

Injected tuffisites of the Russian Platform

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Injected tuffisites are the rocks formed as a result of injection of fluid-contained melt (fluidisat?) in sediments. It is determined that, injected tuffisites are widespread in the lower part of sedimental cover of Russian Platform.

Geological model of genesis of injected tuffisites was created on the example of study of kimberlite area located in the northern part of this region. During the origin of diatremes some part of alkali-ultrabasic melt did not reach the surface, but interacted with Riphean sandstones in the basement of platform sequence, forming injected tuffisites as a result. Sedimentary rocks were partially or completely reworked. As a result of this process fluidal structure and a new mineral association were formed. Investigations of tuffisites in some other areas of the Russian Platform shows that diatremes are not the obligatory condition of the genesis of injected tuffisites: the whole volume of the mantle material could be trapped in sediments.

Similar rocks occur in Brazil, where they are interpreted either as diamond-bearing sedimental conglomerates or - metamorphosed and sheared acid volcanites. These rocks reveal a fluidal texture and other features of injection. These phenomena were noted in the gold-bearing conglomerates of Witwatersrand, South Africa. Processes of the injectional fluidization are much more widespread than it is assumed now.