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Vitaly A. Viginsky¹ (1) GUPRIOOS on RO, Rostov on Don, Russia

Late Alpine Tectonic Reconstruction of Eastern Mezotethys Western Part (Black Sea Region)

Azov and Black Sea basin originated in the western part of Eastern Mezotethys. Eurasian and Arabian geoplates were together with the intervening Rodopian-Pontian suture during Mid-Late Cretaceous. There is blueschist belt occurs immediately south of this suture in northwest Turkey under Cretaceous (~88 Ma) oceanic accretionary complex. A peridotite subvertical slab lies along tectonic contact over the blueschists and the accretionary complex. Black Sea composed of two basins separated by the transform Andrusov-Arkhangelsky lineament. These basins were most likely boundary seas restricted by the volcanic rear arcs (the East Black Sea rise and the Novator swell) over the continental Baikaliid crust. For example, the well-known "Anaurian" layer of the Cenomanian age within the Caucasian Novorossiysk flysch foredeep contains a substratium admixture of pyroclastic andesites. And on the north-east of Novator palaeoarc (Lomonosov Massive) last time discovered effusive volcanites with north-west shoshonite trend. Benioff zone originated during the final stages of the Mezotethys shutting along the southern slope of the East Black Sea rear arc, in such a case the existing Yalta focus centre of rather deep focus earthquakes seems to be the remnant of the Benioff zone. A similar zone seemed to exist along the southwestern Novator swell slope too. The flysch troughs of the North-Eastern Caucasus and the Cisbalkanian mountains, including the Asparukh depression, which were forming at the same time in supposed island arc rear areas, were compensation character.