بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات
لم ترد بالاصل

South Valley University
Aswan Faculty of Science
Geology Department

GEOPHYSICAL AND GEOLOGICAL STUDIES OF THE AREA SOUTH WEST SAFAGA, CENTRAL EASTERN DESERT, EGYPT

A THESIS
Submitted to the Geology Department, Aswan Faculty of Science, South Valley University

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B.SC. (Geology, 1985)

In Partial Fulfillment For the Requirement of the Degree of M. Sc. In Applied Geophysics

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2008

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ABSTRACT

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The present study is concerned with interpret the total intensity aeromagnetic and Bouguer gravity anomaly maps of South West Safaga, Central Eastern Desert, Egypt. From the original maps deduce another second vertical derivative, the reduction to the North magnetic pole (RTP), and downward continuation maps. Determine the anomalous features and calculate the parameters of the causative bodies, such as the depth.

The digitized and gridded aeromagnetic and Bouguer gravity data of the study area has been processed and enhanced using firstly Fourier transformation and then applying various filter techniques to deduce filter maps and profiles suitable for all geological interpretations (Qualitative and Quantitative interpretations).

The resulting structure trends analysis showed that the present study area is affected by N-S, Red Sea–Gulf of Suez trends (These faults changes gradually from NNW through NW to the WNW), Gulf Aqaba trend (These faults changes gradually from NNE through NE to the ENE) and E-w directions, in descending order.

On a forward calculated magnetic and gravity fields an automatic and a manual methods were used to estimate the depths. Whereas the resulting average depths to the basement rocks ranges between less than 0.6 km to about more than 3.5 km indicating that it is subjected to strong tectonic activities.

The study of these anomalous features indicates that great number of the different types of structures has affected this area. Some of these anomalies suggest that their origin could be attributed to fault and dike like intrusions related to the shear and the deep faulted zones. These intruded bodies may be the reason for supplying the structures with the hydrothermal solutions which were playing important role during the formation of ore deposits. Movements along such faults sometimes resulted in considerable flexuring of the overlying strata (as

block folding). The shallow structures are controlled by the directions and positions of deeper structures which characterized by the presence of some close and extended structures as well as uplifted and down-faulted blocks which form horsts and grabens with different directions and areal extensions. The presence of effect of the great African rift system associated with the Red Sea and the subduction zone led to the increasing of Earthquakes activity because brittle lithosphere is being subducted under another plate. The mineralization potentialities are related strongly with structure pattern prevailing in this area. Therefore, it could be concluded that the study area is still active from the structural point of view.

ACKNOWLEDGEMENT

Acknowledgment

First, all gratitude is due to **ALLAH** who guided and aids me to bring – forth to light this work.

I would like to express my deep thanks and gratitude to **Professor Dr. S. O. El Khateeb**, Prof. of Applied Geophysics and Vice Dean Qena Faculty of science, South Valley University; and **Dr. K. O. El- Fargaway**, Lecture of Applied Geophysics, Aswan Faculty of science, South Valley University, for their supervision, advice, and continuous efforts during progress of this work.

I would like to express my deep thanks and gratitude to **Dr. M. O. Khalifa**, Lecturer of Applied Geophysics, Qena Faculty of science, South Valley University, for helpful guidance, moral support, constructive advice, and continues efforts during progress of this work.

I would like to introduce my thanks to **Professor DR. M. K. GHAZALY,** Chairman of Geology Department, Aswan Faculty of science, South Valley University, for there kind aids during the progress this work.

I would like to introduce my thanks to **Professor DR. A. K. Kalafallah,** Dean Aswan Faculty of science; **Professor DR.**, F. A Adam, **Professor DR. M. A. Abd- El Rahaman** and **Professor DR. S. M. OKASHA,** Vice Dean Aswan Faculty of science, South Valley University, for there kind aids during the progress this work.

I would like to introduce my thanks to **My Bosses** and **colleagues** in the Red Sea Governorate, local demonstrator of Quafi city and local demonstrator of El Shaikhia Village for there kind aids during the progress this work.

I would like to introduce my thanks **all members** in Aswan and Qena Faculty of science, South Valley University for their kind aid during the progress this work.

Finally, from all my heart, I feel indebt **my Family** whom given me moral supports, great help and continues efforts during progress of this work. I can not appreciate what they had done for me.

Mohamed Mohmoud Mohamed Ismial

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