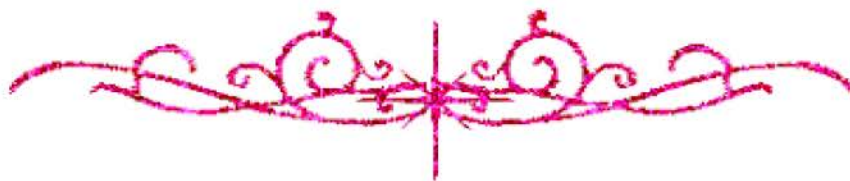


بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

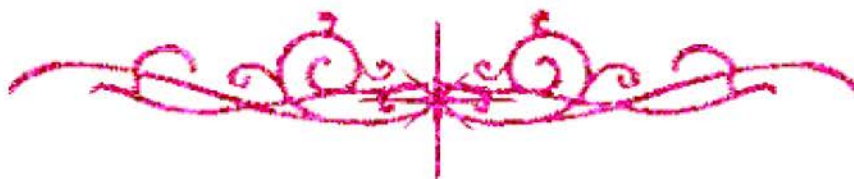
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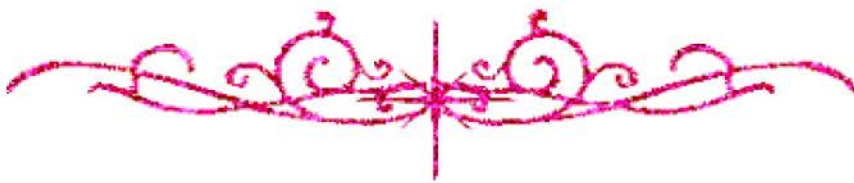
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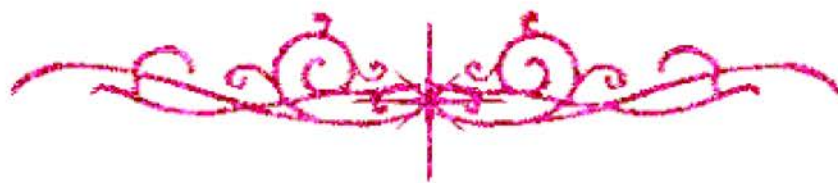


بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل



B17A 2

**Sedimentology And Radioactivity of
Quaternary Sediments, West Bir Dungul
area, Western Desert, Egypt .**

By

**Hamed Ibrahim El Sayed Mira
B.Sc.- M.Sc.**

**A Thesis Submitted
To**

**Department of Geology
Faculty of Science
Ain Shams University**

For

**The Degree of Doctor of
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(Geology)**

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APPROVAL SHEET

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ABSTRACT

The Quaternary deposits in the study area are varied and mainly represented by playa and sabkha sediments which may host surficial uranium deposits.

Several geomorphic units are recorded in the study area e.g. Nubia plain, scarp, plateau, basins, residual hills, aeolian land forms and drainage lines. The drainage pattern is mainly represented by four orders and, the most prominent sets of these drainage lines trend N-S, NE and NW directions.

The faults in the area mostly have E-W and ENE trends. The locations of the faults play a major role in the formation of the basins, in which weathering processes strongly acted at these faulted areas.

The Quaternary sediments in the studied area were deposited in low lying or shallow basins which resulted from the combined effects of tectonic structures and weathering. These deposits comprise playa, sabkha tufa, sand sheets and gravel sediments.

The detailed sedimentological study of these deposits revealed that, the playa sequence is composed mainly of sandy silt horizons with interbed of silty sand band at the middle part of the section. Meanwhile, sabkha sediment succession starts with a salt crust at the top followed downward by sand horizon then silty sand bed. Several geomorphic features were recorded in these sediments as mud cracks, mud curl, crochet structures, salt ridges, fracture and lineation, wind ripples and grooves. Tufa deposits are made up mainly of microcrystalline calcite of lime mudstone lithofacies

From the mineralogical view point , three types of minerals were recorded : clay minerals including kaolinite , montmorillonite and illite , evaporite minerals represented by halite, anhydrite , calcite , gypsum and trona, and heavy sand minerals comprising the opaque minerals ilmenite , hematite, magnetite and limonite, and nonopaque ones including zircon , rutile and tourmaline , monazite , garnet , sphene , pyroxenes , amphiboles and collophane .

The distribution and concentrations of the major and trace elements in the studied Quaternary sediments depend on the ground water composition and the grain size of the sediments. Also it is closely associated with the minerals forming these sediments

Detailed radioactivity studies for these sediments showed that , maximum uranium concentration attains 38 ppm .

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