



GAVIN CONFERENCES

# International Conference on Petrochemical Engineering

July 10-12, 2017 Dubai, UAE

## Nuclear magnetic resonance relaxation time as a diagnostic parameter for reservoir characterization

**Khalid Elyas Mohammed Elameen Alkhidir**  
King Saud University, Riyadh Saudi Arabia

Field observations have been reported and stratigraphic column was constructed. Porosity was measured and permeability was calculated from capillary pressure data. Transverse nuclear magnetic resonance relaxation time was derived from capillary pressure data. NMR fractal dimensions were calculated. Based on the results the sandstones of the Shajara Reservoirs of the Shajara Formation of the Permo-Carboniferous Unayzah Group were divided here into three units. The obtained units from base to top are: Lower Shajara Nuclear Magnetic Resonance relaxation Time Fractal Dimension unit, Middle Shajara Nuclear Magnetic Resonance relaxation Time Fractal Dimension unit, Upper Shajara Nuclear Magnetic Resonance relaxation Time Fractal Dimension unit. It was found that the permeability increases with increasing relaxation time fractal dimension.

### Biography

Khalid Elyas Mohamed Elameen Alkhidir is a researcher at King Saud University. He did his postdoctoral research at King Saud University, College of Engineering Al-Amoudi Research Chair in Petroleum, enhanced oil recovery. He published papers in sandstone reservoirs characterization, tight carbonate reservoirs characterization, and in an enhanced oil recovery.