

Precambrian pyroxene gneisses from Balcarce Hills, Tandilia, Argentina.

^{1,2}RIBOT, A., ²de BARRIO, R. and ¹CORTELEZZI, C., ¹LEMIT-
CIC, 52 e/121 y 122, 1900 La Plata, Argentina. ²Facultad
Ciencias Naturales y Museo, UNLP, 1900 La Plata.

Pyroxene-bearing acidic rocks like granulites, are not frequent in Tandilia basement. Preliminary petrographical and new geochemical data coming from a type locality are presented in order to evaluate its petrological significance. They are gneisses subhorizontally foliated and lineated in east-west direction, with granoblastic-interlobate textures and composed by quartz, acid andesine, K-feldspar, biotite (Bt), hornblende (Hbl), garnet, orthopyroxene (Opx) \pm clinopyroxene. Locally, the gneisses may be migmatized and host epidote-free orthoamphibolites and ophicarbonates lenses; besides the whole may be cross-cut by granite and pegmatite veins. Microdomains with Px+Bt+Hbl in apparent textural equilibria or with Opx as the principal relic phase, at present it may be considered as the less hydrated assemblage in the evolution of these rocks, which had formed during 2.0–2.2 Ga, under deformational conditions nearly to almandine-amphibolite/granulite facies transition. Incomplete replacements of Opx, Hbl and Bt(1) by uraltite, Bt(2) and chlorite, respectively, recorded an increasing fluid pressure during successive retrometamorphic stages. The evaluation of major and trace elements data in accord with field relationships, seems to support a sedimentary protolith for the gneisses (greywackes and calcareous sediments intruded by basalts, and subsequently metamorphosed). First rare earth elements (REE) patterns were obtained and an enrichment in light REE respect to heavy REE with Eu depletion, agree with patterns from felsic gneisses, granulites and charnockites of the world, indicating a continental-crust component for this portion of Rio de la Plata Craton.