

THE PAMPEAN PEGMATITE PROVINCE OF NORTHWESTERN ARGENTINA: AN OVERVIEW

GALLISKI, M.A.

The Pampean Pegmatite Province is possibly the second largest in South America after the Eastern Pegmatite Province of Brazil. It extends discontinuously for more than 800 km N-S and 200 km E-W in the Pampean Ranges of NW Argentina. It has a multistage development from Upper Precambrian-Lower Cambrian to Carboniferous that comprises orogenic and postorogenic pegmatite fields. Orogenic pegmatite fields are of muscovite and rare-element pegmatite classes. Muscovite class pegmatite fields are generally located westward of the main rare-element pegmatite fields in rocks that undergone medium-grade Barrovian-type metamorphism. The rare-element pegmatite fields are placed in medium grade rocks of a high-T low-P metamorphic belt. These pegmatites belong to a LCT (Li, Cs, Ta) petrogenetic family where beryl and complex-type, spodumene subtype pegmatites are widespread meanwhile albite-spodumene and albite types are scarce. They are genetically linked with LILE-rich, strongly peraluminous, and low-Ca calcalkaline granitic suite of S (+I) type. The postorogenic pegmatites form two smaller economic fields. The units are ovoid-shaped, zoned bodies contained in or very close to the cogenetic granites. The pegmatites are of beryl-type, commonly of beryl-columbite-phosphate subtype, and almost lack Li minerals; their more probably signature is mixed between LCT and NYF (Nb, Y, F) petrogenetic families. The parent intrusives generally form composite batholiths formed by mildly peraluminous, high-K calcalkaline granites that belong to an A (+S) type suite. Most of the Pampean Pegmatite Province probably evolved on a pericratonic mobile belt during the different tectonic stages of a Phanerozoic continent-continent collision.