

MINERALOGICAL ASPECTS OF SOME HYDROTHERMAL ZEOLITES FROM COPACENI, ROMANIA

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The studied area is situated in the NE part of Trascau Mountains, 20 km SE from Cluj-Napoca, in the close proximity of the European road E60 near Copaceni village, Cluj County.

The geological formations occur in the area belong to the ophiolitic type Mesozoic island-arc magmatism from Trascau Mountains. These formations are characterized by the presence of pillow-lava basalts and massive basalts, included from a tectonical point of view in the Rimetea Nappe (NICOLAE *et al.*, 2001). The analyzed samples were collected from an abandoned quarry, where an alternating succession of compact basalts and basalt flow sequences can be observed easily. In the upper part of this sequence a layer of volcanoclastics occurs.

The post-magmatic mineral association – hydrothermal and supergene – crystallized along the fractures and void spaces of the basaltic rocks, especially volcanoclastics. Neoformation minerals are basically represented by carbonates,

silica, clay minerals, and zeolites. The methods of investigation we have used (transmission polarizing microscope, stereomicroscope, X-ray diffraction) helped distinguish the presence of six zeolites (analcime, heulandite, wairakite, stilbite, barrerite, chabazite), associated with both micro- and macro-crystalline calcite and silica.

The goal of this study is to perform the mineralogical description of the area and also to emphasize the occurrence of new zeolites. For the near future, our aim is to begin a detailed case study to determine physical and mineralogical properties of one of the zeolites we found (barrerite) with extremely rare occurrence in general.

Reference

- NICOLAE, I., SACCANI, E. & TASSINARI, R. (2001).
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