

Importance of knowing paleogeography in order to understand opening of the Black Sea

A. Sami DERMAN

Consultant

Sokullu Mehmet Paşa Cad. Menekşe Apt. No. 10/7, Dikmen, 06460, Ankara-Turkey

Black Sea is an important element of the regional geology. Understanding its geology like solving a puzzle. That is because each country has a different part of the geology and limited exposures. Turkish part of the Black Sea has exposures that give important clue on the evolution and opening of the Black Sea. There is no marine Permian rocks in the western and central Pontide. Marine Triassic is only present in the Kocaeli Peninsula and toward east only continental Late Triassic is present. Early Jurassic is not present in the western region except Eastern Pontide where Early Jurassic is represented by Ammonitico Rosso facies. Middle Jurassic Sea advanced from the east toward west and reached to Cide area in Bajocian-Bathonian time. An important deformational event occurred at the end of Middle Jurassic and Alluvial fans were developed facing toward north. Late Jurassic is a time of extensive carbonate deposition. This carbonate system forms a platform attached to the Palaeozoic of İstanbul, whereas an isolated platform is developed in the Middle Black Sea. Platform carbonate has a reefal margin in Cide area and faces toward east and north. In the Eastern areas, however, it is difficult to decide whether it is a platform or an isolated platform. Westernmost extension of the carbonate deposition is to the west of Zonguldak city. Early Cretaceous is the time of disintegration of the carbonate platform resulted in horst and graben system. Zero line of the Early Cretaceous sea was around Ereğli. As can be seen from the advancement of the shoreline, sea advanced from east and north toward west and south. Stratigraphic framework and evolution of the units suggest that there was a seaway much before the Early Cretaceous. That seaway probably began to form in Early Jurassic in the Eastern Black Sea but reached to the western areas in Middle Jurassic. It may be speculated that Opening of the Black Sea started in Triassic or even in Permian Time.