Pore Pressure Prediction

Get the knowledge to concepts of hydrostatic, overburden and effective stresses

18th August 2014 - 22nd August 2014, Kuala Lumpur, Malaysia

Petrosync Distinguished Instructor

Fayez Makkar
Drilling and Workover Consultant
Independent Professional Training & Coaching Professional

- Over 35 years of experience in Petroleum Industry.
- Extensive experience on workover, completion logging interpretation and design.
- Accomplished Instructor with over 20 years of experience.

Course Objectives

- GAIN the knowledge about the origins of geo-pressure and the basic physics of geological environments
- UNDERSTAND the concepts of hydrostatic, overburden and effective stresses.
- LEARN various type of data needed and its quality.
- DETERMINE the appropriate level of detail required for geo-pressure prediction and analysis.
- Able to MANAGE the drilling operations through the correct application of wellbore stability principles.
- UNDERSTAND different bit types and applications.
- OPTIMIZE hydraulics for each hole interval based upon wellbore, fluids and drill string configurations

Specially Designed for

This course is specifically designed for, but not limited to employees in the oil and gas industry who holds the following roles:

- Drilling Managers
- Drilling Supervisors
- Drilling Superintendents
- Senior Drillers
- Drilling Engineers
- Operation Engineers
- Project Engineers

HYBRID TRAINING SOLUTIONS

FOCUS TRAINING • REDUCE COST • ENHANCED RESULTS

Over the years, there has been a growing demand for hybrid training programs. It is an excellent option to maximize your training dollar for your specific training needs. We make it possible to run a training program that is customized totally to your training needs at a fraction of an in-house budget!

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This course is essential for every technical professional involved in exploration, risk assessment, development, monitoring, and production of oil and gas. Sealing integrity and hydrocarbon retention capacity of a prospective structural closure are the consequence of the subsurface geo-pressure compartmentalization. Successful drilling to the targeted formation is a result of accurate prediction of pore – fracture pressure and the drilling tolerance window.

This course covers the essentials of geo-pressure compartmentalization in relation to pore pressure development with depth. The basic geological building blocks are used as the foundation for pore pressure predictions. The course is an introduction to developing concepts, models, measurements, predictions, calibrations, and appraisals. Moreover, the course briefly covers the process of calibrating pore and fracture pressures and predicting models before, during, and post drilling. This course will teach you the fundamental skills required to estimate and predict geo-pressure. It will also introduce you to the basics of wellbore stability to help manage your planning for all types of well locations and designs. This course will focus on providing the methodologies and techniques available in evaluating formation pressure both qualitatively and quantitatively. Topics will include methods of pre-well prediction using seismic and basin modeling as well as evaluation using trend analysis techniques and pore pressure indicators.

The course describes the background to, and the prediction and evaluation of, overburden, pore and fracture pressures. While the emphasis is on practical evaluation, the course also describes how formation pressures influence hydrocarbon generation and migration.

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Drilling and Workover Consultant
Independent Professional Training & Coaching Professional

Fayez Makkar is an independent drilling and workover consultant having more than 36 years of experience in Petroleum industry. He has extensive background in workover, completion design and logging interpretation in directional and horizontal wells. He also has experience in all types of drilling operations including deep wells on both offshore and onshore oil, gas and H₂S wells. His teaching experience began since 1992 and at the moment he has taught more than 25 courses. He conducted several courses through TPS and NExt in Turkey.

