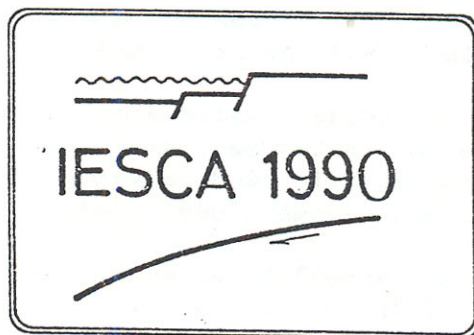


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INTERNATIONAL EARTH SCIENCES  
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1- 6 OCTOBER 1990  
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**ABSTRACTS**

PRE-CONGRESS EXCURSIONS

27-30 SEPTEMBER 1990

SYMPOSIA and SESSIONS

1- 6 OCTOBER 1990

POST- CONGRESS EXCURSIONS

7-10/11 OCTOBER

GEODYNAMIC ASPECTS DURING EARLY PLIOCENE IN MILOS ISLAND  
CYCLADES, AEGEAN SEA.

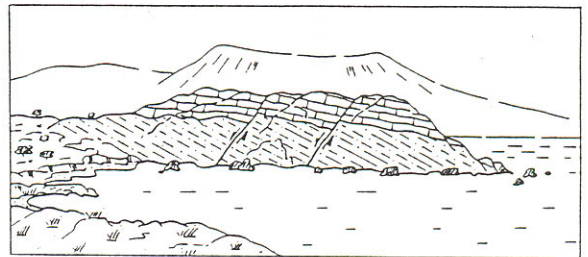
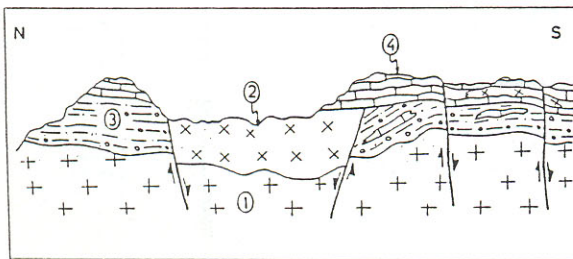
by

D.J. Papanikolaou, E.L. Lekkas, M-R.T. Mirkou & D.D. Syskakis  
(Department of Geology, University of Athens)

The existence of Upper Miocene sediments in Milos has been postulated by some authors who were based mainly on the occurrence of gypsum which is widespread in the Messinian deposits. The beginning of volcanism in Milos was considered as Upper Pliocene (3,5 Ma).

Our investigations showed that:

- (i) The sediments previously considered as Upper Miocene in age are in fact Lower Pliocene, zone of *Globorotalia puncticulata* BIZON, 1972 and zone MLP3 CITA. There are *G.margaritae*, *G.puncticulata*, *G.acostaensis* dextral, *Globigerina falconensis*, *Globigerinoides trilobus*, *G.sacculifer*, *G.obliquus* and *G.extremus*.
- (ii) The gypsum occurrences are not indicators of evaporitic palaeoenvironment of the sediments but it is the result of secondary deposition because of geothermal alterations of the geothermal field developed in Milos.
- (iii) The onset of the modern volcanism in Milos started in Early Pliocene since tuffites were observed interbedded within the sediments.
- (iv) Two sequences can be distinguished within the sediments separated by a slight unconformity. The lower sequence comprises sandstones, conglomerates, clays and limestones. The upper sequence is mainly composed of marly limestones.



Schematic geological section of Kalamos area and panoramic view of the Pounta peninsula, showing synsedimentary faulting and volcanism and also the slight unconformity between the two Lower Pliocene sequences (1. Metamorphic basement, 2. Tuffs, 3. Lower sequence with clastics of Lower Pliocene age, 4. Upper sequence with limestones)

It is remarkable that some E-W faults have affected the lower sequence but not the upper, creating a synsedimentary graben structure.

The upper sequence seems to be followed by thick Pliocene tuffs and tuffites and with unconformity by the Upper Pliocene lavas and ignimbrites of Profitis Ilias.