

## **Silver Veins**

The cliffs across the river here are covered with diagonal cuts and cracks—fissures that indicate where veins of silver run through the rock. Many of the cuts are deep, and the openings of narrow tunnels can be seen near some of them. Miners began digging into this hillside in the mid-1500s with chisels and hammers. After extracting silver ore from veins close to the surface, they dug tunnels and shafts to be able to follow the often-abundant veins deeper and deeper into the mountain.

As can be seen here, the silver veins running through Mt. Sennoyama, the ancient volcano at the center of the Iwami Ginzan Silver Mine, were both numerous and comparatively easy to reach. This was due to a fortuitous geological process that began some 1.5 million years ago, when a volcanic eruption caused a pileup of extremely hot ash and partially hardened lava. This material solidified into a mountain composed of rock that was relatively brittle.

As volcanic activity continued beneath the newly formed mountain,

magma heated groundwater from below, releasing elements such as silver and copper from the nearby sediment into the water. The metal-containing liquid then seeped upward through cracks in the bedrock, penetrating the porous Mt. Sennoyama and distributing silver throughout the mountain. As the liquid cooled and solidified due to changes in temperature and pressure, countless silver veins were left in the coarse rock.