

15-16 April 2025 | Hyatt Regency Al Kout Mall, Kuwait City, Kuwait

UNLOCKING HIDDEN POTENTIAL UNVEILING OFF-STRUCTURE PROSPECTS AND RE-EVALUATING BORDERLINE DISCOVERIES



TECHNICAL PROGRAM COMMITTEE

Talal Al-Adwani (Chair)
KOC

Annan Al-Shamali (Co-Chair)
KOC

Raed Alsaadan (Co-Chair)
Saudi Aramco

Fakhera AlQubaisi
ADNOC

Shaimaa Al-Ansari
Baker Hughes

Nigel Cross
Ben Nevis Energy

Jo Garland
Cambridge Carbonates

Bala Dharanidharan
DeGolyer MacNauhton

Sanlinn Isma'il Ebrahim Kaka
KFUPM

Abdullah Al Kandari
KOC

Omran Al-Zankawi
KOC

Hussain Abdulkareem
KUFPEC

Yaqoob Al-Refaei
Kuwait University

Noha Al Lababidi
Saudi Aramco

Manoj Vallikkat Thachaparambi
Slb

Ali Al-Mujaini
Target Group

WORKSHOP OUTLINE

WORKSHOP OVERVIEW

The evolution of hydrocarbon exploration driven by the diminishing accessibility of conventional large-size hydrocarbon traps has compelled national and international oil and gas companies to scrutinize off-structure prospects and near-field undeveloped or unsuccessful commercial discoveries, discerning root causes of their failures. This dual-pronged approach not only enhances chance of commercial success during exploration, but also expedites production and re-evaluation of undeveloped or commercially unsuccessful discoveries respectively, saving valuable time and resources of operators.

These scrutinizes pave the way for fast-tracking exploration to production lifecycle of the off-structure prospects by leveraging their similarities to active fields in terms of geology, low capital expenditure (CAPEX), and seamless integration with pre-existing infrastructure. Off-structure prospects and near-field undeveloped or previously unsuccessful discoveries, which are located near active fields, have proven to be valuable extensions. They have significantly expanded potential exploration areas and resources.

In recent years, the exploration success and tie-back of such off-structure discoveries into production lines have significantly contributed to reserve addition and production rates of many operators in Middle East and elsewhere. Therefore, sharing knowledge and lessons learned from these endeavors is crucial for the benefit of the broader community. By discussing real-world examples and case studies, participants will gain a deeper understanding of how these strategies have been successfully implemented and can be adapted to their own projects.

Through a series of facilitated exercises and discussions, workshop attendees will learn techniques for identifying and evaluating these "off-structure" prospects - ideas, technologies, or phenomena that fall outside the mainstream. Participants will explore methods for recognizing the early signals of potentially transformative discoveries and develop strategies for severely assessing their viability and impact. By the end of the workshop, attendees will have a comprehensive toolkit for effectively navigating the complexities of modern hydrocarbon exploration, positioning their organizations for success in an increasingly competitive landscape.

WORKSHOP GUIDELINES

FORMAT

The workshop will be 2 days, consisting of oral presentations, poster presentations, core display sessions and breakout sessions where participants can discuss and investigate a specific theme that is of mutual interest. The first day will feature an inaugural keynote speech by a high-profile professional from the industry.

ATTENDANCE

Registrations are invited from all relevant disciplines with experience and/or knowledge of the subject areas being addressed in the workshop. Registrations will be accepted on a first-come, first-served basis.

CALL FOR POSTERS

You are invited to prepare a poster for presentation at the workshop. If you are interested in participating, please send a short abstract to cnavarro@aapg.org by 17 March 2025. All posters will be produced as pull-up banners and delivered by AAPG. There will not be any other format available for poster display.

REGISTRATION TYPES & FEES

Fees are inclusive of onsite documentation, coffee breaks and luncheons.

Non-Member: \$1,575
Join & Save: \$1,575
Member: \$1,375
Committee/Presenter: \$1,275
Young Professional: \$850
Academia: \$500
Student: \$350

*To avail the Member rate you must be an active member of AAPG or KGS.

