



Cairo University

Integration of Geo-Engineering Models to Validate STOIIP Calculations in Heterogeneous Multi Layers Reservoirs

By

Mostafa Mamdouh Mohammed Ibrahim

A Thesis Submitted to the
Faculty of Engineering / Cairo University
In Partial Fulfillment of the
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MASTER OF SCIENCE
in
Petroleum Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Title of Thesis:

**Integration of Geo-Engineering Models to Validate STOIMP
Calculations in Heterogeneous Multi Layers Reservoirs**

Key Words:

Reservoir Simulation; STOIMP ; Reservoir Characterization; Sensitivity Analysis;
Uncertainty

Summary:

- One of the most important parameters in establishing any investment and put development plans to oil fields is to quantify the reserves available for production, that's why the high uncertainty in the calculated STOIMP by volumetric method due to poor seismic resolution has to be validated through integrating geological and engineering data to minimize the associated economic risk

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Dedication

I would like to dedicate this work to my parents and my wife who encouraged me to work hard to achieve my goals.

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