

MECHANISM AND CONDITIONS OF PGE PRECIPITATION IN THE LAYERED INTRUSIONS.

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As the geological observations testify, the formation of PGE mineralization is the result of a number of events occurred in basic - ultrabasic fluid-saturated magma. The fluid influence on the pre-crystallization differentiation leads to the formation of macrorhythmically layered structure of massifs. Non-participation of fluid on the principal stage of the intrusive crystallization causes its local concentration in some parts of cooling massif. Crystallization of the cumulus plagioclase is the petrologic borderline of mass concentration of the fluids. These processes result in tragic consequences: the classical sequence of silicate crystallization breaks up to latest precipitation of Mg-rich olivine. As a result of such case the critical zone of intrusive can be formed. The obvious silicate-silicate liquation as a variant of the critical phenomena is established in the PGE-bearing Lakkulaisvaara massif (Karelia). The low-sulfides PGE mineralization is connected with liquatic microgabbro-norite body in this igneous massif. In generally, PGE behavior in fluid-saturated magma is determined by their proportions between sulfide liquid and fluid. The earlier co-precipitation PGE and sulfides takes place as a solid solutions but the low-sulfides PGE mineralization is the later and more widespread process.