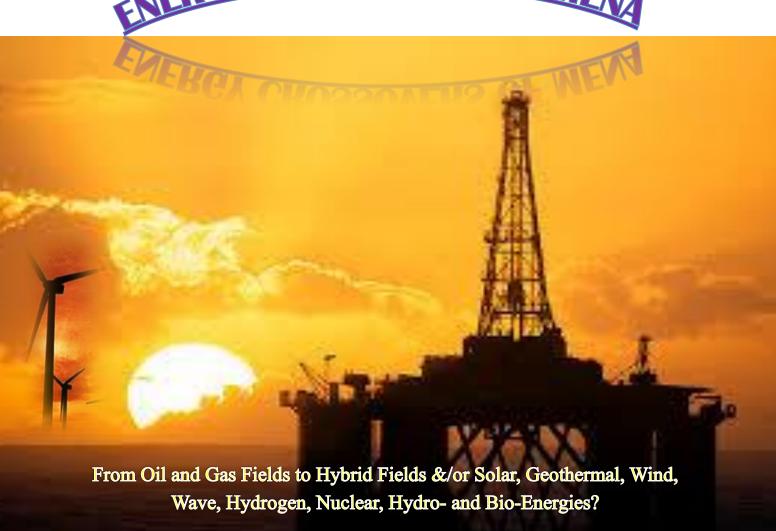






ENERGY CROSSOVERS OF MENA



MENA 2017 Oil & Gas Conference

(MENA17) The 11th International Middle East and North Africa Oil & Gas Conference

18-19 September 2017, The Imperial College 180 Queen's Gate, London, SW7, UK.

www.TargetExploration.Com

Chairmen, Speakers and Presenters



Dr. Michael Ala has been closely associated with the oil industry for more than 35 years as an exploration geologist with an independent oil company, as a consultant as well as in in the field of education and training. He has a BSc in Oil Technology and an MSc, PhD and DIC in Petroleum Geology from Imperial College. In 1973 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. He joined the academic staff of the Earth Science Department of Imperial College in 1981, 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. He is the author of An Introduction to Petroleum Geoscience, a textbook published by World Scientific/Imperial College Press in 2017. Since 1982 he has been involved in organising and presenting numerous industrial training programs in Europe, throughout Africa, Middle East and Southeast Asia. Dr Ala remains engaged in the oil industry and his commercial activities include providing advice on upstream projects and serving as a non-executive director on some oil company management boards.



Dr. Salah H. Al-Dhahab is the Appointed Senior Geological Advisor at Daleel Petroleum (independent operator) in, Muscat, Oman. Dr. Salah has a BSc in Petroleum Geology from the University of Aberdeen and a PhD in fractured reservoir characterization from the Institute of Petroleum, Heriot-Watt University, Aberdeen, UK. Dr Salah has 20 years of experience in the Oil and Gas industry through working for Petroleum

Development of Oman (NOC), Shell EPT (IOC), Knowledge Reservoir petroleum service company (now RPS-KR), Oman Oil Company (upstream investment company). During these years Dr. Salah acquired hands-on work experience on several types of field developments including primary pure depletion, to secondary water flooding to tertiary thermal GOGD and thermal flooding. Dr. Salah analysed data at several scales from well scale to field scale to regional scale, and participated in FDPS of several oil and gas, carbonate and clastic fields.



Mr. Faris Ahmad Abdullah Al-Mansouri, Team Leader – Quality & HSE –PSSG, Kuwait Oil Company. Faris has more than 25 years' experience as Engineer, Senior Engineer, Team Leader in Fire & Safety discipline as well as Corporate HSE Group, Team Leader Soil Remediation Projects-II and Team Leader-Q&HSE (MP&TSD). Wide

exposure in developing, establishing, managing and directing loss prevention issues and Corporate HSE Management System with well recognized visibility across assets & directorates in the Company. Significant skill & expertise in Risk Assessment, Emergency Response and Facility Protection System along with leadership of Safety Community across KPC subsidiaries. He is Focal Point of high priority HSE issues such as Permit to Work, Risk Register, and Corporate Audit Management, MVA Control & Contaminated Soil Remediation.

Dr. Ali Al-Mashhadani is leading a geophysical services company for Acquisitions and processing and interpretation center in UK and Jordan. He has a BSc in Geology from the University of Baghdad, M.Sc from the French Petroleum Inst. (ENSPM-IFP) and PhD, D.Sc from the French Universities. He worked in different petroleum activities and locations :from well site geologist, Area geologist, to Geology manager &field manager in South &North of Iraq; INOC &foreign Companies He was Professor of petroleum geology for post graduates students in Baghdad University and supervised many post graduates theses in many Iraqi Universities Dr AL Mashhadani is a founder &Chairman Board of Trustees of Al Rasheed University for Science and technology in Syria, founder and Associate of many Academies in Jordan, Chairman and member of Board of many Companies and Associations in UK, Europe, Jordan, Iraq.



