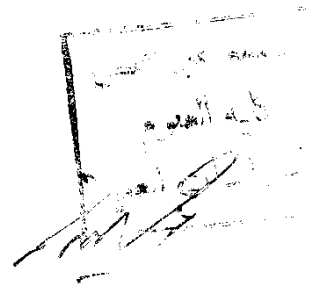
# A STUDY ON THE GEOLOGY AND GENESIS OF SOME Zn-pb DEPOSITS IN THE EASTERN DESERST OF EGYPT (UM SAMIUKI AND UM GHEIG AREAS)

A Thesis

SUBMITTED TO THE

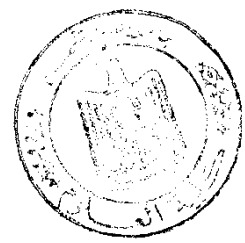
FACULTY OF SCIENCE

AIN SHAMS UNIVERSITY



By

Tabarak Mohammed Mahmoud Deyab



IN PARTIAL FULFILMENT

FOR THE REQUIREMENTS

OF THE DEGREE OF

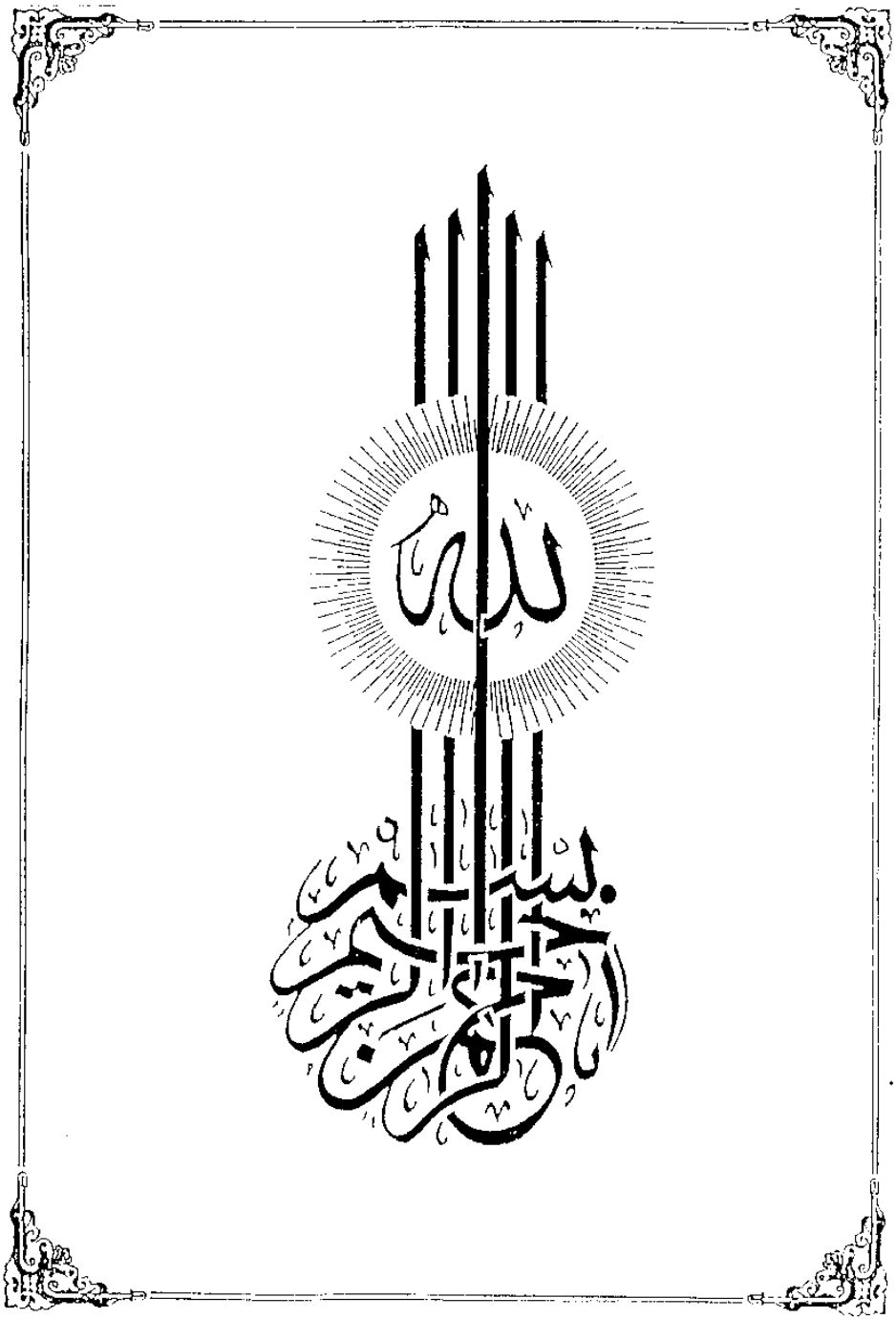
MASTER OF SCIENCE

In Geology



1987

TO MY DEAR FAMILY



# N O T E

Beside the work carried out in this thesis, the candidate has pursued post-graduate studies for the partial fulfilment of the Degree of Master of Science in the following topics.

