

**AAPG International Conference
Barcelona, Spain
September 21-24, 2003**

Saber Moustafa Selim¹, Bassem Ahmed El Badawy², Khalaf Abd Elaal Toghian¹, Mohamed Ayman Khorshed³ (1) Suez Oil Company (SUCO), Cairo, Egypt (2) Suez Oil Company "SUCO", Giza, Egypt (3) Baker Hughes Inteq, Giza, Egypt

Role and Contribution of Pressure Regime Evaluation in Well Planning and Formation Evaluation Process, Ras Budran Field , Gulf of Suez - Egypt

Accurate Prediction of the Estimated Pore Pressure and better understanding for the Pressure Regime Model of an oil field are very important prior drilling any well at several stages in the exploration and development process. The Pressure Regime Modeling can play an important role during exploration phase in:- 1) Assessing the effectiveness of a regional top seal section, 2) Providing calibration to basin modeling, 3) Mapping hydrocarbon migration pathways, and 4) Analyzing "trap" configuration and geometry of a prospective basin.

Furthermore, in the exploration and appraisal drilling and development phase, an adequate calculation and prediction of Estimated Pore Pressure aids in the well planning process by providing proper casing and mud program design which can help in preventing dangerous "blow-outs", lost circulation of drilling fluids and stuck pipes.

In this paper, the authors try to:- 1) To construct a simple and effective pressure regime model for Ras Budran Field, located in the Gulf of Suez 2) To provide proper casing and mud program scenarios for the upcoming wells to be drilled in the field. 3) To find out the relationship between the pressure regime model and the geological setting of the field. To achieve this purpose, the authors used electrical logs to calculate and predict the Estimated Pore Pressure applying the equation and cross-plot methods with different software. The resulted data were integrated and mapped for conducting a Pressure Regime Model for Ras Budran Field.