On the tracks of century-long mining on the mountain Jauken

Introduction

Mining actvities in Carinthia go back to the 10th cenury B. C. and thus have lasted for 3.000 years. Today mining is economically unimportant, not least in the Gail Valley.

In the Gailtal and Carnic Alps the following minerals were mainly mined since Roman times:

- Iron (siderite, limonite, pyrite, marcasite) near the villages of **Dellach** and **St. Daniel**, Kötschach, Nölbling Alm (about 24 occurrences)
- Lead and zinc minerals like galena, sphalerite-ZnS, smithsonite or zinc spar Zn[CO_3]), cerussite (white lead ore) on mountain **Jauken, Plonlacke**, Radnig, Nölblinggraben, Leitenkogel, Zollner, Judengras and other
- Copper (malachite, azurite, chalkopyrite) in **St. Daniel, Plonlacke**, Angerbach-, Kronhofgraben , Obere Tschintemunt-Alm (Elferspitze)
- Graphite and coal (Guggenberg, lignite near Podlanig, Nieselach, Straniger Alm, Naßfeld, Krone, Tomritsch)
- Gypsum (Lammergraben near Laas, **St. Daniel**)
- Noble metals like gold and silver south of the Gitsch Valley (Sattele and Wulzentratten)

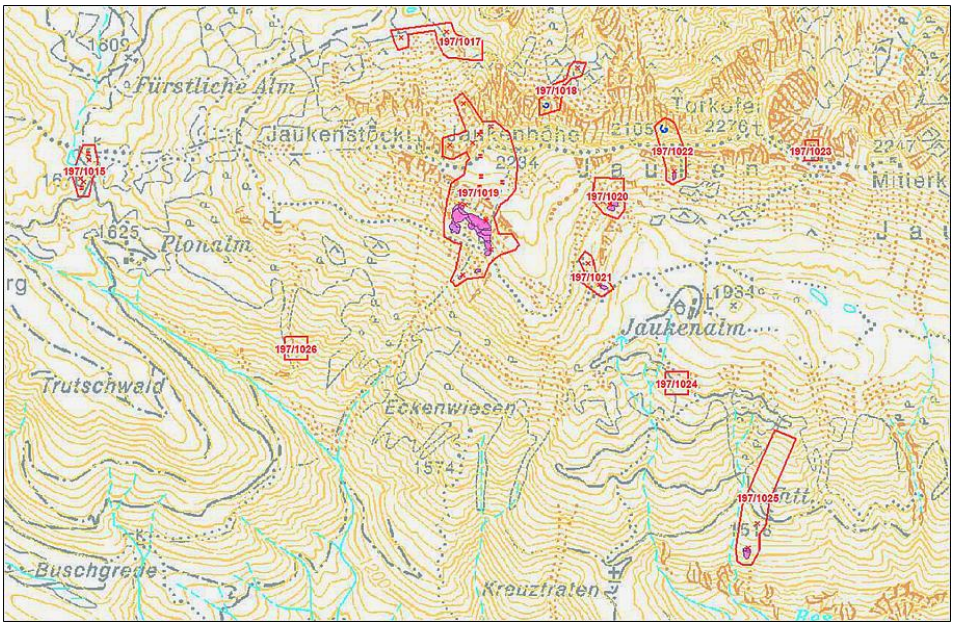
The attentive hiker and mountaineer can find in many regions which are hardly accessible, remains from old mining activities. Besides ruins of mining houses, mine layouts and shorter and longer galleries, collapsed shafts and mining heaps frequently may occur but also ores, slag and working tools which testify past active mining.

The procect initiated by the farming association Jaukenalm aims to restore the most improrant old mining tracks along a trail from Jaukenalm to mountain Jaukenstöckl and further on to Plonalm which means that the most important mining evidences are presented to the wider public in a modern manner.

To reach this goal trilingual panels in an attractive design with historic and up to date photos will be established accompanied by short texts which will be mounted at specific sites. On these panels the mining activities on the mountain Jauken reaching back into the 16th century will be reviewed.