LIST OF PAPERS PRESENTED IN INTERNATIONAL CONFERENCE

- SPE Kuwait International conference on 12/12/2011 - What’s the optimum well geometry & reservoir parameters in fracture carbonate reservoir subjected to steam stimulation? (SPE 150533)
- Egypt international conference in 2000 - LWF logging while fishing
- Italy International conference in 1998 - LWF logging while fishing

CLIENT LIST INCLUDES:

- Saudi Aramco
- Arabian Drilling Company (ADC)
- Kuwait Petroleum Corporation (KPC)
- Greater Nile Petroleum Operating Company (GNPOC)
- White Nile Petroleum Operating Company (WNPOC)
- Petro Energy E&P
- Petrodar Operating Company
- Abu Dhabi Marine Operating Company (ADMA-OPCO)
- Iraq Drilling Company (IDC)

PROGRAM SCHEDULE

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>08:00-09:00</td>
<td>Registration (Day 1)</td>
</tr>
<tr>
<td>09:00-11:00</td>
<td>Session I</td>
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<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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<td>End of Day</td>
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**PORE PRESSURE PREDICTION**

18TH-22ND August 2014, Kuala Lumpur, Malaysia

**Course Agenda**

### Day One - 18th Aug 2014

**Introduction - Pore Pressure Evaluation Techniques**
- Overview

**Geo-physical & other surface methods**
- Seismic Data
- Gravity Data
- Magnetic Data

**Drilling Parameters**
- Mud density / gas relationship
- Gas – cut mud
- Cutting character
- Hole behavior

**Drilling Exponents**
- D-exponent
- Second Generation exponents

### Day Two - 19th Aug 2014

**Drilling Exponents**
- Shale density
- Shale factor
- Temperature
- Mud resistivity/conductivity
- Wireline log parameters
- Sonic / acoustic log
- Resistivity
- Density and Neutron logs

**MWD Logs**
- Pore pressure evaluation
- MWD Resistivity devices
- MWD Gamma Ray
- MWD porosity

### Day Three - 20th Aug 2014

**Factors Affecting Formation Pressure Evaluation**
- Lithology
- Controlled drilling
- Hydraulics
- Roller cone bit selection and bit wear
- Fixed cutter bits (PDC, TEP)
- Drilling fluid type
- Deviated and horizontal wells

**Fracture Pressure**
- Past and current Technology
- Hubbert and Willis
- Matthews and Kelly
- Eaton
- Anderson et al

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If you like to know more about this excellent program, please contact us on +65 6415 4502 or email general@petrosync.com
Additional Fracture Pressure Applications
Estimation of Fracture Pressure
Estimation of fracture pressure
Zero tensile strength concept
Example calculation

Subsurface Stress States
- Effective stresses
- Theoretical subsurface stress state
- Example calculation

Selection of Casing Seats
Leak Off Tests

Pressure Related Problems
- Lost circulation
- Kicks
- Well control
- Well bore stability

Petrosync Quality

Limited Attendees
The course has limited seats to ensure maximum learning and experience for all delegates.

Certificate of Attendance
You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development.

Interactive Training
You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

High Quality Course Materials
Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward. You can follow course progress on your laptop with soft copies provided.
**PAYMENT TERMS**

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

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**INVOICE DETAILS**

Attention Invoice to:________________________________________________________________________

Direct Line Number: ____________________________ Fax: ________________________________

Company: __________________________________ Industry: _______________________

Address: __________________________________ Postcode: _________________________

Country: __________________________________ Email: ________________________________

Please note:
- If you have not received an acknowledgement before the training, please call us to confirm your booking.
- If you have already registered by Phone __________________________ Fax: __________________________ Email: __________________________ Web __________________________

**PAYMENT METHODS**

- By Credit Card: Please debit my credit card: ☐ Visa ☐ MasterCard ☐ AMEX Security Code: _______ Expiry Date: _______
- By Direct Transfer: Please quote invoice number(s) on remittance advice

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**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 charge 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 fourteen (14) 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 fourteen (14) working days prior to 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 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.

Please accept our apologies for mail or email that is incorrectly addressed. We will amend them accordingly.

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**CERTIFICATE OF ATTENDANCE**

70% attendance is required for PetroSync’s Certificate

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**PAYMENT TERMS**

- For payment by Direct Telegraphic Transfer, client has to bear both local and overseas bank charges.
- For credit card payment, there is additional 4% credit card processing fee.

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**CHARGES & FEE(s)**

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**CONFIRMATION**

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