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Geodynamic stresses and eruption paroxysm of mud volcanoes

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Spatial and temporal points of view, mud volcanic zones are associated with areas characterized by an active manifestation of folding movements in the Neogene and Anthropogenous systems. The zones of mud volcanism are closely related to the intensivly subsiding intermontane, piedmont and periclinal troughs, which arose at the early development stage of alpine folded belts.In such geodynamic conditions, mud volcanoes occur in troughs, where sedimentation processes occur very rapidly and sedimentary rocks are observed at large stratigraphic depths. Depending on the tectonic properties of the volcanic zones, various geological factors, lithofacial and structural characteristics have different effects on the morphometric dimensions of the mud volcanoes as well as their activity forms.

Tendencies in the activity of mud volcanoes and seismic intensity are associated with the possible interaction between these natural geological formations that occur as a result of geodynamic stresses on the Earth's crust. Their interaction is related to the location of adjacent microplates, or tectonic blocks. Seismic layers are in analogous or similar geodynamic conditions in these tectonic blocks, and their waves that originated in one of them did not undergo damping before they were transferred to adjacent microblock.