

COUNTER-CLOCKWISE ROTATION OF THE MONGOLIA BLOCK: EARLY CRETACEOUS PALAEOMAGNETIC RESULTS FROM BIKIN, FAR EASTERN RUSSIA

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We present palaeomagnetic results from Early Cretaceous rocks of the Alchan basin (46.5 degree N, 134.7 degree E) in the Samarka-Nadanhada-Bikin Terrane, Sikhote Alin Fold belt, Far eastern Russia. A high unblocking temperature magnetization component with unblocking temperature of 590 degree C was isolated after stepwise thermal demagnetization from 7 sites of the dacite tuffs and welded tuffs in the Albian Alchanskaya Formation, whereas magnetization component with unblocking temperature of 350 degree C was isolated from 4 sites of sandstones in the Berriasian Kultukha Formation. The bedding-tilt test is positive at the 99 percent confidence level for the Albian Alchanskaya Formation, indicating the primary magnetization is preserved. Their tilt-corrected mean direction is $D=324.4$ degree, $I=64.2$ degree ($\alpha_{95}=15.0$ degree), corresponding to a palaeopole at 65.5 degree N, 56.5 degree E with $dp/dm=19.1$ degree /24.0 degree. Early Cretaceous palaeomagnetic declination indicates that the Sikhote Alin Fold belt has rotated counter-clockwise by 55 degree \pm 37 degree with respect to the Eurasian continent later than Albian times (96-108 Ma). Counter-clockwise rotation of this area is also recorded in the large westerly declination values ($D=251.2$ degree, $I=64.0$ degree, $\alpha_{95}=12.4$ degree) in the secondary remanent magnetization in the Berriasian Kultukha Formation. The counter-clockwise rotation is recorded at the interior of the Mongolia Block across the Central Sikhote Alin Fault from the East-Sikhote Alin volcanic belt.