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Some Peculiarities of Mineralogical Zonality of First and Second of Shaly Level of Saksagan Suite of Ingulets Deposit

First and second shaly levels have such an authigenous and metamorphogenous mineral zonality to be close to perfect. Within rare areas of dynamothermal metamorphogenous occurrence under the conditions of greenschist facies, central zones of levels consist of quartz-chloritic, and sometimes of sericite-quartz-chloritic shales. Symmetrically along to a footwall and a sidewall, they pass into carbonate-quartz-chloritic and then into quartz-carbonate-chloritic shales. In turn, they gradually pass into magnetite-chlorite-carbonate quartzites of near-contact zones of first and second ferrian levels.

Such mineralogical zonality of the level in the line of central parts to peripheral ones is more popular under the conditions of epidot-amphiboliti facie: muscovite-quartz-biotite shales with garnet, staurolite, and andalusite (incidentally occurred) → garnet-quartz-biotite shales → garnet-cummingonite-quartz-biotite shales → сланці garnet-quartz-biotite-cummingonite shales. The latter have gradual transition to biotite-magnetite-cummingonite, and garnet-biotite-magnetite-cummingonite quartzites of first and second levels of ferrian levels.

Paragenetic associations being transitional on their mineralogical content are the most popular in the rocks of first and second shale levels. As a part of shales, typomorphic minerals of greenschists (sericite, clinochlore, and carbonates) as well as shales metamorphosed under the conditions epidot-amphibolitic facie (muscovite, biotite, and cummingonite) are available.

First ferrian level has underdeveloped mineralogical zonality: magnetite-micaceous hematite quartzites, and micaceous hematite-magnetite ones within its nonavailability, and red-layered magnetite quartzites occur incidentally as lenses with 5-7-cm thickness. Transitional conditions of metamorphism of the level rocks stipulate its prevalence within transitional mineralogical associations.

Second ferrian level is the thickest within the deposit having completely formed authigene-metamorphogene mineralogical zonality for ferrian level of the deposit. Its central zones consists of locally occurred thin layers (up to 15 m), and lenses of micaceous hematite-magnetite quartzites.