Dr. Munim Al-Rawi. Director, Carta Design and Carta Energy, County Kildare, Ireland. Dr. Munim M. Al-Rawi is a graduate of the Imperial College London and holder of MSc, DIC and PhD in petroleum geology (1966-72). A distinguished consulting petroleum geologist, with 14 years academic experience and over 30 years of international experience in the oil industry in Europe, Middle East, and North Africa. Dr. Al-Rawi has a demonstrated track record of undertaking technical assessments of licence holdings and reserves, technical reports and independent

feasibility evaluations to bankable standards on behalf of exploration companies and financial institutions. Dr. Al-Rawi is founding director of Carta Design Limited, in 1989 in Ireland, trading as Carta Energy®. He worked as Lecturer/Assistant professor on Petroleum Geology at Kuwait University and King Abdul-Aziz University, Saudi Arabia respectively and Visiting Professor at the UAE University. Dr. Al-Rawi worked as associated consultant geologist with the Arab Petroleum Consultants, Kuwait, Petroconsultants, Dublin and Geneva, before Dr. Al Rawi is a well published Geologist on the Petroleum Geology of the Middle East.



Mr. Fahad Yousef Al-Refai, Environment Engineer at Q&HSE Team, Kuwait Oil Company – Ahmadi, Kuwait. He has a Diploma in Mechanical and power Engineering Power and Mechanical science, from College of Technological Studies - Mechanical and power Engineering Power and Mechanical science 4.00 summa cum laude Bachelor of Science: Biological and Environmental Engineering Environmental Engineering from Oregon State University - Corvallis, OR Biological and Environmental Engineering

Environmental Engineering.



Dr. David Boote. Consultant Geologist at 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. David published an impeccable chronicle of the **Safah Oil Field, Oman.**



Dr. Ibrahim El-Mahdy, HSE Advisor, Kuwait Oil Company, holds MBBS (Medical Bachelor & Bachelor of Surgery), Master degree in internal medicine & Occupational health from Cairo university Egypt, High Diploma of Safe Medical application of LASER technology from LASER application institute in Cairo university And MS of Health & Safety management from University of surrey UK, Certified Lead auditor for ISO 14001 & 18001, Certified HSE Management System designer, Certified Trainer for Many HSE training courses (Ex. Defensive Driving, First aid, RATLS Courses....etc.), worldwide certified OSHA representative for General industry / Construction

Occupational health & Safety standards. Worked with many international companies as Medical consultant, QHSE advisor then as QHSE Manger in deferent countries in the Middle East and the last position was QHSE Manager in Schlumberger Kuwait and now working as HSE consultant in KOC. He received Schlumberger chairman Distinguished HSE Service Award 1998 & 2001, KOC chairman HSE award 2002, 2003, 2004, 2005 & 2007 and Petroleum Economist HSE award 2007 & 2008 & chosen by SPE as Distinguished HSE Lecturer 2009 -2010 Lecture Season. He is a member of American Society of Safety Engineers since 2004 and executive Committee member during the last 3 years.



Harry T. "Bud" Holzman Jr. graduated from Trinity University in 1974, he went to work for Geomap as a geologist and stayed with that company for the next 26 years, where he eventually became its president. Bud transferred from the Texas National Guard to the U.S. Army Reserves in 1976 in order to serve as a medical evacuation helicopter pilot in Houston. In 2000, Holzman was called to active duty, received special training and was deployed to Iraq in 2004. He also was assigned as the "Chief Analyst-Iraq Oil and Gas

Infrastructure". In that capacity Holzman authored numerous papers on Iraq future reserves and exploration potential of the country. Most of the reports were classified; however, numerous recommendations have been released on how to develop their huge resource. He also has worked with the Iraq Oil Ministry and government agencies to rebuild their infrastructure, and was involved in giving advice on several oil and gas articles of their constitution. Bud retired in 2008 from the Army after 41 years and works as a geological consultant for Thunder Exploration in San Antonio, Texas. He is currently the Past President of the South Texas Geological Society.



