Magnetic scanning and interpretation of paleomagnetic data from Prague Synform’s volcanics

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Abstract:

Magnetic images have been produced at the distance of 0.1 mm from the polished basaltic thin sections from Prague Synform in Barrandian area. Three different magnetic textures were seen and when combined with optical imaging could be related to petrological features. The first magnetic texture revealed that most of the magnetic signature is localized within the amygdales formed later after the basalts became part of the sedimentary sequence. The second texture showed that the basaltic body contains large grain size distribution of magnetic carriers possibly with variable viscous magnetizations. The third texture suggested a presence of magnetic anisotropy of igneous origin.
Such textural magnetic information along with the paleomagnetic characteristics of the basaltic rocks of Silurian age constrained the overall geological interpretation.

Key words: paleomagnetism, magnetic scanner, magnetic mineralogy, amygdales, magnetic anomalies, magnetic texture.