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## **Self-Oscillating Model of Formation of the Deposits - Giants (on an Example of the Astrakhan Deposit)**

The Prikaspiian depression and Astrakhan dome, in particular, is a large zone oil and gas accumulation. This region is complicated by large faults and overthrusts structures. It is possible to expect, that the formation and development of deposits of hydrocarbon in this area is connected to a motion of fluids in these faults and neighboring crustal blocks. In this connection fluidodynamic regime in the faults is considered to be a result of mechanical characteristics of mountain rocks. The horizontal stresses in the crust and lithosphere originate from global geodynamic processes defined by convective motions in the mantle. We consider that the character of fluid processes in steep faults depends on sequentially alternating processes of a dilatancy and a compaction in them. These oscillations also reduce in formation of hydrocarbon deposits.

A set of fluidodynamic models is considered. In terms of compaction models, multiphase filtration in a piezo-conduction mode, and crustal waveguide models major stages of fluid evolution under the conditions of developing passive margins and in the zones of collision of plates are described. In particular, compaction models of one of the stages of fluid mode evolution within a sedimentary basin and fluid migration from the fault zones toward the upper layers are considered.