

ACAMPAMENTO VELHO VOLCANISM (CAMAQUÃ BASIN, RS, BRAZIL) A CAMBRIAN BASALTIC ANDESITES/RHYOLITIC SUCCESSION

1Almeida, D. del P. M. de, 2Zerfass, H., 1Gomes, C. H. 1Universidade do Vale do Rio dos Sinos, São Leopoldo, Brazil; 2Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil.

The Acampamento Velho Formation (573-546-545 M.a.), represents a significant volcanic manifestation in the Camaquã Basin. In the Santa Barbara Sub-Basin the unit outcrops NW of Caçapava do Sul and in the Vila Nova region. It occurs as lavas, dikes and pyroclastic flows. Such volcanites are overlying the Vargas or Maricá Formations sedimentites, in an angular unconformity, and are recovered, in an erosional unconformity by the Santa Barbara Formation sedimentites. In both regions, two associations of facies have been defined: (1) Inferior: andesites basaltic/andesites, (2) Superior: rhyolitic, with lapillites, tuffs, welded tuffs at the base and rhyolitic flows at the top. The feldspars in the rhyolitic sequence are albite₁₀₀ (a product of albitization) and sanidine. The geochemical pattern of the immobile traces, and the concordant relationship between the volcanic facies suggest co-genetic rocks, representing bimodal volcanism positioned under distensive conditions, after a compressive phase, in a magmatic arc environment. The andesites are metaluminous and the rhyolites peraluminous. The pattern of the rare earth exhibit the evolved character of these rocks, with enrichment of the slight rare earth as compared with the heavy ones, probably due to the low grade of partial fusion of garnet-peridotite in the upper mantle. The rhyolites, the strong negative Eu anomaly is referred to role of the plagioclase fractionation. The spidergram shows peaks and depletions typically orogenic environments, with a positive Ce anomaly, probably due to contamination with marine sediments, and negative P, Ti anomaly (fractionation of titanite, rutile) and Sr (because these rocks are most evolved).