

AN INTRODUCTION TO ALKALINE MAGMATISM OF SOUTHEREASTERN URUGUAY

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This paper deals with the general geological aspects concerning to the Mesozoic alkaline occurrences in the Southeastern of Uruguay. The outcrop area lies between latitudes 33° - 34°S and longitudes 54° - 55°W. The regional geology of Uruguay is underlain by a Precambrian basement characterized by a wide variety of rocks metamorphosed to grades ranging from greenschists to granulites with granitic intrusions and five sedimentary basins, one of them of intracratonic setting and Paleozoic evolution while the others are related to the Mesozoic tectonic events. The alkaline magmatism is tectonically related either to the final distensional events of the Brasiliano orogeny or to the Mesozoic tectonics. The Mesozoic alkaline rocks are concentrated in the Southern and Southeastern regions of the country and they have been named, the former as Valle Chico Alkaline Massif and the latter as Arequita Formation. The Valle Chico Alkaline Massif is composed by heterogranular quartz syenites with fine to coarse grain size and porphyritic trachytes, syenites and syenogranites as minor occurrences. This magmatic association is also cross cut by late porphyritic dykes of trachytic and rhyolitic compositions. The Arequita Formation is composed mainly by rhyolites associated with levels of ignimbritic flows, with dacites and andesites as secondary petrographic types. Petrographic, geochemical and zircon typology data confirm the alkaline affinity for both units. Geochronological data obtained by Rb-Sr and K - Ar (whole rock) and U - Pb (zircons) yielded ages between 123±3Ma and 128±2Ma, respectively.