

## PRACTICAL GEOTHERMOBAROMETRY ROCKS OF ECLOGITES PARAGENESIS

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Rocks of the eclogites paragenesis have a broad interval of compositions and meet in diverse geologic conditions. A major property for reference of rock of the eclogites paragenesis is the coexistence the magnesian garnet and monoclinic clinopyroxene. Selection geobarometer for eclogites is rather limited [1] and until recently conditions of their shaping determined approximately, on a stability limit of magnesian garnet, or on border of coexistence of a pair clinopyroxene - garnet, that is pressure are higher 10-18 kbar. In the present work the definition of temperatures and pressure formation of the rocks of eclogites paragenesis is attempted on the basis of original, developed on the experimental researches, the mineral geobarometer [2]. For this purpose from data available to the scientific literature the group eclogites the most close on a composition of the studied experimentally the system  $\text{CaO-MgO-Al}_2\text{O}_3\text{-SiO}_2$  is chosen. Necessary conditions of selection in this group are comprehensive analysis of compositions clinopyroxene and garnet, and the determination of the ferric iron. In a result, in a structure of select group of analysis there were rocks of different genesis, metamorphic eclogites and eclogites from xenolithes in kimberlites.

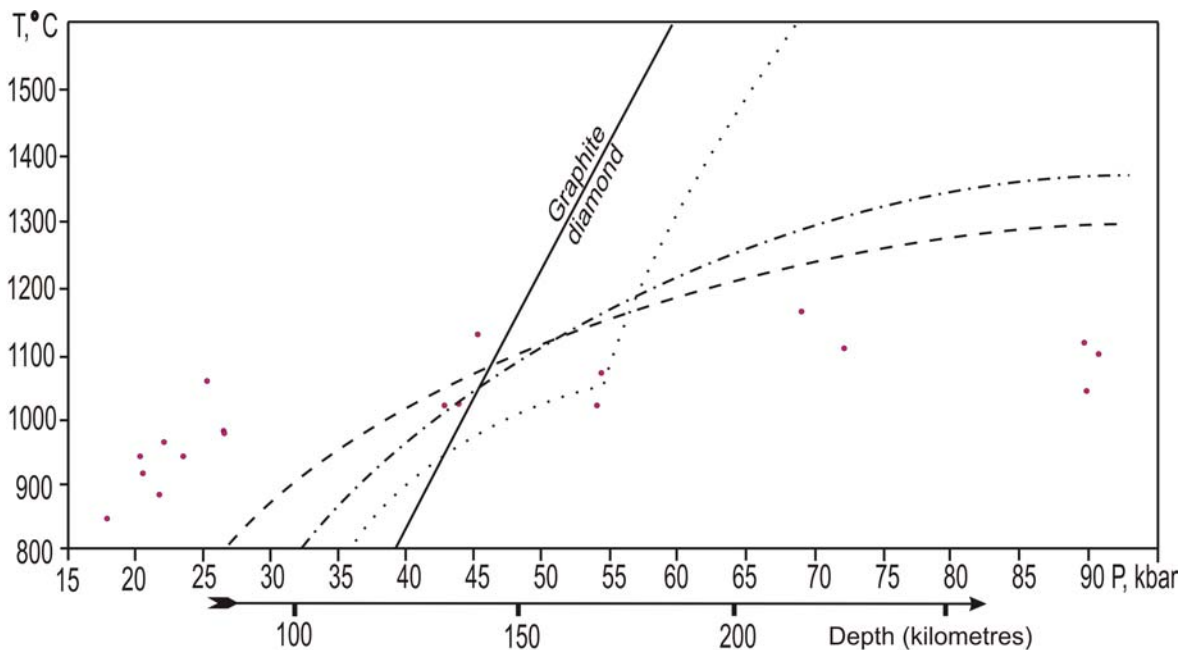


Fig.1. The solid line - graphite - diamond border indicated according of datas Kennedy, Kennedy [13].

Point line - the position of the pyroxene geotherms according dates of F.R.Boyd [14].

Dotted line - the position of the shield geotherms [15]. A dash-dot line is the position of " 40 mW\*m-2 " geotherm [16].

In coordinates temperature - depth (pressure) of a condition of their formation will derivate a trend in the interval pressure 20-80 kbar and temperatures 1000-1300 °C. Temperature the samples is increased with increase with the depth (pressure) of their formation. The obtained trend has more slanting declination, than shield geotherm and «40 mwt/m geotherm ». Low temperatures of formations for the most depth

samples eclogites indirectly confirm a capability of their formations as the cumulations at crystallization of a melt dry peridotite or carbonatitic peridotite.

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