

Time and Style of Deformation of the Kura Foreland Fold-and-Thrust Belt, South-East Georgia (Georgia)

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Our research is motivated by the following questions concerning the geometry and timing of deformation: What is the structure of the Kura foreland fold and thrust belt? What is the present structural style of deformation? When did Late Cenozoic deformation of the Kura foreland fold and thrust belt commence? Section balancing of seismic reflection profiles was used to develop a new tectonic model for the evolution of the Kura foreland fold and thrust belt. On the basis of interpreting seismic profile we present the geometrical modeling of growth strata, which has supplied kinematic description of deformations. Seismic reflection profiles show that the Kura foreland fold and thrust belt of eastern Caucasus are an active thin-skinned fold and thrust belt and they preserve growth strata that record the tectonic and stratigraphic evolution. The growth structures have shapes characteristic of fault-bend folds above thrust, as shown on interpreted sections. Analysis of synorogenic (or growth strata) deposits in seismic section documents that evolution of deformation has been continuing during the last ~ 5-4.5 Ma together with the thrust system kinematics. The growth stratigraphy (Akchagil-Apsheronian) consists of shallow marine and continental sediments. Within the of Kura foreland a sequence stratigraphic is divided into: foreland megasequences (Oligocene-Miocene) and growth strata.