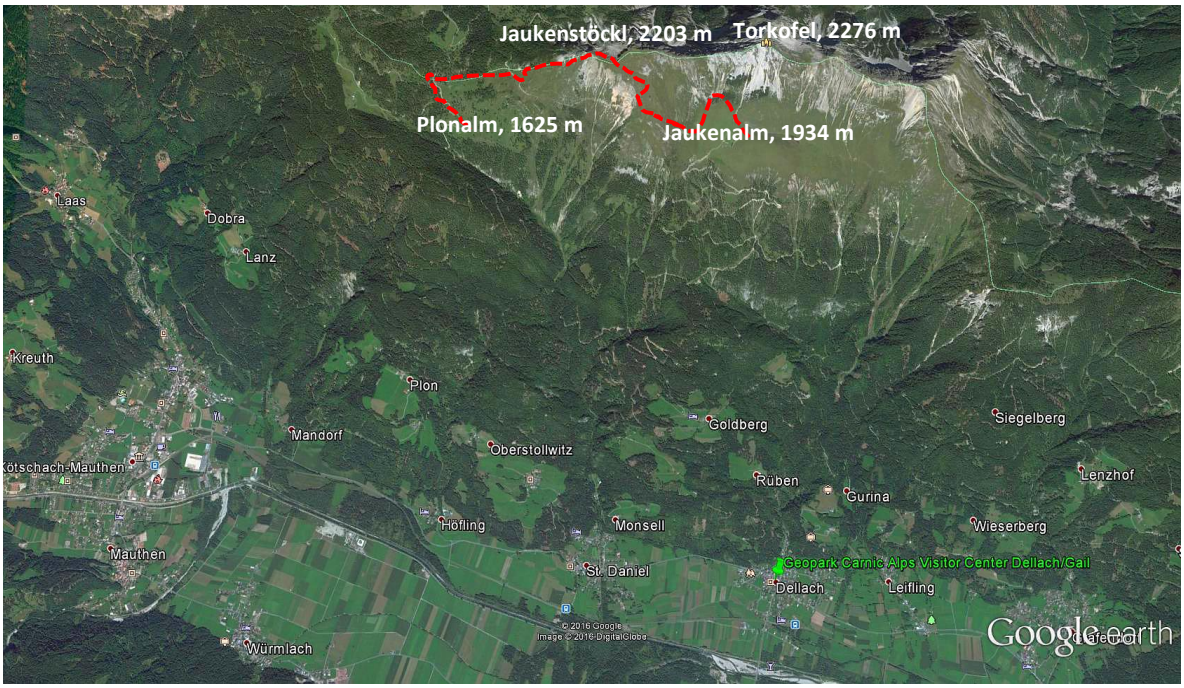
The Geotrail will be constructed in a way that normal people have access without any danger in the open terrain. However, it is recommended to avoid any access to the galleries which may tend to fall in and to collapse.

