



Paleomagnetism of the mid-Devonian Kurgasholak Formation, Southern Kazakhstan: Constraints on the Devonian paleogeography and late orogenic rotations of the Kazakhstan volcanic arc

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A paleomagnetic study of Middle Devonian basaltic and andesitic flows in southeastern Kazakhstan provides additional constraints on the paleo-latitudinal position and on post-Devonian rotations of the southwestern limb of Kazakhstan's highly curved Devonian volcanic belt. A high temperature, dual polarity remanence (tilt corrected Dec=286.5, Inc=46.4, α_{95} =7.8, k=29.2, N=13 site-means) was isolated from the volcanic middle member of the Kurgasholak Formation. We interpret this remanence as a primary mid-Devonian magnetization based on a baked-contact test.

We also isolated a post-folding overprint with an *in situ* mean direction Dec=134.9, Inc=-43.0 (α_{95} =4.9, k=71.6, N=13 site-means), which we can interpret as of Early Permian age because primary results of this age and with similar inclinations have been well documented in the area, whereas overprints with this age are also very common in the entire region. The declination of this overprint is seen to be deflected counter-clockwise by $99.8 \pm 6^\circ$ relative to the 290-Ma reference direction, indicating that the studied locality was affected by late-orogenic rotations.