



## **The Traversella mining site as Piedmont geosite**

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The multidisciplinary research project PROGEOPiemonte selected 9 strategic geothematic areas that have been and are still investigated as representative of the geodiversity of Piedmont. The dissemination of the knowledge connected to geological history, climate and environmental changes, natural hazards, soil processes, and georesources, not only of the geosites but also of the museum collections, has been and will be spread, evidencing the mining and quarrying activities, and by means of science exhibits and Nature trails.

One of the nine selected geosites was the Traversella mining area. Traversella mine is located nearly 50 km north of Turin, and it was (together with the neighbor site of Brosso) one of the most important mining site for iron exploitation. The Traversella orebody was exploited from late medieval age up to the middle XX century. It is a characteristic contact-metasomatic deposit at the contact between granodiorite and preexisting host rocks (micaschists, gneisses and marbles of the Sesia-Lanzo Zone) and the mining district represents the only skarn-type mineralization in the Alps. The iron mineral exploited from different veins and mass pertaining to the contact aureola was primarily magnetite, an iron oxide easy to treat in cast iron, employing the technology locally available before 1900. After the beginning of XX century the extraction involved also pyrite and chalcopyrite (iron and copper-iron sulfide) useful for the production of sulfuric acid. The mine, after some interruptions and re-openings, was officially closed in the second half of the XX century, due to the high exploitation costs and the competition of the foreign mine deposits interested by iron extraction.

Outstanding mineralogical samples coming from these two mines are displayed in the most famous museum all over the world. This research aims to highlight the extraordinary importance of the Traversella and Brosso mining sites both from a scientific point of view, and industrial point of view (these activities contributed to the industrial development of Piedmont Region).

Another goal of the present research is to illustrate the sociological and environmental impact of mining activities on the surrounding region. As expected results, new series of books and booklets will be published: they will enhance the historical background of mining extraction, the mineral dressing activities connected to Traversella mining site and the mineralogical richness of the investigated area.