Advanced Well Log Interpretation

10 - 14 December 2017
Dubai, United Arab Emirates

This course is Designed, Developed, and will be Delivered under
**Why Choose This Training Course?**

This interactive, applications-driven 5-day training course will highlight the techniques and principles of advanced well log interpretation for oil industry professionals who need to deal with wireline and/or LWD logs in their daily job.

The course will explore the tools response explained from their physical principles as well as their relationship with the rock and fluid properties. Most existing open hole logging technologies will be covered explaining their main applications and limitations. Advanced interpretation methods will be covered with numerous examples and exercises including complex lithology interpretation techniques. At the end of the course we will hold a mini-workshop on optimum logging program selection based on: minimum set of logs needed for a proper evaluation, company budget and tools’ limitations.

**This training course will feature:**

- Discussions on tools physical principles and applications
- Tool limitations on different borehole environments
- Tips and examples to identify and understand common logging issues
- Explanation of petrophysical concepts and techniques for advanced formation evaluation
- Application of interpretation methods in several examples and exercises

**What are the Goals?**

By the end of this training course, participants will be able to:

- Understand the physical principles of most existing logging tools
- Apply basic quality control techniques to validate logging data
- Know the main applications and limitations of the different tool readings
- Perform a quantitative formation evaluation on a complex lithology
- Understand the uses of advanced logging tools in complex lithology interpretation

**Who is This Training Course For?**

This training course is suitable to a wide range of professionals but will greatly benefit:

- Engineers in exploration and production departments
- Geologists, geophysicist and petrophysicist
- Petroleum, reservoir and drilling engineers
- In general, all other oil & gas industry professionals who are involved in logging data interpretation and validation

**How Will This Training Course Be Presented?**

This training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented, the sessions will include visual, auditory and kinesthetic elements to cover the three different learning modalities. The daily sessions will be highly interactive and participative. This involves regular discussion of applications as well as hands-on exercises that will be solved manually and/or using Microsoft Excel.
Daily Topics

DAY ONE
Basic Concepts Review and Resistivity Tools

- Petrophysics concepts review
- Introduction to Well Logging
- Log classification according to the measured properties
- Auxilliary measurements, uses and common issues
- Basic measurements: Gamma Ray and Spontaneous Potential
- Resistivity Theory, principles and applications of laterologs
- Advanced Laterolog logging tools: array and azimuthal
- Microresistivity devices, principles and applications

DAY TWO
Conductivity and Nuclear Logging Tools

- Conductivity tools, uses and limitations
- LWD resistivity determination tools
- Advanced Induction logging tools, 3D induction
- RT and invasion profile determination
- Formation density tools, principles and applications
- The photoelectric factor, a key lithology indicator
- Neutron tools principles and applications
- Porosity determination from density and neutron logs
- LWD nuclear logging tools
- Lithology determination, calibrations and log quality control parameters

DAY THREE
Acoustic and Geological Logging Tools

- Basic sonic tools, borehole compensation
- Dipole sonic tools, applications
- Mechanical properties determination and uses
- Sonic scanner principles and applications
- Common sonic issues in the borehole
- LWD acoustic tools
- Dipmeter interpretation principles
- Geological Image Logging Tools
- Structural and Stratigraphic Interpretation Principles
- Open, partially open and healed fractures interpretation

DAY FOUR
Advanced Logging Tools and Introduction to Formation Evaluation

- Nuclear Magnetic Resonance, principles and applications
- Relaxation mechanisms and their association with fluid and rock properties
- Porosity, irreducible water saturation and permeability determination
- Advanced fluid determination methods: 3D map T1-T2-Diffusion
- Dielectric tools principles and applications
- Saturation determination parameters, m, n and CEC
- Geochemical Logging tools.
- Complex lithology evaluation examples.
- Formation evaluation principles
- Rw determination methods
- Crossplots utilization, Hingle and Pickett plots
- Graphical interpretation techniques for porosity and lithology

DAY FIVE
Complex Lithology Evaluation, Formation Testers and Mini-Workshop

- Saturation determination equations and techniques
- Complete formation evaluation for Complex lithology
- Reservoir pressure determination tools
- Pre-test interpretation
- Lost seal, dry tests and supercharging
- Pressure gradient interpretation
- Fluid sampling, optical and composition fluid analyzers
- Advanced probes for special well and reservoir conditions
- Permeability determination
- Mini-workshop on logging program selection
Please use BLOCK CAPITALS to fill in this form. It is important that you read carefully through all information before starting to complete the form.

REGISTRATION DETAILS

Family Name

First Name (Mr./Ms.)

Position

Company

Mailing Address

Telephone

Mobile

Fax

Email

REGISTRATION FEES

US$ 4,500/ - per participant

This fee is inclusive of Documentation, Lunch and Refreshments

MODE OF PAYMENT

- Please invoice my company
- Please invoice me
- Cheque payable to “PetroKnowledge Limited”

WAYS TO REGISTER

T: +971 2 5577 389
F: +971 2 5577 128
E: info@petroknowledge.com
W: www.petroknowledge.com

COURSE SCHEDULE

10 - 14 December 2017
Dubai, United Arab Emirates

HOTEL ACCOMMODATION

Hotel accommodation is not included in the Registration Fee. A reduced corporate rate and a limited number of rooms are available for attendees wishing to stay at the hotel venue.

Please make your request for accommodation at least 3 weeks prior to the commencement of the course.

CERTIFICATION

A Certificate of Completion will only be awarded to those delegates who attend the entire course.

CANCELLATIONS & SUBSTITUTIONS

You must notify the Registrar of cancellations at least 2 weeks before a scheduled seminar in order to be eligible for a credit. If you cannot attend, you may send a replacement from your organisation at no charge. There is a $250 handling charge for all cancellations or rescheduling. We reserve the right to cancel a seminar due to low enrolment. All registrants will be notified in advance and a full refund will be provided upon request.

DISCLAIMER

Circumstances beyond the control of PetroKnowledge may necessitate postponement, change of venue or substitution of the Instructor. As such, PetroKnowledge reserves the right to implement such amendments.