Unexplored Eastern Part of the Ukrainian Black Sea is a Highly Promising Area for Oil and Gas Prospecting

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The internal structure of the Black Sea is fairly complex. There are two extensional basins of different ages, the West and East Black Sea basins, separated by the Mid-Black Sea Rise (Andrusov Ridge in the Ukrainian sector). These two separate sub-basins have subsided as one certainly since at least about 30 Ma. A regional investigation of the eastern part of the Ukrainian Black Sea has been carried using a vast set of regional seismic reflection profiles, including the new set of regional seismic profiles by Naftogaz of Ukraine. To the south of the Crimea peninsula 20 large structures with closures of 50-200 sq. km have been mapped within Miocene-Pliocene sediments. Huge structures (>350 sq. km) in Tertiary and older sediments exist further to the east within Sorokin Trough and Andrusov Ridge.

In the easternmost part of the Ukrainian Black Sea a number of high-amplitude anticlines has been mapped in shallow water depth and a huge Mesozoic structure of 400 sq. km in deep water depth (150-700 m). Eocene, Oligocene and Miocene sediments are considered as source rocks with good generative potential for hydrocarbons. There are strong direct hydrocarbons indicators on seismic data. According to expert appraisal, each major lead formed within Upper Mesozoic-Cenozoic section in water depths of 100 m to 2000 m has an area of several hundred sq. km, with vertical closure of hundreds of meters, and has the potential to contain hundred million barrels of recoverable hydrocarbons.