Mining

The ore process - the road from ore to silver

The rocks of the mountain range contain several different types of ores. In quartz veins there are ore minerals with, among other things, silvery lead luster. It consists of 86% lead and 14% sulphur. The silver content in the lead was about 0.2% at *Gierggevárre* and *Álggavárre.*

Burning

Up until the end of the 18th century, *tillmakning* or "burning" was used as a mining method. It meant that they blew up the rock by lighting fires at the bottom of the mine. The embers were then torn away, water was added and the rock cracked. A lot of wood was required for the preparation, and the *Gierggevárre* mine was located in the mountains, far from woodland. It required too much wood transport for it to be profitable. Instead, holes were drilled which were filled with gunpowder, plugged with clay, and ignited with long sulfurized cotton thread. Gunpowder were transported to Sweden via the Germans who introduced it to Nasafjäll in Piteå Lapland. One barrel of gunpowder is the equivalence of 1500m3 of firewood.

Seperation

The first thing that must be done after "burning" the rock is to separate the ore from the waste rock. It's called *sovring*. The crushing of the rock was usually done outdoors, but in *Álggavárre* there was a special house for *sovring*.

The mill

The impure ore is then finely crushed in a mill. During this process the ore will be finely crushed into ore flour and then washed from sludge and water. This process is called *bokning*.

Roasting

During the next process, the ore must be heated - this is called roasting. The purpose of roasting is to expel water and carbonic acid from the ore and to remove sulfur and other impurities. It took place in an open, slightly sloping oven, where the water could run off.

Melting

The ore is then melted to produce silvery lead. During melting, the slag settled on top of the ore could be lifted off. The product that was now obtained was called working lead and was an alloy of lead and silver.

Separation

The lead ingots were melted in a flame furnace. When zinc oxide and lead oxide ran off, only tinsel remained. It was purified by adding lead, taking with it the rest of the impurities from the silver, which was the final product.

The mining in *Gierggevágge* and *Alggavárre* never had any great national significance.
Here, 42 leaded pieces of veneered silver were produced in the last year of operation, while the Sala silver mill produced 2289 leaded pieces in the same year.

(1 leaded piece=210,616 g).