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IPLAM Integrated Petrophysics for Laminated and Low Resistivity Reservoirs – Clastics & Carbonates

Diagnosis and treats the primary problem with log analysis
Course Level : Intermediate

24th – 26th May 2027 at Bangkok, Thailand | 01st – 03rd September 2027 at Kuala Lumpur, Malaysia
11th – 13th October 2027 at Jakarta, Indonesia

Use unsused SCAL, Which SCAL with which logs? Cross-calibrate {Logs-SCAL-RCA}



Petrosync Distinguished Instructor
Mark Deakin, PhD

- Petrophysics Course Instructor & Technical Consultant
- BSc (Honours) Geology, University of Reading, UK
- PhD "The Integrated Petrophysical Analysis of Brae Conglomerates", Imperial College, London.

- A PhD in Integrated Petrophysics and 30 years global experience.
- Over 60 detailed reservoir studies worldwide; primarily in Southeast Asia's low-contrast pay and carbonate & fractured reservoir.
- Operations Petrophysicist for over 50 wells worldwide.
- Reputable Troubleshooter/Advisor/Mentor on all things petrophysical: Mud properties, Logging programs, SCAL program design, NMR, Shaly Sands, Rock Typing, Carbonates & Fractures, Saturation-height, Optimal Geo-model input, Upgrading Reserves, Training

PROGRAM SCHEDULE

08:00	Registration (Day1)
08:10 – 10:00	Session I
10:00 – 10:15	1st Tea Break
10:15 – 12:00	Session II
12:00 – 13:00	Lunch Break
13:00 – 14:45	Session III
14:45 – 15:00	2nd Tea Break
15:00 – 16:00	Session IV
16:00	End of Day

*Schedule may vary for each training

Who Should Attend?

Operations Geologists, Experienced Log Analysts, Experienced Petrophysicists, Wellsite Geologists, Users of petrophysical results, Geo-modellers, Exploration Managers, Team Leaders. Anyone involved with the evaluation or modelling of Shaly Sand, Laminated or Low Resistivity Low Contrast (LRLC) pay reservoirs.. Bring your laptop with MS Excel.

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Course Overview

This course details ten techniques which radically improve shaly sand and low resistivity petrophysical evaluation in clastics and carbonates. Laminates, Low Resistivity Low Contrast Pay (LRLC), Shaly Sands, Bi-modal microporous and conductive mineral reservoirs are characterized, diagnosed and treated sequentially and accurately.

The course steps through a logical process to find commonly available powerful data to address the problem and then sets out the optimal evaluation path to achieve robust results for each reservoir type. All modern logs including XYZ Resistivity, NMR, Dielectric, Pulsar, LithoSpectral GR, Sigma and Image logs are covered, together with numerous core-log and log-log cross-calibration techniques.

The course includes the rigorous application of XYZ resistivities with Thomas Stieber and Qv as well as a Quick Look Shaly Sand evaluation of a routine logging run using a real-time Interactive Petrophysics template, with equations. This template can be reused for future wells with IP or other software (See PetroDB). Micro-practicals, videos and open discussion keeps this class an eye-opening and memorable learning experience, especially for those who have evaluated LRLC pay, who are encouraged to share their experiences.

Course Objectives

To teach you how to :

- Define and Identify Shaly Sands
- Identify Laminated and Low Resistivity Reservoir Types and flag Missed Pay
- Understand why these reservoirs are missed
- Pinpoint and acquire key data
- Use geo-facies and Petro facies effectively
- Calibrate HPV and kh correctly in Shaly Sands
- Understand and apply Thomas Steiber, Waxman Smits, Dual Water, Juhasz, Indonesia or other shaly sand techniques correctly
- Use NMR logs simply and correctly in LRLC
- Impress your team and carry them forward with your understanding and expertise!

WHY YOU SHOULD ATTEND PETROSYNC'S EVENTS

- To ensure that all objectives of the course matches yours, all PetroSync programs are developed after intensive and extensive research within the industry
- PetroSync programs focus on your immediate working issues to ensure that you are able to apply and deliver immediate results in real work situations
- Application and implementation of industry knowledge and experience are the drivers for our course design, not theoretical academic lectures
- PetroSync training focuses on practical interactive learning tools and techniques including case studies, group discussions, scenarios, simulations, practical exercises and knowledge assessments during the course. Invest a small amount of your time to prepare before attending the course to ensure maximum learning
- PetroSync follows a rigorous selection process to ensure that all expert trainers have first-hand, up-to-date and practical knowledge and are leaders of their respective industrial discipline

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Course Agenda

Day 1

- Petrophysical Reservoir Types
- Shaly Sands, Laminated & Low Resistivity Low Contrast Pay Reservoir Types
- Shaly Sand Reservoir Examples
- Laminated Reservoir Examples
- Low Resistivity Low Contrast Pay Reservoir Examples
- Log Identification of SS, LAM & LRLC: Routine Logs
- Recognising Missed Pay

