

### Episode Three

## Mining Tools

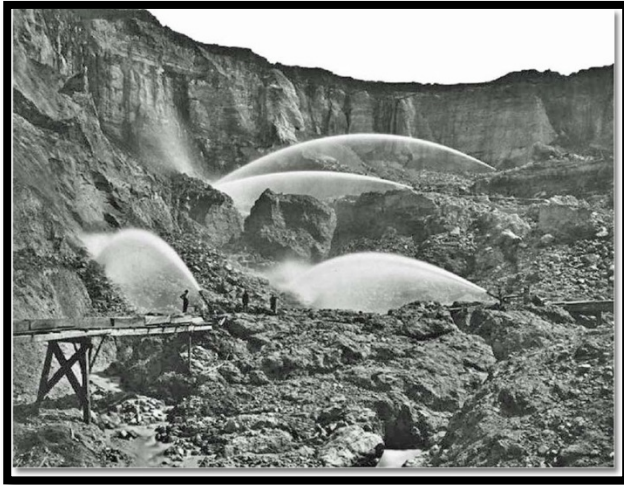
Gold panning was slow work, so the miners created ingenious tools and methods to help process the pay dirt more quickly.

Countless numbers of rockers, sluice boxes and long toms dotted the banks of every stream, creek and river in the Mother Lode.

Hydraulic mining used huge jets of water to wash away cliffs and mountains! Unfortunately the resulting massive amount of erosion and flooding in the Sacramento Delta resulted in hydraulic mining being banned as “a public and private nuisance” and stopped in 1884. But, by 1893, it was permitted again as long as the runoff was controlled.

Stamp mills were the backbone of the hard rock gold mining process. These large, noisy machines crushed the ore into a fine powder so the gold could be separated and recovered using mercury.





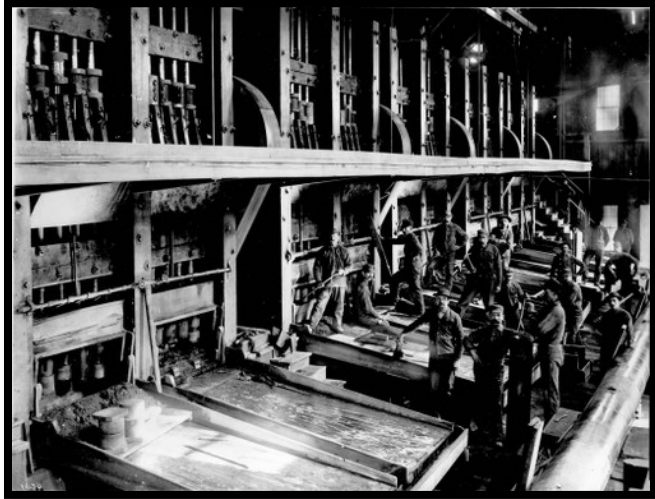
**A single water cannon could fill 82 swimming pools in only an hour. The power of a water jet was strong enough to move a school bus.**



**The sluice box and long tom helped the miners process more dirt at a faster rate. Small strips of wood, called riffles, were nailed along the bottoms of these devices to trap the gold as the water washed the dirt through the trough.**



**Moving the rocker back and forth, like a baby cradle, was similar to the motion of shaking a gold pan. The heavier gold would sink and the loose dirt and gravel would wash away.**



**Stamp mills were loud enough to be heard several miles away! The miners working in these mills would often lose their hearing in just a few weeks.**

**These websites will provide more information  
about mining tools and techniques**

[www.sierracollege.edu/ejournals/jsnhb/v2n1/miningtechniques](http://www.sierracollege.edu/ejournals/jsnhb/v2n1/miningtechniques)

[www.sierrafoothillmagazine.com/goldmethods.html](http://www.sierrafoothillmagazine.com/goldmethods.html)

[www.goldrushnuggets.com/stampmills1](http://www.goldrushnuggets.com/stampmills1)

[www.eyewitnesstohistory.com/californiagoldrush.htm#](http://www.eyewitnesstohistory.com/californiagoldrush.htm#)

# Mining Tools and Techniques

Match the word with the definition

\_\_\_\_\_ *Monitor/Water cannon*

**A:** To wash away rock and dirt with huge jets of water.

\_\_\_\_\_ *Hydraulic mining*

**B:** When the miners checked their day's work looking for gold.

\_\_\_\_\_ *Mercury*

**C:** A very *long* sluice box.

\_\_\_\_\_ *Rocker*

**D:** A serious sickness caused by breathing in rock dust.

\_\_\_\_\_ *Sluice box*

**E:** A wooden water trough that traps gold.

\_\_\_\_\_ *Long Tom*

**F:** A mixture of mercury and crushed, gold bearing rock.

\_\_\_\_\_ *Amalgam:*

**G:** This spins quickly by being pushed by jets of water.

\_\_\_\_\_ *Clean up*

**H:** Miners used this shiny liquid to capture gold.

\_\_\_\_\_ *Water wheel*

**I:** A large hose nozzle that sprays huge jets of water hundreds of feet.

\_\_\_\_\_ *Black lung*

**J:** When miners got sick by touching mercury or breathing its fumes.

\_\_\_\_\_ *Mercury poisoning*

**K:** A small box that sways back and forth like a baby cradle.

ANSWERS: I, A, H, K, E, C, F, B, G, D, J