

## **A MAGNETIC FABRIC STUDY OF THE RENCA BATHOLITH, NORTHERN SAN LUIS PROVINCE, ARGENTINA.**

1RAPALINI, A.E., 2LOPEZ DE LUCHI, M., 1GEUNA, S.E. and 1ROSSELLO, E. 1  
Departamento de Ciencias Geológicas, F.C.E.y N., Universidad de Buenos Aires,  
Buenos Aires, Argentina; 2 CIRGEO, CONICET, Buenos Aires, Argentina

The Renca Batholith is a 19 km by 13 km ellipsoidal composite and zonal pluton exposed in the northeastern part of the Sierra de San Luis, Argentina. A porphyroid granodiorite and monzogranite external zone (Unit 1) and an equigranular biotite-muscovite monzo to leuco-monzogranite inner zone (Unit 2) constitute its principal units. It intrudes a medium-grade metamorphic basement composed of schists and micacites. In order to determine its geometry and conditions and processes involved in its emplacement, a multidisciplinary study has been started on this magmatic unit. As part of the geophysical characterization, a systematic magnetic fabric study was carried out. Sixty sampling sites were evenly distributed on most of the batholith. Two to five oriented cores were collected at each site. Bulk susceptibility (K) and anisotropy of magnetic susceptibility (AMS) measurements were done on all specimens. K values indicate a bimodal distribution that correspond to Unit 1 (ferromagnetic) and Unit 2 (paramagnetic). This match the magnetometric response of this body. Same distribution is observed in the anisotropy degree, with higher values in the porphyroid granitoid (Unit 1). The AMS has a predominantly foliated fabric, with a distribution of magnetic foliation planes generally sub-vertical and parallel to the boundaries of the ring-like Unit 1. Unit 2 shows less consistent orientation of these planes, which are frequently subhorizontal. The magnetic fabrics of this body agree with other fabric parameters and are consistent with a model of radial stress produced on Unit 1 during emplacement of the central Unit 2.