

## SEDIMENTARY AND GEODYNAMIC EVOLUTIONARY MODEL OF THE BALKAN THRUST BELT

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The Balkan thrust belt is part of the Alpine Chain. Onshore Bulgaria it trends east-west but turns to the southeast on the western margin of the Black Sea.

The first tectonic phase started in the Aptian-Albian. Initially it was characterised by simple inversion of previous extensional structures, preserved along the Moesian Platform margin. Tectonism continued with a northward (N35E) verging thrust belt/foreland basin system developed during the Upper Cretaceous-Middle Eocene. The E-W sector was generated in a sinistral transpressive regime driven by the very rigid and thick Moesian Platform and Rhodope Massif respectively north and south of it. The northwest/southeast zone was formed in a pure compressional fashion caused by the underthrusting of the Western Black Sea stretched crust. A northward migrating foredeep system westerly sourced has been recognised from detailed field studies and integrated with seismic data.

The second phase (Middle Eocene-Oligocene) was characterised initially by a dextral strike-slip regime and later by dextral transtensional deformation. This new setting was driven by movement on the northernmosts play of the North Anatolian Fault Zone (Maritza Fault) and by the development of the Aegean back arc basin in the south. These driving mechanisms were also responsible for the generation of the Srednogora wrench corridor in the on shore sector and the creation of several grabens offshore reactivating previous compressional structures. A different sedimentological sequence and sourcing area have been identified within these transtensional features.