I. Field Geology :

1. Mapping
2. Sampling
3. Photogeology
4. Geotectonic

II. Advanced Mineralogy :

5. Mineralogy
6. Geochemistry
7. Crystallography

III. Advanced Petrology :

8. Igeneous Petrology
9. Metamorphic Petrology

Language : German, M.Sc. Course

She also passed successfully an examination in the above mentioned topics.

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ACKNOWLEDGEMENT

The Author wishes to express her grateful thanks to Prof. M. Ezzeldin Hilmy, Professor of Economic Geology, Ain Shams University, for his continuous encouragement and interest in this work.

The author is deeply indebted to Prof. Abdel Aziz A. Hussein of King Abdul Aziz University, Jeddah, for his supervision, continuous guidance, and critical reading of the manuscript, and the fruitful discussions during the progress of this work.

The author would also like to express her thanks and gratitude to Dr. M.A. Gad, director of the Central laboratories of the Geological Survey of Egypt, for co-supervising the present work and making available the excellent research facilities during the petrochemical study of the rocks.

The author gratefully acknowledges the kind assistance and fruitful suggestions provided by Dr. Amal H. Rasmy, Director of the Geochemical Department of the Egyptian Geological Survey.

Thanks are due to my colleagues in the Geological Survey who helped in finalizing this work.

C O N T E N T S

# LIST OF FIGURES

II.10. Recrystallized calcite associated with fine gypsum aggregates.

II.11. Colloform texture in microcrystalline carbonate.

CHAPTER III. 1. Schematic cross-sections of different types of sulphide deposits.

1.a. Cyprus deposit.

1.b. Kuroko deposit.

1.c. Besshi deposit.

1.d. Minderalization in Benue and Amazon Rift Zones.

CHAPTER IV. 1. Sphalerite aggregates with some chalcopyrite exsolution bodies and rare galena grains along the borders.

IV. 2. Transparent sphalerite with allotriomorphic texture.

IV. 3. Sphalerite vein with minor chalcopyrite exsolution bodies encrusted and partly replaced by chalcopyrite. The black areas are gangue.

IV. 4. Chalcopyrite angregates are associated with minor galena and is coroded by gangue.

IV. 5. Covellite and neodigenite are alteration product of chalocopyrite. Covellite is developed along fractures.

IV. 6. Covellite replaces chalcopyrite along cracks. Pyrite is brecciated and arranged in prefered orientation due to cataclasis.

IV. 7. Pyrite and sphalerite aggregates scattered in gangue.

IV. 8. Pyrite aggregates replaced by goethite.

IV. 9. Pyrite enclosed in sphalerite and chalcopyrite. The three minerals are invaded by covellite lamellae.

IV.10. Rhombohedral crystals of marcasite and chalcopyrite grains enclosed in sphalerite. Black area are gangue.

IV.11. Bornite aggregates replacing chalcopyrite which is rarely rimed by covellite.

IV.12. Galena aggregates enclosing sphalerite grains. Galena is corroded by gangue.

IV.13. Septechlorite replaced by carbonates and tremolite, black areas are ore minerals.

IV.14. Talc and carbonate aggregates replacing ore minerals.

IV.15. Tremolite bundles intersecting talc and septechlorite.

IV.16. Galena with triangular pits following the octahedron planes.

IV.17. Galena associated with pyrite, sphalerite and gangue, showing intergranular texture.

## LIST OF TABLES

# A B S T R A C T

This thesis reports on the geology, mode of formation and characteristic features of two widely different Zn-Pb (and Cu) deposits in Egypt, namely those at Um Samiuki (area I) and Um Gheig (area II).

Area I occurs amid an extensive belt of metavolcanic rocks that extends in a NW-SE direction in the southern part of the Eastern Desert of Egypt. This area is made up mainly of a pile of cyclic acidic to intermediate metavolcanic rocks, with their associated pyroclastic and volcanosedimentary rocks. The repetition of the metavolcanic sequence is most conspicuous at Wadi Um Samiuki and Wadi Dabalit. These metavolcanic rocks are classified into : older metavolcanics (at Wadi Um Samiuki) and younger metavolcanics (Abu Hamamid group). The massive sulphide mineralization is associated with the Abu Hamamid group.

Area II lies within the sedimentary sequence of Miocene age extending parallel to the Red Sea in the Eastern Desert of Egypt. The area is made up of dominantly Precambrian basement rocks, Upper Cretaceous , Middle Miocene (Basal and Gypsum series) and Quaternary sedimentary successions. The Zn-Pb mineralization is located in the limegrits and conglomeritic limegrits of the Basal series, and to a lesser extent in the lower parts of the Gypsum series of the Middle Miocene. It is shown that the sulphide mineralization at Um Samiuki is a stratiform