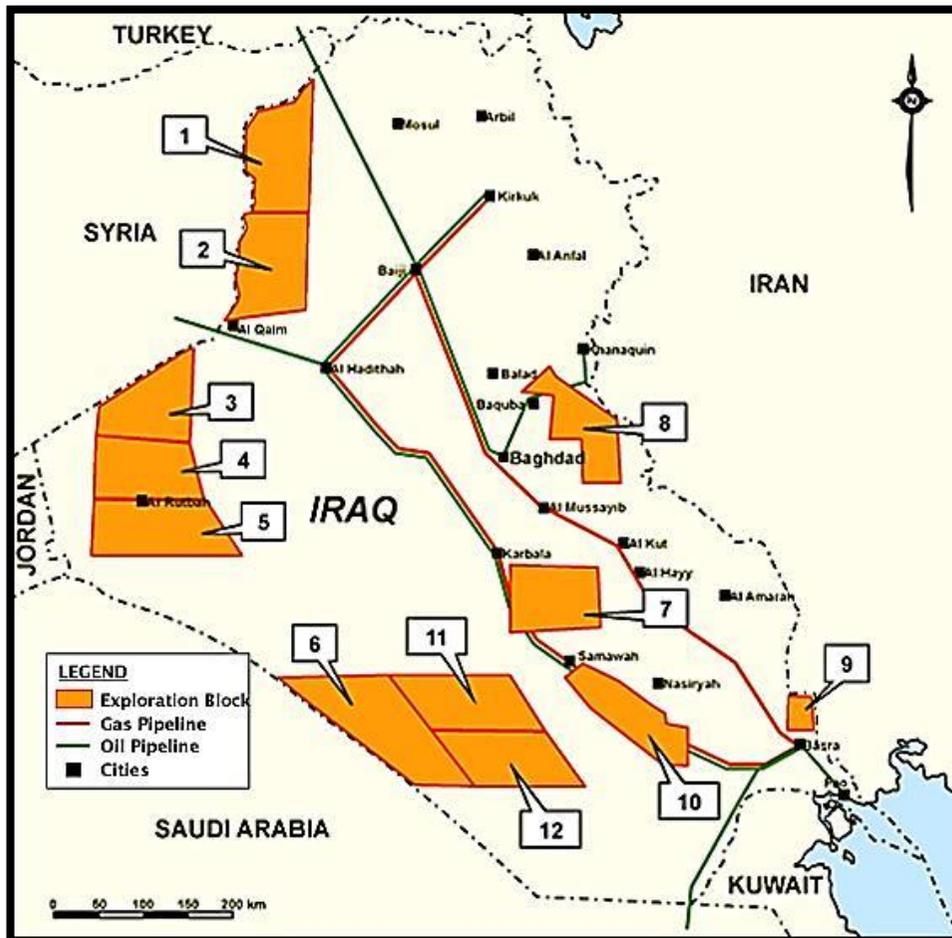


# Target Exploration

Energy Geosciences Research & Development



## IRAQ in Preparation for the 5<sup>th</sup> Bid Round: Exploration, Fields Development and Operation Challenges

Iraqi Petroleum Conference 2012 (IPC12)  
The 4<sup>th</sup> International Iraqi Petroleum Conference

13<sup>th</sup> and 14<sup>th</sup> September 2012

The Imperial College

180 Queen's Gate, London, SW7, UK.

## *IPC12, 4<sup>th</sup> International Iraqi Petroleum Conference*

One hundred and ten years after Iraq's first oil discovery of Chia Surkh Oilfield, exploration and development efforts added 550 prospective structures, 75 oil and gas discoveries and 25 producing oil fields\*. **One hundred and ten years later**, Iraq remains the country where you can discover giant oil fields.

The theme of the 4<sup>th</sup> Iraqi Petroleum Conference is “Iraq-In Preparation for the 5<sup>th</sup> Bid Round: Exploration, Field Development and Operation Challenges”.

**Iraqi Petroleum Conference Series (IPCs)** are probably the best technical events dedicated to disseminating new hydrocarbon exploration and development research, new ideas and technical achievements of the Iraqi, Middle Eastern and international upstream sectors. Organized by Target Exploration at the Imperial College since 1999, the IPCs incorporates a successful proportion of 75% Geosciences, Geotechnical and Petroleum Engineering presentations vs. 25% economic, Hydrocarbons bid rounds, new-ventures analyses and other related presentations.

