

GEOLOGICAL-PETROLOGICAL FEATURES OF THE PUKA OPHIOLITE MASSIF (ALBANIA)

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The Puka ophiolite massif is part of the western ophiolite complex of Albania. Its surface is 210 km². Petrologic, geochemical, metallogenic data and the regional correlation with the ophiolites of the Mediterranean Alpine realm suggest that this massif belongs to the MOR type ophiolites.

Mapping on 1:25000 and 1:10000 scales and detailed field observations permit to distinguish mantle, cumulate and volcanic sequences.

The ultrabasic mantle sequence is represented by clinopyroxene lherzolites and harzburgites with rare dunite lenses. In the upper part of the sequence plagioclase lherzolites and dunites are found, whereas in its uppermost part olivine hornblendites are developed.

The cumulate sequence is represented by a reduced plutonic series. The main rocks are troctolite, olivine gabbro, gabbro, ferrogabbro, gabbro norite and trondhjemite. The latter one forms lenses or small intrusions.

On top of the plagioclase-bearing ultrabasics metamorphosed basaltic volcanics of MORB type are situated. Further upward the volcanic sequence is composed of Ti-rich basalts, hyalobasalts, variolites and dolerites. The ultramafic intrusions (pyroxenites) are located at the contact between mantle and cumulate sequences. The dike series is represented of pyroxenites, micro gabbro, gabbro, troctolite and trondhjemite. The dikes cut the transitory mantle-cumulate zone, and partially the upper mantle rocks.

Generally, the textures of the ultrabasic sequence are protogranular and porphyroblastic, while for the cumulate sequence crescumulate, adcumulate and heterocumulate textures are characteristic.

Chromite and Ni-sulphide ores and different industrial minerals have been identified in the Puka ophiolite massif. The chromite mineralization is found within the mantle and cumulate sequences and shows variable morphologic, texture and composition features.