

SANTORINI, PART OF THE HELLENIC ARC AGE RELATIONSHIP OF ITS EARLIEST VOLCANISM

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Volcanic products are interbedded with fossil bearing marine sediments in several localities on the Akrotiri Peninsula, Thera. These palaeontological findings allow dating of the earliest volcanism in the region.

Our field studies and analysis of the foraminiferal content from the Archangelos - Loumaravi - Balos area, combined with a reevaluation of previously published palaeontological data, show that the volcanism started here within the interval from the uppermost Pliocene to the lowermost Pleistocene. These data are in accordance with absolute dates obtained from some volcanic products in the area.

Furthermore, the foraminiferal faunas reveal that a littoral environment prevailed in the Mt. Archangelos - Mt. Loumaravi district at the time of deposition. Sediments in the area between Cape Balos and Cape Loumaravi were deposited at a greater water depth in an inner to outer shelf environment.

PETROGRAPHICAL AND GEOCHEMICAL ASPECTS AND K/AR-DATING OF IGNIMBRITES IN CAPPADOCIA, TURKEY

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The Neogene/Quaternary volcanic activity in Central Anatolia resulting from the collision of the Afro-Arabian and Eurasian plates began in the Upper Miocene and lasted until historic times. The pyroclastic deposits in the area between the cities of Nigde, Nevşehir and Kayseri, comprise at least 9 major non-welded and welded rhyolitic ignimbrites. Individual deposits cover areas >5000 km². Ignimbrite stratigraphy comprises (from bottom to top) Lower - and Upper Göreme, AkDag, Cemilköy, Tahar, Sarımaden, Kizilkaya, Incesu, and Valibaba-ignimbrites. They are separated from each other in the field by Plinian pumice, minor surge, and extensive alluvial and shallow lacustrine sediments.

K/Ar-dating of bulk rock (pumice and glass) and biotite samples from the ignimbrites yielded ages between 9.0 and roughly 1-2 m.y. BP. In particular: 9.0 ± 0.2 for Lower Göreme; 7.6 for AkDag; 6.7 for Cemilköy, and 3.95 for Sarımaden-ignimbrite. The