Target Exploration consistently provide their conference attendees with original presentations, new ideas, stimulating discussions, valid conclusions, frank answers to their questions; as well as digital and hard copies of their conference abstracts, papers and/or presentations.

**Usual presenters** are exploration, development and new-ventures staff of national and international oil companies as well as energy economists, planners, and legal, financial, HSSE advisors and risk analysts.

**Usual attendees** are representatives of national and international oil and gas companies, service companies, government energy and environment agencies, international upstream investors, lawyers and legal companies, energy research establishments, and other organizations operating, investing or planning to invest in the upstream oil and gas industry of Iraq and/or MENA countries.

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\* *Iraq Oil Exploration Company*

## Chairmen

**Dr. M. Ala**, Department of Earth Science and Engineering, Royal School of Mines, Imperial College, University of London, London, UK.

**Prof. Ali I. Al-Jubouri**, Department of Geology, Mosul University, Mosul, Iraq.

**Dr. Abdul-Hamid Fenghour**, Consultant Petrochemical Engineer, London, UK.

**Dr. Thamir Al-Uqaili**, Consultant reservoir Engineer and CEO Petroconsult Canada, Mississauga, Canada.

# Authors/Presenters



**Dr. Michael Ala**, Department of Earth Science and Engineering, Royal School of Mines, Imperial College, University of London, London, UK.

Dr. Ala has been closely associated with the oil industry for more than 30 years both as an exploration geologist with an independent oil company and as a consultant. He has a BSc in Oil Technology and an MSc, PhD and DIC in Petroleum Geology from Imperial College.

In 1972 he joined Seagull Exploration International and was involved in exploration studies and prospect evaluation in many parts of the world including Africa, northwest Europe, eastern Mediterranean, the Caribbean, South America and the Middle East. In 1976 he became the company's General Manager in London, responsible for its north European and Middle Eastern operations.

Since 1981 he has been a member of the academic staff in the Earth Science Department of Imperial College, rising to the post of Director of the internationally recognized MSc Petroleum Geoscience Course in 1994. Dr Ala has published more than 60 research and review articles covering the Middle East and West Africa, focusing on the petroleum geology and oil industry of Iran and is on the Editorial Board of the international Journal of Petroleum Geology. He was also Editor in Chief of Seventy-Five Years of Progress in Oil Field Science and Technology, published in 1990. Since 1982 he has been organizing and presenting numerous industrial training programs in Europe, north Africa, west Africa and southeast Asia. Currently, Dr Ala is completing a textbook entitled The Acquisition and Interpretation of Openhole Logs.

He is co-founder (1988) and Director of Hydrocarbons Venture Limited, a UK based organisation involved in consultancy and participation in exploration projects. Until 2008, he was Chairman of Azar Energy Qeshm, a company he co-founded in 2003 with the aim of participating in the Iranian oil and gas sector projects. In 2007 he joined the

board of Dominion Energy as a non-Executive Director. Dominion's principal activity is the exploration and development of oil and gas fields in north Africa in general and in Tunisia specifically.



**Prof. Ali I. Al-Jubouri**, Professor and Researcher in petrology and mineralogy of sedimentary rocks at Department of Geology, Mosul University, Iraq.

Prof. Al-Jubouri is currently in a sabbatical year at the Department of Earth Sciences, Royal Holloway of London University working on the maturation of Iraqi Paleozoic shales from mineralogical (clay), geochemical, and biostratigraphical disciplines. He received his BSc in geology and MSc in sedimentology from Mosul University, Iraq in 1980 and 1983 respectively, and PhD from Comenius University, Slovakia in 1992.

Prof. Ali is a member of numerous international societies and has published several papers on sedimentological, mineralogical and geochemical topics in local and international refereed journals. Awarded the 2009 Distinguished Scholars Award from the Arab Fund For Economic and Social Development, Kuwait.



**Dr. Thamir Al-Uqaili**, CEO, Petroconsult Canada, Mississauga, Canada.

Dr Uqaili received his PhD in Petroleum Engineering from the Imperial College, University of London in 1977. After a short spell of consulting work in the UK, Dr. Al-Uqaili returned to work as Reservoir Engineer in Basra Petroleum Company (BPC) in Basra, South Iraq. Following that, he held several key positions in the upstream oil industry of Iraq; in which he worked as Field Manager of North Oil Company, Kirkuk; General Manager of Central Petroleum Organization, Baghdad then General

Manager Planning Department at the Ministry of Oil, Baghdad to name few.

