Correlations of global-regional tectonic environments of convection recycling and degassing of the Earth

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Among the main indicators of the deepness of the global-regional tectonic environments and processes are indicators related to the interpretation of the data in the isotope-helium and carbon-helium isotopic systems. In these systems, when we performed an alternative multiregional interpretation of the data, the correlation of tectonic environments with the specifics of the processes of mantle-crust interaction and the Earth's degassing distinctly manifested. [1, 2 and oth.]. Based on our alternative interpretation of the data in the isotope-helium and carbon-helium systems (taking into account convection recycling), the “cold” amagmatic (avulcanic) branch of the hydrocarbon degassing of the Earth of Academician P.N. Kropotkin in the substantiation of the deep origin of hydrocarbon fluids received not a purely juvenile, but a juvenile-recycling interpretation. As a part of this report, justification of convection recycling will be presented in the control of the global-regional degassing of the Earth and its hydrocarbon branch (in connection with the oil and gas accumulation processes). The main-points of our report are based on the earlier published data on the isotope helium [3, 4, 5 and oth.] and are in accordance with the latest results of isotope investigations of noble gases [6, 7 and oth.].

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