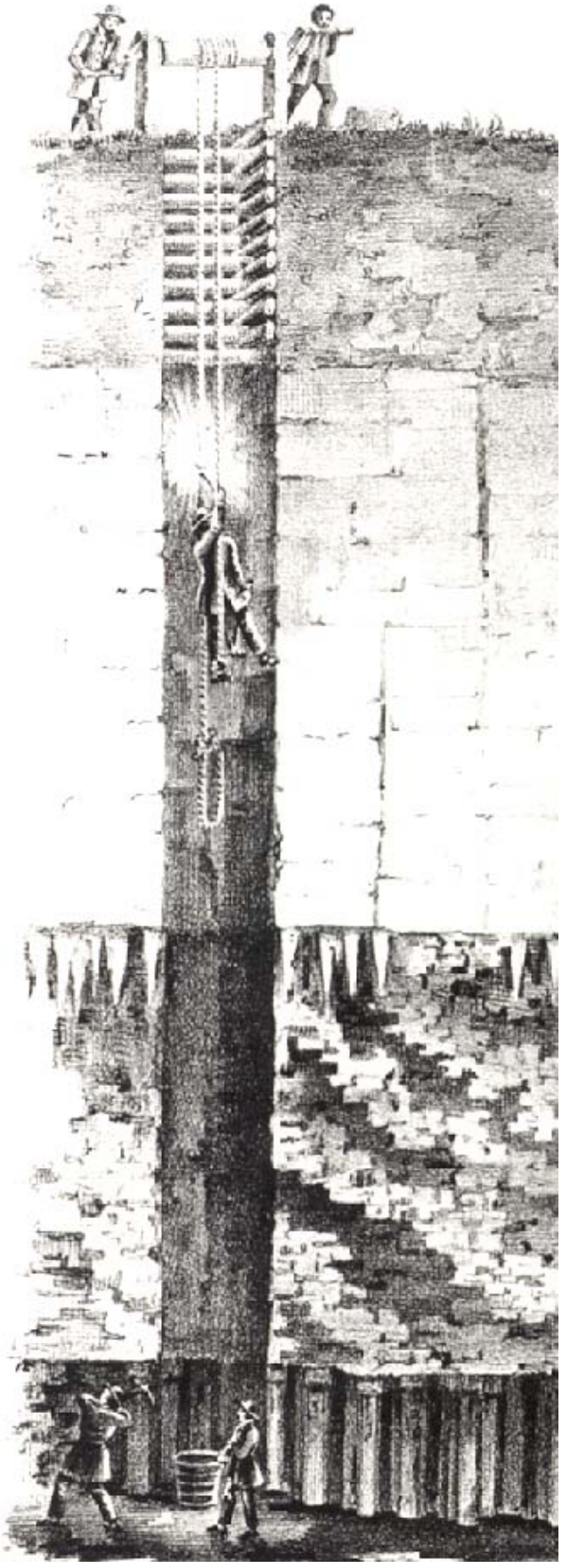
# Mining in Southwestern Wisconsin



Did you know that lead mining in Wisconsin first started with the Native Americans? With just a bit of digging, Native Americans could find chunks of lead ore also called galena. If these were broken open, the mineral flashed and glittered in the sun. Broken into tiny pieces, the glittering mineral could be used as a body paint. For centuries, Native Americans from here traded the mineral with tribes located hundreds of miles away.

Did you know that Native Americans told the French explorers about the mineral? The Native Americans mined the lead ore and then smelted it. Smelting uses heat or fire to separate the metal lead from the other mineral in the ore. The Native Americans built a fire pit and threw the ore into the fire. The lead melted and cooled into a chunk of lead metal. The Native Americans traded lead with the French and later with the Americans for many years.

Now imagine yourself a miner more than 150 years ago starting a new life in Wisconsin. Picture yourself getting off the steamboat in Galena, Illinois so you can buy your supplies. Miners needed tools to work underground. They needed tools for building supports to hold back the rock and dirt. They also needed everyday supplies like food. Some lived out of doors while they prospected for a good place to dig. They listened to each other and followed stories of big strikes. Towns like Platteville grew where ore was discovered.

Lead had many uses. It was an important ingredient in paint. Musket balls and shot were made from lead.

