

## **TEXTURES OF MINERALIZED RARE-METAL GRANITES AS A TOOL FOR EXPLORATION**

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Bodies of mineralized rare-metal granites are commonly interpreted from geophysical data (gravity, magnetics, seismics) as horizontal or moderately inclined plates connected with the sources of felsic magmas by thin steep feeding channels. Recognizing the nature of upper contacts of these bodies is of importance for mineral exploration as they host most of the deposits of granitic affiliation (Sn, W, Mo, Nb, Ta, Be, Li). Apical parts of granitic bodies of plutonic and batholith size contain in places fine-grained porphyritic and/or aphyric granites, two-phase and aplitic granites as well as specific pegmatitic rims (stockscheiders). Even small granite cupolas are formed by two or more magmatic pulses whose products are commonly overprinted by postmagmatic or late magmatic alterations. The crystallization of the granites near the upper contact is characterized by rapid cooling and loss of volatiles, oscillation growth (manifested on quartz by CL), repeated brecciation and metasomatic pervasive and joint controlled alterations related or unrelated to ore mineralizations. The complex origin of granite textures along the upper contacts is caused not only by the temperature gradient at the time of intrusion across the contact zone and a sudden release of pressure but also by the later emplacement of younger granites along the upper contact of solidified granites and massive alterations caused by orthomagmatic and meteoric fluids circulating in fissures and joints of solid granites.