HUMAN INTERVENTION

The first inhabitants in Valais during the Bronze Age exploited local copper ores. The Romans discovered new mines and mineral extraction continued up to the 20th century with the Comtesse Mine at Praz-Jean, containing lead, zinc and silver. Iron ore found near Lana also contributed to local tool building.

In the Val d'Hérens hot water springs exist in Combioula.

The Bronze Age began 4000 years ago in southern Europe and the mining of copper in the Alpine valleys speculated as early as the 3rd millennium BC. Many sites in Valais harbour relics of this ancient civilization.

From the 2nd millennium BC mineral exploitation probably increased enriching the locals, as testified by the rich tombs found in Valais from 1800 -1650 BC. This Rhône culture may have considerably developed the new technology before declining in 1600 BC.

Further reading>>

Much later the Romans encouraged mining as they did all over the Empire. The first attested mines are the Mont-Chemin mines, close to Martigny in the 5th century. (Ansermet 2001).


Geology museum in Lausanne (biography)

Perhaps the Val d'Hérens harbours less mines than the neighbouring Val d'Anniviers, but there are nevertheless some important exploitations alongside others forgotten long ago. Copper, used to produce bronze and relatively common in the area, was already exploited by the first inhabitants. In Satarma near Arolla there are signs malachite suggesting an ancient copper excavation. Close to Suen in the St-Martin district more than 100 tons of copper were produced during World War I from green malachite and blue azurite.

But the most important mines are situated above the village of Praz-Jean in the Hérémence district. The Comtesse and Barma Mines between 1300 and 1500 metres of altitude were exploited for lead, zinc and silver from the beginning of the 19th C until 1943. Several hundreds of tons of lead in the form of galena, and a ton of silver were extracted from these mines. The mine of Six des Fées, fée means fairy but also ewe in local patois, produced lead, copper and silver, although the cliffs are now only accessible to climbers.
In Lanaz, close to Les Haudères, a small iron ore mine produced sufficient quantities of iron necessary for local tool making during the 19th C. Pierre ollaire, or soapstone, was extracted for the manufacture of kitchen utensils and furnaces close to Evolène, amongst other mostly forgotten mines. According to Prof. Pfeifer, around twenty sites of Pierre ollaire deposits exist in the region, some underground.

Further reading>>

The valley also contains a very strategic metal, tungsten, which was prospected in the 1980's in Liez close to St Martin. And finally the colossal digging of the Grand Dixence Dam produced a new type of mining: the separation of iron ore, magnetite, from the sand of the of Praz-Fleuri moraine used to make concrete. Between 1955 and 1961, over 15'000 tons of high quality ore were sent to the Von Roll steel works in the Jura.

Many other types of rocks have been or still are exploited in Valais, for construction such as the large slates found on the mountain houses

Further reading>>

During the 20th century the glacial reliefs have been ingeniously used to build dams to produce hydraulic energy, and the Valais has become the biggest producer of green energy in Switzerland. South of the Rhône valley the sometimes massive metamorphic rocks and the nappe structure present ideal sites for dams. This is more problematic north of the Rhône where the calcareous nappes are often highly fractured and karstified.

To know more>>

Deep fractures also allow for hot water to remount, explaining the numerous thermal hot water springs in the Valais. In Val d'Hérens the hot water springs in Combioula below Euseigne are rich in iron and sulphur. The other great geological challenge is the construction of long tunnels under the Alps and currently the world's longest train tunnel, 57 km, is in the St-Gotthard region.