Analysis of fracturing of the complex joint zone of the Kandalaksha and Chupinsky grabens

GORDEEV N.A.
SCHEIMT INSTITUTE OF PHYSICS OF THE EARTH OF THE RUSSIAN ACADEMY OF SCIENCES,
Moscow, Russian Federation
e-mail: turistmsu@gmail.com

Throughout the neotectonic history of the formation of the Kandalaksha graben, it experienced stretching. However, if we consider it in more detail, then the nature of the development of graben steps, the propagation of smaller structures, pulsating, differentiated movements are visible. This is an extensive laying of shear zones, shear-discharge and rotational (Baluyev, 2012; Kolodyazhny, 2019).

The study of the nature of fracturing of the Keret archipelago and the Khetolambin massif was carried out by several methods: the construction of density stereograms in the stereonet program, the method of cataclastic analysis by Yu.L.Rebetsky, the structural-geomorphological method by L.A.Sim (Rebetsky, 2017), implemented in the SimSGM program (Gordeev, 2019), and the paragenetic method of structural analysis by L.M. Rastsvetaev (Rastsvetaev, 1987).

The zone under consideration is a complex articulation of transverse grabens of different ranks, where Kandalakshsky is of the 1st rank, and Chupinsky is of the 2nd. Disclosure of the 1st pushes disclosure of the 2nd. Most of the measured geological stress indicators reflect shear processes, these are sliding mirrors, vein structures and detachments. And in a small amount of dumping movements. All this is arranged in an alternation of systems of diagonal shifts and systems of orthogonal resets on O.Sidorov, whose age is noted as postglacial, the first thousand years. Such a system reflects the sublatitudinal compression in the Chupinsky graben, which is induced by the opening of the Kandalaksha graben.

The work was written within the framework of the state task of the IPE RAS.

Bibliography: