Actual Well/Field Evaluation Workshop - Computer

Instructor Mark Deakin, PhD *(Petrophysics)*
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Who Should Attend?

New petrophysicists, all geo.model builders (Petrel, Eclipse etc), exploration & reservoir geologists, geophysicists, keen operations geologists. Anyone who needs a fast paced, hands-on overview of the petrophysical evaluation process. No previous petrophysical knowledge is required, however, attendance to Integrated Petrophysics.. or, if a client supplied carbonate data set is used, to Carbonate and Fracture Petrophysics, is strongly recommended.

You Will Learn

- The importance of preparing and loading all data
- The big picture objectives of why, what and how to do petrophysics
- To question alternatives and negotiate the best evaluation pathway through today's typical data sets
- How to quickly use Core, SCAL, MDT's and DST's with logs
- All essential quick look methods
- All PPL's basic integration techniques
- Tips and tricks from the author's 25year mega evaluation file
- The basic ideas and structure behind major parallel methods in petrophysics e.g. Sw Rt, Cap.press, NMR
- To quickly sort through the barrage of confusing modern petrophysical data, to think clearly and advance your team quickly towards Fit-For-Purpose results
- The essential ingredients and style of a succint, informative petrophysical report
- To get excited about petrophysics, reservoirs and geo-models!

About the Course Testimonials

In this computer aided basic course PPL and students perform an actual evaluation on a cored, purpose designed data set, or client supplied data set. Data is loaded to PPL and client software. ALL major stages necessary for a full petrophysical integration are discussed and then actually performed by both Instructor and students. A twice daily open critique and proposal session of the ongoing evaluation keeps the class highly motivated, tightly focused. The evaluation sequence is continuously referenced to reinforce real-world constraints of Time vs. Fit-For-Purpose geo.modeling results. All evaluation parameters are documented together with a short report and key figures just as in a real study. Stages include:
Log, Core, SCAL, MDT, and DST data organisation, zonation, vclay, total and effective porosities, water zones, Rw, Pickett plots, Rwa, m, Ro prediction, n, Swrt, Fluid Zones, Bound fluid volumes, Coates permeability, Capillary pressure quick-look Sw's (yes, this is possible see Integrated Petrophysics..), Base case Sw, Swrt optimisation, Netpay, Zone averages, short Report and Figures.
All data is properly integrated according to PPL standards. Students elect if they wish to receive staged, checked off Certificates. These 5 days offer a powerful, dynamic training session in which participants actually experience and the practical issues at stake and make the key choices which impact reserves themselves.

Course Content Detailed contents (Public courses 5 days. Tailored In-House 3 or 5days)

- Collating, preparing and loading petrophysically relevant data to log software
- Check core data. Calibrate log to core porosity
- Review common SCAL data sets. Use them to calibrate log resistivity equations
- Extract key answers from MDT data. Check log analysis. Determine free water levels. Set up a quick look capillary pressure look up table
- Extract and use the DST (well tests) key answers
- Produce a Petrophysical Results Table (sums and averages) for input to your geo.model
- Integrate all common petrophysical data with logs using established PPL procedures
- Check your results with common sense logic
- Participate in Daily morning Recaps and practical Do's and Don'ts for the working petrophysicist
- Observe and actually perform software (Geolog) key petrophysical procedures:
  Vshale, Øt, Øe, Sw100, Rwa, Pickett, aRw, m, Ro, n, Swrt, Fluid zones, Bound fluid, Permeability, Cap.press Sw, Pay, Net, Averages, Report.
- Excitement and even mild stress as you actually make the decisions and DO petrophysics rather than just sit there and LISTEN!
- Choose if you wish to be issued with a Staged Certificate

The Instructor CV

Dr Mark Deakin is an experienced and innovative mainstream petrophysical consultant, author and enthusiastic tutor in petrophysics. He holds a Ph.D. in 'Integrated Petrophysics' from London's Imperial College, is an ex Amoco petrophysicist, and has 25 years experience, including 12 as a lecturer, independent consultant and Director of his own consulting company. He has performed over 40 detailed reservoir studies, primarily in Southeast Asia's difficult carbonates and stacked 'low-contrast-pay' reservoirs. Deakin chooses to work frequently in operations to keep abreast of new LWD, coring and wireline technology. His holistic approach is to bring each field's development uncertainties into sharp focus and then systematically reduce them by a cost-benefit ranked plan of action. Innovative integration and clear, practical recommendations typically result in improved simulation and increased reserves, at low cost. Soon after his petrophysics PhD Deakin authored **the first public petrophysical data integration course**. He has continually evolved and chaired this and other courses, publicly and in-house, for eighteen years through OGCI, HOT and independently. Deakin is a long standing member of the SPWLA.

PS: Fast paced, hands-on overview of the petrophysical evaluation process

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