  Exercise
- Effect on Reservoir Properties: SS, LAM & LRLC
- Effect on Measured Log Properties: SS, LAM & LRLC
- Why Routine Log Analysis Fails
- Why Waxman Smits, Dual Water and Indonesia Fail: Laminated
- Facies Based Petrophysics
- LRLC Pay: Spectral GR Logs
- Recommended Logs: Routine & Special
- Recommended Core, Mudlogs and Other data

  Exercise QL Shaly Sand

Day 2

- Laminates – Quick Look Techniques
- Formation Pressure, Vlam, PetroDB
- X, Y, Z 3D Resistivity Tools
- The Klein Plot and Quick Look Sw
- Thomas Stieber Clay/Shale Distribution Model
- Determination of Rsand: Formal vs Quick Look
- Full Thomas Stieber Evaluation for HPV

  Exercise
- Checks on HPV results
- Refinement of TS Method with core: Rsd, Archie, WS
- Thomas Stieber Core Calibration
- Misuse of Routine Core Analysis in Laminated Reservoirs
- Author Quick Look Laminated Analysis – No 3D Resistivity
- Compare: Archie WS Author Full Thomas Stieber
- Laminated Reservoir Permeability
- Well tests, Core, Log reconciliation
- HPV vs kh

  Exercise Thomas Stieber vs NMR in Shaly Sand

Day 3

- Non-Resistivity Methods
- Volumetric Methods
- NMR
- Dielectric
- Pulsar
- Image logs
- OBM Core HPV

  Exercise
- Saturation-Height Modelling in Laminates
- Capillary Pressure
- Minimum Required Data
- Lab Capillary pressure Data Quality and Flaws
- How to use Routine Core with SCAL
- Calibration of log data to Capillary pressure results
- Quick Look Saturation Height HPV
- Hierarchical Reconciliation of Results
- Facies, HPV, Permeability
- Saturation Height Exercise
- Geomodel checks
- Does your Geo-model correctly represent its inputs?
- Laminated Reservoir Petrophysics

  Exercise Saturation Height in LRLC pay

  – Summary

  – Key Recommendations

IN-HOUSE SOLUTIONS

SAVE COST • IMPROVE PERFORMANCE • REDUCE RISK

PetroSync understands that in current economic climate, getting an excellent return on your training investment is critical for all our clients. This excellent training can be conducted exclusively for your organization. The training can be tailored to meet your specific needs at your preferred location and time. We will meet you anywhere around the globe.

If you like to know more about this excellent program, please contact us on +65 3159 0800 or email general@petrosync.com

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Instructor Profile



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Mark Deakin, PhD

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- BSc (Honours) Geology, University of Reading, UK
- PhD "The Integrated Petrophysical Analysis of Brae Conglomerates", Imperial College, London

Mark Deakin is a consultant, author, course instructor in Petrophysical Data Integration & 5 years wellsite geologist. He holds a Ph.D. in 'Integrated Petrophysics' from London's Imperial College. He is an ex Amoco petrophysicist and has over 30 years global experience. He has performed over 60 detailed reservoir studies worldwide; primarily in Southeast Asia's low-contrast pay and carbonate & fractured reservoirs. Deakin's approach is to identify and rank reserves uncertainties then guide companies towards defensible reserves and optimal development via the application of new technology, targeted data acquisition and the systematic, logical integration of all related data.

After his PhD Deakin authored the first public Integrated Petrophysics course in 1989 which evolved into the industry's benchmark petrophysics training course. This was followed by courses in Carbonate & Fracture petrophysics and three day focused modules on Quick Look Integration Techniques; How to use Modern Logs with SCAL; Low Resisivity Low Contrast Pay; Laminates & Thin Beds; How to use PetroDB effectively and a Renewable Energy. Deakin's special interest has been using PetroDB (a generic, rock typed petrophysical database) and SCAL Digital Rock Physics with logs to identify Missed Pay and EOR. Since 2010 he has been drawn to the inevitability of Renewable Energy, writing the course Renewable Energy Primer in 2015. He is an active member of SPWLA and occasional lecturer at Curtin University. His consulting company PETROPHYSICS Pty Ltd has offices in Perth, Australia

Sample of Project List

- PETROPHYSICS TECHNICAL CONSULTANT, December 1989 – Present (Part List)
- Dallas & Perth Oct 2016 – Current: The detailed asset evaluation and marketing of an unconventional, fracture stimulation light, tight oil (LTO) reservoir for Private Equity client
- Alaska Jan - Apr 2016: Unconventional light tight oil (LTO) reservoirs. Setup operations for integrated formation evaluation embracing drilling, mud, LWD, mudlogging, wellsite geologists, core, wireline and testing programs
- South Sudan Dec 2015: Review and Recommendations for the improved petrophysical, reservoir engineering management and geo-model setup of a clastic oil development
- Dallas Jun 2015 - Aug 16: Unconventional, review and recommendations of fracture stimulation tight oil developments
- Vietnam Jan 2015: Idemitsu, Discovery well A-Z petrophysical integration of logs, NMR, core, SCAL, MDTs & well tests for standard petrophysical output plus oil, gas & water effective permeability.
- And over 60 detailed integrated reservoir studies completed.

