

In-mine drilling

Drilling geologists design drill programs and track the progress of drill holes from start to finish. The information gained from drilling helps mine geologists estimate the amount of gold within the ore bodies and is used to generate underground designs to extract that ore. At Fosterville Gold Mine, drilling geologists work specifically with underground diamond drill rigs.

Design the drill program

Before drilling begins Geologists decide:

- › Where to drill
- › How many holes are necessary
- › How long the holes will be
- › What the target is
- › What the best location is to drill from

They then organise drill sites to make sure there is enough power, water and air.



Hole plan is given to drillers

Once drilling has begun, down hole surveys are taken regularly, which allows geologists to track the hole. However, there are many factors that can cause a drill hole to move away from its target. Geologists work closely with drillers to manipulate drilling techniques and vary equipment to reach the desired spacing between drill holes.

Drill core is logged

Once drilling is completed, geologists log the drill core. As much information as possible is recorded. Structural and geotechnical measurements are taken in every hole.

If the hole contains important structures, mineralisation or gold, these areas are sampled by logging geologists.



Reporting the results

Samples are sent to a local laboratory to determine how much gold the rock contains. This is measured in grams per tonne (g/t).

When results are returned, they are subjected to quality control. If the results pass all tests, they are reported and utilised to build resource and reserve models. Engineers then use these to evaluate the validity of mining.