Dr. Muhammad W. Ibrahim. Director and R&D Manager of Target Exploration Consultants, London, UK. He received his BSc. in Geology from the College of Sciences, University of Baghdad, his MSc and PhD in Petroleum Geology from the Imperial College, University of London. Dr. Ibrahim joined King Abdul-Aziz University, Jeddah, Saudi Arabia where he established the Department of Petroleum Geology there. After a short assignment as Consultant Geologist in KISR, Kuwait; Muhammad joined Mobil Oil and Veba Oel in Tripoli, Libya as Staff Geologist and left Veba after five years as Acting Development Group Superintendent. Muhammad contributed in few

oil and gas discoveries such as VEBA's 4L1-11 and 4N1-11 discoveries, and discovery of carbonate build-up in Farroud reservoir of Ghani Field, Sirte Basin, Libya. As a member of new venture team he contributed through due diligence integrated study of stacked reservoirs to more than doubling the officially estimated in-place oil reserves of a giant field for PETRONAS Carigali. Dr. Ibrahim established Target Exploration Consultants in London in 1990, but continued to work as Petroleum Geologist for several oil companies including: OOCEPE&P, in Muscat, Sultanate of Oman, Korea National Oil Corporation (ME) in Dubai, UAE, KOC in Ahmadi, Kuwait; DNO in Iraq, Sudan and Syria; LASMO International and LASMO Grand Maghreb in London, UK and Tripoli, Libya. Muhammad published on the Petroleum Geology of MENA.



Gerry P. Lourantos has been closely associated with the oil industry for more than 35 years as an explorationist. He has a BSc in Physics and an MSc and DIC in Geophysics from Imperial College. In 1978 he joined GeoSource International and was involved in seismic data acquisition (Kuwait, Oman, and Sudan) and data processing (Egypt, Libya, Syria, Kuwait, Saudi Arabia, Oman, North Sea, Nigeria, Pakistan and Vietnam). In 1980 he joined Phillips Petroleum International in London, working mainly on African projects (Sudan, Egypt, Ivory Coast, Congo, Gabon, Senegal, Kenya, and Somalia). He coordinated a very large regional aeromagnetic

survey in Sudan, which culminated in a Pan-African Epi-continental Cratonic Basins study. In 1985 he joined PetroFina International in Norway as Chief Geophysicist. He worked on various projects in the Barents Sea, Norwegian Sea and North Sea and participating in seven consecutive Norwegian Licensing Rounds. He lead the operations in the Petrofina operated Block N24/9, leading to the 24/9-5 oil discovery in Tertiary injectites and participated in re-development projects in the Greater Ekofisk Area. In 1996 he established his consulting companies (IEEC and Petro-Energy), advising both national oil companies (NOC) as well as private oil companies. He worked on various projects in Angola, Greece, Georgia, Cameroon, Chad, Namibia, Cuba, East African Rift System, including for five years as the Director for Exploration of an onshore operated new venture exploration project in Central Africa.



Dr. Francis Perrin is a Senior Fellow at the OCP Policy Center (Rabat, Morocco) and Consultant and freelance journalist in energy economics in addition to being: Senior Research Fellow at the French Institute for International and Strategic Affairs (IRIS, Paris), Chairman of Energy Industries Strategies Information (EISI), Contributing editor to the Paris-

based energy weekly Petrostrategies, Contributing editor to Cyclope (World Commodities Markets), published annually by the Cercle Cyclope and the Economica publishing house (Paris), Contributing editor to ARCADIA (a report on Africa and commodities markets), published annually by the Cercle Cyclope and the OCP Policy Center and Presenter of Courses at the IRIS and the OCP Policy Center. Dr. Perrin was the Editorial Manager, Arab Oil and Gas, Arab Petroleum Research Center, and Président Stratégies et Politiques Energétiques (SPE).) and Africa Energy Intelligence. Dr Perrin received a PhD in energy economics from the Institute of Political Studies, and studied economics and political science at the University of Grenoble (France). Dr Perrin's 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.



Dr. Giuma Reeh, Exploration Geophysics Consultant, Target Exploration Consultants Ltd., London, UK. Dr Reeh has a PhD. in Geophysics from Birmingham University, UK on "Structural and Tectonic Evolutions of the Sabratah Basin NW Offshore Libya" 2015, MSc in Geophysics from Bristol University, UK and BSc. in Geophysics from Tripoli University, Libya. Dr Reeh has a long service and experience of the geology and geophysics of Libya, with skills in: 2D / 3D Seismic Interpretation experience for more than 8 years using Kingdom Software. Well-tie analysis, depth conversion, and well log correlation. Salt tectonic structure evolution and dynamic

structural restoration of salt diapirs using different level of software, i.e. LithoTect, Move for 2D and 3D Kinematic Modelling. Gravity and Magnetic data acquisition, processing and interpretation for more than 20 years. Using Oasis-Montaj software in processing and interpreting Gravity and Magnetic Data.