Partial Client List

- Aramco
- BP
- BHP
- BritishGas
- CarigaliTriton
- Chevron
- Conoco
- Petronas
- DiscoveryGeo
- Schlumberger
- Staroil
- Woodside
- KNOC
- NorskHydro
- Perenco
- Petroklas
- PetroSA
- Over 40 clients worldwide, large and small operating companies and partners.

INVESTMENT PACKAGES

Please checklist the package that you are attending!

	IPLAM Integrated Petrophysics for Laminated and Low Resistivity Reservoirs – Clastics & Carbonates SCHEDULES	LOCATION	PRICE
☐	24th – 26th May 2027	Bangkok, Thailand	USD 3,595
☐	01st – 03rd September 2027	Kuala Lumpur, Malaysia	USD 3,595
☐	11th – 13th October 2027	Jakarta, Indonesia	USD 3,595

** All prices are subject to change without notice and are not guaranteed, except that prices for an order that have been accepted by PetroSync is not subject to change after acceptance*

** Price is nett excluding Withholding Tax if any and will be quoted separately. Please send us the withholding tax payment receipt.*

DELEGATE DETAILS

1st Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

2nd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

3rd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

4th Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

**Please fill all the details including mobile number. This help us to contact participant if they are late in class or if there is any urgent update (through whatsapp/call)*

INVOICE DETAILS

Attention Invoice to: _____

Direct Line Number: _____ Fax: _____

Company: _____ Industry : _____

Address: _____ Postcode: _____

Country: _____ Email: _____

Please note:

- Indicate if you have already registered by Phone ☐ Fax ☐ Email ☐ Web ☐
- If you have not received an acknowledgement before the training, please call us to confirm your booking.

PAYMENT METHODS

☐ By Credit Card

☐ By Direct Transfer : Please quote invoice number(s) on remittance advice

PetroSync Global Pte Ltd Bank details:

Account Name: PetroSync Global Pte Ltd
Bank Name : DBS Bank Ltd
Bank Code : 7171 • Bank Swift Code : DBSSSGSGXXX • Branch code : 288
Account No : • SGD : 288-901898-0 • USD : 0288-002682-01-6
Bank Address : 12 Marina Boulevard, Level 3. Marina Bay Financial Centre Tower 3. Singapore 018982

All bank charges to be borne by payer. Please ensure that PetroSync Global Pte Ltd receives the full invoiced amount.

COURSE CONFIRMATION

I agree to PetroSync's terms & conditions,payment terms and cancellation policy.

Signature : _____

Date : _____

Payment Terms *Payment is due in full at the time of registration. Full payment is mandatory for event attendance.*

PROGRAMME CONSULTANT

Name : Cay Aagen
Email : registration@petrosync.com
Phone : +65 3159 0800

TERMS AND CONDITIONS

DISCLAIMER

Please note that trainers and topics were confirmed at the time of publishing; however, PetroSync may necessitate substitutions, alterations or cancellations of the trainers or topics. As such, PetroSync reserves the right to change or cancel any part of its published programme due to unforeseen circumstances. Any substitutions or alterations will be updated on our web page as soon as possible.

DATA PROTECTION

The information you provide will be safeguarded by PetroSync that may be used to keep you informed of relevant products and services. As an international group we may transfer your data on a global basis for the purpose indicated above. If you do not want us to share your information with other reputable companies, please tick this box ☐

CANCELLATION POLICY

Delegates who cancel after the training is officially confirmed run by email, are liable to pay the full course fee and no refunds will be granted. You may substitute delegates at any time as long as reasonable advance notice is given to Petrosync.

In the event that PetroSync cancels or postpones an event for any reason and that the delegate is unable or unwilling to attend in on the rescheduled date, you will receive a credit voucher for 100% of the contract fee paid. You may use this credit voucher for another PetroSync to be mutually agreed with PetroSync, which must occur within a year from the date of postponement.

PetroSync is not responsible for any loss or damage as a result of the cancellation policy. PetroSync will assume no liability whatsoever in the event this event is cancelled, rescheduled or postponed due to any Act of God, fire, act of government or state, war, civil commotion, insurrection, embargo, industrial action, or any other reason beyond management control.

CERTIFICATE OF ATTENDANCE

80% attendance is required for PetroSync's Certificate of Attendance.

DETAILS

Please accept our apologies for mail or email that is incorrectly addressed.
Please email us at registration@petrosync.com and inform us of any incorrect details. We will amend them accordingly.

Find us on Social Media:

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CHARGES & FEE(s)

- For Payment by Direct TelegraphicTransfer, client has to bear both local and oversea bank charges.

- For credit card payment, there is additional 4% credit card processsing fee.