

Observations from geologic and seismic cross sections.

Profile 05005-B (**Electronic archive Fig. 4b**) cuts through the Basin Edge West. As shown by the topographic profile, its SW half is formed by high plateau and NE half by NE-dipping slope. The bedding readings at the surface indicate that the plateau is formed by an open **syncline**, while the NE flank of the plateau is formed by anticline with gently dipping limbs. The anticline is asymmetric. While **its** SW limb is relatively short, the NE limb makes up half of the profile.

The seismic image of the SW syncline allows to see its detachment fault on the southwestern side of the section based on truncated reflectors of two different bodies. It is located at a depth of about 1000-1200 ms TWT. The image shows that the NE limb of the anticline contains one more fold, or even thrust sheet. The image in its NE portion shows that even the Akchagylian-Apcheronian sedimentary package is slightly folded and faulted. The NE side of the profile allows us to see the onlap of the Akchagylian-Apcheronian sediments on the underlying Maeotian-Pontian stratigraphy over erosional unconformity verified by fieldwork.

Profile A (**Electronic archive Fig. 4a**) is cut through the westernmost flank of the Didi Shiraki syncline. As shown by its topographic profile, the highest elevation is located in its SW portion, formed by high plateau. One third of the profile in the NE has a slope that plunges down towards to Alazani valley. The bedding readings at the surface were difficult to find. There is just one single reading in profile center located in the Akchagylian formation. The bedding reading shows the same dip as reflectors in the seismic profile, having a gentle dip towards the center of the Didi Shiraki syncline. The Akchagylian – Apcheronian section is imaged as a system of sub-horizontal reflectors. They are parallel and have relative high acoustic impedance. The image shows that even an Akchagylian-Apcheronian sedimentary package is a bit folded. The NE side of the Didi Shiraki syncline allows us to see an onlap of the Akchagylian – Apcheronian package on the underlying Maeotian – Pontian stratigraphy, over erosional unconformity verified by fieldwork.



