



Magnetic mineralogy investigation of reference Permian-Triassic sequence at Kuznetsk Basin, Russia

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In this work we performed investigations of 77 samples from Babyi Kamen' section in left bank of the Tom' River, Kemerovo region, Russia ($54^{\circ}23.079'N$, $087^{\circ}32.105'E$). This section is suggested as a reference for the Kuznetsk Basin and entire Angarsk region. It was studied since the 1930's and widely described in the literature. Succession is presented by sandstone, siltstone, and claystone which contain vast amount of tuffaceous material. The age of the samples is Permian/Triassic.

Measurements of magnetic susceptibility, hysteresis parameters and induced magnetization versus temperature were carried out for determination magnetic mineralogy.

Differential thermomagnetic analysis was carried out for tracing magnetic minerals according their Curie temperature. Measurements were made in special equipment 'Curie Express Balance' that was created in the Paleomagnetic Laboratory of the Institute of Geology, Kazan Federal University. This process included the measurement of the sample induced magnetization as a function of temperature. The rate of heating was $100^{\circ}C/min$. The measurements were made in a constant magnetic field - 400 mT. We have got thermomagnetic curves of the first and second heating up to $800^{\circ}C$. The weight of the sample is approximately 0.1 gram. Hysteresis properties were determined using a J-coercivity spectrometer, also built in the Paleomagnetic Laboratory of Kazan University, and providing for each sample a modified hysteresis loop, backfield curve, acquisition curve of isothermal remanent magnetization, and a viscous IRM decay spectrum. Each measurement set was obtained in a single run from zero field up to 1.5 T and back to -1.5 T [1]. Magnetic susceptibility was measured in Multi-function Kappabridge MFKA1-FA (AGICO) on frequency 976 Hz.

Acknowledgements: The work was carried out according to the Russian Government's Program of Competitive Growth of Kazan Federal University and supported by the grants of State Program in the field of scientific research and Russian Foundation for Basic Research (project no. 16-04-01062).

[1] Burov B.V. 1986. Kazan: Publishing house of KSU, 167 p. (In Russian).