



# FESAus Monthly Technical Meeting

## *“Inconsistencies in Core Analysis Data Integration for Reservoir modelling”*

Max Podolyak, Core Laboratories

### **Abstract:**

The primary goal of any reservoir characterization is to understand the reservoir capacity and connectivity by integrating data from different sources. However, the integration process is never straight forward; an application of various qualities and quantities of data in a consistent manner can result in many disputes, some of which still remain unresolved. Petrophysicists, for example, think of the reservoir in terms of effective porosity associated with clay bound water, whereas reservoir engineers tend to think of effective porosity in terms of inter-connected hydrocarbon mobile fraction of pore space. One of the roles of a petrophysicist is to produce porosity-permeability transforms to populate static models, whilst the reservoir engineers complain that the subsequent permeability prediction does not match the welltest data, resulting in their having to invoke permeability multipliers. This apparent contradiction has been open for debate for at least 50 years with no definitive resolution in sight. This presentation will focus on the typical problems found in current industry workflows for core data application in reservoir modelling processes, including the development of porosity permeability relationships, and use of capillary pressure and relative permeability data. It will be demonstrated that correctly utilised core analysis data can, firstly, aid in bridging the gap between the two different industry definitions of the same reservoir parameters related to rock capacity and connectivity. Secondly it can aid in reducing the uncertainties in accurate reservoir characterisation by assuring a consistent approach to data integration.

### **About the Presenter:**

Max is a Technical Director for Rock Properties Group within Core Laboratories Asia Pacific with almost 10 years of practical and consultancy experience in Core Analysis. He has BSc degree in rock physics and geology from Moscow State School of Mines and MSc in Petroleum Engineering at Heriot-Watt University.

He started his career working with RESLAB in the UK as a special core analyst and was involved in the planning and operations of a number of major petrophysical and reservoir engineering core studies. Until recently, he was a Senior Consultant at Senergy International for Asia Pacific, providing consultancy services, technical support and training to operating companies on a range of core analysis issues. Max is a regular presenter for regional technical sessions with FESAus, SPE, SEAPEX.



**DATE:** Tuesday 8<sup>th</sup> November 2016, 12:00 – 1:30 PM **VENUE:** Hotel IBIS- 334 Murray Street, Perth

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

Online registration at [www.fesaus.org](http://www.fesaus.org)

Note: limited seats for unregistered attendees may be available: \$50.00 cash door charge