In 1993, Dr. Al-Uqaili joined Repsol International as Area Reservoir Coordinator (North Africa), Madrid, Spain; and Baker-Hughes as Business Development Manager in 2003.

**Mr. Sardar Mohialdeen Balaky**, Lecturer, Department of Geology, Salahaddin University, Erbil, Iraq.

Sardar has a M.Sc. in Stratigraphy and Sedimentology from Salahaddin University. He published locally on the Tithonian-Berriasian Chia Gara, Upper Jurassic Naokelekan, Middle Jurassic Sargelu and Early Carboniferous Harur Formations in NE Iraq. At present, he is studying towards his PhD in Sedimentology and Sequence Stratigraphy at Salahaddin University. Erbil, Iraq.

**Dr. David Boote**, Consultant Geologist, DB Consulting, UK.

David Boote spent twenty five years in international new venture exploration with Occidental Oil and Gas Company, variously as Chief Geologist Worldwide Exploration, Regional Manager (Middle and Far East) and Senior Geological Advisor, responsible for basin evaluations, play analysis, prospect generation and field appraisals in most parts of the world. Since leaving Occidental in 2000, he has been active as an independent consultant focusing on regional stratigraphic and hydrocarbon petroleum system analyses in North and East Africa and the Middle East.



**Dr. Paul Farrimond**, Director & Geochemical Consultancy Manager, Integrated Geochemical Interpretation (IGI) Ltd., Biddeford, Devon, UK.

Paul has a B.Sc. (Hons.) in Geology and Chemistry and a Ph.D. in Organic Geochemistry from the University of Bristol, UK.

He was a Senior Lecturer in Geochemistry at the University of Newcastle upon Tyne, before joining IGI in 2005. Paul is a petroleum geochemist with specialist expertise in molecular geochemistry, including oil-oil and oil-source rock correlation, petroleum biodegradation and source rock characterisation.

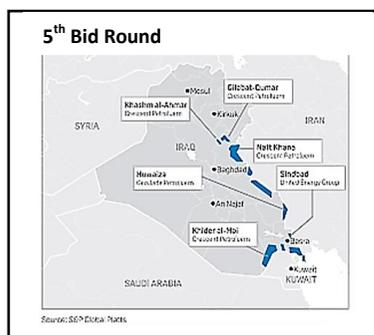
He has worked on oils and source rocks from many areas of the world, and his research experience has ranged from Precambrian rocks to modern sediments and even bacteria.

**Dr. Abdul-Hamid Fenghour**, Consultant Petrochemical Engineer, London, UK.

Dr Fenghour has a B.Sc., M.Sc. and Ph.D. In Chemical Engineering, and CASLAT in advanced education. He is a Chartered Chemical Engineer, a member of the Inst. of Chemical Engineers, and the Editor of the Journal of Chemical Thermodynamics. Worked as Process Engineer, Plants Manager, Senior Project Engineer for the National Petrochemical Company of Algeria, and as Research Associate in the National Engineering Laboratories, East Kilbride, Glasgow, Scotland, and as a Research Associate in the IUPAC Centre, Department of Chemical Engineering, Imperial College. Dr. Fenghour authored more than 30 publications in refereed journals, books and conference proceedings.

**Dr Raingard M. Haberer**, Petroleum Geochemist and Basin modeller, Integrated Geochemical Interpretation (IGI) Ltd, Biddeford, Devon, UK.

Dr. Raingard studied Geology at the University of Tübingen (Germany) and got a PhD in organic geochemistry from the Technical University Berlin. After working as a Post-Doc at the Geo-Forschung-Zentrum Potsdam dealing with the prediction and quantification of petroleum alteration processes in reservoirs she joined IGI in 2010 working as a petroleum geochemist and basin modeller.



