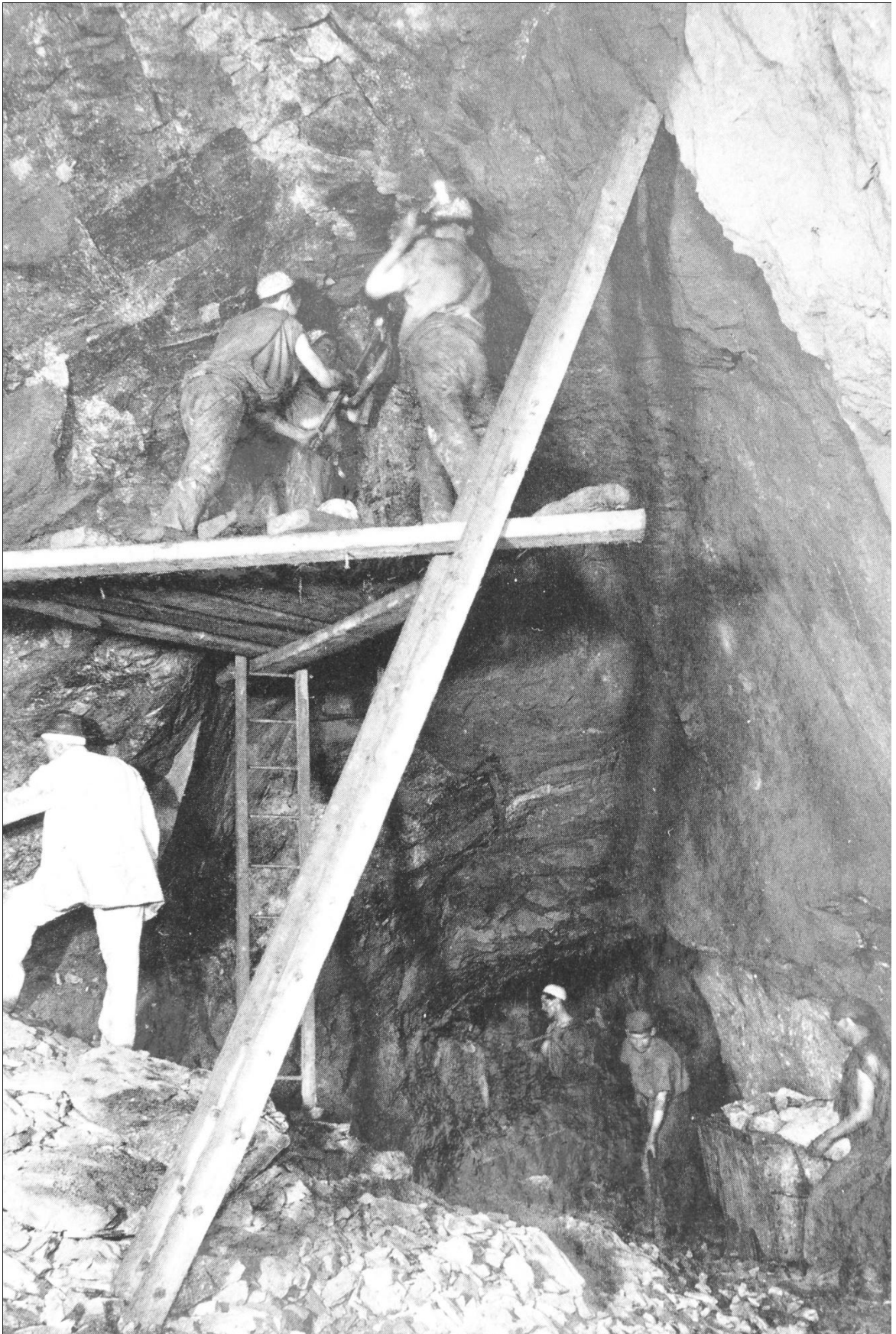


4G Miners at Work



Photograph 1

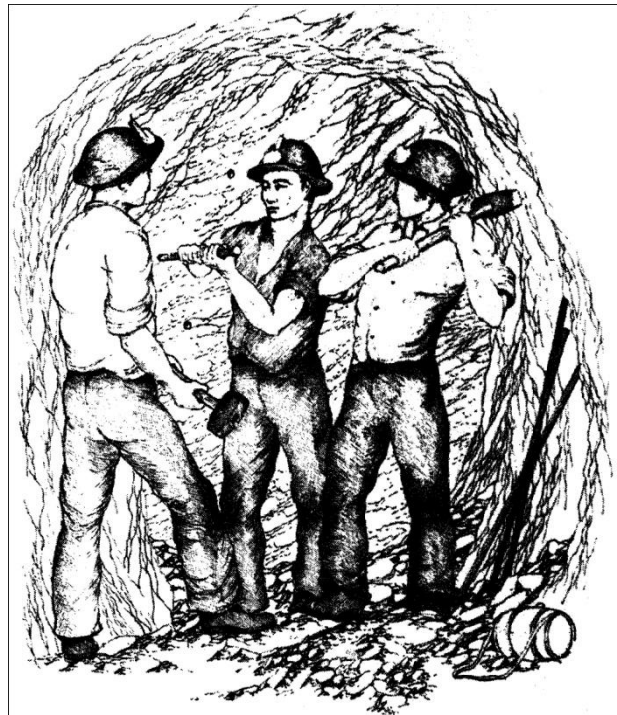
The first photograph shows miners at work in a Cornish metal mine in 1900 in conditions similar to those in Snailbeach at the same time. The mineral vein is almost vertical. The top right corner of the picture shows the upper side, the 'hanging wall' of the STOPE, which is the area worked by the miners. It is unlikely that the miners normally had such a bright light as the one used to take the photograph. This appears to be a flash photograph taken with burning magnesium used to provide the light.

The only real change in 100 years of mining is that the miners have proper helmets instead of the stiffened hats of earlier miners, and they don't have candles or any other lights on their helmets. They must have some other form of lighting, either electric lights or acetylene lamps.

Just visible in the bottom right corner is a truck for transporting the ore via a narrow gauge tramway to the foot of the shaft. One miner is lifting a large block by hand into the truck. Another uses a long handled shovel.

This shows how the mine was extended. First, a horizontal tunnel is dug for the tramway. Then the ore is dug from the sides and the roof of the tunnel. As more of the roof is removed ladders and planks of wood are used to make temporary platforms on which the men work.

A team of three men works on the platform. Two are using hammers to strike some type of rod held in position by the man behind. The drawing on this page gives a clearer impression of this style of working. Clearly mechanical drilling is not being used. They could be drilling a hole by hand in which explosives will be placed later. However, they could be driving wedges into the vein to remove blocks which will fall to the foot of the stope. This should break the ore into smaller pieces to make it easy to handle. The man in the pale coloured suit appears to be inspecting. Since he is wearing a jacket he's probably not doing strenuous manual work. He is standing on a large pile of loose rock. If this is useful ore it will be taken out. Waste rock may have to be taken out of the mine but it is often used to fill in worked out stopes in the mine. This saves on moving waste rock and also helps to stabilise the worked out parts of the mine.



