



## **RESULTIES OF THE PRELIMINARY PALEOMAGNETIC STUDY OF THE QUEBRADA DEL PIMIENTO FORMATION, BLOQUE DE SAN RAFAEL, MENDOZA PROVINCE, ARGENTINA: TECTONICS CONSTRAINS**

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A preliminary paleomagnetic study was carried out on the “Quebrada del Pimiento Formation” rocks, which belong to the Late Permian period. The outcrops of these rocks are located in the Bloque de San Rafael, Mendoza Province, Argentina.

From a paleogeographic point of view, the studied rocks are part of a deformation belt acknowledged for the Southwestern Gondwanaland. This belt crosses through the current Buenos Aires, La Pampa and Mendoza’s provinces and then through South Africa, Antarctica and Australia. This belt was first defined by Keidel (1916) who established it as a stratigraphic and tectonic link between the San Juan and Mendoza Precordillera (Argentina) and Cape (Africa). Later, Du Toit (1927; 1937) named it “Geosynclinal of Samfrau”. Until today remains controversies about both, the age and the mechanism of the deformation. The aim of this work, then, is to collaborate on the knowledge and understanding of this belt’s deformation.

The “Quebrada del Pimiento Formation” is made up by basandesitic dikes and sub-volcanic bodies. K/Ar dating on rocks of this formation gave  $263 \pm 5$  My (Valencio y Mitchell, 1972) and  $259 \pm 10$  My (Toubes y Spikerman, 1979) ages.

The samples were taken from eight different sites (seven at 34,6° Lat. S; 68,5° Long. W and one at 34,7° Lat. S; 68,4° Long. W). Seventeen hand-samples were got out from these sites and forty six specimens were obtained from them. Every specimen was studied through a routine paleomagnetic analysis (thermal and alternate fields demagnetization).

A pre-tectonic magnetic record with two populations having opposite polarities was the result of this preliminary paleomagnetic study. A paleomagnetic pole (PP) for the Late Permian was calculated: 65,9° Lat. S, 189,8° Long. E,  $A95^\circ = 11,8$ . This polar position is anomalous when it is compared with the apparent polar wander curve (APWC) of South America for that age. In order to explain this anomaly, it is suggested here two possibilities. The first possibility might be that the obtained pole position was right and its anomalous position in the curve is given because of a rude definition of the "Quebrada del Pimiento Formation" age and the apparent polar wander curve for the Permian-Triassic lapse. The second option suggests the possibility of a rotation according to a vertical axis of the sample location that would be bigger than 30° counterclockwise.