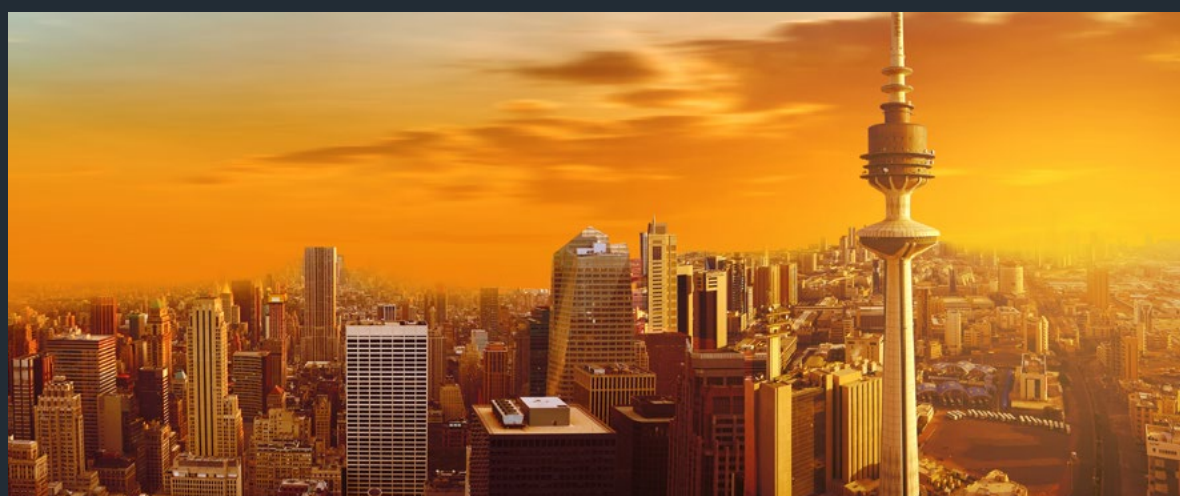
**To register as a Young Professional you must be under the age of 35 with less than 10 years of work experience.

REGISTRATION DEADLINE

To guarantee your seat, please make sure to register by 8 April 2025.

CANCELLATION POLICY

AAPG will refund the tuition, less a \$100 processing fee, if the request is received no later than 30 days prior to the workshop. Cancellations must be made in writing. The registrar will accept cancellation notices by telephone, but all such notices must be followed up by fax or e-mail. No refund will be made for cancellations received less than 30 days prior to a workshop being given. Nonpayment of tuition does not constitute automatic cancellation. If no cancellation notice is received by 30 days prior to a workshop, participants are liable for full tuition. AAPG reserves the right to cancel a workshop if enrollment is insufficient to ensure proper effectiveness. Substitutions for individuals can be made at any time. A paid enrollment may be transferred one time to a future workshop if the request is received prior to the 30-day cut-off date.



DAY 1: TUESDAY 15TH APRIL



SESSION 1 - EVOLVING EXPLORATION STRATEGIES OF OFF-STRUCTURE PROSPECTS: A WIDESPREAD OVERVIEW

This session will provide a holistic introduction to the changing landscape of hydrocarbon exploration, especially to off-structure prospects, emphasizing the shift in mentality due to the decreasing availability of easy hydrocarbon traps in well mature basins. Discuss the dynamic nature of exploration and evolving strategies, setting the stage for more focused discussions.

- **Changing Paradigms in Hydrocarbon Exploration:**
 - > Historical perspective and current trends.
 - > Shifting focus from large-size traps to off-structure and near-field prospects.
- **Technological Advancements Driving New Strategies:**
 - > Innovations in geological and geophysical methods.
 - > Role of digital transformation in exploration (AI, machine learning, and data analytics).
 - > stratigraphic traps and formerly marginal reservoirs -poor res quality- now successful due to new unconventional production techniques.
- **Case Studies: Successful Adaptations to New Exploration Strategies:**
 - > Real-world examples from various mature basins across the world.

