

**GRANULITIZATION OF ECLOGITIZED DYKES IN THE GRIDINO AREA,
BELOMORIAN BELT, RUSSIA**

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Archaean eclogites were recently found in the Gridino zone of tectonic mélange (northern Karelia), (VOLODICHEV et al., 2004). Eclogite bodies are cut by dykes, assigned to a complex of "drusites" of an early Proterozoic age. The geological and petrological research has shown that the dykes, having preserved signs of magmatic stage of the evolution (Fig. 1), were subsequently subjected to metamorphic transformations under conditions of eclogite (Fig. 2a) and granulite (Fig. 2b) facies. P-T parameters of granulite stage 770 ± 30 °C, 13.6 ± 0.9 kbar (GCPQ and GOPQ geothermo-barometers, paragenesis presented on Fig. 2b). The P-T evolution of metamorphism of the dykes coincide with the evolution trend of the Archaean eclogites.

*Fig. 1. Sample t1111-8.
Relics of magmatic clinopyroxene surrounded by fine-grained garnet.*

*(a) Microphotograph
White box marks the area of
image in (b). Crossed polars;*

*(b) BSE image
Note the platy garnet and white
dots of ilmenite exsolutions
inside clinopyroxene.
Length of the bar is 200 µm.*

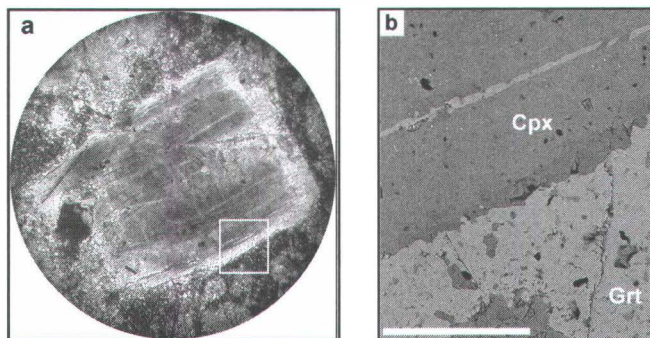
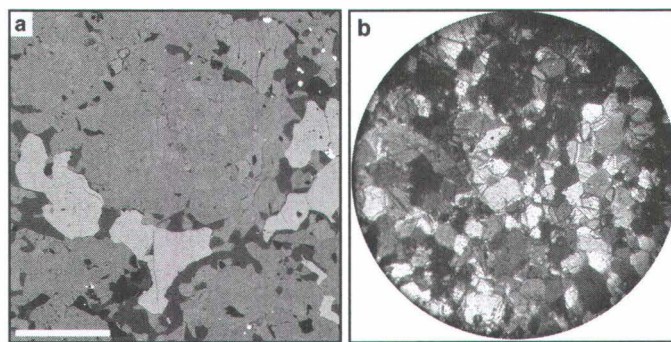


Fig. 2.

*(a) Sample 996-10. BSE image.
Lamellae and inclusions of orthopyroxenes in metamorphic (eclogitic) clinopyroxene (center of the picture), white grains are garnet.
Length of the bar is 200 µm.*

(b) Sample t1111-4. Photomicrograph of garnet-two pyroxene granulite. Crossed polars, field of the picture is 1 mm.



References

VOLODICHEV, O.I., SLABUNOV, A.I., BIBIKOVA, E.V., KONILOV, A.N. & KUZENKO, T.I. (2004):
Petrology, 12, 540-560.