

2015 GSA Annual Meeting in Baltimore, Maryland, USA (1-4 November 2015)

Paper No. 219-2

Presentation Time: 9:00 AM-6:30 PM

QUATERNARY STRATIGRAPHY OF WESTERN TURKMENISTAN (SOUTHEASTERN CASPIAN SEA)

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South-east coast of the Caspian Sea remains poorly studied, despite the presence of numerous anticlinal structures, revealing sections of Quaternary sediments, widespread marine terraces and interstratification of Caspian deposits with continental, represented by Uzboi and Paleo-Amu-Darya alluvium (Karakum formation), lake and aeolian sediments.

Geomorphologically southeastern section of the Caspian coast corresponds to the Western Turkmen lowland, characterized by a flat relief with a number of small anticlinal uplifts. Quaternary deposits of considerable thickness are hidden under a layer of aeolian sands and proluvial fan of Western Kopetdag, Uly and Kichi Balkhan and can be studied in a limited number of sections on the sides of the anticlinal uplifts (Cheleken, Monjukly, Boyadag, Syrtlanly, Nebitdag).

Available data on the structure of Quaternary sediments of south-east coast of the Caspian Sea allows to distinguish seven complexes of marine sediments corresponding to the largest stages of the Caspian Sea evolution (Akchagyl, Apsheron, Bakinian, Urundzhik, Khazar, Khvalynian and Novocaspian) and quite incomplete and poorly studied complex of continental deposits, among which there are traces of Akchagyl and Apsheronian aged deposits and Turkyanian sands and widespread Karakum formation. Lithologic homogeneity of Karakum formation show significant meandering of Paleo-Amu-Darya, which often changed its course from the modern delta of the Amu Darya River to the Caspian Sea and had a significant streamflow. End of the Pale-Amu-Darya streamflow, evidently refers to the beginning of Khvalynian era, which correlates the launch of the Uzboi, which is confirmed by lithological and petrographic analysis of sediments in Western Cheleken section (Kurbanov, 2013). Findings of Mammal fauna in Western Turkmenistan confined to water deposits: in the early Pleistocene (Akchagyl, Apsheron) - to the river and sea, in the middle and late Pleistocene - sometimes to the river and lake facies./i

Session No. 219--Booth# 270

[T138. From the Caspian to Mediterranean: Environmental Change and Human Response during the Quaternary \(IGCP 610\) \(Posters\)](#)

Tuesday, 3 November 2015: 9:00 AM-6:30 PM

Exhibit Hall (Baltimore Convention Center)

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