

# **CLINOPYROXENE AND SPINEL COMPOSITION FOR PALEODYNAMIC ORIGIN OF OPHIOLITIC VOLCANIC ROCKS (SOUTHERN ARGOLIS PENINSULA, GREECE)**

**A.D. Photiades and G.S. Economou**

Institute of Geology and Mineral Exploration 70, Messoghion st., 11527 Athens, GREECE.

The ophiolitic "mélange" of Upper Jurassic age in the Southern Argolis Peninsula, consists mainly of brecciated and schistose serpentinitised harzburgite as matrix, includes two distinct volcanic suite blocks of boninitic and basaltic composition respectively. Both lavas contain numerous well-preserved primary clinopyroxene phenocrysts. The former is associated with a typical greenschist facies mineral paragenesis (albite, chlorite, tremolite, actinolite, epidote, quartz, calcite, sphene, magnetite) with spinel microphenocrysts and the latter block is associated with zeolitic facies mineral paragenesis (albite, zeolite Na-Ca, chlorite, calcite) and sulfur minerals.

Clinopyroxene phenocrysts microanalyses have been plotted in discriminant diagrams and have shown for the endiopside-augite of boninitic blocks the orogenic affinity. This has also been marked by the chemistry composition of spinels (Cr#0.7-0.8), which is comparable to jurassic and tertiary supra-subduction zone rocks characterised by low-Ti and very low-Ti. In the other part the augite-salite of basaltic blocks are considered as an oceanic crust relic and are clearly related to tholeiitic basalts and more precisely to non-orogenic tholeiites characterised by high-Ti (MORB).

Furthermore these mineralogical results are consistent with previous results for the Northern Argolis peninsula ophiolitic units where the boninitic rocks are probably formed in a back-arc or interarc setting where the compositional variations of MORB-like basalts are attributed to dynamic partial melting of the rising mantle diapir.

## **SOME VIEWS ON THE STRUCTURE OF THE BASEMENT IN THE STRYMON BASIN**

**S. Pitsios and S. Papamarinopoulos**

The contact between the Servomacedonian and Rhodope massives in Eastern Macedonia-Greece is concealed under the sediments of the Strymon Basin for its major extent in the greek territory. Where mapped, at the northern and southern edges (Agistron and Messolakia areas respectively) of the basin this contact is of overthrust type, the Servomacedonian massif overriding the Rhodope. For the study of the basin's basement a regional geological map at a 1:500.000 scale was compiled from the relevant maps of Greece, Bulgaria and Yugoslavia. Ten combined gravity and magnetic