

THE PROSPECTS OF NEW GIGANTIC HYDROCARBON POOLS DISCOVERIES IN THE BLACK SEA

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The Black Sea is one of the most complicated geological knots in the World. It is characterized by very severe environment conditions and great health-resort importance. So there is economically profitable basis only for prospecting, exploration and development of gigantic gas and especially oil pools in this extremely promising petroliferous megabasin. Prolonged steady ascending flows of hydrocarbon gases through the Black Sea bottom together with high-enthalpy deep fluids of wide range of physic-chemical characteristics (P_{CO_2} , P_{H_2S} , pH, Eh, etc.) with tectonophysical dilation exert powerful decompactive action upon both carbonate and quartz-silicate rocks. So beneficial prerequisites for formation of voluminous reservoirs connected with granite domes and crystalline blocks of different age occur here. We have every reasons to believe that analogues of such fields as White Tiger and Dragon (South-Vietnam shelf) and gigantic combined reservoirs (metasomatically altered crystalline rock massives – diverse reservoirs within sedimentary cover) are of widespread occurrence in Azov-Black Sea region. The important morphogenetic types of complexly built petroliferous reservoirs is connected with superposition of decompacted crystalline and carbonate rocks. Comprehensive analysis of distribution, geological occurring conditions and formation regularities of enough-studied fields connected with the reservoirs of this type testify that here we are dealing not with simple parasteric superposition, but with true rock paragenesis. It is caused by special manifold role which crystalline benches and ledges play in formation of biocarbonate bodies (reefs, bioherms, calcarenite bars, etc.) and dolomitization of them. The results of manifold investigations of geology, sedimentology and petroleum potential of the South China Sea shelf (with a number of rift and island arc petroliferous basins) is of basic importance for revealing of tectonic, geodynamic and fluid-dynamic interrelations between crystalline basement, biocarbonate accumulation and oil-gas pools formation in the complexly built reservoirs (traps) being considered. A number of fields with petroliferous crystalline rocks were discovered within Vietnam Sector of the shelf. And it is here the presence of various (micro)biocarbonate bodies is detected. Moreover, Hainan with its lagoons and islets bring out clearly the close interrelations between reef-carbonate formation, granite massives and accumulations of arcogenic clastic material. There are other striking examples of gigantic fields (Panhandle-Hugothon, Kuyumba-Yurubchen-Tokhomskaya, etc. within special transitional petroliferous intervals (stages) between Lithosphere Granitic Layer and basal carbonate series of stratisphere.

Technical session (topic)

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