**Dr. Muhammad W. Ibrahim**, Petroleum Geologist, UK, Middle East and North Africa.

Dr. Ibrahim has a Ph.D., M.Sc. and DIC in Petroleum Geology from the Royal School of Mines (Imperial College), University of London, and a B.Sc. in Geology from the College of Sciences, University of Baghdad. Dr. Ibrahim worked in exploration, appraisal, and development geology as an employee or as a consultant through Target Exploration for AMOCO Overseas, DNOS, Kuwait Oil Company, LASMO Grand Maghreb, LASMO International, Mobil Oil Libya, Oman Oil Exploration Company, PETRONAS International, UNOCAL Syria and VEBA Oil Operations. He contributed to few oil and gas discoveries, filed one USA patent application, wrote several geological

and open-hole log analysis programs, and published on various aspects of exploration and development geology of the Middle East-North Africa (Iraq, Jordan, Kuwait, Libya, Oman, Saudi Arabia, Sudan, Syria, and UAE) and other regions.



**Mr. Ahmed Mousa Jiyad**, Petroleum Development Consultant, Vaksdal, Norway.

Ahmed is an independent development consultant and scholar. He studied and graduated with B.Sc. in Economics (Univ., of Baghdad), Post Graduate Diploma in Planning (Univ., of Birmingham, UK), M.Sc. in Development Studies (Univ., of Bath, UK) and MA, Law and Diplomacy (Tufts and Harvard Universities, USA). He has over 40 years of extensive international professional experience in Iraq, UK, USA, Norway, and, with UN organizations, in Poland, former Czechoslovakia, Hungary, Uganda, Sudan and Jordan. While in Iraq (1968-88), he worked as senior economist with Ministry of Oil and INOC, chief expert with the External Economic Relation Committee- Council of Ministers, chief expert and director of OECD department, Ministry of Trade. He left Iraq to the US in July 1988 as Fulbright Visiting Fellow at Fletcher School of Law and Diplomacy, Tufts University 1988/9. Ahmed is an active scholar with regular participation in international conferences, workshops, seminars and related events. He published widely since 1976 on energy and other developmental issues, and his publications appeared in many countries in Arabic, English, Turkish and Norwegian. Ahmed M. Jiyad was born in Iraq; he is an Iraqi-Norwegian citizen and lives in Norway since October 1989.

**Mr. Hama-Jaza Salih Kadir**, Former Iraq's MoO and KRG Petroleum Advisor

Hama-Jaza Salih Kadir has a BSc in Petroleum Engineering from the Engineering College, University of Baghdad. He worked in the Iraqi oil industry between 1970 to 2007 in different positions, starting from field drilling engineer, head of drilling fluid & Cementing Section, Drilling Manager for CPO-Central Petroleum Organization, Chief Planning Engineer for Ministry of Oil in Baghdad, Chief Planning Engineer for Northern Admin in KRG, General Manager for Oil

and Mineral in Erbil/KRG, Senior Petroleum Advisor for PM Office 2005-2007, before 1993-1997 founder of TaqTaq Oil Project.

During 2003-2004 Mr. Salih Kadir worked as Petroleum Advisor for the Coalition Provisional Authority - CPA/Baghdad and Ministry of Oil - MOO/Baghdad/Iraq. During 2005-2007 Hama-Jaza worked as Senior Petroleum Advisor in the Prime Minister -Office/KRG-Iraq, as well as Senior Petroleum Advisor-TTOPCO/Turkey. He was Senior vice president for technical and business development for WZA Pet Co. Ltd. a KRG private service company active in Kurdistan, NE. Iraq.



**Yasin Latif**, Sales Manager, Wireline, Schlumberger, Iraq.

After graduation with a BSc in Earth sciences from the Quaid Azim University Islamabad, Pakistan, Yasin served Hunt Exploration company for short time as field seismic acquisition quality control.

Yasin joined Schlumberger in 1998 and worked in Middle East (Oman, Saudi Arabia, Kuwait and Iraq).

During these assignments, he was mainly involved in borehole data acquisition, technical support and Sales.

**Dr. Basem K. Moh'd**, Lecturer in Mining and Engineering Geology, Tafila Technical College, Tafila, Jordan.

Dr. Mohammad received his M.Sc. in Carbonate Sedimentology from the University of Jordan, and his PhD in Geomaterial Engineering from the University of London in 1996. He has more than 20 years experience in geological mapping, mining geology, mud logging and oil shale exploration with the Jordanian Natural Resources Authorities. He joined the staff of Tafila Technical University in 2001. His research interests include the Geology of Jordan, geology of oil shale, and porosity networks of oil and water carbonate reservoirs.



