

Excavation techniques

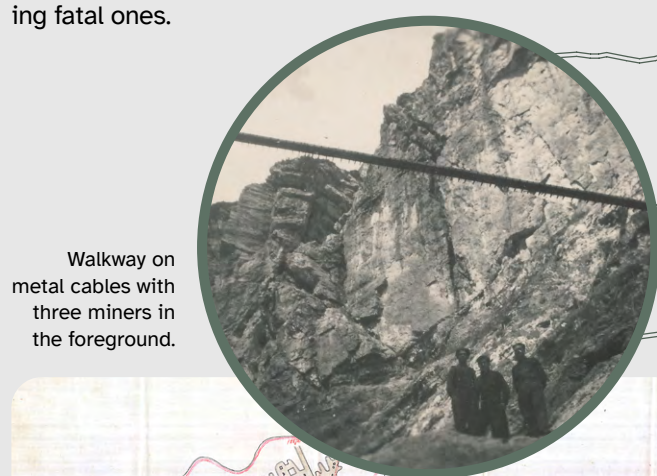


The exploitation of the deposit occurred **by following the productive levels in a horizontal or sub-horizontal plane** and completely backfilling the resulting galleries with the barren rock, that is, the material that does not contain the bituminous levels.

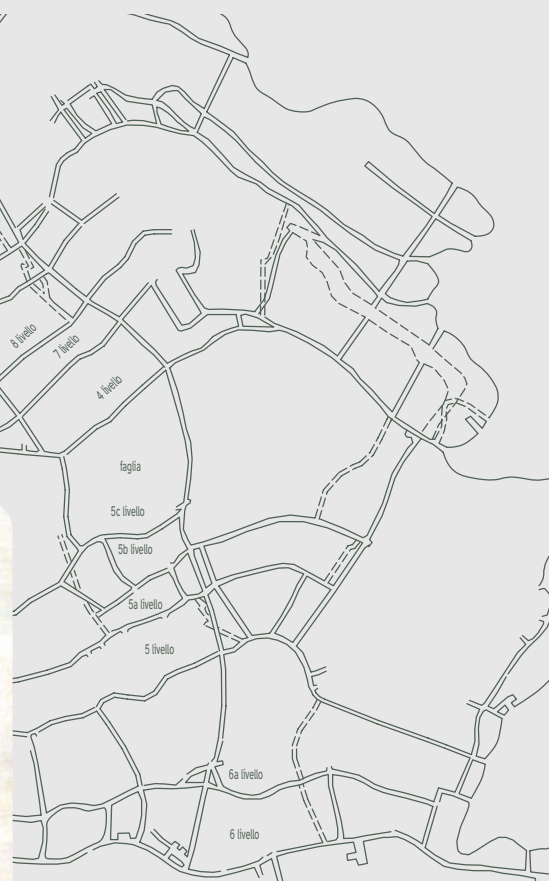
Then they moved on to the **abandoned pillars method** (rock columns that supported the ceiling) and backfilled (dug areas that were then filled with the barren rock), therefore also using the barren rock as a support for the roof. As the exploitation progressed, enormous voids were created between the Dolomite horizons, while the vault of the gallery was often also supported with beechwood beams taken from the municipal forests of the area. The **exploitation method pushed to the maximum**, in order to exploit the entire production horizon, the poor safety on the work site and the twelve-hour work shifts were the cause of **numerous accidents**, up to and including fatal ones.

In the 1920s, interventions were carried out in order to improve access, and a 64 m long **metal rope walkway** was also built **on the Rio Resartico** in order to put the tunnel entrances and the workers' shelters in safe and direct communication. The work shifts were shortened to 8 hours. The material for processing was obtained using blasting, usually exploded at the end of the shift. On the construction site, the recovered material was sorted and the useful rock was loaded onto wagons, while the barren rock was used to shore up the to rear of the working face.

The material was transported from the mine to the distillation plant on an automatic cableway that split into two branches, one 800 metres long and the other 3600 metres long.



Walkway on metal cables with three miners in the foreground.



Surveys carried out in the 2000s.

General working plan of the mine, 30th October, 1937.