

FEATURES OF THE GABBRO-AMPHIBOLITE TRANSFORMATION IN METABASITES FROM THE UFALEI COMPLEX (THE URALS)

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The scatter in estimations of P - T conditions for coronites can be considerable even for rather small regions. We have tried to find out the reason of this phenomenon on the example of metabasites body (50x50m) in the southern part of Ufalei complex. Coronites preserved mainly in a central part of the body. Towards the periphery pyroxene disappears, garnet occurs more rarely, and the rocks transfer in amphibolites. There are no significant distinctions between coronites and amphibolites with respect to the major rock-forming components, but the quantities of rock-forming minerals and their compositions vary over a wide range; some grains display chemical heterogeneity. Then we determined the reactions resulting in transformations of gabbro to coronite (1), coronite to garnet amphibolite (2), garnet amphibolite to amphibolite (3). At the stage(2) the $Fe/(Fe+Mg)$ -ratios of garnet and hornblende increase, as well as the portions of edenite and tschermakite minerals in amphibole, that is reflected in observed variations of mineral compositions from center to rim of separate crystals in coronites. The stage(3) results in decreasing of tschermakite mineral portion. Thus, the traces of both progressive, and regressive reactions are noted in rocks from the studied body and as a result distinctions in estimations of P and T range up to 100°C and 2 kbar. The main reason of this phenomenon is irregular distribution of H_2O inside the body. The central part is rather dry then edge, which contacted with water saturated metapelites.