

Open Pit Mining

1 GRAM OF GOLD PER 1 TONNE OF ROCK

Open pit or surface mining involves excavating rock to reach the gold below the surface. The process follows a cycle of drilling, blasting, excavating, hauling, and rehabilitation to mine gold bearing rock.



Macraes Open Pits

We have several open pits on our site, all in different stages of mining, rehabilitation, or closure. Macraes has low-grade ore with a 1:10 stripping ratio. This means to uncover the gold-bearing ore, 10 tonnes of rock must be moved. Once we reach the gold-bearing ore, it only contains about 1 gram of gold per tonne of rock, this is one part per million.



Once an open pit is no longer being mined it may be backfilled with waste material and is rehabilitated with topsoil and planting to return it to productive land. Some open pits are allowed to fill with water and create a lake as the final land form.

Some of the typical features of an open pit include pit walls shaped into a staggered pattern to provide structural support, benches for excavators to sit on as they load up trucks, and haul roads that trucks travel along to move rock out of the pit to the Processing Plant or to the waste rock stacks.



Equipment

The machinery in the open pit is some of the largest in New Zealand. Some of our operators say that our haul trucks are like driving a two-storey house! You'll see other support equipment on the haul roads like water carts, graders, dozers, and light vehicles.



This truck can carry 171 tonnes of rock

Did You Know?

You can fit three utes stacked on top of each other inside the bucket of our 360-tonne excavator.

