

THE DEVELOPMENT OF THE STRUCTURES OF THE MESSINA ABYSSAL
PLAIN SINCE MESSINIAN TIME - INTERPRETATION OF REFLEXION
SEISMIC PROFILES

by

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Résumé: Les profils de sismique réflexion obtenus pendant
la campagne no. 50 du "Meteor" en 1978 montrent
"domings" de la base du sel messinien. Les aligne-
ments structurelles résultés sont interprétés par
horsts étroits et grabens larges en action de temps
messinien jusqu'au présent.

During Meteor cruise no. 50 in 1978, within the border-
land between Messina Abyssal Plain and Malta Ridge (=Medina
Rise) some reflexion seismic profiles have been recorded.
Their interpretation can be summarized in the following
statements:

1. Within the studied area there exist some elongated "do-
mings" of the pre-Messinian basement which partly rise
above the surrounding seafloor (e.g. Victor Hensen Sea-
hill).
2. Between these "domings" broad "basins" with Messinian
evaporites and Plio-Quaternary sediments are situated.
The maximum thickness of the evaporites of these "ba-
sins" increases from E or SE respectively towards the
central Messina Abyssal Plain.
3. Post-Messinian tectonic movements can be observed.
4. The structural pattern will be interpreted by narrow
horsts and broad grabens acting since Messinian time
up to the present.

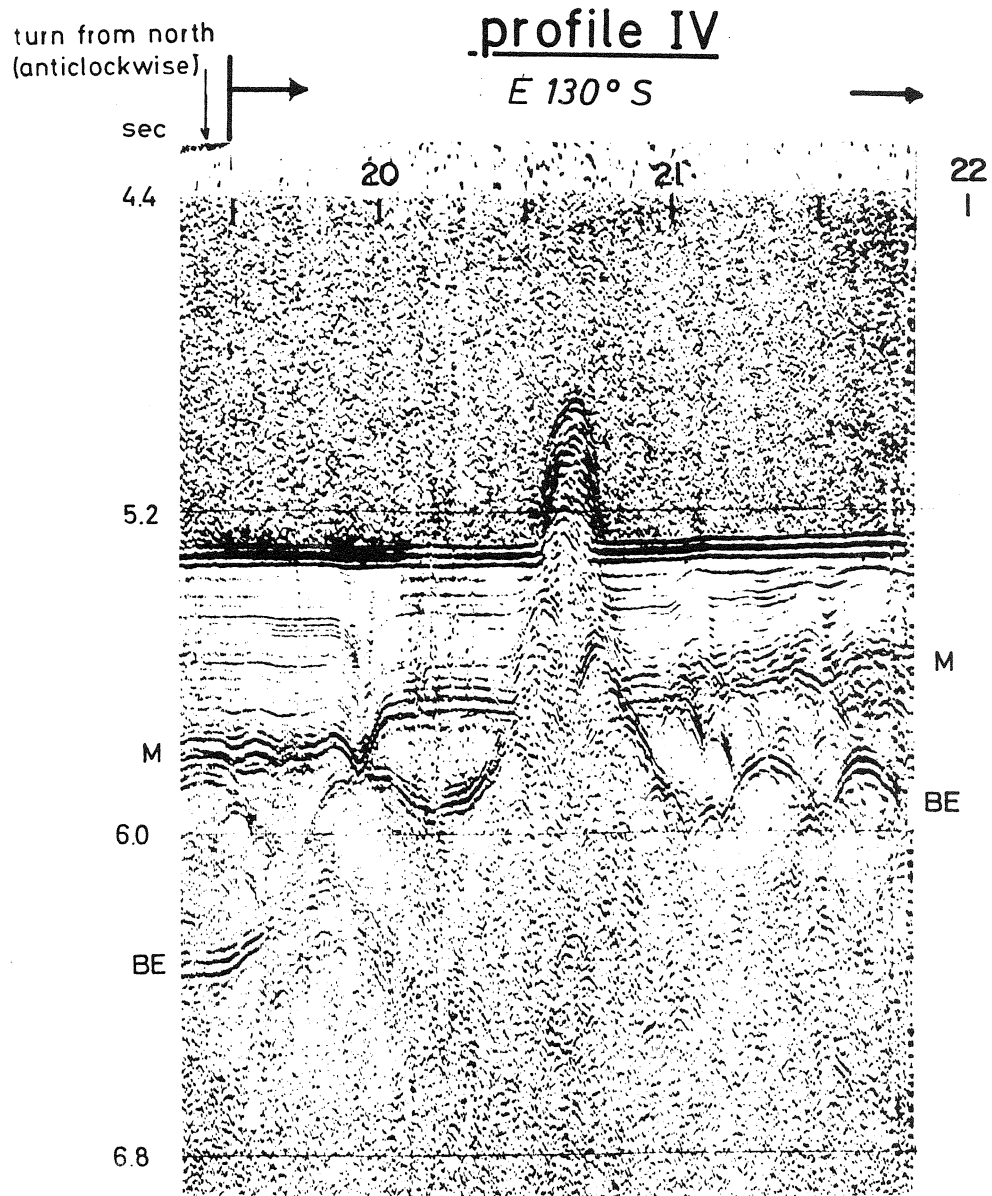


Fig. 1: Reflexion seismic profile between $35^{\circ}52'N$, $18^{\circ}24,5'E$ (left) and $35^{\circ}43'N$, $18^{\circ}36'E$ (right).

M = top of Messinian evaporites (reflector M)

BE = base of Messinian evaporites

In the center of the profile the pre-Messinian basement rises above the seafloor of the Messina Abyssal Plain building the backbone of the Victor Hensen Seahill. A second "doming" of the pre-Messinian occurs at about 19.55 h. On top of it the small cover of evaporites seems to be disappeared by subsolution in connection with tectonic movements.