# HYDROCARBON POTENCIAL AND GEOCHEMICAL PROPERTIES OF MAIKOPIAN SOURCE ROCK IN THE EASTERN BLACK SEA REGION

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Deep-sea part of the Black Sea region represents huge interest at present time. Multiple direct features of petroleum potential of the area, such as oil and gas seepages, active mud volcanoes, gas hydrates have been detected. Shelf part was currently studied in details, and hydrocarbon fields were discovered within its limits.

Samples were collected during several research cruises in the Black Sea within Training Trough Research program. Five areas: Ukrainian, Russian, Georgian, Turkish continental margins and central part of the sea were investigated. Mud breccia, rock clasts and oil from deep sea mud volcanoes were analyzed. Additionally collection of Maikopian oil and rock samples from onshore drilled wells and outcrops was chosen for comparison.

Age determination showed that most of semilithified rock clasts are from upper part of Maikopian formation. Total organic carbon content in the rock clast varies from 0.2 to 9.37%, hydrocarbon potential (S1+S2) is 0.25-18 mg/g corresponding to a source rock with moderate and good oil/gas potential. Samples demonstrated relatively low maturity based on pyrolysis data (maximum temperature less than 429$^{o}$) and biomarker analysis. Although oil have been sampled within studied area. Precise biomarker investigation of oil from the Petroleum mud volcano shows high biodegradation level and similarity with the immature Maikopian oil. Also specific biomarkers (homologues of tetracyclic terpanes) in marine oil samples were observed.

Since Maikopian sediment thickness in the depressions around 5-6 km, we are expecting existence of active oil generation and migration in the middle and lower parts of formation.