Petrophysics Operations QC
Application and processing to ensure highest quality log data

27th July 2015 - 30th July 2015, Kuala Lumpur, Malaysia

Petrosync Distinguished Instructor
Dr. Ahmed Taha Amin
President, Godomex
International Consultant Petrophysicist

- Over 35 years of experience in Oil & Gas industry
- Specializes in formation evaluation, core analysis and reservoir modeling
- Handled technical & managerial positions in GUPCO, ADCO & ADNOC, QGPC, Apache and RPS Energy

Course Objectives

- Understand basics of Open and Cased Hole logging measurements
- Improve logging operations and tool calibrations
- Acquire knowledge on log quality control on tool measurements (log readings) and data handling
- Understand porosity tools measurements and determination
- Learn and practice curve editing (depth matching, despiking, splicing and multiple run merge)
- Understand data loading on Interactive Petrophysics (IP) software and it's relation with log results
- Introduction to core analysis and loading of output parameters
- Practice application on Data-Base creation and loading digital, scanned or digitized data of different format using IP
- Practice application examples for curve editing using IP software

Specially Designed for
The course is designed for all data management professionals who is handling and loading digital log data, new hired petrophysicists, geologists, geophysicists and reservoir, petroleum, drilling engineers whose job requires a more extensive knowledge of Well Logging.
Course Overview

No amount of fancy post-processing can really overcome problems caused by data which is bad from the start. Calibration and other wireline and/or MWD product quality problems discovered at the wellsite can usually be rectified.

Once a well has been cased, however, the best a wireline or MWD vendor can offer is discounted charges and/or credit against future work. We will work with the wellsite staff and the wireline and/or MWD vendors to ensure that the log data obtained is the highest quality possible.

The trainer will help participants understand logging measurements, logging operations, tool calibration and environmental corrections. The course will focus on log quality control on tool measurements and handling, data loading on IP software and practice application for curve editing. At the end of the course, the participant will have extensive knowledge of well logging and quality data logs.

Testimonials

“Dr. Ahmed has an excellent experience and presentation skills.”

“The course information and Dr. Ahmed’s experiences has been well-delivered & shared to us.”

“The examples and case studies from past experience of Dr. Ahmed are very valuable.”

PROGRAM SCHEDULE

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>Registration (Day1)</td>
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<tr>
<td>09:00 – 11:00</td>
<td>Session I</td>
</tr>
<tr>
<td>11:00 – 11:15</td>
<td>Refreshment &amp; Networking Session I</td>
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<tr>
<td>11:15 – 13:00</td>
<td>Session II</td>
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<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
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<tr>
<td>14:00 – 15:30</td>
<td>Session III</td>
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<tr>
<td>15:30 – 15:45</td>
<td>Refreshment &amp; Networking Session II</td>
</tr>
<tr>
<td>15:45 – 17:00</td>
<td>Session IV</td>
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<tr>
<td>17:00</td>
<td>End of Day</td>
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Petrophysics Training Courses (JANUARY - DECEMBER 2015)

<table>
<thead>
<tr>
<th>DATE</th>
<th>COURSE TITLE</th>
<th>INSTRUCTOR</th>
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</thead>
<tbody>
<tr>
<td>06th – 10th Apr</td>
<td>Advanced Petrophysics</td>
<td>Peter Betts</td>
</tr>
<tr>
<td>27th – 30th Jul</td>
<td>Petrophysics Operations Quality Control</td>
<td>Ahmed Taha Amin</td>
</tr>
<tr>
<td>30th Sep – 02nd Oct</td>
<td>Production Logging and Analysis</td>
<td>Barry Nicholson</td>
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<tr>
<td>05th – 07th Oct</td>
<td>Cased Hole Logging and Analysis</td>
<td>Barry Nicholson</td>
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<tr>
<td>02nd – 05th Nov</td>
<td>Integration of Petrophysics &amp; Core Analysis</td>
<td>Ahmed Taha Amin</td>
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Basic of Open and Cased Hole Logging:

- Introduction
- Planning (logging programs and objectives)
- Logging Operation (logging speed, sampling rate, log units, scales, log presentations, main log and repeat section, depth match, digital data format, etc)
- Tool Calibration
- Logging Environment

Reservoir Rock Properties

- Porosity
- Saturation
- Permeability

Open - Hole Logging Tools and Measurements:

Lithology Tools:

- Gamma Ray, Spectral Gamma Ray
- Spontaneous Potential (SP)
- Caliper Logs

Porosity Tools:

- Sonic Logs
- Density Logs
- Neutron Logs

Case Studies: Bad Log Quality Examples
- Good Log Quality Examples

Resistivity Tools:

- Laterologs
- Induction Logs
- Micro-Spherical Logs (MSFL)

Day Three - 29th July 2015

Curve Editing

- Depth Matching, despiking, splicing and multiple run merge with exercises
- Correct Curve selected for loading
- Environmental Effect and Corrections with exercises
- Curve Mnemonics for different service company
- Digitizing and Scanning of old log data

Practical Application examples (Workshop) using IP Software

- Creation of Data - Base by field basis
- Loading of digital data in different format (LAS, DLIS, LIS, ASCII, etc.) for each well
- Select the correct curve for loading
- Saving of processed log products in different digital format
- Practice on curve editing (Depth Matching, despiking, splicing and multiple run merge)
- Practice on Environmental Effects and corrections
- Practical cases for log quality control
- Bad and good quality raw curves
- Bad and good quality results data
- Output parameters and raw data presentation on different templates and in cross-plots or histograms
- Output format of digitized and scanned old logs

