# Principles and Applications of Borehole Magnetic Resonance Data

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Borehole magnetic resonance is a unique measurement that responds to both the volumes of fluids present in a rock, and the geometry of the pores in which this fluid resides. It has been used in the oil and gas industry for over twenty years to evaluate storage and flow properties of hydrocarbon reservoirs and the use of borehole magnetic resonance in hydrogeological characterisation is increasing as the technology becomes more readily available. Qteq's BMR tools have been designed for use across the georesource industries (hydrogeology, geotechnical and mining) that utilize boreholes ranging in size from 75 to 312 mm in diameter, providing continuous measurements of hydrogeological properties such as specific yield, specific retention and hydraulic conductivity at a scale intermediate between core and well test data. This results in a convenient framework for integration of all data and is a powerful addition to any borehole geophysical characterisation aimed at evaluating the storage and flow capacity of subsurface formations. We will touch on the geophysics behind magnetic resonance and use industry examples to highlight different applications and benefits across the hydrogeology, geotechnical and mining industries.
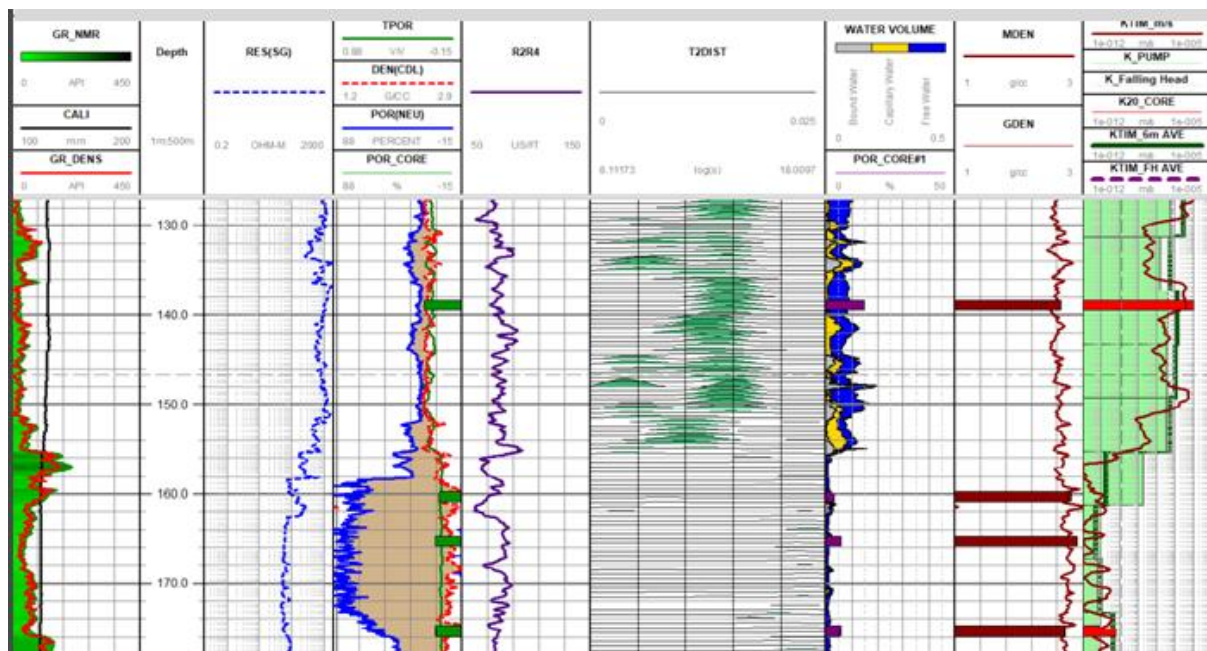
Biography
Ryan Gee is the European Business Development Manager for Qteq, an Australian based Company that provides technical services and products across the Georesources Industries. Originally from Canada and now based in Finland, he has over 10 years of experience in reservoir and well testing, and interpretation. His primary focus is to increase the exposure, understanding and integration of borehole magnetic resonance technology in Europe.