Enhance your exploration findings through gravity and magnetic data analysis

17 July - 20 July 2017
Jakarta, Indonesia
Course Overview
Gravity and Magnetic Methods for Exploration is developed to enhance exploration findings through the techniques of gravity and magnetic data analysis. Get to know these methods and how they can be used in an exploration program to map the subsurface 3D geological structure.

This program shall address the role Gravity and Magnetic Methods play in an exploration program, and most importantly when and how to use these methods. The program will cover the theoretical drivers of these methods, including acquisition,

Includes Specific and Practical Case Studies
The participants will be actively involved in exercises with real data sets and software to be practiced on. The attendees will learn the key concepts behind the methods for using gravity and magnetic and how they can be applied for exploration.

Gain an Enhanced Way of Analyzing Basins
After attending this program, participants will gain an enhanced way of analyzing basins together with seismic analysis.

How Does This Course Benefit You?

Learn The Application Of Gravity And Magnetic Methods
The training program allows the attendees an appreciation of how the gravity and magnetic exploration methods work (i.e. physics) and what controls the shape and size of anomalies.

Understand The Acquisition Of Exploration Data And Their Anomalies
The methods of acquisition of exploration data (traditional land, sea and air, with space and tensor methods included) are reviewed together to construct grids and maps of the different anomaly types.

Gain Insights Of The Geology Through Advanced Processing
Attendees will be able to understand how the grids (and profiles) undergo ‘Advanced processing’ in a similar manner to ‘seismic attribute analysis’ to generate derivative maps that allow the position (edges) of sub-surface geological structures to be mapped.

Overcome Magnetic Interpretation Problems
Understand the fundamental magnetic interpretation problems that occur close to the magnetic equator and how they can be partly overcome. The derivatives are then used to provide depth estimates to the tops of structures giving a 3D visualization of basement structures under investigation.

PetroSync Quality Assurance
All PetroSync courses are developed with top quality to address all your training needs and purposes. Our courses are vetted strictly to ensure that we always deliver the best courses with the best industry expert.

PetroSync Inhouse Solutions
PetroSync can tailor our courses to meet your specific needs at your preferred location and schedule. Contact us for more information at +65 6415 4500 or email to general@petrosync.com

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Who Needs This Program

- This training program is developed and designed for people who are involved in exploration projects, and would like to apply complementary methods that can enhance seismic methods. This program is suitable for Exploration Geophysicists through to Exploration Project Managers needing to make exploration decisions. In order to fully appreciate the course, ideal attendees are geophysicists with at least 2-3 years experiences, or new Exploration Project Managers.

Job Titles Include:
- Exploration Geophysicists
- Exploration Geologists
- Exploration Managers

Course Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>08:00—09:00</td>
<td>Registration (Day 1)</td>
</tr>
<tr>
<td>09:00—11:00</td>
<td>Session I</td>
</tr>
<tr>
<td>11:00—11:15</td>
<td>Refreshment 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>
</tr>
<tr>
<td>14:00—15:30</td>
<td>Session III</td>
</tr>
<tr>
<td>15:30—15:45</td>
<td>Refreshment Session II</td>
</tr>
<tr>
<td>15:45—17:00</td>
<td>Session IV (Last Session)</td>
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Course Agenda — 5 Days

**DAY 1**

**INTRODUCTION - BACK TO BASICS**
- Introduction And Overview Of Course
- Gravity And Magnetic Responses To 3D Variation In Density And Magnetisation Of Rocks
- Gravity Anomaly Types And Responses

**EXERCISE:**
- Structural mapping of Lake Tanganyika, East Africa using 2D seismic data.
- How could gravity and aeromagnetic improve the interpretation?
- Gravity Acquisition: Land, Sea, Air And Space (Including Tensor Data)
- Magnetic Acquisition: Land, Sea, Air And Space

**DAY 2**

**Advanced Processing**
- What Are Derivatives?
- Amplitude Derivatives
- Phase Derivatives

**DEMO:**
- Using GETgrid to analysis gravity and magnetic grid data using data from Officer Basin, Australia.

**EXERCISE:**
- Deriving derivatives for Officer Basin

**DAY 3**

**STRUCTURAL MAPPING**
- Which Derivatives To Use?
- 2D Lineament Tracking-Automated
- Problems Of Tracking Lineaments At The Equator And How To Partly Solve Them

**EXERCISE:**
- Structural mapping of Eastern Officer basin

**DAY 4**

**DEPTH ESTIMATION**
- Extended Tilt-Depth method
- Local Wavenumber

**EXERCISE:**
- Power Spectrum, Tilt-Depth and Local wavenumber methods applied to Officer Basin grids

**EXERCISES FEATURE:**
Trainees will have computer-based exercises across sessions. This will require suitable number of PCs preferably with operating system that does not exceed Windows 32 bit. There will be GETgrid (10 temporary licenses), which will be in loaded in a USB Dongle security. All USB dongles must be returned after use. These exercises include:
- Structural Mapping Of Lake Tanganyika, East Africa Using 2D Seismic Data
- How Could Gravity And Aeromagnetic Improve The Interpretation?
- Using Getgrid To Analysis Gravity And Magnetic Grid Data
- Using Data From Officer Basin, Australia.
- Deriving Derivatives For Officer Basin
- Structural Mapping Of Eastern Officer Basin
- Manual Method Of Depth Determination
- Power Spectrum, Tilt-Depth And Local Wavenumber
- Methods Applied To Officer Basin Grids
- **Gmsys** 2D Gravity And Magnetic Modeling Of Malay Basin. The Importance Of Understanding Geological Processes
- Case Histories (Bolivia, West Africa Margin, Cameroon, Sudan)
INVESTMENT PACKAGES (Please Circle)

<table>
<thead>
<tr>
<th>INVESTMENT PACKAGE</th>
<th>DEADLINE</th>
<th>FULL MASTERCLASS</th>
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</thead>
<tbody>
<tr>
<td>Standard Price</td>
<td>7 July 2017</td>
<td>USD 3,395</td>
</tr>
<tr>
<td>Early Bird Offer</td>
<td>16 June 2017</td>
<td>USD 3,195</td>
</tr>
<tr>
<td>Group Discount (3 or more Delegates)</td>
<td>7 July 2017</td>
<td>USD 3,055</td>
</tr>
</tbody>
</table>

Group Discount is based on Standard Price
* To enjoy the promotion & discount offer, payment must be made before dateline
* 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: ____________________________
Direct Line Number: ____________________________  Fax: ____________________________
Company: ____________________________  Industry: ____________________________
Address: ____________________________  Postcode: ____________________________
Country: ____________________________  Email: ____________________________

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

PAYMENT METHOD

- By Credit Card: 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
  Account No: SGD: 288-901898-0  USD: 0288-002682-01-6
  All bank charges to be borne by payer. Please ensure that PetroSync Global Pte Ltd receives the full invoiced amount.

- 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
  Account No: SGD: 288-901898-0  USD: 0288-002682-01-6
  All bank charges to be borne by payer. Please ensure that PetroSync Global Pte Ltd receives the full invoiced amount.

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.

CONFIRMATION

Terms and Conditions:

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

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 course due to unforeseen circumstances. Any substitutions or alterations will be updated on our website 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 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 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

70% 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.

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