



MAGYAR GEOFIZIKUSOK EGYESÜLETE

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structural inference can be listed with the location in the flue before the outbreak, so the bombs are considered indicators of the eruption. Other volcanoes in studies done in accordance with the knot estate vent eruption prevention and the eruptuion model. The vent in the upper range of thick, clear hand without bombs are located underneath the band structure and the core-rim characterized by the appearance of concentric follows. I have described the two new types of bombs lowermost part of the stack. The bombs stain the newly arrived masses of magma generated by magma mixing in the vent are created as a result. The magma mixing enormous pressure on the magma column which displayed evidence of magma within the crystal cracked. The bright band in the vent bombs lowermost part of the magma mixing as a result of following the influx of fresh magma is formed. The flue pressure caused by itself, without any external fluid is sufficient conduct of the eruption, thus vulcanoi bursts into new approaches to relocate Csomád for similar dactik volcanoes.

Electron backscatter diffraction measurements on upper mantle ultramafic xenoliths from the Nógrád-Gömör Volcanic Field

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Theoretical

The Nógrád-Gömör Volcanic Field is one of the five occurrences in the Carpathian-Pannonian region where upper mantle ultramafic xenoliths are hosted in Plio-Pleistocene alkali basalts that can be found on the surface. Petrographic and geochemical features of these xenoliths have been providing matter to various studies in the past few decades, however, there is a lack of examinations focusing on crystal preferred orientation (CPO). CPO means the characteristic directions of crystallographic axes of the major rock forming silicates in the xenoliths (olivine and pyroxenes) according to the plane of foliation, and is resulted from changes in the physical conditions of the upper mantle (p, T, stress, etc). Electron backscatter diffraction (EBSD) is an analytical method that can measure CPO in mineral grains of a xenolith thin section, and thus can be used to gain information about

deformation processes that took place in the mantle domain represented by the studied xenoliths.

We selected 13 representative lherzolite xenoliths from 7 quarries of the Nógrád-Gömör Volcanic Field with previously studied petrography and major element geochemistry to be measured with EBSD. Our results showed that the distribution of crystallographic axes in olivines, plotted on a series of pole figures, can be divided into three distinctive groups based on the alignment of the *a*, *b* and *c* axes. These groups more or less correlate with petrographic textures, geographical locations, calculated equilibrium temperatures and olivine J-indexes, which indicate the strength of the xenolith fabric. The difference in equilibrium temperatures, and hence in the estimated depths of origin, may be responsible for the observed distribution of olivine crystal axes. Nevertheless, various CPOs suggest that there may be more deformation effects that have activated on distinct levels of the mantle beneath the Nógrád-Gömör Volcanic Field.

Genesis of an Epigenetic Copper Occurrence at the Darnó Hill

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Theoretical

The geology of the Darnó Hill in NE Hungary is very complex, as submarine volcanic rocks together with sedimentary successions of different age and origin are found there. The studied epigenetic veins are located in Triassic and Jurassic pillow basalts.

The veins contain mostly quartz and prehnite with copper- and iron-containing ore minerals, but at the contact with the host rock, basalt clasts together with chlorite and epidote are also found. As alteration products of the primary chalcopyrite, malachite, azurite, pyrite, hematite, limonite and bornite were identified. Quantitative analyses of the mineral compositions showed that the chalcopyrite always contains a small amount of Co and sometimes As, Zn, Te occur. Based on the fluid inclusion study of the vein filling quartz, the minimum formation temperature (T_h) was between 169-228 °C, while the salinity of the crystallizing fluid was 2-3 NaCl equiv.wt%. Quantitative analysis of chlorite syngenetic with quartz in the veins allows calculating 228 and 258 °C as formation temperatures. Joint