

NORTH CASPIAN TRACE FAULT FRAMEWORK

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Up-to-date data proved the existence of the buried, covering Upper Paleozoic complex, thrust over the southern edge of the Pre-Caspian syncline. Based on the results of the analysis of the data from the wells drilled in Bozashi coast of the Caspian Sea, G. Zh. Zholtaev and B. M. Kuandykov had expressed, as early as in 1992, an assumption about the overthrust zone development in the North Caspian.

The zone consists of two different age narrow dislocation systems: late Paleozoic Bozashi and Permo-Triassic Mangyshlak. Bozashi dislocation system is thrust over the southern edge of the pre-Caspian syncline. A weakly dislocated autochthonous complex, with the Tengiz, Korolevskoye, Astrakhan fields confined thereto, is located under the Carboniferous and Lower Permian allochthonous formation cover. The pericline of the major Zhylyoi High, embracing Kashagan, Kairan, Tengiz, Aktoty, etc., prospects, is overlapped by the Makhambet overthrust zone. The southern part of the East Zhambai High is also located under the overthrust cover.

The abatement and upheaval areas of the forward cover portion divide the covering plate into steeply seated thrust sheets, overlapping each other. The main composition plane is oriented towards the west-north-west and consists of several echelon-like scaly overthrusts.

Development of the modern Bozashi system overthrust sheet framework may be divided into three major stages: Late Paleozoic, Triassic and Neogene Tertiary.

Immediately to the south of the Bozashi zone, there is a developed Mangyshlak Permo-Triassic dislocation zone, thrust over in the northern direction. The major mass movement course is, perhaps, an eastern trend of the Manash Suture, known from the literature and also having the overthrust nature.

Bozashi and Mangyshlak overthrust sheet formations are overlapped by the Jurassic-Paleogene and Neogene-Tertiary weakly dislocated sediments, making up the neoautochthonous complex, with Kalamkas, Arman, Karazhanbas and production field groups on the western Caspian Sea coast discovered there.

Apart from the overthrusts and faults, having a predominantly sublatitudinal orientation, there are also the displacements with the north-eastern orientation observed.

Tectonic movements in Paleozoic and Mesozoic played a significant role in the development of the North Caspian trace faults.