NATURAL GAS GEOCHEMISTRY

27th - 30th of APRIL 2015 at KUALA LUMPUR, MALAYSIA

PetroSync Distinguished Instructor:
CHRIS CLAYTON, PhD, ARSM, FGS
Independent Geochemistry Consultant,
Chris Clayton Geochemistry Services

- Established expert in natural gas geochemistry
- 25 years industrial experience in petroleum exploration with extensive industrial contacts and collaborative research
- Extensive exploration/production and research experience in many areas of organic and inorganic sedimentary geochemistry, most recently in subsurface fluid flow mechanisms and field compartmentalisation studies
- Scientific Committee for 20th Int. Mtg. on Organic Geochemistry, Nancy, France 2001
- AAPG Distinguished Instructor 1999, Distinguished Lecturer, Indonesian Petroleum Association Annual Meeting 1998

Course Objectives

- LEARN the basis of the different origins of natural gas and the geological controls on its formation
- UNDESTRAND the recent geochemical and isotopic methods of determining the origin of the gas, its thermal maturity (i.e. temperature of generation), the influence of mixing of gases from different sources and the origin of inorganic components such as nitrogen and carbon dioxide
- GAIN a working knowledge of the increasingly important role of biogenic gases as exploration targets in their own right
- INTERPRET available types of geochemical data for gases and be able to apply these directly to exploration and field development problems

Specially Designed for

This course is specially designed for exploration and development geoscientists, E&P managers, and those who are in need of a comprehensive overview natural gas geochemistry.

- Geochemists
- Exploration Geologists & Geoscientists
- Development Geologist
- Geomodellers

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Participants will learn the fundamental basis of the different origins of natural gas and the geological controls on its formation. A significant part of the course will discuss recent geochemical and isotopic methods of determining the origin of the gas, its thermal maturity (i.e. temperature of generation), the influence of mixing of gases from different sources and the origin of inorganic components such as nitrogen and carbon dioxide. Participants will also gain a working knowledge of the increasingly important role of biogenic gases as exploration targets in their own right. At the end of the course, participants will be proficient in the interpretation of all available types of geochemical data for gases and be able to apply these directly to exploration and field development problems. The course will be supplemented by a number of hands-on exercises from gas exploration/production problems worldwide. In addition, participants are encouraged to bring along examples from their own experience for class discussion.
Chris was born in the UK more years ago than he cares to remember. Following a first degree in Geology at Imperial College, University of London he completed a PhD in silica diagenesis and chert formation jointly at King’s College London and the Institute of Geological Sciences Isotope Geology Unit.

He joined the BP Research Centre in 1982 where he somehow became an organic geochemist. During this time he researched among other things, isotopic behaviour in the petroleum system, kerogen formation processes, biogenic gas generation and controls of petroleum seepage.

Chris left BP at the end of 1992 and has since worked as an independent consultant in geochemistry and basin modelling to the petroleum, minerals and groundwater industries. He now lives in the middle of nowhere in the heart of the English countryside near Worcester.

Since 1992 until present, he is an independent Geochemistry Consultant for his own company, which is an international business, based in UK with projects underway in West Africa, North Sea, USA, south east Asia, Middle East and Tunisia. Principally working in petroleum exploration/production with subsidiary groundwater chemistry and mineral exploration projects. Most work is centred around solving specific advanced exploration/field development problems and/or collaborative research with client. Also present technical training courses in house and general for industry, e.g. Norsk Hydro, Indonesian Petroleum Association, AAPG.

Professional Achievements:
- Scientific Committee for 20th Int. Mtg. on Organic Geochemistry, Nancy, France 2001
- AAPG Distinguished Instructor 1999
- Distinguished Lecturer, Indonesian Petroleum Association Annual Meeting 1998
- Scientific Committee for 18th Int. Mtg. on Organic Geochemistry, Maastrict, Netherlands 1997
- AAPG Best International Paper 1993

Clients Include:
- Norsk Hydro - Migration studies, gas sourcing, field compartmentalisation studies
- Nexen Inc. – Buzzard Field reservoir fluid study
- PanAfrican Energy – Phase prediction, onshore Gabon
- BHP – Gas exploration, Gulf of Mexico
- BP Exploration, Angola, Houston and Thailand – Hydrocarbons & inorganic gases
- JNOC – Bacterial gas exploration
- Shell – Bacterial gas exploration
- Hunt Oil – Shallow coring studies
- Gaz de France – Inorganic gas sources
- Maghreb Minerals Ltd. – Pb/Zn mineral exploration, Tunisia

Selected Recent Publications:
**Course Details**

**Title:** NATURAL GAS GEOCHEMISTRY  
**Date:** 27th - 30th APRIL 2015  
**Location:** Kuala Lumpur, Malaysia

### INVESTMENT PACKAGES

<table>
<thead>
<tr>
<th>Investment Package</th>
<th>Deadline</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Price</td>
<td>24th APR 2015</td>
<td>SGD $4,995</td>
</tr>
<tr>
<td>Early Bird Offer</td>
<td>27th MAR 2015</td>
<td>SGD $4,795</td>
</tr>
<tr>
<td>Group Discount</td>
<td>24th APR 2015</td>
<td>10% discount for groups of 3 registering from the same organization at the same time</td>
</tr>
</tbody>
</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.
* Important: Please note that registration without payment will incur a SGD 200 administration fee.

### DElegates Details

1st Delegate Name: ____________________________  
Direct Line Number: __________________________  
Job Title: ____________________________  
Head of Department: ____________________________

2nd Delegate Name: ____________________________  
Direct Line Number: __________________________  
Job Title: ____________________________  
Head of Department: ____________________________

3rd Delegate Name: ____________________________  
Direct Line Number: __________________________  
Job Title: ____________________________  
Head of Department: ____________________________

### INVOICE DETAILS

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Company: ____________________________  
Address: ____________________________  
Postcode: ____________________________

Country: ____________________________  
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:  
  - Please debit my credit card: Visa  
  - MasterCard  
  - AMEX  
  - Security Code: ____________  

Card Number: ____________  
Expiration Date: ____________

Name printed on card: ____________________________

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

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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.

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**CERTIFICATE OF ATTENDANCE**

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

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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.