بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Cairo University
Institute of African Research and Studies
Department of Natural Resources

Influence of the African Rifting System on the Petroleum Potential in East Zeit Area, Egypt

Thesis

Submitted for the Degree of Master of Science in
African Studies (Natural Resources, Geology)

By

Naglaa Saleh Mohamed Hassan
B.Sc., Geology, 1996
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2005

APPROVAL SHEET

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2005

Committee in charge
Date / /2005

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Abstract

The study area is located in the vicinity of East Zeit Field bounded by latitudes 27° 41' and 28° 10' N and longitudes 33° 22' and 33° 56' E.

This study aims at investigating the influence of rifting on the processes of organic matter maturation, hydrocarbon generation, expulsion, and migration, as well as the influence of rifting on the preservation of accumulated hydrocarbons.

The study concluded that intervals within the Belayim, Kareem, Rudeis, Nukhul, and Thebes formations are potential sources while Esna, Sudr, Matulla, and Wata formations are effective oil source rocks as they have reached peak generation in the study area. The study concluded the presence of three generating and expelling troughs based on the results of thermal burial histories: the East Zeit Trough, the Central Trough, and the East Central Trough.

All the source formations in the three troughs reached top oil window and expelled their hydrocarbons since 8 mmybp and continued to 0.3 mmybp, such timing post-dates the Early Miocene Mid Clysmic or Mid Rudeis disturbing event and the Late Miocene Messinian quite event, which suggest high migration and accumulation efficiency for hydrocarbons generated in the three troughs.

Also, other geological conditions allowed for high preservation efficiency and the least spillage or leakage, if any. These conditions are short migration, juxtaposition of oil bearing beds and sealing beds, timing of deposition of the ultimate seal, faults terminating in the ultimate seal have throws less than the thickness of the seal, and the rapid burial of the overburden especially towards the axial low of the Gulf of Suez. The Central Trough is considered the highest in preservation as migration started the latest among all troughs (5.5 mmybp relative to 8 and 7 mmybp for the East Zeit and East Central troughs, respectively).

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Special words of gratitude are due to my family specially my mother, my husband, my sisters, and my sons for their support and help.

Dedicated to the soul of my father, to my mother

and to my family.