INTEGRATED GEOENVIRONMENTAL ASSESSMENT OF DEVELOPMENT ACTIVITIES IN NORTH WESTERN SINAI, EGYPT

A THESIS SUBMITTED

BY

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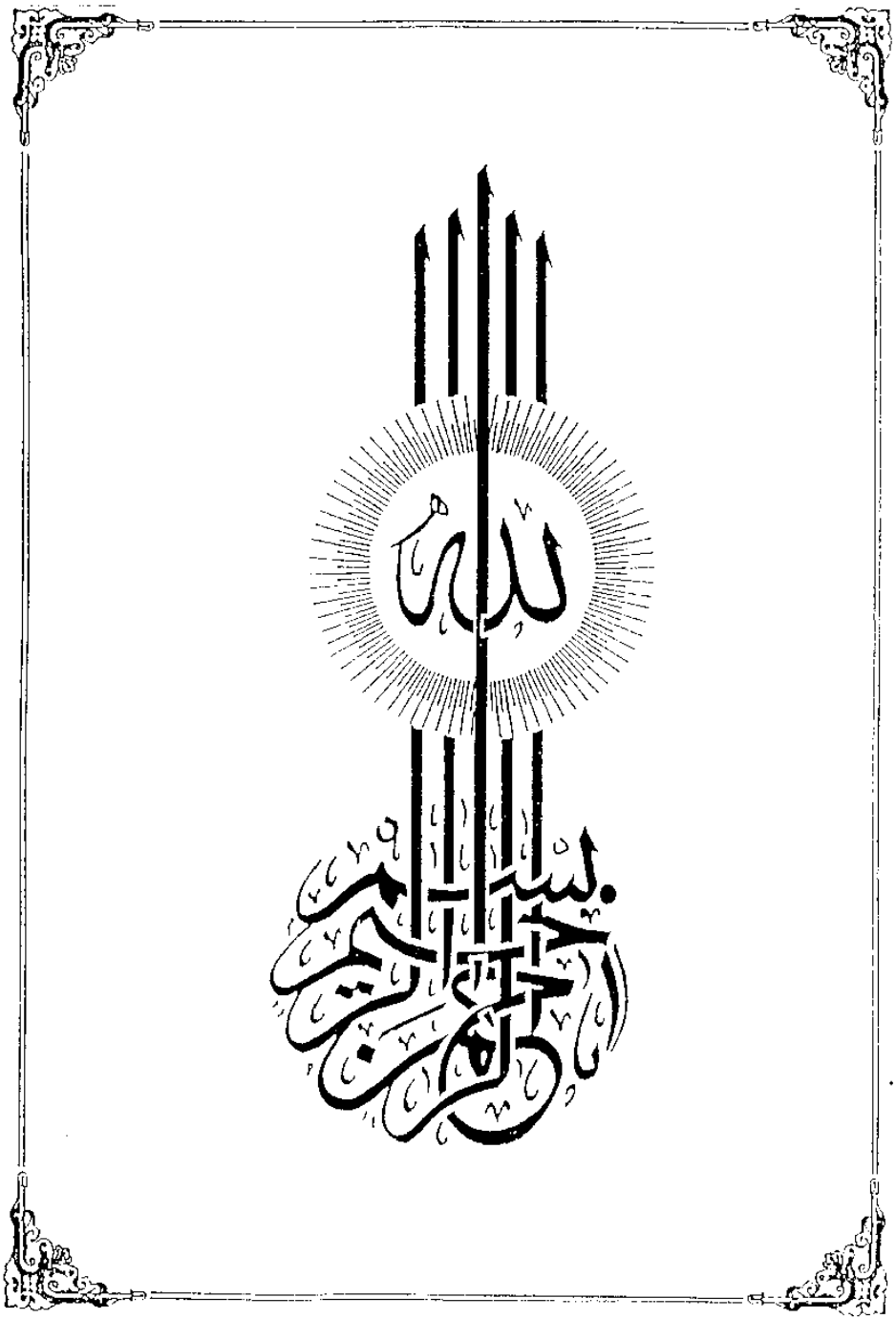

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ABSTRACT

The present study deals with the geoenvironmental aspects of the development area in northwestern Sinai by using the data and technology of Remote Sensing and GIS.

The field observations, the visual analysis of satellite images and meteorological data leads to the illucidation of the physiographic setting, geomorphologic and sedimentomorphic classiffication.

The stratigraphy of the subsurface succession and the recognized rock units are discussed through the study of the logs of ten oil wells and eight shallow boreholes in the area under consideration .

The construction of depth relief maps on the tops of the different recognized rock units from the top of the Dabaa Formation to the Mit Ghamr Formations and also the isopach maps of the pre-Oligocene – Basement and those of the Dabaa Formation – Mit Ghamr Formation together with the processing of the gravity data, leads to visualization of the deep-seated regional features of large scale structural elements.

The remote sensing investigations done and a GIS model is built up and the geoenvironmental assessment of the development projects in the area under consideration is dealt with. The risk assessment and the recommendation are given.

CONTENTS