Dr. Razik Shaikh, director of Direct Geo-Solutions Ltd., UK. and associate consultant of Target Exploration, London, UK. He received his PhD in Geological Science from University of Exeter, UK. in 2000, his MSc in Petroleum Geology from the Imperial College London, UK in 1991, and his BSC in Geology from Kingston Polytechnic, UK in 1990. He has more than 20 years' experience working in the Oil and Gas sector in Production and Development Geology (in both Clastics and Carbonates; Oil and Gas; IOR and EOR), apart from some years of

North African, Sub-Sahara and North Sea exposure his experience has predominantly been gained in the Middle East (with Dubai Petroleum and Petroleum Development Oman/Shell) and South East Asia (Shell Malaysia). Dr. Shaikh's extensive work experience gained through working fulltime as a Senior Production Geologist for Shell UK and Shell Malaysia; a Senior Development Geologist for Petroleum Development Oman (PDO) and a Senior Geologist for Dubai Petroleum Company (DPC). He has also worked as a Senior Geologist for Schlumberger GeoQuest and Baker Atlas Geosciences and a Geophysical Analyst with Halliburton Geophysical Services and Western Geophysical. Dr Shaikh accumulated vast experience in developing oil and gas fields, in onshore and in deep and shallow offshore waters. He has familiarity in working environments in the Middle East, Africa and South East Asia. His key skills and technical experience include: Well Planning, Well Execution, Well Delivery, Well Operations, Directional Drilling and Geo-steering, Reservoir Management, Core Acquisition and Analysis, Formation Evaluation and Log Interpretation, Static Reservoir

Modelling (using Petrel), Collaborating between Exploration and the 'Asset' and Well Engineering, Taking responsibility for the Delivery of Geo-Operational Documents, Sour Gas experience, Integrating Shallow Hazards Assessments and Pore Pressure Prediction data into Well Delivery Plans, Undertaking studies to improve the subsurface understanding of reservoirs to enhance their performance. He has a talent for compiling and delivering reports, presenting studies, and coaching, mentoring and training junior staff members.



Martin Wagner has been closely associated with the oil industry for more than 20 years. He has a BSc and an MSc in Microbiology.

In 1995 Martin started his career as scientific assistant at the microbiological department of the Ernst-Moritz-Arndt-University (Germany, Greifswald).

In 1997 Martin, together with his father Dr. M. Wagner, took over the previous research institute of the East-German state oil company, establishes MicroPro GmbH and becomes the Managing Director of the

Company, a specialized geo-microbiological laboratory based in Germany. He was scientific leader of several R&D projects, e.g. focusing on hydrocarbon bio-degradation, fermentation processes, renewable energy by microorganisms (hydrogen), and H2S removal from gas. He is an expert in reservoir and geo-microbiology with specific focus on microbial induced corrosion (MIC), sulphate reducing bacteria (SRB), and acid producing bacteria (APB). He holds lectures and workshops and advises oil companies on microbial-related problems in technical facilities and reservoirs, such as underground gas storages, oil production installations or pipelines. Numerous surface exploration surveys (MPOG®) have been carried out under Martin's leadership worldwide.



Dr. Mohammed Warrak is a Target Exploration Consultant Geologist, Research Associate in Structural Geology, Imperial College, London, and Associate Lecturer at The Open University, UK. Dr. Mohammed has a B.Sc. Honours in Geology, University of Liverpool, M.Sc. and D.I.C. in Petroleum Geology, Imperial College, University of London, and Ph.D. in Structural Geology, Imperial College. His PhD degree involved studying an area of great structural complexity in the Western Alps of France. However, while he was labouring towards his structural PhD he presented an outstanding carbonates

sedimentology/carbonates petrography paper to the Geological Society of London in 1973; in which he single-handedly resolved the genesis and closed the door of research on hitherto enigmatic "Cornieules" or Box-work sedimentary structure.

Dr. Warrak is a well-established researcher and teacher of Earth Sciences with detailed knowledge of the Geology of the Northern Oman Mountains. The results of his research include scientific papers and six geological maps of some of the most important and geologically critical regions of the Northern Oman Mountains. Dr. Warrak carried out consultations to the Government of the UAE, the British Geological Survey (UAE Geological Map Project) and several national and international petroleum companies including, ADNOC (Salt Dome Traps, and other Projects), Calvalley Petroleum International (Yemen concession), and OMV.

MENA Oil & Gas Conference Series

MENA17 is the eleventh *Middle East and North Africa Oil & Gas Conference* that is organised by Target Exploration Consultants will be held as usual at the Imperial College on the 18 and 19 September 2017 with four post-conference courses on the following 3 days. Exploring alternative energy crossover options of MENA Countries is the theme of this conference, and it aims at providing the participants with facts, feasibility and sustainability of MENA's energy crossover options:

- Reviewing the status of upstream oil and gas industry of the Middle East and North Africa after recent wars across several MENA oil producing countries.
- Assessing the impacts of Global Warming and Climatic Changes on petroleum production, export, consumption, and Energy Crossovers options of MENA Countries.
- 3. Estimating volume and type of undeveloped petroleum resources left behind due to unfulfilled structural, subtle, stratigraphic, hydrodynamic traps; and gas, heavy oil, unconventional, shale oil, shale gas and oil shale exploration and production cycles of individual MENA countries.
- Exploring the feasibility of hybrid oil fields (e.g. Solar Oil Fields) and hybrids or single renewable and/or alternative Crossover Energy Technologies for MENA Countries.
- 5. The flexible post-presentations and panel discussions at Target conferences are workshop-like and intended to give the attendees opportunities to learn and absorb new development in E&P of oil and gas, and concepts, techniques and applications of new alternative energies in MENA.



