

7-16 - SPECIAL PROBLEMS OF MORPHOLOGY AND QUATERNARY SEDIMENTATION ON THE MEDITERRANEAN RIDGE/IONIAN SEA -

by W. HIEKE - W. SIGL -

During the cruises N° 17 (1969) and N° 22 (1971) of the RV "Meteor" cores were taken in the southern Ionian Sea from the Mediterranean Ridge and the surrounding area.

The cores from the Mediterranean Ridge show a differentiated profile. Three kinds of dark layers were observed :

- a) stagnation layers with high content of organic carbon
- b) Mn-rich layers (up to 1.8 % MnO)
- c) dark layers with high content of feldspars.

The quartz content of the sediments shows great variations which probably could be used for a correlation.

On the western edge of the Mediterranean Ridge occur turbidites which have been deposited about 9,000 years ago. Their material could have been slumped from western or southern shallow water areas.

A detailed bathymetric survey of a "cobble stone area" on the western part of the Mediterranean Ridge showed that the so-called "cobble stones" are flat parallel ridges of probable tectonic origin. Cores from the same area suggest tectonic activities within the last 9,000 years.

Interventions à la suite du 7-16 -

RYAN - What is the sedimentary facies represented in the Oligocene and Miocene clasts found in your interformational Greccia ? If shallow-water or pelagic this would help solve the problem of the topographic setting to the eastern Mediterranean prior to the Late Miocene "crisis of salinity".

Réponse : "Most of the clasts are apparently of Miocene age. Oligocene nannoplankton elements cannot be associated with definite components of the breccia. The Miocene clasts are gray marlstones without forams, showing a foliate fissility. Sometimes silica sponge spicules occur. Up to now we cannot determine the sediments of these clasts to a definite water depth."

MASCLE - J'approuve les conclusions du Dr. HIEKE, quant à la morphologie réelle des "Cobble Stones" et lui indique un article récent, publié par des chercheurs anglais, qui démontre le même fait grâce à des résultats de side scanning sonar, c'est-à-dire que les "Cobble Stones" se présentent comme des blocs faillés et allongés que la bathymétrie ne permettait pas jusqu'ici de déceler.

HINZ - Do you consider the cobble stone zone as in relation with subsidence or compression ?

Réponse : No compression. It is a tectonic by distension.

NESTEROFF W.D. - Il est très difficile de conclure à des phénomènes de compression ou de distension dans une zone sur un petit nombre de carottes. Les structures observées peuvent être locales et il serait désirable d'avoir 50 à 100 carottes pour pouvoir se faire une idée d'ensemble. Il semble que sur certaines carottes de petites cassures indiqueraient de la compression.