

## What happened next?

### Information sheet – James: what happened next ...

James chose a hillside claim and, with a couple of friends, had some success in finding gold. Most of the fragments of gold settled out at the bottom of their system of channels and sluices, and James and his friends were making quite a bit of money.

However, the smallest fragments were getting washed back into the active river channel. James thought that this was wasting precious gold. In 1850, he came across a solution to this problem. Someone offered to sell him some **mercury**.

When James added the mercury to his sluices, it mixed with the gold and formed an **amalgam**. This amalgam settled at the bottom of the sluices, preventing the gold from being washed away. James then squeezed the amalgam through a leather cloth to separate the mercury from the gold, and heated the gold to remove any remaining traces of mercury.

Unfortunately, even when using this mercury extraction method, a small amount of gold was still washed away in the river water. Even worse, some of this was in the form of amalgam, which meant that mercury was going into the river as well. James could not have known at that time that this could cause any harm, but scientists today – more than 150 years later – have found mercury in fish living in reservoirs and lakes that are fed by rivers flowing through the old gold-mining areas.