SESSION 2 - DEVELOPING A CUSTOMIZED FRAMEWORK FOR OFF-STRUCTURE OPPORTUNITIES [INNOVATIVE TECHNOLOGIES & WORKFLOWS]

This session dives into strategies for exploring off-structure prospect discoveries, focusing on customized geological and geophysical (G&G) techniques. Participants will explore advanced technologies, comprehensive risk assessments, and case studies to maximize these prospects. The session aims to equip attendees with practical knowledge and skills to navigate economic conditions effectively and leverage off-structure opportunities for significant commercial success.

- **Geological and Geophysical methods:**
 - > Advanced seismic interpretation techniques, including sequence stratigraphic approach.
 - > Designing exploration programs specific to geological settings and the economic conditions
 - > Geomodelling and reservoir characterization specific to off-structure settings
- **Technological Integration for Enhanced Exploration:**
 - > Use of 3D seismic, magnetic, and gravity surveys
 - > Integration of remote sensing and satellite data
- **Case Studies: Maximizing Potential in Off-Structure Prospects:**
 - > Real-world examples demonstrating successful optimization.
- **Economic Assessments:**
 - > Strategies and techniques for minimizing CAPEX and maximizing utilities of the existing infrastructure.
 - > Cost-benefit analysis of off-structure explorations

DAY 2: WEDNESDAY 16TH APRIL



SESSION 3 - RE-EVALUATING NEAR-FIELD DISCOVERIES: CASE STUDIES

This session analyzes uneconomic discoveries – geological discoveries with proven hydrocarbon, and highlights the key challenges and tangible outcomes of re-evaluation processes. Emphasize the importance of learning from initial failures and how this analysis contributes to making exploration procedures more cost-efficient.

- **Analyzing Uneconomic Discoveries:**
 - > Identifying common pitfalls and root causes of initial failures
 - > Systematic review of past exploration efforts
- **Case Studies of Successful Re-evaluations:**
 - > Detailed examination of previously uneconomic discoveries that were re-evaluated and developed.
- **Methodologies for converting undeveloped discoveries into cost-efficient development:**
 - > Techniques for minimizing CAPEX and maximizing existing infrastructure.

SESSION 4 - RISK ASSESSMENT WORKFLOWS AND ADVANCEMENTS IN ANALYZING UNCOMMERCIAL OFF-STRUCTURE DISCOVERIES

Explore advanced techniques for analyzing uneconomic discoveries, integrating geo-mechanics, petrophysical analysis, and seismic imaging. Discuss the pivotal role of these technologies in understanding fluid flow, pressure formation, and reservoir compartmentalization. Focus on critical elements of risk assessment and customized workflow in off-structure exploration, addressing economic and geological risks.

- **Economic and Geological Risk Analysis:**
 - > Quantitative and qualitative risk assessment methodologies.
 - > Risk mitigation strategies tailored to off-structure exploration.
- **Customized Exploration Approaches/ workflows:**
 - > Designing exploration programs specific to geological settings and economic conditions.
 - > Utilizing adaptive exploration strategies based on real-time data and analytics.
- **Integrated Approaches in Geo-mechanics, Petrophysical Analysis, Seismic Imaging Innovations, and Fluid Flow & Pressure Cell Analysis**
 - > Advanced techniques for understanding subsurface mechanics.
 - > Petrophysical evaluation estimation and its impact on exploration success.
 - > Enhanced imaging techniques for better subsurface visualization.
 - > Application of 4D seismic in re-evaluating unsuccessful discoveries.
 - > Pressure cell formation and its implications for exploration.
- **Integration of Technologies for Exploration Advancements**
 - > Advanced seismic interpretation techniques.
 - > Geomodelling and reservoir characterization specific to off-structure settings.
 - > Use of 3D seismic, magnetic, and gravity surveys.
 - > Integration of remote sensing and satellite data.
- **The Power of Data Analytics in Concept**
 - > Success technical cases highlighting the transition from data analysis to practical exploration actions.

