

Paleomagnetism of the Sorachi and Yezo Group in the Ashibetsu area, central Hokkaido, Japan.

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Paleomagnetic study was performed on Upper Jurassic~Lower Cretaceous Sorachi Group and Yezo Group in Ashibetsu area, central Hokkaido aiming at quantitative estimation of tectonic movements in reference to the northeastern Eurasia. Characteristic remanent magnetization (ChRM), which is carried by various ferromagnetic minerals, was isolated for five sites. To determine their origin, we executed isothermal remanent magnetization (IRM) experiments, and origin of ChRM is categorized into two groups. One of them is positive in reversal test, and enhanced precision parameter after tilt correction implied pre-folding origin. Untilted formation mean direction ($D=-12.0^\circ$, $I=47.7^\circ$, $\alpha_{95}=12.3^\circ$) is characterized by significantly shallower inclination than the expected value for coeval mother continent, and northward movement since the Cretaceous is determined to be 2100 km (± 1500 km). In comparison with previous paleomagnetic studies and tectonic models, central Hokkaido could consist of at least two components and have experienced rapid northward movement driven by plate motion.

Keywords: Paleomagnetism, Hokkaido, Cretaceous