THE VICTOR HENSEN STRUCTURE IN THE CENTRAL IONIAN SEA

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During the cruise of the German R/V "Victor Hensen" in 1977 within the southeastern part of the Messina Abyssal Plain an elongated hill has been found (HIEKE 1977). This elevation rising up to 350 m above the abyssal plain has been correlated with morphological features on the northeastern rim of the Malta Ridge as well as with subbottom structures recorded on continuous seismic reflection profiles. The result is a SW-NE striking structure of at least 60 km length.

During Meteor cruise no. 50 in autumn 1978 some additional investigations have been carried out. The evaluation of the material is not yet finished. The reflection profiling showed that there is no certainty concerning the connection between the norteastern part of the Victor Hensen structure and the structural elements of the Malta Ridge. It is still unsettled wether the Victor Hensen structure passes into the doming at S.P. 535 or into that at S.P. 430 of fig. 29 of FINETTI & MORELLI 1973 (= "G" respectively "F" in fig. 4 of HIEKE 1977).

FINETTI & MORELLI 1973 interpret reflector A on fig. 29 to be the base of the Quaternary-Pliocene. This coincides with the thickness of the Plio-Quaternary sediments ascertained in DSDP Site 374 (HSÜ, MONTADERT et al. 1978). Within the domings of fig. 29 an unnamed reflector lying normally about 0.4 sec deeper than reflector A rises and forms partly elevations above the sea floor. Hence, in contrast to FINETTI & MORELLI, the domings have to be regarded containing pre-evaporitic layers.

To investigate the sediments covering the Victor Hensen Seahill a piston core was taken. It is located on the flank of the hill about 100 m above the surrounding plain. The core (2.52 m length) has not yet been investigated in detail. The first view showed repeated changing of the slight inclination of the layers and a sediment sequence unknown from the cores in the neighborhood.

Literature:

FINETTI, I. & MORELLI, C. (1973): Geophysical exploration of the Mediterranean Sea. - Boll.Geofis.Teor.Appl., 15, N. 60, 263-341, 41 figs., 14 pl.

HIEKE, W. (1977): The "Victor Hensen Seahill"; part of a tectonic structure in the central Ionian Sea. - Mar. Geol., 26, M1-M5, 4 figs.

HSÜ, K.; MONTADERT, L. et al. (1978): Site 374; Messina Abyssal Plain. - Initial Reports of the Deep Sea Drilling Project, vol. XLII, part 1, 175-217. Washington (U.S. Government Printing Office).