

Preliminary paleomagnetic data from the Dakhla section, Southwestern Moroccan Sahara

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ABSTRACT

New Eocene vertebrate localities were reported recently southern Dakhla city in southwestern Morocco. The Eocene sediment crops out on cliffs along the Atlantic Ocean coast. Vertebrate remains came from two conglomeratic sandstone beds and are principally represented by isolated teeth belonging to selachian and bony fishes, a proboscidean assigned to *Numidotherium* sp. and many remains of archaeocete whales (Basilosauridae). Twelve paleomagnetic sites were sampled along the Al Aargoub section aiming to characterize the paleomagnetic signal and its suitability to perform further magnetostratigraphy. The natural remanence magnetization of a total of 50 samples was measured, but the intensities of a majority of samples are too weak before or after alternating field (AF) or thermal demagnetization and could not be measured on the available equipment (JR6). These samples had to be rejected as well as a few which had been remagnetized in the general direction of the present earth's field. The remains samples exhibit one or two component magnetization. These magnetization components appear to be carried by both sulphide mineral and a magnetite-titanomagnetite mineral. The data of all the samples are very unstable except five which show normal polarity at the lower part of the section, this outcome is unfortunate for a magnetostratigraphic investigation, as it makes a correlation with the geomagnetic polarity timescale (GPTS) very difficult. Dating based on the magnetic results is therefore impossible.

Keywords: Dakhla, Eocene, Sahara, Vertebrate, Magnetostratigraphy,