

MAJOR TENDENCIES OF PETROCHEMICAL EVOLUTION OF NEOGEAN BASALT-DOLERITE FORMATIONS IN THE WESTERN EURASIAN ARCTIC

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Plateau-basalts represented by volcanic-plutonic complexes of PR2, D2-3, P2-T1, J3-K1 and N age are widespread in the Barents-Kara region on the west of Eurasian Arctic.

Analysis of petrochemical data allows to suggest two tendencies in development of the trap magmatism in the Barents-Kara region: planetary and regional. Since earlier to later epochs the former is characterized by general depletion of intermediate-composition basalts of the Earth in Mg and enrichment in Ti, some increase in Fe/Mg. The latter is determined by Pz-Mz development of the most part of the Barents-Kara region as young epibaikalian platform with following involvement (in Mz2) of its northern areas into pre-rift stage and also by such regional features of geohistory as Late Devonian rifting in the Novaya Zemlya and Timan. They are reflected in general decrease in alkalinity of Devonian and Mesozoic basalts due to potassium, the amount of which is minimal in the Mz basalts. Along with this, the amount of Mg is low that reflects their eclectic nature: on the one hand, their compositions seem to continue the general line of the evolution of young platform traps (and basalts), on the other hand, they are the indicators of forthcoming tectono-magmatic events due to the Arctic Ocean opening. More general tendency is also reflected in behavior of Ca (increase in Ca and Fe importance lasted until Mz2) that can be explained by contamination, probably typical for young platforms where thick, but ductile crust slowed down the magma motion contributing to the assimilation.