A shaft with a windlass at the top

## Lorenzo Bevans' Mine

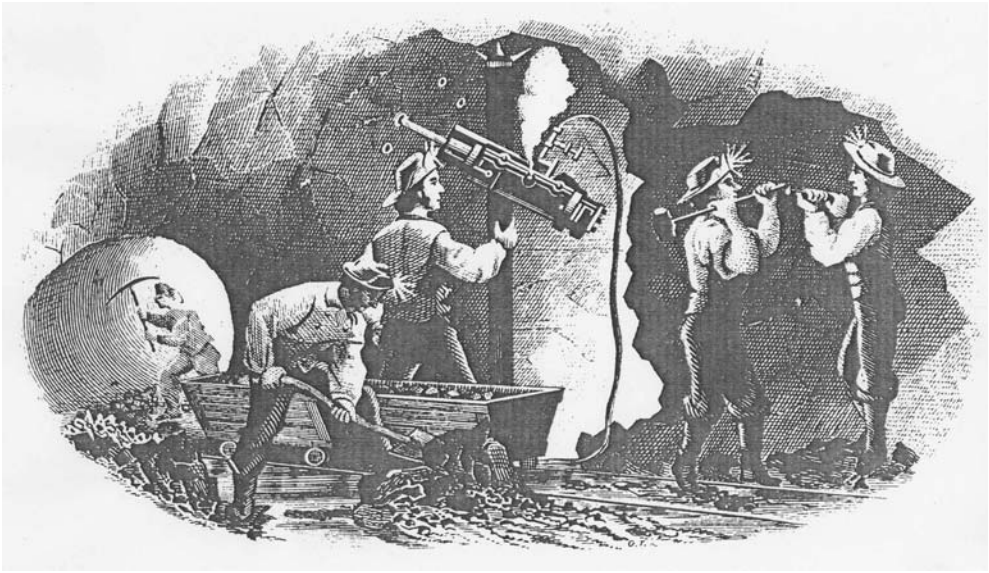
In 1845 Lorenzo Bevans was broke and had a family to support. He and his family were living in Platteville. Lorenzo and a *hand*, his assistant, were digging around two older mines. He had been working there for months, finding only a little lead. Discouraged he almost gave up, when one afternoon, his pick broke through the clay and he found a rich vein. A few hours of work revealed the enormous value of the mine.

That summer, Lorenzo had nearly 20 people working the mine. A shaft went down 50 feet into his mine. Miners below worked with picks to dig out chunks of ore. Over two million pounds of lead ore were found in the first year. Over a hundred years after the miners left, the Mining Museum reopened the mine Lorenzo had worked.

### The Switch to Zinc

Eventually most of the easy to find lead was mined. Then miners had to dig deeper which made mining more difficult. Some mines flooded from underground water. It was getting harder to find the lead ore. If you were a miner and really liked your job, but you couldn't find enough lead ore to pay the bills, what would you do? Some miners quit and found other jobs like farming. Other miners moved away lured by news of gold in California or other strikes in other parts of the country.

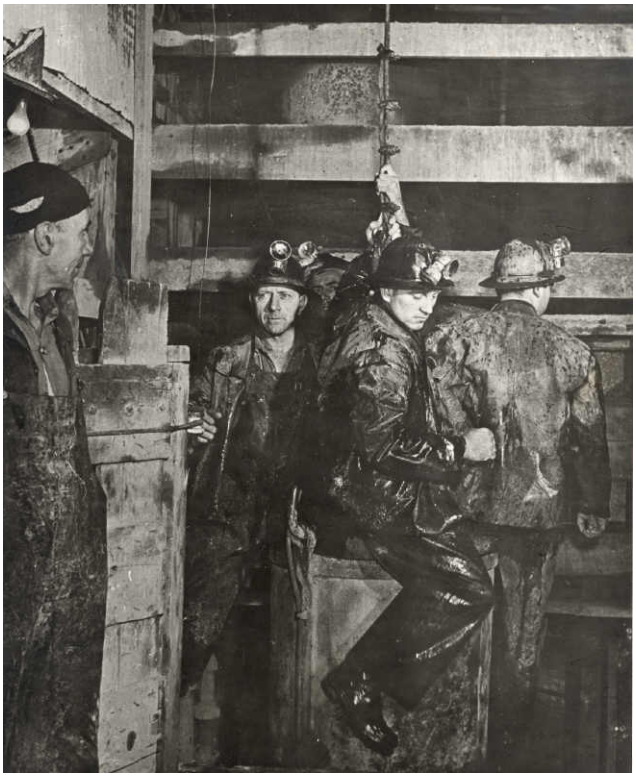
But some miners wondered if they couldn't make money here by mining another metal. In 1860 the first load of zinc ore was shipped out of southwestern Wisconsin. Zinc was used to make brass and coat iron so it didn't rust. Zinc miners went deeper. Different inventions let the miners do things differently.