TO REGISTER, PLEASE CLICK [HERE](#)

FOR MORE INFORMATION middleeast.aapg.org

BAHRAH FIELD CORE DISPLAY

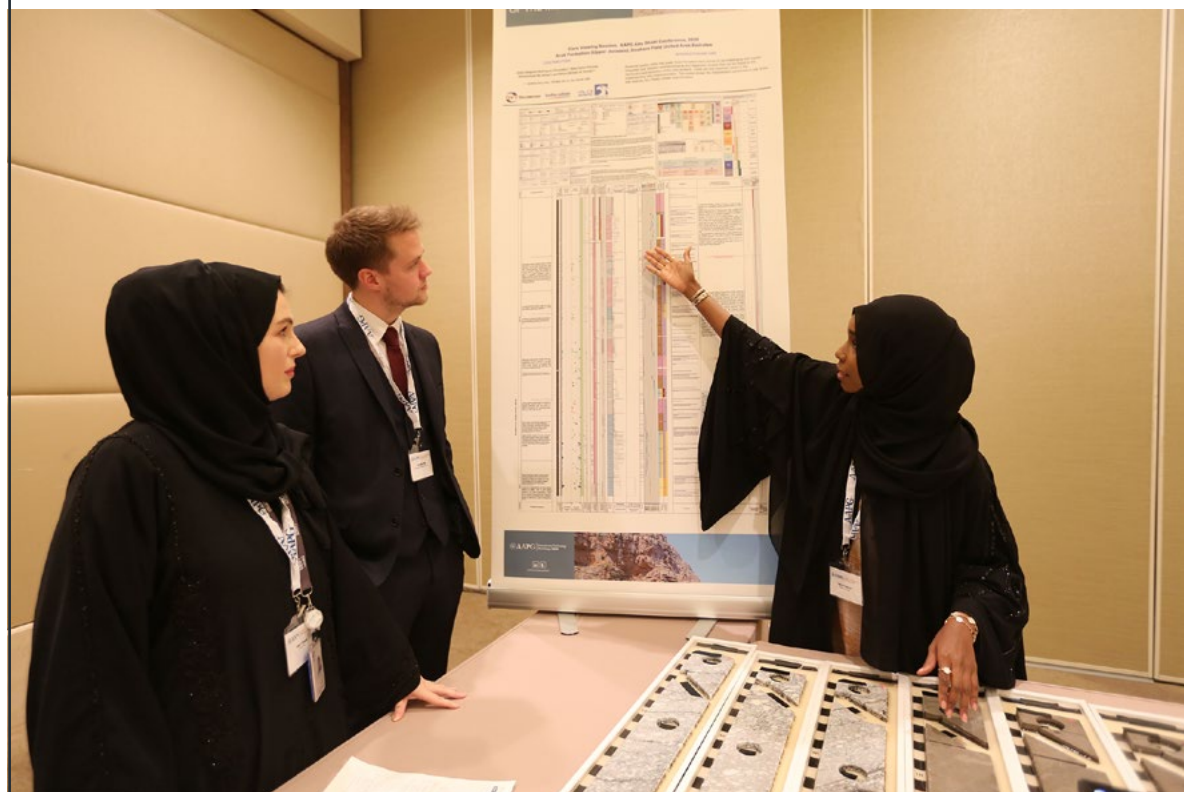
The core display to accompany the AAPG workshop: Unlocking Hidden Potential: Unveiling Off-Structure Prospects and Re-Evaluating Borderline Discoveries includes core cut from several Cretaceous reservoirs in the Bahrah Field of North Kuwait.

The successful development of the Bahrah Field optimizes the leveraging of new drilling and completion technology, as well as a deepening exploration strategy involving multiple reservoirs.