**Mr. V. Fabio Oglioni**, Borehole Geophysicist, Schlumberger, Iraq.

Fabio Oglioni has 30-year experience in Schlumberger log data processing and interpretation. After graduation in earth sciences from Bologna University, Italy, Fabio served Schlumberger as borehole geophysicist mainly in European countries.

Mr Ogliani's areas of interest are 2D offset and walkaway Vertical Seismic Profiling, 3D-VSP in both offshore and onshore areas, sonic log petrophysical analysis and, more recently, borehole micro-seismic.

**Dr. Francis Perrin**, Editorial Manager, Arab Oil and Gas, Arab Petroleum Research Center, and Président Stratégies et Politiques Energétiques (SPE). Studied economics and political science at the University of Grenoble (France); received a PhD in energy economics and graduate from the Institute of Political Studies. Consultant and freelance journalist in energy economics. Editorial manager of Arab Oil & Gas published by the Paris-based Arab Petroleum Research Center. Contributing editor to Petrostrategies (Paris) and Africa Energy Intelligence. Dr Perrin research and publication are with special emphasis on the Middle East, Africa, the Caspian Sea region, sanctions and the strategies of the international oil industry.



**Ben Sayers**, Senior GIS Geoscientist, Lynx Information, London, UK.

Ben has a BSc in Geography and GIS (Hons) – University of Greenwich and he is Currently Studying for his MSc in Petroleum Geoscience at the Royal Holloway. Ben has been involved with the upstream oil industry for over 6 years, mainly working with Seismic and GIS Data. Ben has been recently involved in data harvesting, organising and GIS enabling in-house data for Oil Majors in Onshore UK, and MENA countries such as Iraq, Kazakhstan, Egypt and Algeria.

# Conference Programme

DAY 1 THURSDAY	13/09/20 12	IPC 2012	THE 4 <sup>TH</sup> IRAQI PETROLEUM CONFERENCE
REGISTRATION	08:30	REGISTRATION	IRAQ: EXPLORATION, FIELD DEVELOPMENT AND OPERATION CHALLENGES
SESSION	TIME	CHAIRMEN/SPEAKERS	SESSIONS/PAPERS
SESSION A	09:00	Chairman: Dr. M Ibrahim	UPSTREAM DEVELOPMENTS
1	09:00	TBA	Introduction to IPC 2012.
2	09:20	Ahmed Mousa Jiyad (Energy Cons., Norway)	Evolutionary Trends of Iraq's Oil & Gas Agreements.
3	09:50	Dr. Thamir Uqaili (CEO, Petroconsult, Canada)	In Preparation for Iraq's Fifth Bid Round
COFFEE BREAK	10:30		POSTER SESSION 1
SESSION B	11:00	Chairman: Dr. Ali Al Jubouri	PETROLEUM SYSTEMS OF IRAQ
1	11:00	R. Haberer and P. Farrimond (IGI Ltd. UK.)	Organic Geochemical Evaluation of the Petroleum Systems in Iraq.
2	11:40	R. Abdul Fattah, <i>et. al.</i> (TNO, Netherland)	Gravity Data Combination for Basin and Petroleum System Analyses in the Arabian Peninsula.
LUNCH BREAK	12:00		POSTER SESSION 2

<b>SESSION C</b>	<b>14:00</b>	<b>Chairman: Dr Mike Ala</b>	<b>SPECIAL ISSUES OF E&amp;P OPERATIONS IN IRAQ</b>
<b>1</b>	<b>14:00</b>	<b>M. W. Ibrahim</b> (Petroleum Geol., London, UK)	<b>Long-term Predictability and Impact of Dust Storms on E&amp;P in Iraq and Gulf Countries.</b>
<b>2</b>	<b>14:30</b>	<b>F. Ogliani, Y. Latif</b> (Schlumberger) & Others	<b>Oil Prospect in Compressive Structure Illuminated by Borehole Seismic: Case History, Kurdistan, Iraq.</b>
<b>TEA BREAK</b>	<b>15:00</b>		<b>POSTER SESSION 3</b>
<b>SESSION D</b>	<b>15:30</b>	<b>Chairman: Dr Mike Ala</b>	<b>NEW ADVANCES IN E&amp;D GEOLOGY</b>
<b>1</b>	<b>15:30</b>	<b>M. Al-Haj, A. Al-Jubouri</b> (Mosul Univ. Iraq) and <b>A. Al-Hadidy</b> (North Oil Co., Kirkuk, Iraq)	<b>Sequence Stratigraphy and Porosity Evolution of Cenomanian-E. Campanian Rocks of Northwestern Iraq.</b>
<b>2</b>	<b>16:00</b>	<b>M. W. Ibrahim</b> (Petroleum Geol., London, UK)	<b>Exploration Ramifications of the Regional Geothermal Gradient of Iraq.</b>
<b>SESSION E</b>	<b>16:30</b>	<b>Chairmen: Dr M Ala &amp; Dr. Ali Al Jubouri</b>	<b>PANEL DISCUSSION 1</b>
<b>END OF DAY 1</b>	<b>17:00</b>	<b>End of Day 1 IPC 2012</b>	

