PETROGRAPHY, PETROCHEMISTRY AND DISTRIBUTION OF RADIOACTIVE MINERALS AND ELEMENTS IN GEBEL EL - ZEIT GRANITE, EASTERN DESERT, EGYPT

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THESIS

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TO
MY MOTHER
AND
MY DEAR HUSBAND

بسم الله الرحمن الرحيم

NOTE

The work of the thesis was carried out in Ain Shams University, for the partial fulfillment of master of science degree. Beside the research work materialized in this thesis the candidate has attended graduate courses in the following topics :-

1- Igneous petrology .
2- Sedimentary petrology .
3- Metamorphic petrology .
4- Mineralogy .
5- Geochemistry .
6- Crystallography .
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CHAPTER I
INTRODUCTION

I. 1. General Statement

The present study deals with the petrography, petrochemistry and the distribution of radioactive elements and minerals in the granitic rocks of Gabal El Zeit in the North Eastern Desert of Egypt. The area under examination is limited by Latitudes (27^{o} 25") and (28^{o} 00") North and longitudes (33^{o} 25") and (33^{o} 35") East (Fig. 1). This area is represented by an elongated NNW - SSE granitic mass (Main Gabal El Zeit) flanked by sedimentary rocks of Paleozoic to Quaternary age (Salman etal.,1988).

I.2. Topography and Geomorphology

Gabal El Zeit area in general, represents a conspiceous elongated ridge which follows NNW - SSE direction parallel to the Gulf of Suez trend. The mountain range is separated by a wide depression from evaporites into the northern Main Gabal El Zeit and the southern little Gabal El Zeit. The maximum elevation point is 456 m in the north, while in the south it reaches 265 m. above sea level. The Main Gabal El Zeit is dissected by Wadi Kabrit dividing it into eastern Gabal El Zeit granite and western Gabal El Zeit sedimentary rocks. The little Gabal El Zeit shows a more complicated morphology due to the presence of several blocks within the two major central depressions.