Reservoirs include the Mauddud Formation, a matrix-dominated shelfal carbonate reservoir originally discovered in the 1930's, and initially not possible for production at sustainable rates using conventional vertical wells. This reservoir has been redeveloped in the last few years using horizontal wells and multi-stage acid frack completions. A similar approach is being considered for the deeper Ratawi Limestone Formation.

The Burgan and Zubair reservoirs are heterogeneous fluvio-deltaic reservoirs, where channelized sandbodies encased in heterolithic fines offer stratigraphic trapping potential. Such closures combine with a complex network of transpressional and transtensional cross faults to set-up further exploration potential through the mapping of subtle combination traps.

The story of the successful Bahrah Field development is further described in Session 3 of the workshop (The Bahrah Field and the Value of Re-Evaluating Once Borderline Discoveries).



ENJEFA BEACH GEOLOGICAL FIELD TRIP: EXPLORING HOLOCENE SHOREFACE AND TIDAL DEPOSITS AT ENJEFA BEACH, KUWAIT

FIELD TRIP INFORMATION

Field Trip Organizer



الجمعية الكويتية لعلوم الأرض
Kuwait Geosciences Society

Field Trip Leaders



Dr. Yaqoub Alrefaei
Kuwait University



Dr. Aimen Amer
Slb

Date

14th April 2025

Time

7am - 12pm

Field Trip Fee

\$330

Registration Deadline

13th March 2025

Fee Includes:

- Transportation
- Field guide
- Water, cold beverages, snacks

Meeting Point

Parking lot of Hyatt Regency,
Al Kout Mall

FIELD TRIP OBJECTIVES

This field trip aims to explore and study the depositional environments and sedimentary structures of the Holocene shoreface and tidal deposits at Enjefa Beach. Participants will examine the various sedimentary structures, ichnofacies, stratigraphic layering, and depositional packages. This geological site is modest; however, it offers easy access and high-quality preservation of sedimentary structures.

FIELD ACTIVITIES

Upon arrival at Enjefa Beach, the field guides will provide an orientation of the Enjefa beach and explain the main exposed sedimentary facies. The participants will have the opportunity to walk to the exposed rocks and examine them closely. However, taking samples or breaking the exposure with a hammer will not be allowed, and can only be done with instructions from the organizers. The outcrop exposure is small, and we want to do our part in preserving its geological beauty. The instructors will walk the participants through various facies and explain their main characteristics. This will give the participants critical insight into recognizing such facies in their own hydrocarbon fields, on cores, or on other outcrops they may study. The primary depositional environments that will be analyzed are:

- Shoreface Deposits

Participants will gain knowledge on how to differentiate between middle shoreface, upper shoreface, and foreshore facies using stratification patterns and ichnofacies.

- Tidal Channels

Exploration of tidal channels including channel fill and lateral accretion surfaces will also be conducted based on distinct bioturbation, sedimentary structures, and sediment grading.

- Sea Level Fluctuation

Once the participants have established facies understanding special attention will be put on the sea level changes during the Holocene epoch. Such understanding is critical for the participant's future application of sequence stratigraphic concepts.

We recommend that all participants bring a field notebook, camera or phone for taking pictures, and a hand lens.

IMPORTANT NOTES REGARDING THE FIELD TRIP

- Before purchasing non-refundable airline tickets, confirm that the trip will take place as trips may be cancelled if undersubscribed.
- Please register well before 13 March 2025. Field trip cancellation due to low enrollment will be considered at this time. No refunds will be allowed on field trips after this date.
- Field trips are limited in size and are reserved on a first-come, first-served basis and must be accompanied by full payment.
- A wait list is automatically created if the field trip sells out. AAPG will notify you if space becomes available

CANCELLATION POLICY

- Cancellations can be made by contacting Cora Navarro on or before 13 March via email at cnavarro@aapg.org
- Cancellations received on or before 13 March will receive a refund LESS a US \$75 processing fee.
- Refunds will not be issued after 13 March or for "no shows."
- You may substitute one participant for another.

TO REGISTER, PLEASE CLICK [HERE](#)

FOR MORE INFORMATION middleeast.aapg.org