GEOLOGY AND PETROLOGY OF THE TASAKEMIN OPHIOLITE (TIEN SHAN, KYRGYZSTAN)

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It is considered the Tasakemin ophiolite to represent the oldest oceanic crust situated in the Northern Tien Shan. It is composed of peridotites, serpentines, metagabbro, metabasalts, amphibolites, chlorite-actinolite schist with intercalation of metasediments. At the northen part it is covered uncomformly by basal conglomerates which is mamber of the Devonian volcanogenic sedimentary series. The southeastern part of the ophiolite is intruded by upper Proterozoic and Paleozoic granitoids. The rocks of Tasakemin ophiolite was very complicatedly deformed during multistage metamorphic processes. Ophiolite rocks underwent to metamorphism of prehnite-pumpellite, greenshist, amphibolite and eclogite facies, which reflects various stages formation Earth crust of this region.Petrochemical features of rocks are comparable to MORB. Minor and trace element compositions also are like an oceanic formation. Northern part of the Tasakemin ophiolite underwent to high pressure metamorphism up to formation of eclogitic rocks. Eclogite-bearing rocks overthrusted onto the rocks of ophiolite. On the southern part the rocks of ophiolite have been transformed to migmatites under the conditions of amphibolite facies. The U-Pb age of migmatites is 2200+50 Ma. Geological evolution of the Tasakemin ophiolite comprises from geodynamic conditions of an oceanic floor to collision zones through the conditions of subduction and accretion zones.