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Interaction Between Felsic and Mafic Magmas in the Salmas Intrusive Complex, Northwestern Iran: Constraints from Petrography and Geochemistry

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Abstract:

The Salmas plutonic complex, in the northernmost part of Sanandaj-Sirjan Zone of Iran, provides evidence for magma interaction processes. The complex contains mafic-intermediate, hybrid and felsic rocks which intruded into the Paleozoic metamorphic complex. They show typical relationships described in many mafic–felsic mingling and mixing zones worldwide, such as mafic microgranular enclaves (in felsic and hybrid rocks), mafic sheets, and hybrid rocks. The mafic microgranular enclaves (MMEs) are characterized by fine-grained, equigranular and hypidiomorphic texture and some special types of microscopic textures, e.g., quartz xenocrysts, oscillatory-zoned