### Drilling and Blasting

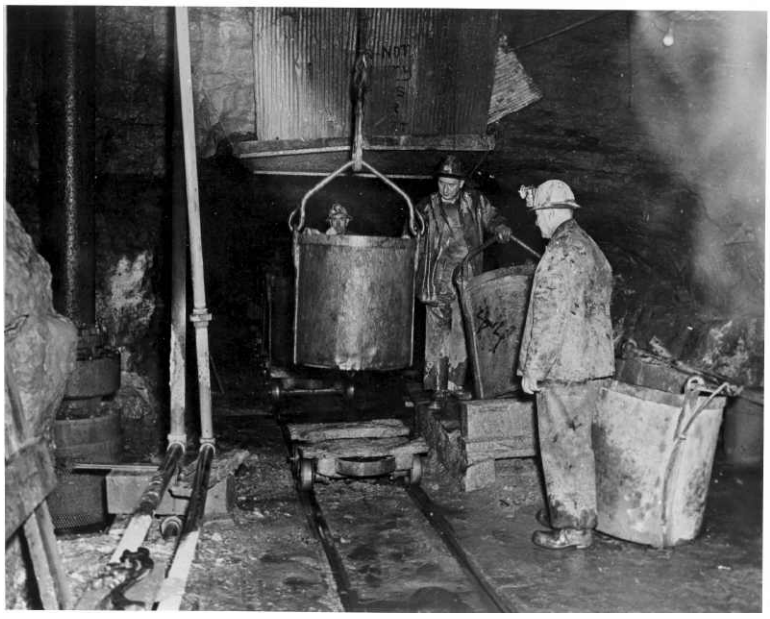
In the center, you can see a pneumatic or air powered drill. Next to it two men are drilling a hole by hand. This is how lead miners drilled holes. The miners filled the holes with gun powder. The blast broke and cracked the rock. Zinc miners used dynamite for blasting once it had been invented.

## Getting In and Out



The lead miners used a windlass to haul ore and miners in and out of the mine. If you were going into the mine you'd hold onto a rope with your foot in a bucket while two miners would crank the windlass and lower you down. Zinc miners used machines called hoists to lift and lower large metal buckets called cans.

When zinc miners went underground, they rode in the cans. Four miners would crowd in, one leg inside and one leg hanging out of the can and then be lowered maybe 300 feet underground. This picture shows miners ready to descend into the mine. You can tell these miners were working in the 1940s by looking at their equipment. They are wearing hardhats and carbide lights. Slickers and rubber boots help keep them dry.



This photograph from the 1940s shows zinc miners at the bottom of the shaft. The large cans on carts are hooked to the cable, and the hoist lifts the cans out of the mine.

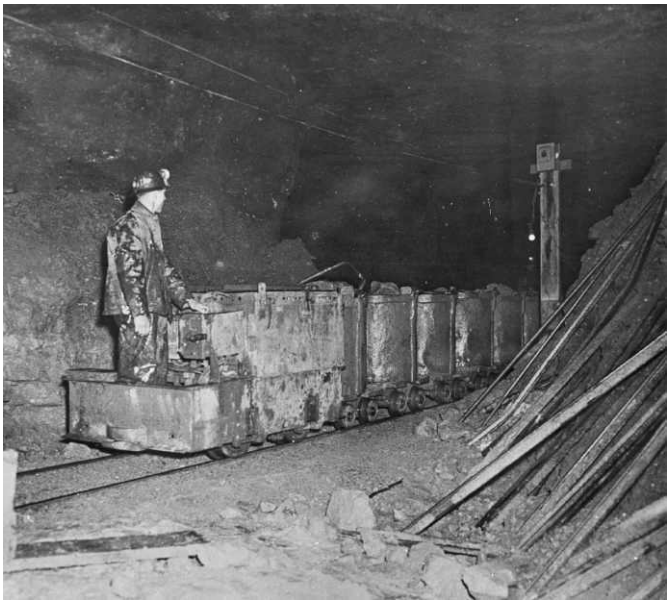
On the far left you can see the dark, iron pipe that carries the water pumped out of the mine. Zinc mines were very wet. Without pumping, the passageways would fill to the ceiling with water.

