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Features of structure of Hayvoron fault zone

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Hayvoron fault zone (Southern-Western part of Ukrainian shield) was formed on plageogranite of Hayvoronsky complex (Early Archae). Previously this area was considered as area of granitization of primary rocks and tectonics role in formation of Hayvoron zone was ignored or poorly studied. The goal of the research was to determine fault zone structure and to identify secondary rock structures, their regularity and deformation mechanisms.

The research was based on tectono-facial methodology developed by E.Patalakha, A.Lukienko, V.Smirnov (1981–2007)

Area of investigation is a fragment of singranitization dislocation zone. It shows typical forms of viscosity faults system that determined basing on meso- and microtexture characteristics. Described outcrops are series of little geological bodies that have plate form. These plates differ according to rock fabric. Ranking level of secondary structure elements in rocks serves as the evidence for deformation intensity (tectonofacies). The ranking level increase in the direction to nominal seam of shear-zone. Xenolithes of primary rocks are also involved in tectonic process. These xenolithes are lens-shaped bodies that are bedded conformably to secondary plate bodies. Amount of primary rocks decrease in high-level deformations zones.

In thin-sections deformation rank-level is recognized by growth of tectono-matrix content: granulated quartz, deformed grains of plagioclases and albitization. Tectonomatrix in high-rank tectono-facieses composed to 90% of rocks. The main rock deformation appeared to be: granulation of quartz crystals and translation in plagioclases crystals mechanisms. The albite content increases from middle to high-rank deforma-

tion level. This fact shows that deformation process was going on simultaneously with granitization.