Aegina island took place over a long time span, starting at ~4.4 ma. and terminating approx. 1 million years ago. Both, the logn term volcanic activity, and the inverse occurence of eruptive products can be explained by a seriees of complex magmatic processes such as crystal fractionation, mingling, and mixing.

Volcanic activity started with minor eruptions of rhyodacitic ashes and pumice. A large basal volcanic edifice was built up consisting of andesitic-dacite flows and plugs. This **first volcanic phase** terminated with the eruption of numerous dacitic plugs and volcanoclastic flows at approx. 2 ma. The **second volcanic phase** started after a long time of restoration period, uplift and individualization from the *Oros and Lazarides fissures* producing minor amounts of pyroclastics and flows of basaltic andesites, high-alumina basalts, and hypersthene andesites.

A COMPARATIVE MINERALOGICAL STUDY OF THE ACHLA TARLA AND ST. PHILIPPOS MINERALIZATIONS IN THE KIRKI AREA, N.E. GREECE

E. Dimou

Institute of Geology and Mineral exploration 70 Messogion st., 115 27 Athens, Greece.

Two uncommon polymetallic mineralizations of vein type into tectonic zones, occur at St. Philippos and Ahla Tarla sites in the Kirki area.

At the site of St. Philippos the mineralization is considered to be very peculiar, since it includes rare sulphosalts which combine the presence of the Pb-As-Bi elements with the simultaneous absence of the Sb element in their lattice. The mineralization consist of pyrite, sphalerite (± Mn), galena, jordanite, Bijordanite, Kirkiite, levyclaudite, bismuthinite, cosalite, wurtzite, kosterite, tennantite chalcopyrite, enargite, lusonite, seligmannite. The mineral succession suggests an initial deposition of quartz-pyrite, followed by a second main stage of sphalerite - kirkiite - levyclaudite - Bi jordanite - kosterite - bismuthinite - cosalite. In turn a third stage follows with tennantite - galena and a last one with wurtzite-baryte. The formation of these sulfosalts requires specific conditions, such a mean formation temperature of 400° C approx. high fS_2 and low fFe.

The mineralization at the Achla Tarla site is more simple with main metallic minerals pyrite, sphaletite, galena, wurtzite, jordanita, and tennantite. Tha element Bi is totally absent, while tha content of wurtzite and of the colloidal sulphide minerals (as pyrite-galena) is high, suggesting the existance of cooler solutions.

According to our approach, in both sites, the same type of mineralization occurs, directly connected to the magmatic activity (hydrothermal, telescopic type). A differentiation in the composition of the ore is observed from place to place and according to the depth (vertical - lataral differentiation). The last and more differentiated metalliferous solutions have deposited their metallic content at the Achla Tarla site.