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ABSTRACT

Nubia A rock unit is one of the best reservoirs in the Gulf of Suez region and is dated as of Lower Cretaceous age. This study is concerned as the petrophysical evaluation and well log analysis of Nubia A for 4 wells at the West Esh El Mallaha Oilfield, Southern Gulf of Suez, Egypt. Computer-assisted log analyses were used to evaluate the petrophysical parameters such as shale volume, total and effective porosities, water, hydrocarbon and flushed zone saturations, reservoir and pay flags. Cross-plots of the petrophysical parameters versus depth were illustrated. The Nuabia A rock unit refers to the matrix components mainly sandstone with some kaolinite and shale contents. In this study, the Nubia A rock unit differs slightly in thickness in the study area. The capacity of the Nubia A rock unit is assessed from the well-log analysis through the examination of the total and effective porosities. Nubia A rock unit is interpreted from 4 studied wells as a good quality reservoir rocks with high average effective porosity reaching up to 21% and high average hydrocarbon saturation reaching up to 68%.
