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SEM ANALYSES OF MINERALS FROM ALLCHAR DEPOSITE - REPUBLIC OF MACEDONIA

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The Allchar Sb-As-Tl-Au volcanogenic hydrothermal deposit is situated at the northwestern margins of Kožuf Mts. (Republic of Macedonia), close to the border between Republic of Macedonia and Greece. From the geotectonic point of view, ore mineralization is related to a Pliocene volcano-intrusive complex located between the rigid Pellagonian block in the west, and the labile Vardar zone in the east.

From the metallogenic point of view, the Allchar deposit belongs to the Kožuf ore district as part of the Serbo-Macedonian metallogenetic province.The locality is

one of the Unique deposits in the world not because of its size but because of its mineral composition and diversity, including an abundance of particularly rare thallium sulfosalts.

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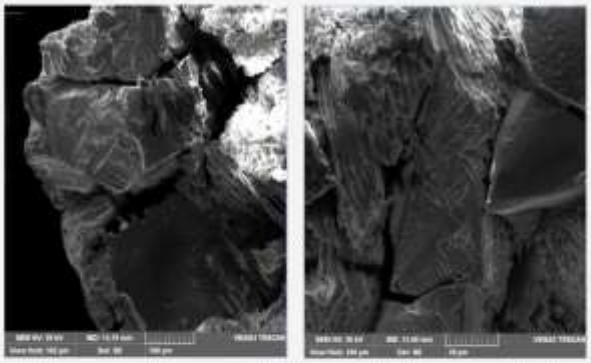

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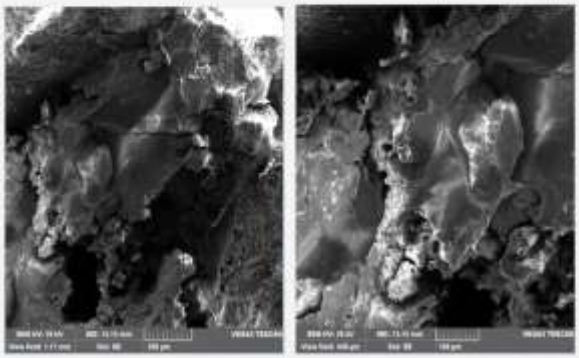

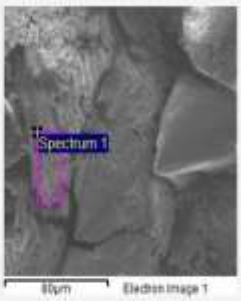

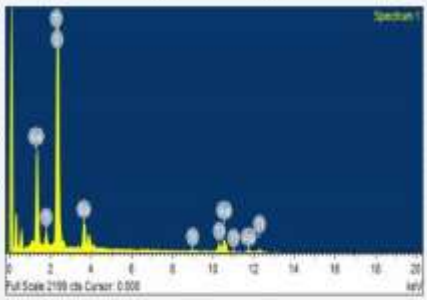

The Allchar deposit is polychronous and polygenetic.

It has formed as a result of complex physico-chemical processes occurring in a heterogeneous geological environment, in the interaction of multi-stage hydrothermal fluids with the products of polyphase magmaticactivity and surrounding sedimentary and metamorphic rocks.

The major elemental components of the Allchar deposit are Sb, As, Tl, Fe and Au, accompanied by minor Hg and Ba, and traces of Pb, Zn, Cu. Enrichment of Tl in the Allchar deposit is closely associated with increased concentrations of volatiles, such as As, Sb, Hg.

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