

## **Seismic formational methods of sedimentation-tectonic models construction**

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Modern methods for geologic section prediction are based on the outstripped studies of its genesis. Reconstruction of the sedimentation history, based on seismic data, is the main task of the seismostratigraphic method. But seismic data contain also a basic lot of information about tectonic dislocations. The latter have an influence on morphostructural features of a geologic section, its material composition and oil-gas bearing potential. Reconstruction of tectonic history of geologic sections is accomplished by means of structural modelling and back stripping methods.

However, the key problem of geologic interpretation is the designing of a combined sedimentation-tectonic model in frames of which sedimentation and tectonic scenarios should be strictly tied. This means to reconstruct and to put in agreement: 1) ranks of sedimentary bodies and faults, which cross them; 2) mutually tied sequences of active and stable sedimentation-tectonic stages; 3) morphostructural, formational, lithofacial characteristics and types of dislocations: post and consedimentational, conducting and sealing, etc.

This complex problem demands the application of specialized methods. Such methods are developed within the framework of Structural Formation Interpretation – SFI. At present SFI methods allow in practice to perform: 1) detailed featuring and imaging of the hierarchic structure of terrigenous and carbonate sections; 2) revealing and tracing of tectonic faults tied in ranks with sedimentary bodies; 3) reconstruction of syngenetic sedimentation conditions and designing of 3D lithofacial models. Testing of the SFI methods carried out in eleven regions of Russia and abroad revealed their quite pronounced geological effectiveness.