The mining area Jauken-South



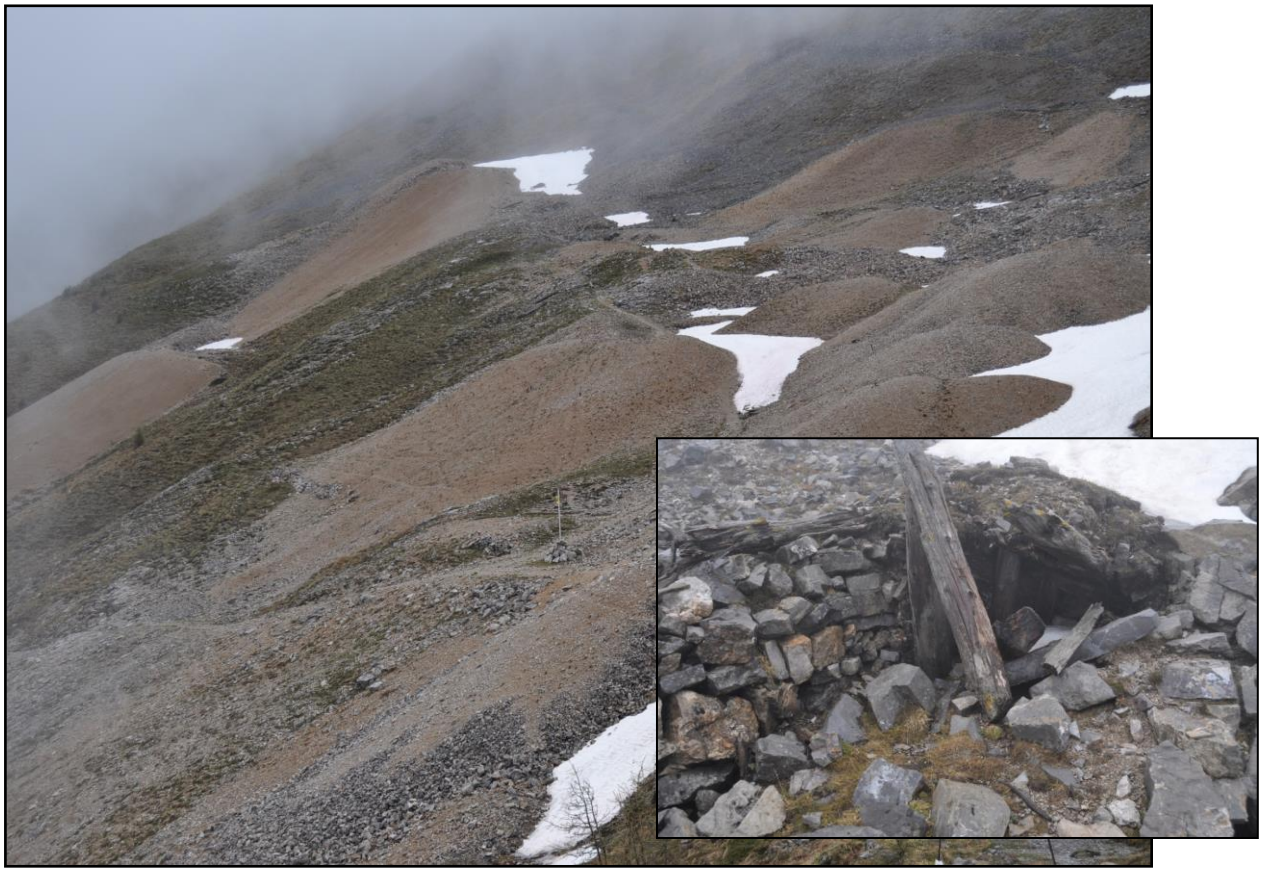
The main occurrences of Pb and Zn ores in the mining area Jauken South are galena (PbS), sphalerite (ZnS) and smithonite or zinc spar ($Zn(CO_3)$)

Source: Mining archive, Geological Survey of Austria



Hiking trail between Jaukenalm and Plonalm (Map ©Google Earth)

Mining for lead and zinc on the mountain Jauken played a major role in this area belonging to the community of Dellach/Gail. The mining peak for lead and zinc minerals was between the 16th and the 17th century. In the year 1786 some 2 tonnes lead and about 2.000 tonnes smithsonite were extracted. Around the year 1867 even about 2.500 tonnes ore with a zinc content between 30 and 35% zinc was produced.



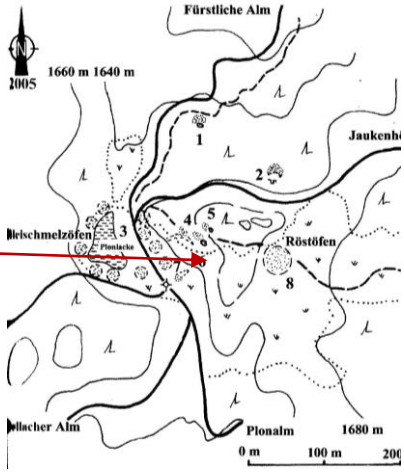
Mining heaps and ruins of mining houses of the lead and zinc mining area Jauken-South.
Extraction 1867: 2.500 t ore with 30-35% content zinc. Mine was closed in 1901.

Plans for panels

1. **Jaukenalm:** Introduction of the mining Jaukenalm
2. **Oster gallery:** Old trenches and test excavations along the trail from Jaukenalm in western direction
3. **Mining heaps and old mining ruins near König gallery:** Mining of sphalerite, galena, pyrite, chalkopyrite, smithsonite (Galmei), wulfenite, cerussite
4. **Frauen gallery:** old water supply pipe
5. **Trail from mining heaps to Jaukenstöckl:** old trenches
6. **Wohlgemut gallery:** this famous and partly collapsed gallery is located northeast of Plonlacke
7. **Plonlacke:** remains of old smelting furnaces

Left: View of the mining heaps on the southern side of mountain Jauken; right: portal of König gallery

Old trenches on the trail to Jaukenstöckl



Smelting furnaces for lead and zinc at Plonlacke. Map after A. Pichler (2009).
At least 10 primitive smelting furnaces were in operation here. With the help of water from the pond the ore was separated from the surrounding Triassic limestones.

Collapsed shaft (pinge) und portal of the 45 m extending Wohlgemut-gallery northeast of Plonlacke.