## Moving the Ore

The lead miners carried buckets or used wheelbarrows to carry the ore. Some of the earliest zinc miners loaded rocks and ore into carts and then pushed the carts on track to move the ore and rock underground. Later, the miners brought mules into the mines and the mules pulled ore cans that sat on carts. Imagine convincing a mule to get into an ore can each morning for a ride into the mine. Mules aren't built to fit in a can so the mules were lowered down in slings. Once underground, the mules were stabled in a section of the mine for months at a time.

By the 1920s larger mines with miles of passageways started to use small gas powered trains to move cans quickly and efficiently from where the men were working to the hoist. Unfortunately the engines produced carbon monoxide which is harmful to people and eventually the mines stopped using gas engine trains underground.

This picture shows an electric train running underground. You can also see the ore cans on the carts.

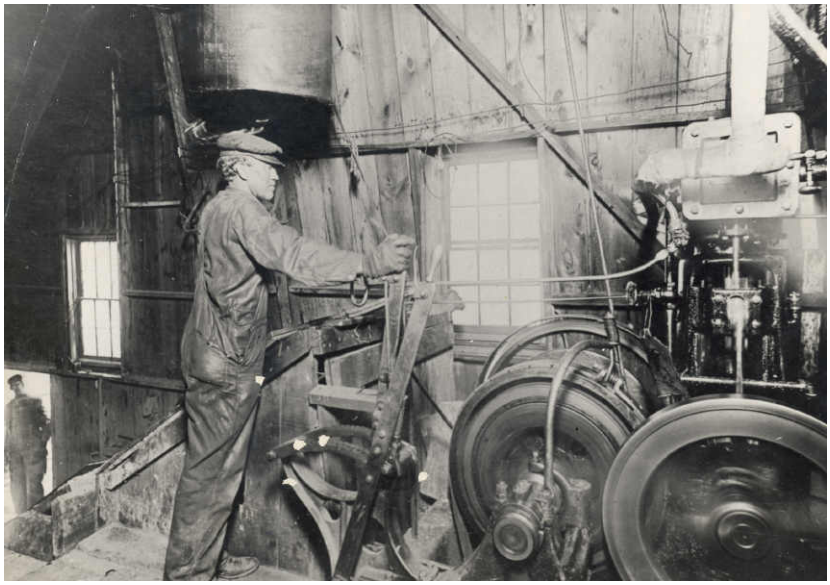


## Aboveground

A large zinc mine had several buildings above ground. You might find an office or a repair shop. One building was used by the miners for changing out of their wet, dirty clothes at the end of the day. The miners eating their lunch here were working in a zinc mine during World War II.

## The Hoist House

The hoist house or headframe was built over the shaft. The hoist is a machine that lifts and lowers cans in and out of the mine. The hoist lifts the can up and then tips the can. The rock and ore fall out onto the grizzly bars.



## Sorting Ore

At the grizzly bars miners sort the ore from the waste rock. Using sledgehammers the miners break apart the rock and ore. The broken pieces of ore would fall between the bars. From there the zinc ore was taken to a mill where it was broken into even smaller pieces and sorted from other stuff you don't want like calcite, pyrite (fools gold) and rock.

The tall building on the left is the hoist house. The large waste rock was dumped onto the waste rock pile on the left in the picture. The short building is part of the mill. In the mill the mixture of rock and ore was crushed. The ore was sorted from the rock using water. These smaller pieces of crushed waste rock were called tailings. Along with water the tailings were pumped from the mill to the big pile on the right. Some of these piles looked like small mountains

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## Hundreds of Years of Mining

Mining has a long history in southwestern Wisconsin starting hundreds of years ago with the Native Americans mining the lead ore, galena. Around 1822 Americans began mining galena and then later started mining zinc ores. The last mine in our district closed in 1979, but even now, if you dig underneath the towns and farms of southwestern Wisconsin and you'll still find zinc and lead ores.

The Empire Mine and Mill was in Platteville just a few blocks from the museum. On this postcard, the hoist house is on the far left on the hill. The cans moved down the tramway to the mill where the ore was crushed. Then the ore was shipped by train to a smelter to be made into the metal zinc. Mining was messy and sometimes hard on the environment. Most of these big piles of waste rock and tailings have been cleaned up or buried.