MENA 2017 Oil and Gas Conference Day One Monday 18th Sept 2017

09:00-09:30am. Registration and Morning Tea and biscuits

<u>Session 1:</u> Opening remarks: Global climatic time Frame for crossing over to renewable energies in MENA countries

09:30. Safety moment, opening remarks & introduction to day-1 sessions.

10:00. Iran's return on the international oil and gas scene.

- · The main priorities of Iran's oil and gas policy
- · A difficult environment for producing countries with low oil prices
- The revival of OPEC
- Change in Washington, D.C.: Mr. Trump at the White House
- · A second term for President Hassan Rohani
- Strong tensions between Iran and Saudi Arabia/Arab Gulf countries
- The agreement on South Pars Phase 11 with Total: a breakthrough?

Dr. Francis Perrin, Senior Fellow at the OCP Policy Center, Rabat, Morocco.

10:30. Geological perspectives of global climatic and sea level changes.

- UN Framework Convention on Climate Change (UNFCCC) (Paris Agreement)
- Global Sea Level Rise: Geological to Recent Records.
- Global Temperature Rise: Geological to Recent Records.
- Global Warming: Geological to Recent CO2 Records.
- Global Dust Storms: Geological to Recent Records.
- The Causes: Milankovitch Cycles vs. CO2 Producing Civilisations.
- Conclusions and Recommendations.

Dr. M W. Ibrahim, Target Exploration Consultants Ltd., London, UK.

11:00-11:30am. Morning Coffee and Poster Presentations Session 1

<u>Session 2:</u> Undeveloped hydrocarbon resources of unfulfilled exploration cycles in MENA basins

11:30. Late Quaternary diapirism in the southern Arabian Gulf: the Zirku salt plug.

- Geology of the Zirku salt plug
- Late Quaternary deposits: facies, depositional environment, correlation and age
- Evidence of Late Quaternary diapirism:
 - 1. Marine terraces and notches
 - 2. Clastic dykes
 - 3. Mini diapirs
 - 4. Gypsum flows
 - 5. Folding and thrusting
- Late Quaternary sea-level fluctuation
- Diapiric history

Dr. Mohammad Warrak, Target Exploration Consultants Ltd., London, UK.

12:00. Subsidence history of Sabratah Basin, North African margin.

- Location of the study area.
- Aims of the study
- Tectonic setting
- Tectonic subsidence as a function of time
- Estimation of the thickness of the crust
- Stretching factor of the Sabratah Basin

Dr. Giuma Reeh¹, Dr. David Boote ² and Dr. T. Reston ³

¹. Target Exploration Consultants, ². David Boote Consulting Ltd., ³. Birmingham Univ., UK.

12:30. Range and potential of different energy options in the basins of Mesopotamia and Arabian Plate

- Introduction
- Plate Kinematics and intraplate tectonics
- Consequences of the geodynamic history on fluid distribution and Migration
- Renewable energy potential of the Middle East, VS. the Nuclear Development option:
 - 1. Solar
 - 2. Wind
 - 3. Hydro
 - 4. Biomass
 - 5. Geothermal
- The Nuclear Resurgence
- Conclusions

Dr. Ali Al-Mashhadani, CEO Makamin, Geophysical Services Centre and GSC-UK

13:00-14:00pm. Lunch Break and Poster Presentations Session 2

<u>Session 3:</u> HSE Consequences of Typical HC Exploration cycle in a MENA Basin

14:00. Microbial Enhanced Oil Recovery

Methodological background

- Case histories
- Applications

G.P. Lourantos, and Martin Wagner, MICROPRO GMBH, Germany.

14:30. The journey of achieving 313 Million safe man hours at major projects and technical services directorate – KOC.

- Projects and technical services
- Planning
- Training
- Reporting
- Responding and remediation
- Follow-up
- Conclusions and Recommendations

Faris Al-Mansouri, Fahad Al-Refai, and Eiman Al-Abdulghani, KOC, Kuwait.

15:00-15:30pm. Afternoon Tea and Poster Presentations Session 3

<u>Session 4:</u> New hydrocarbon exploration, development and production opportunities in MENA countries

15:30. An update on Iran's upstream sector: post-sanction opportunities and challenges.