## *Conference Dinner*

**The Day: 13 September 2012**

**The Time: 20-23 pm The Place: TBA**



DAY 2 FRIDAY	14/09/20 12	IPC 2012	THE 4 <sup>TH</sup> IRAQI PETROLEUM CONFERENCE
REGISTRATION	08:30	REGISTRATION	IRAQ: EXPLORATION, FIELD DEVELOPMENT AND OPERATION CHALLENGES
SESSION	TIME	CHAIRMEN/SPEAKERS	SESSIONS/PAPERS
SESSION F	09:00	Chairman: Dr. Ali Al Jubouri	UPSTREAM DEVELOPMENT
1	09:00	TBA	Summary of First Day and Introduction to Second Day Sessions
2	09:10	F. Perrin (Stratégies Politiques Energétiques, Paris)	Iraq and the International Oil Industry: a Delicate Relationship.
3	09:50	Ahmed Mousa Jiyad (Energy Cons., Norway)	<a href="#">Iraq's Petroleum Sector Development-Opportunities and Challenges.</a>
COFFEE BREAK	10:30		POSTER SESSION 4
SESSION G	11:00	Chairman: Dr. M. Ala	PETROLEUM SYSTEMS OF NORTHERN IRAQ
1	11:00	Ali Al-Juboury (Mosul Univ., Mosul, Iraq) and Tom McCann (Steinmann Inst., Bonn, Germany)	Petrologic and Geochemical Interpretation of the Transitional Triassic-Jurassic Boundary Sections from North Iraq
2	12:30	Sardar Balaky (Salahaddin Univ., Erbil, Iraq)	Stratigraphy, Facies & Source Rocks of Tithonian-Berriasian Chia Gara Formation, Kurdistan, Iraq.
LUNCH BREAK	12:00		POSTER SESSION 5

SESSION H	14:00	Chairman: Dr. Ali Al Jubouri	OIL SHALE AND SHALE GAS PLAYS OF IRAQ & MENA COUNTRIES
1	14:00	Mike Ala (Imperial College, London, UK)	The Shale Gas Revolution.
2	14:30	Mike Ala (Imperial College, London, UK.)	The Non-Conventional Oil Revolution.
TEA BREAK	15:00		POSTER SESSION 6
SESSION I	15:30	Chairman Dr. Ali Al Jubouri	NEW HYDROCARBONS EXPLORATION FRONTIERS
1	15:30	M. W. Ibrahim (Petroleum Geol., London, UK.)	Exploration Plays, and Exploration Play Fairways of Iraq: A Review.
2	16:00	David Boote (DB Consulting Ltd.), B. Sayers, (Lynx Ltd.), R. Kelly, (IGI Ltd, UK.), R. Haberer (IGI Ltd., UK.) and May Dickson (Lynx Information Systems Ltd., London, UK.)	Petroleum Systems of Iraq.
SESSION J	16:30	Chairmen: Dr M. Ala & Dr A. Al Jubouri	PANEL DISCUSSION 2
END OF DAY 2	17:00	End of IPC 2012	

## POSTER PRESENTATIONS

POSTER SESSION	1	B. Sayers (Lynx Ltd.), et. al.	<b>A Modern ArcGIS Analysis of Petroleum Systems of Iraq.</b>
POSTER SESSION	2	R. Abdul Fattah, et. al. (TNO, Netherland)	<b>Gravity Data Combination for Basin and Petroleum System Analyses in the Arabian Peninsula.</b>
POSTER SESSION	3	Elisa Gusti, et.al. (TNO, Utrecht, Netherlands)	<b>The Application of Phytolith Stratigraphy as Correlation Tool for 'Barren' Red-beds.</b>
POSTER SESSION	4	M. W.Ibrahim (Petroleum Geol., London, UK.)	<b>Geothermal Gradients and Geothermal Gradient's Anomalies of Iraq.</b>

