Geophysical Research Abstracts, Vol. 7, 02267, 2005
SRef-ID: 1607-7962/gra/EGU05-A-02267

Paleomagnetism of the North Marmara Region

O. Makaroglu , N. Orbay

Istanbul University, Engineering Faculty, Deparment of Geophysics, Avcı lar, 34320, Istanbul, Turkey (ozlemm@istanbul.edu.tr)

The study area is located in the W Pontides. This study aimed at understanding the tectonic evolution of different tectonic units of the W Pontides by obtaining paleomagnetic data from the Upper Creatceous volcanic rocks exposed in the Istanbul and Istranca regions. Oriented rock samples were collected from the Upper Cretaceous volcanic rocks at 15 sites. The mean value of denclination and inclination for Upper Creataceus samples were found to be 187^0/-46^0 in the Stranja Region and 348^0/40^0 in the İstanbul Region. The corresponding mean paleolatitudes were determined to be 27.4^0 for the Stranja Region and 22.8^0 for the Istanbul Region. However, the Upper Cretaceous volcanic stratigraphy in the Istanbul Region allows us to determine palaeolatitude variation with time. The mean values of paleolatitude were found to be 20˚, 23˚ and 26˚ from the oldest (Poyraz) to the youngest (Kı sı rkaya) intervals. Therefore, we hypothesise that the Istanbul Fragment moved from southerly latitudes northwards in the Upper Cretaceous period, when the Istranca Block was at a fixed position.