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 6415 4500 or email general@petrosync.com
Coring and Core Analysis Data:
- Brief Introduction to parameters of core analysis results
- Data loading format of core analysis output parameters

Log Quality Control:
- Log data Quality Control and data selection
- LQC on output processing parameters and digital data format (for example the difference between $S_s$ & $S_{wu}$ or $S_{xo}$ & $S_{xou}$)

Cased-Hole Logging Tools and Processing:
- Cement Bond (and it's correlation to OH data)
- Thermal Decay Time
- Production Logging
- Casing Collar Log (and it's relation to Perforations)

Geological Tools:
- Dipmeter Tools
- Image Tools

Other Tools:
- Nuclear Magnetic Resonance
- Modular Dynamics Tester

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
Dr. Ahmed Taha Amin has over 35 years in industry, principally in log analysis and formation evaluation in various technical and managerial positions for GUPCO (Cairo, Egypt), ADCO & ADNOC (Cairo, Egypt), QGPC (Doha, Qatar), Apache (Cairo, Egypt) and RPS Energy (UK). He specializes in formation evaluation, core analysis and reservoir modeling. He is formerly a Senior Lecturer Petrophysics in the Department of Physics at the Alexandria University and Geological Department at Cairo University. Senior Instructor for many in house and international courses in Petrophysics with major international training companies. Dr. Ahmed had executed training courses for RPS, Cepsa, Repsol, Sasol SA, El-Furat, Sudapet and he was a Senior Advisor Petrophysicist in Apache Egypt Companies.

He has broad experience working with assets and providing properties for reservoir characterization. Dr. Ahmed is completely familiar with operational aspects of logging and log interpretation with strong experience with carbonate petrophysics after 15 years experience in the Middle East.

He had done numerous industry courses in Petrophysics Logging, Log Analysis, Geology, Geophysics, Reservoir Engineering and publication in petrophysical topics. Currently, Dr. Ahmed is working as an independent consultant petrophysicist with CEPSA, Aminex, TPS and IPR International. At the same time working as associate principle petrophysicist with RPS for international projects (Sasol Johannesburg)

**HIS PROFESSIONAL MEMBERSHIP/AFFILIATIONS**
- American Association of Petroleum Geologists (AAPG)
- Society of Petrophysicist & Well Log Analysis (SPWLA)
- Society of Petroleum Engineers (SPE)
- Egyptian Society of Applied Petrophysics (ESAP)
- Egyptian Petroleum Exploration Society (EPEX)

**HIS CLIENT LIST**
- ARAMCO (Cairo)
- Petronas (Sudan)
- ADCO (UAE)
- Cairn Energy
- Cepsa (Madrid)
- Hess & Nalpetco
- Sasol
- Cuu Long Joc (UK)
- RPS Energy (UK)
- Dana Gas
- Qatar Petroleum
- EGPC
- EGAS
- Petrobel
- Qarun
- Repsol (Madrid)
- Al Furat Petroleum Co.
- Sudapet
- CCED
- BGFCL
- PetroGulf
- Ganoub
INVESTMENT PACKAGES

<table>
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<tr>
<th>Investment Package</th>
<th>Deadline</th>
<th>Course Fee</th>
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<tbody>
<tr>
<td>Standard Price</td>
<td>24th Jul</td>
<td>SGD $ 4,995</td>
</tr>
<tr>
<td>Early Bird Offer</td>
<td>26th Jun</td>
<td>SGD $ 4,795</td>
</tr>
<tr>
<td>Group Discount (3 or more Delegates)</td>
<td>24th Jul</td>
<td>10% discount for groups of 3 registering from the same organization at the same time</td>
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</table>

Group Discount is based on Standard Price
* To enjoy the promotion & discount offer, payment must be made before deadline
* For 7 or more delegates, please inquire for more attractive package.
* Prices include lunches, refreshments and materials. Promotion & discount cannot be combined with other promotional offers.
* Important: Please note that registration without payment will incur a SGD 200 administration fee.

DELEGATES DETAILS

1st Delegate Name ___________________________ Mr □ Mrs □ Ms □ Dr □ Others□
Direct Line Number: _________________________ Email: _________________________
Job Title: ________________________________ Department: ____________________
Head of Department: _________________________

2nd Delegate Name ___________________________ Mr □ Mrs □ Ms □ Dr □ Others□
Direct Line Number: _________________________ Email: _________________________
Job Title: ________________________________ Department: ____________________
Head of Department: _________________________

3rd Delegate Name ___________________________ Mr □ Mrs □ Ms □ Dr □ Others□
Direct Line Number: _________________________ Email: _________________________
Job Title: ________________________________ Department: ____________________
Head of Department: _________________________

INVOICE DETAILS

Attention Invoice to: _________________________ 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 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 2889018980 - USD: 0288002682016
All bank charges to be borne by payer. Please ensure that PetroSync Global Pte Ltd receives the full invoiced amount.

☐ By Credit Card:
Card Number: _____________________________ Security Code: ____________
Expiry Date: _____________________________
Name printed on card: _____________________

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Course Confirmation

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

Authorized Signature: _________________________

PAYMENT TERMS: Payment is due in full at the time of registration. Full payment is mandatory for event attendance.

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

You may substitute delegates at any time as long as reasonable advance notice is given to PetroSync. For any cancellation received in writing not less than four (4) working days prior to the training course, you will receive credit voucher less a SGD $200 administration fee and any related bank or credit card charges.

Delegates who cancel less than four (4) working days of the training course, or who do not attend the course, are liable to pay the full course fee and no refunds will be granted.

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 course, 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

A minimum of 70% attendance is required prior issuance of PetroSync’s Certificate.

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