- Introduction review of NIOC's major policies
- Review of Iran oil industry's current difficulties
- Review of upstream investment opportunities
 - 1. Exploration blocks
 - 2. 'Hydrocarbon fields'
- Recent activities in the upstream sector
- Overview of the exploration blocks
- 'Hydrocarbon fields' categorisation
- MoUs, field study agreements and contracts
- · Regulatory regime
- Concluding remarks

Dr. Michael Ala, Imperial College, London, UK.

16:00. Offshore Iraq: petroleum systems and exploration plays of a frontier area in the Arabian Gulf.

- Introduction:
- Defining the Iraqi MOO: "the regional waters of Iraq in the Arabian Gulf"
- Marine water depth of the Iraqi offshore concession on offer
- Stratigraphy and structures
- Petroleum systems (source, reservoir, cap rocks, times of charge and closures)
- Fields, discoveries and exploration Plays
- Conclusions and recommendations

Dr. MW. Ibrahim, Target Exploration Consultants, London, UK.

16:30. Panel discussion and day one concluding remarks

17:00 pm. End of conference day one.

11th MENA (2017) Oil & Gas Conference Dinner

20:00pm until 22:00 pm on Monday 18th Sept. 2017

Participants and their spouses are cordially invited to the 11th MENA Oil & Gas Conference dinner on the evening of first conference day.

Name and directions to the restaurant are available at registration desk.





MENA 2017 Oil and Gas Conference Day Two Tuesday 19th Sept 2017

09:00-09:30am. Registration and Morning Tea and biscuits

<u>Session 5:</u> Geographic and climatic prerequisites for successful renewable energy projects in MENA countries

09:30. Safety moment and introduction of day-2 sessions.

10:00. Potential for wave energy in MENA countries.

- Source and Types of Ocean Wave Energy
- Ocean Wave Energy Resources
- Types of wave Energy Converters (WEC)
- Prototype WEC Performance in Ireland Video show
- Arid and Extremely Arid Coastlines in MENA Countries
- Future Development of Wave Energy in MENA Countries
- Conclusions and Recommendations

Dr. Munim Al Rawi, Carta Energy, Ireland.

10:30. Future energy perspective for the UAE.

- The country in brief
- UAE's available Energy Resources
- Official future energy perspective
- Oil and gas strategy
- Nuclear energy
- Renewables
- Conclusion

Dr. Mohammad Warrak, Target Exploration Consultants, London.

11:00-11:30am. Morning Coffee and Poster Presentations Session 4

Session 6: Potential of geothermal as crossover energy in MENA

11:30. Applications of inorganic chemical data in the petroleum industry.

- Introduction
- Acquisition
- Uses
- Value Drivers
- Key Take Aways
- Case Study

Dr. Razik Shaikh, Direct GeoSolutions Ltd., UK.

12:00. Geothermal potential in the Risha area, eastern Jordan.

- Geothermal Exploration History in Jordan
- · Geothermal Energy Sources in Jordan
- Geothermal Source and Gradient in the Risha Area
- Potential Geothermal Reservoirs in the Risha Area
- Future Development of Geothermal Energy in the Risha Area
- Conclusions and Recommendations

Dr. Munim Al-Rawi, Carta Energy, Ireland.

12:30. Application of compensated geothermal gradients (CGG-ESTI[©]) method in mature basins rejuvenation and prospects generation.

- Introduction
- The Concept
- The Software
- The Analysis
- The Results
- Conclusions
- Applications
 - 1. Rejuvenating Mature Basins:
 - 2. Prospects Generation:
 - 3. Justification of Dry-Hole Post-Mortem And Further Actions:
 - 4. Interim Drilling Decisions:
- References

Dr. Muhammad W Ibrahim, Target Exploration Consultants, London, UK.

13:00-14:00pm. Lunch Break and Poster Presentations Session 5

<u>Session 7:</u> Social and HSE factors affecting feasibility, efficiency and sustainability of renewable energy projects in MENA countries

14:00. Microbial Prospecting for Oil and Gas

- The Theory
- The Applications
- Case Studies

G.P. Lourantos and Martin Wagner, MICROPRO GMBH, Germany.

14:30. HSE management system implementation by using new technology application (KOC and HSELive system as case study).

- Reporting
- Analysis
- Corrective Actions
- Preventive Actions
- Follow-up

Dr. Ibrahim El-Mahdy, Kuwait Oil Company, Ahmadi, Kuwait.

15:00-15:30pm. Afternoon Tea and Poster Presentations Session 6

<u>Session 8</u>: Novel and new application of established technologies in the upstream Petroleum Industry of MENA

15:30. Geological review of hydrocarbon seepages in Ahmadi, Kuwait.

