タイ南部における古地磁気学的研究

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Paleomagnetic study of Peninsula Thailand

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Paleomagnetic study was carried out in Peninsula Thailand. In order to constrain evolution process of the West Sundaland during northward displacement of Indo-Australian plate, Jurassic-Cretaceous red sandstones have been sampled at 33 sites from the Khrong Ming Formation and the Lam Thap Formation in Surat Thani (9.1 degree N,99.4 degree E) ,Thailand. Stepwise thermal demagnetization isolates high-temperature components with unblocking temperature of 600-690C. Easterly deflected declination (D=29.2 degree, I=10.7 degree, a95=14.6 degree in stratigraphic coordinates) is observed in the northern part of our study area (11 sites 85 samples), and shows positive fold tests. The easterly direction is consistent with those of Cretaceous paleomagnetic directions of Indochina. On the other hand, Westerly deflected declination (D=338.7 degree, I=18.5 degree, a95=11.2 degree in geographic coordinates) is observed in the southern part of our study area (14sites 58samples), and shows negative fold tests. Similar westerly paleomagnetic directions have been reported from Jurassic-Paleocene rocks in Peninsula Malaysia. We have discovered distinct difference in declination within our study area. Present study combined with the previous paleomagnetic studies suggest that differential tectonic rotation occurred between the Indochina block and Peninsula Malaysia, and that the boundary of this different tectonic rotation is located in our study area of Surat Thani.