

The New Results of Correlated Onshore and Offshore Geological and Geophysical Studies in the Cyprus Area

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**Geological Survey of Cyprus

Two expeditions carried out with RV "Akademik B. Petrov" (1989) and RV "Akademik N. Strakhov" (1990) in the Cyprus area yielded new data on the onshore geology and marine geophysics of the region.

Many of the gravity and seismic refraction data obtained are still under-going processing, but some preliminary results merit a brief outline and discussion. They support previous conclusions that Cyprus is underlain by continental type crust, and that south of the island the crust is of oceanic nature (Makris et al., 1983). The base of the Mamonia rock complex seems to be a rootless nap of the Trodos ophiolites of about 4.5 km thickness, as indicated by the interpretation of the seismic refraction data. The upper and lower boundaries of the Trodos allochthoneons were traced and correlated for the continuous onshore-offshore seismic profiles. They are truncated by graben-like structures and disappear north of the Eratosthenes Seamount. The results of the onshore geological studies include a new biostratigraphic subdivision of the Diarisos group. It was established that the uppermost lava are lower Cretaceous and thus younger than previously suggested. Evidence for MORIS affinities of the basalts from the lower part of this sequence was found. Furthermore it was discovered that the serpentinite melanges related to the Diarisos group do not include any exotic blocks of Trodos affinity. These last two observations indicate that the upper Triassic basalts were generated under true oceanic conditions (as oceanic crust).

Sediments associated with these lavas are of pelagic type and do not include any terrigenous components. We intend to outline briefly the scope of our institute's "Tethys" project.

Reference

Makris, J., Ben-Avraham, Z., Behle, A., Ginzburg, A., Giese, P., Steinmetz, L., Whitmarsh, R.B. and Eleftheriou, S, 1983: Seismic refraction profiles between Cyprus and Israel and their interpretation. *Geophys.J.R.astr.Soc.* 75, 575-591.