isostatically compensated trough which is underlain by a considerably thinn crust. Available results of geophysical investigations show that the basement u derneath the Benue Trough is irregular in shape and folded and uplifted in plac mapping out several basinal structures in which sediments of varying thickne have been laid down. Sedimentary thickness in the trough averages from abo 0.38 km to an estimated maximum ob about 7.00 km. These sediments have been inte preted as being folded and cut across by numerous faults, 5 - 160 km in leng whose trends are mostly anti-parallel to the axis of the trough.

Geophysical investigations further suggest the existence of igneous intrusiv of basic to intermediate composition within the Benue Trough. These intrusives o cur at depths which vary from as shallow as 0.005 km to depths of 8.0 km or mor On the basis of geophysical studies, the Benue Trough can be described as an elo gated rift of subsidence in which a thick succession of sedimentary rocks, evap rites and intrusives have been emplaced. Results of geophysical studies so f carried out support the fact that the evolution of the Benue Trough involve asthenospheric up-doming, crustal thinning and stretching, emplacement of igneou bodies and block faulting.

Magnetotellurics in the Senegalo-Mauritanian Basin, West Africa

M. Ritz and Y. Bellion (Dakar, Senegal)

The deep geologic structure of the onshore Mesozoic-Cenozoic Senegalo-Mauritanian basin (West Africa) has been studied using the magnetotelluric (MT) method along three approximately linear traverses, with a limited amount of information provided by deep drilling. The interpretation of the MT data, given in terms of two-dimensional (2-D) resistivity structures, indicate that the main gross lithological boundaries of Senegal can be readily followed by using calculated resistivities derived from the 2-D Mt modelling. The resultant interpretive cross sections depict three important layers in the electrical stratigraphy (post-Senonian, pre-Senonian, basement). Conductive horizons not indicated in the borehole logs are also observed and are probably caused by saline water-filled fracture zones. The basin is characterized by water-saturated, unconsolidated, low-resistivity sediments. In the southern part of the basin, there are relatively conductive (10-30 ohm-m) formations below the Mesozoic which are interpreted to indicate very fractured sandstones of Ordovician-Devonian age. However, delineation of the boundary between Jurassic limestones and basement rocks is somewhat uncertain due to the low electrical resistivity contrast. With the details provided by the MT data, a geologic model has been developed. This indicates that the basin is a westward-sloping, open homocline in which the structure is controlled by basement faults that portray a more or less staircase structural style.

La chaîne des Mauritanides au Sénégal Oriental: Interprétation de deux profils magnétotelluriques

M. Ritz et B. Robineau (Dakar, Sénégal)

Des mesures récentes du champ électromagnétique (méthode magnéto-tellurique), le long de deux traverses au Sénégal Oriental, depuis le bassin côtier jusqu'au craton ouest africain à travers la chaîne des Mauritanides, ont permis d'établir des

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