Name of proposed project:
PALAEOCLIMATE REGIME OF THE CASPIAN AND BLACK SEA DURING THE LAST 3 MA

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Introduction:

The Caspian Sea and Black Sea was a part of the Tethys Ocean between the Euro-Asian, Indian and Afro-Arabian plates during the Early and Middle Cainozoic. The Alpine orogeny took place in the Miocene time. In the Sarmat and Meotis times that has formed the Alpine belt. Then Pontian Basin of the Eastern Paratethys had been separated into the Black Sea and the Caspian Sea in the Shamakhy time.

The climatic event and hydrological history were the same in the Black Sea and the Caspian Sea during Akchagyl and Absheron time. The fauna composition clearly indicates that both of the transgression is associated with brackish environment (the Middle of the Akchagyl and the Middle of Absheron). Another transgression which might be associated with fresh environment was not recognized clearly because of lack of data. DESCRIPTION

Goal of the project:

The aim of the research would be to investigate the fine-grained sediments of the Plio-Pleistocene in order to quantify the major clay mineral groups by the X-ray diffraction methods (XRD), a morphology of the clay minerals by Scanning Electron Microscopy (SEM) and their chemistry composition by X-ray fluorescence (XRF). In addition to the clay mineral study, palynology, micropaleontology analyses would be carried out in the research in order to better understand palaeoenvironmental condition. OBJECTIVE

The major statement of the problem is that to reconstruct past climate and sea level at the last 3 Ma time and which of the stage the Black Sea and the Caspian Sea was connected each other. The main question is how many transgression were during the times, their relation with salinity and what was the main reason tectonic or/and climate. DESCRIPTION

Expected results:

The clay minerals, their chemical compositions, palynology and micropaleontology would give information not only about climate history of the Black Sea and Caspian Sea regions during the Plio-Pleistocene time and also information about transgression and

regression at the time which is important for petroleum geology. Additionally, based on the data would be reconstructed reconnection of the Black Sea and Caspian Sea.

Function of the partner:

We would like to collaborate with research institutes or university which is interested in Black Sea and Caspian Sea. Identification of pollen and microfossil by micrascope would be done in Azerbaijan. However investigation of the clay mineralogy and palynology samples preperation should be done in university which has got suitable laboratories.