بسم الله الرحمن الرحيم

شبكة المعلومــــات الجامعية

التوثيق الالكتروني والميكروفيلم

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قَــسـم ﴾

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 الـوثــــائق

الأصـــلية تالفـــة

بالرسالة صفحات

لم ترد بالأصـــل

Drilling Fluids Optimization in Gulf of Suez Area

Presented by

Eng.\ Mohamed Atwa Mohamed
B. Sc of Petroleum Engineering, 1999
Faculty of Engineering,
Cairo University

**A Thesis Submitted to
the Faculty of Engineering at Cairo University
in Partial Fulfillment of the Requirements for**

*The Degree of Master of Science in
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**Faculty of Engineering,
Cairo University,
Giza,
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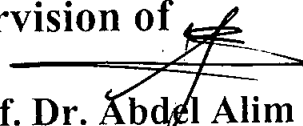Faculty of Engineering,
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Abstract

Drilling optimization remains a key issue in the oil industry due to the high costs in today's challenging facing these applications.

In drilling activities in the Gulf of Suez area, there are some problems that appear during drilling such as: blow outs, lost circulations, shale shaker screen plugging, caving, cutting in hole, mud weight build up, cement contamination,...etc. These problems reduce the drilling efficiency and increase the final cost of well drilling. So, an optimization program is needed to select the optimum drilling fluids based on optimizing the drilling fluid parameters to avoid these problems.

The optimization process is based on actual data collected from October and Morgan fields in GUPCO area in the Red Sea. This study involves the comparison between the optimized well and the actual drilled wells to show how costs can be saved. FORTRAN programs have been built to optimize the drilling activities in October and Morgan fields. The final optimized drilling program is to be implemented in these fields as well as in the Red Sea area.

The results show that, for October field, the average mud cost saving is 29%, and for Morgan field, is 28%. These values are very tremendous in the final cost of the well. Moreover, mud optimization reduces the drilling problems and avoids any consequences resulting from these problems.