Preliminary Results of Relative Paleointensity Record of Sediments from Tajamar Formation, Valle De Lerma, Salta, Argentina.

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Abstract: This study was carried out on three sedimentary cores (474 samples) located in an outcrop in Guachipas (25° 31'S 65° 30.5'W), Tajamar Formation. Guachipas sediments are located in the river drainage of Guachipas River, which drains Meso-Cenozoic outcrops that bordering the southern end of the Lerma valley.
We conducted a detailed study of rock magnetism to characterise sediments and calculate the relative paleointensity records (RPI). The studied samples showed a viscous remanent magnetisation (VRM) removed with alternating fields of about 10-15mT. The rest of the remanence is stable and show only one component. The magnetic properties have shown highly variable values, displaying changes in both grain size and concentration of magnetic minerals. It was found that the main difference between the samples was the amount of soft/hard minerals. Magnetite is present in all the samples, but around 30% of the samples also present high amount of hematite and were removed for further studies. The remaining 323 samples fulfil the necessary conditions to calculate RPI by normalising the NRM with anhisteretic remanent magnetization (ARM), saturated isothermal remanent magnetization (SIRM) and volumetric susceptibility (k). Two ages indicate the record covers a time span between 40 to 200 kyrs. Our RPI logs were compared with SINT800 curve to date the sediments, obtaining a good correlation, confirming the ages previously obtained and dating the whole sedimentary sequence.

Keywords: relative paleointensity, sedimentary sequence, dating.