

## **South Caspian Pliocene-Anthropogenic basin (summary of existing views)**

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On the basis of long-time integrated sedimentology, paleogeographic and structural - formation studies covering Pliocene-Anthropogenic sediments of South Caspian Basin (SCB) and design of structural - formation, paleogeographic and catagenetic models applying geophysical studies in the region, the author has interred rift nature on this basin during Pliocene-Anthropogenic stage of its evolution.

It is assumed that SCB is intercontinental with absence of continental crust.

Evolution of SCR started from Miocene, continental stage of development Lesser and Great Caucasus and Kopetdag.

At initial stage of South Caspian rift-graben evolution the crystal uplift of Caucasus, Kopetdag and Talysh organic system took place. Extension forces within their borders caused collapse of central part of South Caspian block. We assumed that at later stage folded blocks of Lesser Caucasus and Talysh on the other hand Alborz and Kopetdag on the other were moving apart. As a result of these riftogene processes the contemporary structure of SCB Antropogene was formed.

Starting from Miocene, subsidence of central part of SCB and later movements of folded blocks of Great and Lesser Caucasus, Talysh and Elbrus occurred along Western Caspian, Sangachal - Ogureghy deep faults and Turkmenistan thrust.

During rift generation within SCB, magmatic troughs emerged in the rift zone - South Absheron, Lower Kura. Enzaly and Western Turkmenistan. Structural-formation studies with application of geophysical data acquired in the region, allow assuming that massive Godina can be considered as interrft horst with large gravity anomaly. Its generation relates to Miocene-Pliocene ages and was formed due to South Caspian riftogenesis.

The following are sedimentologic evidences of South Caspian rift basin:

- a) Avalanche sedimentation and development of large thickness (2.5-3 km/106 years) even within border of Lower Pliocene (Productive Series);
- b) Morphology of Lower Pliocene molasses formation covering 600 km area from east to west constitutes huge micro-lens, which evidences intensive subsidence of central portion of rift basin and later transgression is observed in latitudinal direction along rift flanks due to movements of side folded blocks in opposite directions;
- c) The negative geothermal anomaly (13.-1.60C/100m) within South Caspian Pliocene-Antropogenic rift basin is related to generation of large thermal fields due to thick shaly layer of Maikop, Miocene and Productive Series