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**Newly Revealed Extensional and Transpressional Structures in the Southeastern Mediterranean Basin and their Significance to Hydrocarbon Exploration**

The structural setting and evolution of the southeastern Mediterranean basin, offshore Israel, were studied utilizing recently acquired regional, 2D seismic, magnetic and gravimetric data. Underneath several kilometers of Cenozoic basin-fill the data show a 5-10 kilometers thick Paleozoic-Mesozoic sedimentary interval.

Deeply buried, graben and horst system extends throughout the basin, between the Israeli coastline and the Eratosthenes seamount. Northeast-southwest oriented normal faults offset Basement to Middle Jurassic stratigraphic levels. These deep-seated, extensional structures are associated with Early Mesozoic, Neotethyan rifting activity. A conspicuous, positive magnetic anomaly located along the structures, is probably related with contemporaneous, Early Jurassic magmatism.

A 50-70 kilometers wide fold belt forms an elevated, upthrust platform west of the coastline. Dense series of northeast-southwest oriented thrust faults, monoclinical and anticlinal structures affect Mesozoic to Miocene strata. Isolated, subtler folds are found in Lower Cenozoic strata west of the upthrust platform.

The contractional structures are associated with reactivation of older fault systems during Late Mesozoic closing phase of the Neotethyan basin. The abrupt termination of the fold belt westward reflects a transition between two crustal types indicated also by a negative Bouguer gravity anomaly.

The study reveal various types of large-scale, Mesozoic to Early Cenozoic structures found at 1000-1500 meter water depth, west of the Israeli coastline. Sub-commercial oil and gas shows, were encountered in Mesozoic structures near the coastline. These shows are considered as an up-dip extension of a significant, hydrocarbon province located at the deeper part of the southeastern Mediterranean basin.