



Models of distribution of deep faults within the Caspian Sea on the basis of abnormalities of gravitational, magnetic fields and seismic data

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Abstract

In tectonic plan the Caspian Sea is characterized by a rather complicated structure with various elements – south-marginal part of the Eastern-European ancient platform, Scythian-Turanian young platform and alpine Mediterranean belt. The mentioned elements are different both by folding basement structure and peculiarities of sedimentary cover due to it study of regional faults of the Caspian Sea is of great geological interest. As a result of it there was conducted a typization of basic anomalies according to geophysical fields (gravitational, magnetic and seismic) and compiled models of faults system distribution by features of gravitational and magnetic fields anomalies. Use of features for blocks and zone of deep faults distinguishing by anomalies of seismic fields allowed to tracing their quantitative parameters (limit of depths distribution, line of dip, inclination, amplitude of vertical displacement by basic boundaries), as well as revealing some patterns of forms and structures in consolidated crust by profile sections. On the base of data obtained by each of the methods separately there was compiled deep faults network model with indication of their quantitative parameters that enables to receive the most reliable ideas about deep faults and blocks of the earth crust of the Caspian sea.