TYPOMORPHIC FEATURES OF HIGH-BARIC MINERALS FROM KIMBERLITES OF THE UKRAINE.

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Kimberlites of all-known diamond-bearing provinces of the world are characterized by a certain and rather limited complex of accessory minerals, represented by garnets, chrome-spinellids, clino- and more rare, - orthopyroxenes, picroilmenites and by a number of another , less typical minerals. They, as a rule, compose xenoliths of abyssal, up to upper part of the mantle, rocks, but more often they can be observed as separate grains of disintegration products of indicated xenoliths. Amount, shapes and dimensions of these grains vary within very wide limits and directly depend on initial amount of appropriate xenoliths in kimberlites. Often their surface was resorted by residual magmatic melts and sometimes it was surrounded with reactional coatings.

By their composition mantle xenoliths are distinctly subdivided into ultrabasic(peridotitic - in the most wide interpretation) and basic(eclogites and rocks, close to them) branches. Alongside with this it has been established, that diamonds were connected with both paragenetic associations(Sobolev, 1974). It enables to determine potential diamondiferousness of kimberlites cy composition and quantitative relation of abyssal assosiations indicator-minerals still before their sampling.

Kimberlites, found at the territory of the Ukraine, are the exception in this respect. Thus, representative sampling of intensively altered(carbonatized) kimberlites, encountered in 1977 in the zone of joint of the Near-Azov crystalline rock mass (NMC) with Donbass(the eastern Near-Azov region), did not establish. Among indicator-minerals of these kimberlites the rare relation is registered: chrome-spinellids prevail sharply over garnet-pyrope, and chrome-diopside and picroilmenite are observed in individual relict grains(Smirnov et al., 1986). According to its composition no one of chrome-spinellid figurative points falls into a field of diamond-bearing associations. Among pyrope, although violet-red varieties if different intensity prevail, but a mass, overwhelming them, is located in a field of lherzolite paragenesis, typical of non-diamondbearing or poorly diamond-bearing kimberlites(Sobolev, et al., 1980).

In three kimberlite pipes and dyke, discovered at the northern side of NMC(the Eastern Near-Azov region) in 1990-1992, picroilmenites sharply prevails over another indicator minerals (Smirnov et al., 1993). Composition of pyrope, which amount of grains varies from single grains to(in rare cases) tenth of one percent of a heavy fraction weight, is practically analogous to composition of above-mentioned kimberlites, i.e., it corresponds to lherzolite paragenesis. Figurative points of chrome-

spinellids and chrome-diopside compositions on a corresponding diagrams confirm, probably, insignificant diamondiferousness of of kimberlite rocks investigated. But, taking into consideration the industrial development of this region with well-developed service lines, the revealing of even poorly diamond-bearing bo - dies here (on their existence the findings of diamond in terrigenous deposits of a various age indicate) may turn out to be profitable during their operation.

Only compositions of violet-red, purple-red and densely-mauve varieties of pyrope in kimberlite fragments, found in 1975 - 1976 in original sedimentary-fault breccias at the north of Volyn', the content of knorringitic component in which reached 20,9 - 30,6 mole% (Tarasyuk et al., 1980; Smirnov et al., 1988) testifies obviously the existence of kimberlite bodies of diamond facies in this region. Recently the sampling of basal horizons of Lower Cenomanian also confirms this fact. Approximately 2,5 km to the east from above-mentioned kimberlite manifestation about two scores of violet-red and purple-mauve grains of pyrope with maximum content of knorringitic minal up to 12,3 mole% and hundreds of rather large (up to 3,25 mm), primary ovate-orbicular, often with grey leucoxene illinition and" a rash" of perovskite on primary surface of picroilmenite grains with MgO content 7,52 - 8,41 mass % and Cr_2O_3 1,85 - 4,14 mass%) were met. That's why, it is sen - sible to continue sampling of similar deposits here and to stu - dy in details indicator-minerals, which can lead to discovery of diamond-bearing kimberlites.

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