

WESTERN BLACK SEA FIELD STUDIES

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In the Safranbolu-Eflani area, there are outcrops of three different sedimentary basins and an ophiolitic zone that lie to the south. The first basin occurs in Paleozoic age sediments and is named as the Istanbul Zone. The second basin which occurs disconformably on the Istanbul zone is the Upper Jurassic-Upper Cretaceous age Ulus Basin. The third basin is the Karabük-Safranbolu basin and lies over these two basins.

The Upper Cretaceous-Eocene aged Karabük-Safranbolu basin has a thickness of about 2000 m sediments that includes three tectonically controlled diverse sequences. This basin lies parallel to the ophiolitic thrust zone (Arkotdag melange) and is restricted from the west by the Karabük fault, from the south by the Karagöl fault. It is divided into two sections in south of the Eflani and contains many folds.

According to Organic geochemical study in the region, Paleozoic basin (Istanbul zone) and the Ulus basins have hydrocarbon generation potential. Several petroleum and gas seepage were found. Therefore, structural and sedimentary features of Tertiary have prospects for petroleum exploration in the area.