STRATIGRAPHY AND SEDIMENTATION IN THE MEDITERRANEAN RIDGE DIAPIRIC BELT

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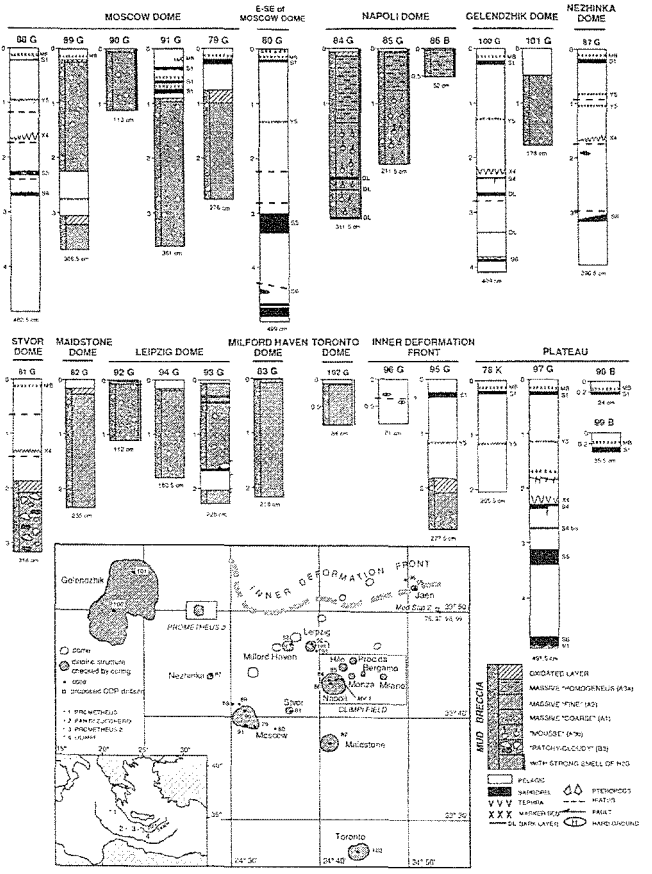
Two basic sediment types are recorded in the Mediterranean Ridge diapiric belt: the host sediment and the mud breccia. The host sediment consists of hemipelagic marl as dominant lithology, associated with sapropels and tephras as minor isochronous lithologies. A high resolution stratigraphy, which allows much more detailed and precise correlations than those based on biostratigraphy (essentially calcareous nannofossils) is applicable to the over 20 cores considered in this study, that were obtained during cruise TTR3-Leg 2 in 1993.

The mud breccia is matrix-supported and contains submillimetric to pluricentrimetric clasts in various amounts, up to 50% (STAFFINI *et al.*, 1993). This lithology is consistently related to doming physiographic features of different size and shape (CAMERLENGHI *et al.*, 1992), and to high reflectivity patches recorded on long range side-scan sonar.

The mud breccia can be intruded or extruded. The massive, coarse nature of the mud breccia recorded in the large majority of the 16 cores that contain this lithology suggests intrusion. Cores from Napoli Dome, which is typically an active mud volcano (CITA *et al.*, in press), are fine-grained and very gaseous. Contacts between the mud breccia and the host sediment are mostly distinct, but may be gradational. Two cores document interlayering of the mud breccia with pelagic sediments, but no turbidites were ever recovered.

Among the main results of the study we mention: the strong slope instability documented by the pelagic host sediments from the ridge diapiric belt (hiatuses, microfaults, hard grounds); the wide distribution of diapiric features across the ridge axis (from the Inner Deformation Front to the Toronto Dome, some 50 km to the south); the age of the mud breccia (matrix essentially) which is consistently early-middle Miocene with some older elements, but is strictly mid Cretaceous for the southermost Toronto Dome.



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