- Gas seepage incidents at Ahmadi Township, SE Kuwait
- Post-2010 Gas seepage incidents studies of Ahmadi
- Definition, worldwide and HC seepages of Kuwait
- Stratigraphically induced Gas seepages at Ahmadi
- · Structurally induced Gas seepages at Ahmadi
- Production induced seismicity and Gas seepages at Ahmadi
- Impact of natural Earthquakes on Gas seepages
- Impact of climatic cycles on Gas seepages
- Impact of human habitats on Gas seepages and vice versa
- Conclusions, recommendations and references

Dr. MW. Ibrahim, Target Exploration Consultants, London, UK.

16:00. Dragging onshore and offshore exploration into the quantum age: using novel electromagnetic technology.

- Introduction
- Forward Model
- Virtual Lithological Log
- Conclusions
- References

Gordon Stove, Adrok, Edinburgh, UK.

16:30: Panel discussion and concluding remarks.

17:00pm. End of Day Two and MENA 2017 Oil and Gas Conference.

Standby Paper Presentations:



1. Iraq's oil potential.

- Introduction
- Vastly underestimated reserves
- A world Leader?

Harry Holzman, Jr. Thunder Exploration in San Antonio, Texas, USA

2. Diagenetic traps in Kuwait.

- Diagenesis as trapping agent of hydrocarbons
- Relation of Digenetic traps to structural growth
- Proven Digenetic traps in Sandstones in Kuwait
- · Potential Diagenetic traps in Carbonates in Kuwait
- Conclusions and Recommendations

Dr. Munim Al-Rawi, Carta Energy, Ireland.

3. Growth structures in central Iraq.

- Tectonic Elements of Iraq
- Exploration History of Central Iraq
- Drilled and Undrilled Structures in Central Iraq
- Potential of Growth Structures in Central Iraq
- Conclusions and Recommendations

Dr. Munim Al-Rawi, Carta Energy, Ireland.

4. Performance review of petroleum new-ventures in Iraqi KRG.

- Introduction:
- 1900-1990 background time lines
- Post-1990-2003 background time lines
- Post-2003 background time lines of major events
- · Geological background of KRG areas
- Pre-1990 discoveries and
- Discoveries vs commercial discoveries/drilled holes ratios
- Oil and gas production and production sharing companies payments delivery problems
- Conclusions

Dr. M W. Ibrahim, Target Exploration Consultants, London, UK.

5. Global climatic and sea level changes: IRAQ as an example.

- Location and Climatic Classification
- Trend of Temperature Records of Mesopotamia.
- Trend of Rainfall Records of Mesopotamia.
- Trend of Sand and Dust Storms (SDS) Records of Mesopotamia.
- Holocene-Recent Geology and Shorelines of Mesopotamia.
- Future trends of Rainfall, Temperature, SDSs and Shorelines of Mesopotamia.
- · Recommendations.

Dr. Muhammad Ibrahim, Target Exploration Consultants, London, UK.

6. Global climate and sea level changes: USA as an example.

- Introduction
- Array, frequencies and climatic and sea level changes disasters impacting the USA
 - 1. Hurricanes
 - 2. Earthquakes
 - 3. Volcanoes
 - 4. Floods
 - 5. Winter Storms
 - 6. Wildfires
 - 7. Tornadoes
 - 8. Droughts
- Other Natural Disasters
- FEMA: treating the symptoms
- The Paris accord: u-turning on the late and slow moving Global Accord
- Summary, conclusions and missed opportunities

Dr. M W. Ibrahim, Target Exploration Consultants, London, UK.

7. Impact of sand and dust storms on the feasibility, efficiency and sustainability of solar energy projects in MENA: the Kuwait case.

- Sand and Dust Storms (SDS) Crises in the Arabian Gulf Countries.
- Definitions, Genesis, Source and Types of Airborne Particles in Sand & Dust Storms.
- Frequency of SDS in Kuwait and Arabian Gulf Countries.
- Trends of SDS in Kuwait and Arabian Gulf Countries.
- · Short- and Long-term Predictions of Sand and Dust Storms
- Impacts of SDS on Petroleum Operations in Kuwait and GCC Countries.
- Impact of SDS on Solar and Renewable Energy Operations in Kuwait & GCC Countries,
- Recommendations: Predictions of SDSs and Suggested Management Plans/Actions

Dr. M W. Ibrahim, Target Exploration Consultants Ltd., London, UK.

Post-MENA 2017 Oil & Gas Conference Courses

On 20 and 21 September 2017 at the Imperial College, London SW7, UK.



<u>Course 1</u> Impacts of sand and dust storms (SDS) on HSSE, energy and petroleum operations in Kuwait and Arabian Gulf countries

Instructor: Dr. Muhammad W. Ibrahim, PhD., Target Exploration Consultants Ltd, UK.

Place: Imperial College, 180 Queens' Gate London SW7.

Date: 20 September 2017 Time: 9:00 AM to17:00 PM.

