

**AAPG Annual Convention
Salt Lake City, Utah
May 11-14, 2003**

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**Role and Contribution of Pressure Regime Modeling in Well Planning and Formation Evaluation Process,
Gulf of Suez Oil Fields, Egypt**

The pressure regime modeling is an important integral part of the well planning and formation evaluation process. An adequate prediction of the formation pore pressure and better understanding for the pressure regime model of an oil field are very important prior drilling any well and can play an important role in: - 1) Deciding where the proposed wells are placed, especially in Gulf of Suez Oil Fields. The risk of drilling into overpressure can be reduced and drilling dry holes can be minimized. 2) Enable the well planner to anticipate the location and potential magnitude of possible abnormal pressure problems and consequently avoid environmental pollution, loss of reserves, loss of human life, lost valuable rig time and equipment problems. 3) Minimizing the drilling cost as it can be used as a guide to estimate the formation pore pressure and fracture pressure, so that the mud density can be optimized to provide sufficient overbalance while being low enough so that formation integrity is not compromised. Offset data sets of the drilled wells can be used to provide detailed profiles of expected formation pore pressure for well proposals. These data include composite well logs, survey data, wireline logs, seismic data, various pressure evaluation logs, production tests and direct pressure measurements. Also, the geological setting of the area and the problems encountered while drilling the wells should be taken into consideration while evaluation. These valuable information can be subjected to regional variations during the course of a new well, so, it is very important to recognize, detect and evaluate any changes in the formation pore pressure data and this "real - time" information can be used to implement new well proposal. Also, relationships between Petroleum Geology and Drilling Engineering can be interpreted to give accurate estimations of formation pore pressures at any point during the course of a well and led to drill the well safely.