marl-carbonate column had a mean accumulation rate of 2.5 cm/1,000 years, which is considered fairly average for the marl-carbonate columns found in the Mediterranean (Vol. 13, p. 198). (The marl-carbonate often had up to 75 % nannofossil and Foraminifera content p. 204 ff)). Beneath the pelagic ooze layers of most holes were found alternating layers of anhydrite, gypsum, and dolomitic, fossiliferous, marl--and even halite at some sites.

All this requires that we recognize long periods when the Mediterranean Sea was so isolated from the Atlantic that the water evaporated down to form brines concentrated enough to precipitate these evaporites.

--At present the Mediterranean Sea is dependent upon the Atlantic for 9/10 of its water supply. (Rainfall and rivers supply only 1/10 of the water which is lost by evaporation as time progresses.)

--Normal sea water has to evaporate to about 1/5 its volume to precipitate anhydrite, and 1/10 to precipitate halite (NaCl).

In even the most arid and hot parts of the world only about 5 meters of sea water evaporates per year--enough to deposit only 2.2 mm of anhydrite or gypsum.

At Site 124, 23 m (75 ft.) of evaporation-formed anhydrite were found. (At 2.2 mm/year this would be 10,400 years for only this small portion of the local stratigraphic column there.)

In 1975, Cruise 42A went back into the Mediterranean and drilled deeper, finding extensive normal, pelagic, marine deposits beneath the evaporite layers. e. g. at Site 372 in Balearic basin, approximately 300 meters of pelagic ooze, marl and marlstone were found beneath the evaporite deposits (p. 205 of my Chap. 9 (p. 178 of printed book)).

--This, at 2.5 cm/1,000 years, would add 12 million years of deposition time. (The bottom at Site 372 was classified as Lower Miocene.) [From Initial Core Descriptions, Leg 42A, p. 54; also Geotimes, August 1975, p. 16-19]