A NEW FORM OF HETEROGENEITY WITHIN GABBRONORITES OF THE FEDOROVA-PANSKY MASSIF (KOLA PENINSULA)

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One of the most important geophysical methods of investigation used in the Fedorovo-Pansky layered intrusion is the magnetic survey. Homogeneous gabbroid units are commonly characterized by a flat undisturbed magnetic field in magnetic section; they alternate with layered horizons wich have contrasting magnetic properties.However, a more detailed investigation (scale 1:2000 - 1:5000) of the magnetic field over homogeneous units shows that sublatitudinal magnetic anomalies conformable to layering are present within the homogeneous units as well.The magnetic anomalies did not seem to be controlled by any of the described petrographic structure.The situation has changed when the petrographic structures were classified by “the structural indicatrix method” by Y.L.Voytekhovsky (1995). According to this method only three possible theoretical structural types are distinguished for three-mineral gabbronorite: S1, S2, S3.Comparing the results of geophysical and staistical methods we found some interesting facts about “cryptic” layering of the homogeneous units in the Fedorova-Pansky intrusion. The main is the adequate spatial correlation between high-magnetic horizons and gabbronorite of S3 type. The gabbronorite of S2 composes low-magnetics intervals .