VOLCANIC ROCKS OF THE OKHOTSK SEA

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Volcanic rocks widely are spread in all structures of the Okhotsk Sea. They are characterized by different petrochemical characteristics and are divided by some age comlexes: Late Paleozoic, Late Triassic, Late Jurassic, Early Cretaceous, Late Cretaceous, Paleogene, Neogene and Pleistosene. Cretaceous volcanites predominate very much (70%) over other complexes.

Late Paleozoic and Late Triassic volcanic rocks are distributed on the north of the Okhotsk Sea, where they compose the continental crust rests, formed due to a destruction of the Mainland margin. The rocks are presented of andesite and andesidacite, characterized by high concentrations of Na, Al and Fe and low contents of K and Mg.

Late Jurassic-Late Cretaceous volcanic associations crop out at central part of the Okhotsk region. Paleogene, Neogene and Pleistocene volcanites are developed in the rift zone of Kuril basin and at the north-eastern slopes of Derugin basin. Volcanic rocks of the complexes mostly are presented of andesibasalt-andesite-andesidacite-dacite row (70%), are distinguished by high contents of Si, Al, Ca and alkalies and low concentrations of Ti and Mg. Content of K increases to more young rocks. Concentration Al decreases from Late Jurassic to Late Cretaceous complex and it rises again to Pleistogene volcanites. Majority of volcanic rocks of the Okhotsk Sea are related to a calc-alkaline series. They are differentiates of andesite magma, formed due to melting of the continental crust and contamination of the original basalt magma by a sialic material. Pleistocene andesibasalts, dredged at the north-eastern slope of Kuril basin, contain high concentrations of K, Al, Rb, Sr and Ba and low contents of Ti, Zr, Nb and Y, are similar with andesibasalts of a rear part of the Kuril Island Arc and belong to a calc-alkaline series of the Island Arc (Tararin, 1999).