

## Multiphysics Reservoir Characterization and Dynamics

**Ben Clennell**

Group Leader, Exploration Geosciences, CSIRO



### Presentation:

The talk will introduce CSIRO's use of multiphysics concepts to improve characterization, understanding and management of subsurface resources during an asset lifecycle.

- Showcase some new technologies being developed at CSIRO for improved characterization of rocks and fluids
- Describe some “Digital Rock” workflows: novel x-ray imaging of rock, pore space and fluids; what to do about microporosity and sub-scale permeable pathways
- Mention some approaches to physical property upscaling with percolation theory and physical process upscaling using thermodynamic bounds.
- Demonstrate that Petrophysicists are the people needed to make all this stuff work !

### About the Presenter:

Ben has been working in CSIRO since 2003 where he was hired to be “The Petrophysicist” in the old Petroleum Division. He has recently moved from a two year term managing all of upstream oil and gas research (including unconventional gas) at CSIRO back into a group leader role for Exploration Geosciences (covering petroleum geology, geophysics/rock physics/petrophysics and sensing technology teams). Ben's academic background is in marine and petroleum geology (BA Geology from Oxford University and Ph.D. in Geology from London University). In the past decade his work has focused on applied, industry-relevant projects involving rock physical properties, porous media characterization / porous media thermodynamics and development of laboratory and log analysis workflows. Ben was formerly on the committee of FESAUS, and is still an active member of SPWLA, SPE and SEG. Aside from oil and gas, Ben is also active in the scientific ocean drilling community through the International Ocean Discovery Program.

**DATE:** Tuesday 14<sup>th</sup> July 2015 12:00 – 1:30 PM **VENUE:** Hotel IBIS (Upstairs) - 334 Murray Street, Perth

**Cost:** Members \$30.00; Non Members \$40.00; Students/Retirees \$10.00

Online registrations at [www.fesaus.org](http://www.fesaus.org) Door registration charge \$50.00 cash