

## VERMICULITE DEPOSITS OF ECONOMIC INTEREST IN THE ASKOS AREA, THESSALONIKI COUNTY, N. GREECE

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More than seventy, relatively small and elongated serpentinite bodies are known in the Vertiskos formation of the Serbomacedonian Massif in northern Greece. Reconnaissance studies in nearly half of them in the area north of Volvi and Langada lakes, revealed that vermiculite and talc mineralization characterizes their contacts with the surrounding two-mica gneisses. Intense schistosity and similar mineralogical composition (antigorite, Cr-rich magnetite, chlorite  $\pm$  talc) are observed in the serpentinite near the mineralization.

Vermiculite, irregular in shape masses of vermiculite and tremolite  $\pm$  (chlorite + talc), and talc with disseminated chlorite and pockets of serpentinite, form in that order discrete zones in gneiss-serpentinite contacts. The zones, which exhibit sharp contacts, have highly variable thickness varying from a few tens of centimetres up to 5 metres.

Detailed x-ray diffraction work, thermoanalyses tests and chemical and microprobe analyses suggest a trioctahedral vermiculite with some dioctahedral replacements. Preliminary exfoliation tests (rapid heating at 870°C) gave an expansion factor of 7.

## EVIDENCE FOR HIGH PRESSURE METAMORPHISM IN THE VERTISKOS GROUP OF THE SERBOMACEDONIAN MASSIF: THE ECLOGITE OF NEA RODA, CHALKIDIKI

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Small eclogitic bodies participate in the Vertiskos group of the Serbomacedonian massif. They crop out among folded migmatitic gneisses and amphibolites. The eclogites have been amphibolitized and further retrograded to greenschist assemblages. Near Nea Roda in Chalkidiki, however, retrogression of the eclogites was not very extensive and the original high pressure assemblage is well preserved. Clinopyroxenes are omphacites (jadeite 35-42 mol per cent), garnets are almandines with 18-25 mol per cent pyrope. Amphiboles are mostly secondary and are ferroan pargasitic hornblendes to ferroan pargasites. Albite is forming during the amphibolitization and the following greenschist overprinting. Omphacitic pyroxenes are partly converted to amphibole-albite symplectites. Deformation of the eclogites was certainly pre-greenschist but its relation to the amphibolitization event is not certain. Garnet-clinopyroxene and garnet-amphibole geothermometry yield temperatures around 800 and 750°C respectively.