Photograph 2

Here more modern mining is shown. The two men operating the drill are wearing masks to protect them from dust. As regulations requiring the wearing of masks were passed in 1905 the picture

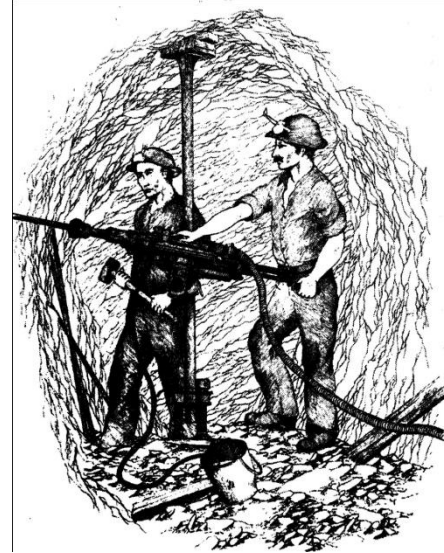


would appear to have been taken after that date. Rather surprisingly, the man in the background is not wearing a mask. The drill, as can be seen from the spiral along its length is a rotary drill, used for drilling fairly soft ground and minerals which are not too hard.

It is clearly a posed photograph because the man in the foreground is holding the drill. He also holds a long tube which is used to extract dust made by the drill, rather like having a vacuum cleaner attached to the drill. The miners have acetylene lamps on their helmets.

He is wearing wellingtons rather than boots. Clearly there is water in the foot of the mine. Large pieces of timber are wedged across the stope to support the sides.

In the upper sketch a percussion rock drill, like a pneumatic road drill, is being used. This is used for hard rock. It is supported by a post wedged against the roof and floor because it is extremely powerful and too heavy for a man to handle.



The lower sketch shows the method of working in a large stope. The tramway is visible at the bottom of the picture. The horizontal tube at about head height is for compressed air. This could be for drilling or for operating other mine machinery; pumping the mine, ventilating or driving winches.

Because of the height of the stope, ore is loaded into a chute to fill the truck.

Long drill bits like the one used in the photograph can be seen in the Blacksmiths' Shop. They were probably used for mining Barytes via Perkins Level.



