

GEODYNAMICS AND EVOLUTION OF TRANSBAIKALYE MESOZOIC VOLCANISM

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GEODYNAMICS AND EVOLUTION OF TRANSBAIKALYE MESOZOIC VOLCANISM STUPAK F.M., Institute of Natural Resources, Chita, Russia A region between the Baikal rift zone and Mongolo-Okhotskaya suture, 109 and 122 meridians, has been examined. Volcanic activity of Mesozoic era in its limits was realized for 5 stages (P-T, J, J3-K1, K1, K2). Surface, subvolcanic and hypabyssal Mesozoic rocks of volcanic origin have been concentrated in a system of isolated areas differed by time of laying and a number of manifested stages of volcanism. Origination of areas has been determined by existence of endogene activity centers functioning for a long time but discontinuously. Location of such centers has been steady for last 270 Ma of the Earth's history. For each of these stages of volcanism, successively differentiated basalt-trachyte series of rocks which palingene-anatectic formations of dacite-rhyolite structure are associated with (excepting stage K2) have been formed. From the first stage to the last in the total volume of vulcanites a share of main rocks increases from 1-2 to 100%, a share of acid decreases up to the absence, a share of medium rocks remains accessory. Rocks of the first four stages are subalkaline, of the last – alkaline. For the main rocks of volcanic origin of Transbaikalye Mesozoic era the evolutionary dualism is specific: their intrastage development proceeded through the bowen trend and culminated in trachytes, the intracycle development (for primary compositions) took place with the increase of melanocratism and alkalinity that resulted at the final stage in the change of trachybasalt magma by alkaline-basaltoid. Volcanic activity of Transbaikalye Mesozoic era developed in the alternating field of force. Geodynamic conditions of tension in the region were generated by continuous (175-180 Ma) rise of mantle diapir, conditions of compression – by pressure of the North-Chinese continent enclosing the Mongolo-Okhotsky paleocean. In periods of tension (appropriate to volcanism stages) effusions and intrusions of considerable amounts of basalt, the formation of great (proportional to volcanism areas) depressions filled by sediments and magmatites took place. In periods of compression, destruction of depressive structures, different-sized shifting of their parts over a shock system of shift-thrust and upthrust types, erosion and denudation (up to disappearance) of raised blocks occurred.