## ALTERNATIVE PRESENTATIONS

STANDBY PRES.	1	L. Al Khatteeb (Iraq Energy Inst. London, UK)	<b>Upstream Petroleum Policies &amp; Regulations: The Legal &amp; Commercial Framework.</b>
STANDBY PRES.	2	Elisa Gusti, et.al. (TNO, Utrecht, Netherlands)	<b>The Application of Phytolith Stratigraphy as Correlation Tool for 'Barren' Red-beds.</b>
STANDBY PRES.	3	Basem Moh'd (Tafila Univ, Jordan) and  C. Carnaganu (Brooklyn College, NY, USA)	<b>Amount of Water Absorption as Controlled by Carbonate Unimodal  and Bimodal Pore Structure: a New tool to Predict Petrophysical Properties.</b>

STANDBY PRES	4	Basem Moh'd (Tafila Univ., Tafila, Jordan)	Geology and Hydrocarbon Potential of the Jordanian Oil Shale.
STANDBY PRES	5	H.-J. Salih Kadir (Petrol. Engineer, KRG, Iraq)	Kurdistan Region and Iraq's Upstream Hydrocarbon Investment Models.

## Location, Travel Information and Accommodation

### LOCATION:

IPC 2012 will be held at the **Clore Lecture Theatre Huxley Building of Imperial College, 180 Queen's Gate, London SW7 (Building No. 13 in the attached location map).**

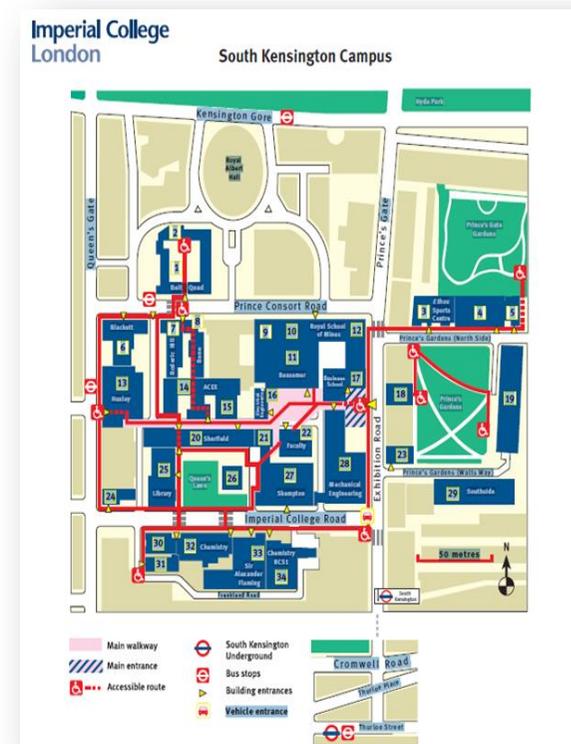
The Imperial College is located at the centre of the scientific and cultural quarter of London: The Royal School of Mines, the Geological Museum, the Royal Geographical Society, the Natural History Museum, the Science Museum, the Royal Albert-Victoria Museum, the Royal School of Art, the Royal School of Music, the Royal Albert Hall and the Royal Albert Memorial are all within 10 minutes' walk from conference hall.

### TRAVEL:

Nearest Bus stops are outside the Royal Albert Hall at Kensington High Street and nearest Tube is South Kensington Underground Station at the southern end of Exhibition Road.

### ACCOMMODATION:

To book your accommodation within or outside the Imperial College campus, please visit the I C accommodation Department website or contact the I.C. Accommodation

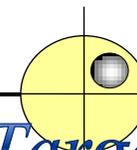


Staff at: Tel: +44 (207) 594 9507/11 Fax: +44 (207) 594 9504/5 . <http://www3.imperial.ac.uk/summeraccommodation>

## INFORMATION:

For other information, please e mail or telephone: M. W. Ibrahim, PhD., 65 Kenton Court London W14 8NW, UK. Tel: (+44) 207 371 2240, [M.Ibrahim@TargetExploration.Com](mailto:M.Ibrahim@TargetExploration.Com)

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