<u>Course</u> <u>2</u> Gravity and Magnetics in petroleum exploration

Instructor: Dr. Giuma Reeh, PhD., Target Exploration Consultants Ltd, UK.

Place: Imperial College, 180 Queens' Gate, London SW7.

Date: 21 September 2017 Time: 9:00 AM to17:00 PM.

<u>Course</u> 3 Introduction to the petroleum geology and typical fields of Oman

Instructor: **Dr. Salah Al-Dhahab**, *PhD*., Daleel Petroleum, Muscat, Oman.

Place: Imperial College, 180 Queens' Gate, London SW7.

Date: 20-21 September 2017 Time: 9:00 AM to 17:00 PM.

Course 4 Introduction to the petroleum geology and typical fields of Iran

Instructor: **Dr. M. Ala,** *PhD*., Imperial College, London, UK. Place: Imperial College, 180 Queens' Gate, London SW7.

Date: 20-21 September 2017 Time: 9:00 AM to 17:00 PM.

Location, Travel and Accommodation



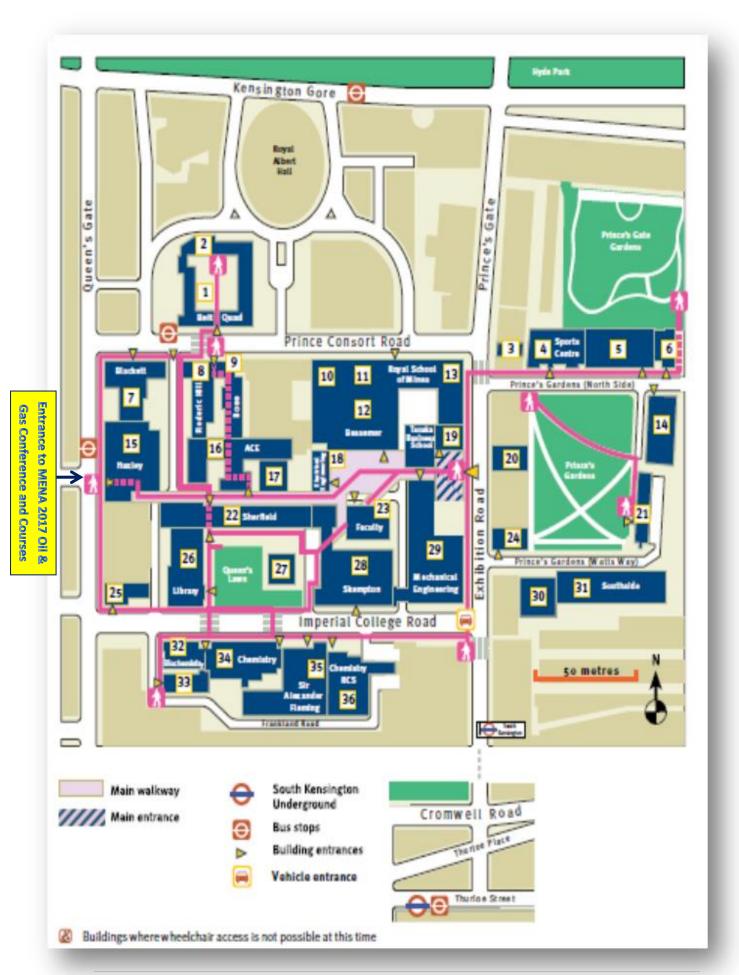
The Venue: *MENA 2017 Oil & Gas Conference* will be held at Clore Lecture Theatre, Imperial College, 180 Queens Gate, London SW7 (Building 15 on Location Map). The Imperial College is located at the center of the scientific and cultural quarter of London; Royal School of Mines is within the Imperial College Complex, and the Royal Geographical Society, Geological Museum, Natural History Museum, Science Museum, Royal Victoria & Albert Museum, Royal School of Art, Royal School of Music and the Royal Albert Hall are within 200 meters radius from the conference site.

<u>Transportation:</u> Nearest **Bus Stops are**: No. **70** at Queens Gate, **9** and **10** at Kensington High Street (Kensington Gore), and **49** at Gloucester Road. Nearest **Underground Stations** are South Kensington and Kensington High Street Stations.

Accommodation: To book your accommodation within or outside the Imperial College campus, please visit the Imperial College Accommodation Department's website or contact the I.C. Accommodation Staff at: Tel: +44 (207) 594 9507 Fax: +44 (207) 594 9505 http://www3.imperial.ac.uk/summeraccommodation

Location Map: Imperial College South Kensington Campus

MENA 2017 Oil & Gas Conference will be held around Clore Lecture Theatre in the Imperial College (map building No. 15). The best entrance to the Clore LLT is at 180 Queen's Gate, London SW7 (see location map below for nearest underground station and bus stop).





This conference document is immediately available from

Target Exploration

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