

THE FAR EASTERN PROVINCES OF KIMBERLITES, AMPROITES, NEPHELINITES, ALCALINE BASALTOIDS, HYPERBASITES AND OF ACCOMPANYING ROCKS.

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This is the first attempt to generalize the items of information about all complexes known, about occurrences and outcrops of kimberlites, lamproites, alkaline basaltic rocks and outcrops isolated (diatremes?) of ultrabasites and accompanying rocks. All these rocks are located in various tectonic structures within Primorye, Khabarovsk and Amur regions, Sakhalin Island and Southern Korea territory. The age interval for these rocks ranges from Pre-Cambrian to date. These rocks are known to occur practically in all structural - formational zones of the Far Eastern sector of the Pacific Belt, but they are found in different quantities. However, only part of the provinces known were thoroughly investigated geophysically. That is why the real distribution of these rocks in the concealed outcrops of taiga and marshy localities is not known yet.

Kimberlites are identified within articulation zone of Khanka massif and Sikhote-Alin folding region in Anjui massif (the Northern Sikhote-Alin). Lamproites and related rocks which are studied unsufficiently well so far are registered in Amur depressions and in coal-bearing basins to the west from Sikhote-Alin folding region. Nephelinites are known as components of Ussuryisk series (Primorskyi region) and at Sakhalin Island. Volcanic and extrusive bodies consisting of alkaline basaltic rocks of sodium and potassium gradations are most widely distributed. They form both compact areals and outcrops, the latter are confined to the deep faults.

Because of prolonged evolution of magmatic process, the complexes of different composition and age are combined spatially in several areas. Both ultrabasites (meimechites, picrites, komatiites) and basaltic rocks of normal and alkaline series are found in some complex compositions. The rocks considered contain xenoliths of the host rocks, ultrabasic nodules, ultratelluric phenocrysts, xenocrysts. Some minerals from rocks mentioned above could be called high-pressure ones. Several discoveries of accessory diamonds are known at present.

Analysis of data above cited suggests to conclude that consolidated platform, plums, and hot spots have played a key role in the development of Mesozoic activation zones. This conclusion supports the idea that the duration of magmatic process was about 1 to 2 million years and that magmatic rocks have been heterogeneous. It should be noted that the evaluation of the diamond content of the provinces of ultramafic and alkaline rocks has not been done yet. Therefore all Far Eastern provinces deserve equal attention. We suspect that territories with high occurrence of rocks varying in age and composition are likely to have good prospects for diamond content.