



Workshop on the Hydrocarbons Potential of Cyrenaica Platform, NE Libya and the Neighboring Areas
First Circular & Call for Extended Abstract

ورشة عمل عن الإمكانيات النفطية لمسطح برقة شمال شرق ليبيا والمناطق المجاورة لها نوفمبر 2024

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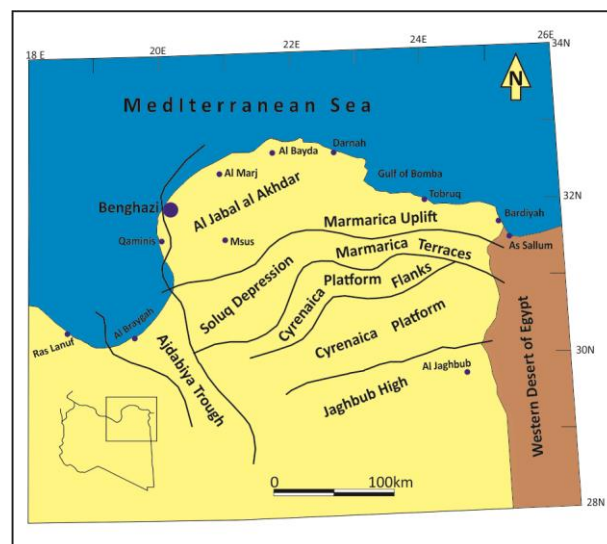
عملت شركة الخليج العربي للنفط منذ انشائها على التنقيب عن النفط والغاز في مناطق مختلفة من ليبيا وقد حققت الكثير من النجاحات التي ساهمت بالرتقي بشركة الخليج إلى مصاف الشركات العالمية، ومن خلال سعيها الدائم إلى التنقيب عن النفط والغاز في المناطق الجديدة والمهجورة قررت العودة إلى التنقيب عن النفط والغاز في منطقة برقة. فبالرغم من أن منطقة برقة من أول المناطق التي بدأت بها أعمال التنقيب عن النفط خلال خمسينيات القرن الماضي إلا أن أعمال التنقيب بها قد توقفت لعدة أسباب لعل أهمها الاكتشافات الضخمة التي حققتها الشركات النفطية خلال تلك الفترة في حوض سرت النفطي (مثل حقل السرير والنافورة وغيرها) وحوض الحمادة النفطي، ومن ناحية أخرى فقد تكون التقنيات المستخدمة في تلك الحقبة لا تتلاءم والطبيعة الجيولوجية المعقدة للمنطقة.

ومن خلال متابعة شركة الخليج العربي للنفط للنشاطات والنجاحات الاستكشافية في المناطق المجاورة لليبيا، قررت العودة إلى التنقيب عن النفط والغاز في منطقة برقة، وذلك من خلال منظور وتقنيات جديدة، وبدعم من المؤسسة الوطنية للنفط استهلكت شركة الخليج هذه العودة بالبداية بأعمال حفر البئر الاستكشافية (A1-75/03) وسوف تتبع هذه البداية بإجراء ورشة عمل تهدف إلى دعوة المتخصصين لدراسة وتقييم الخصائص الجيولوجية والنفطية للمنطقة ومقارنتها بالمناطق المجاورة وذلك للخروج بطرق استكشافية جديدة قد تساهم في الكشف عن الإمكانيات النفطية للمنطقة.

Date: 4th, 5th and 6th November 2024

Venue: Arabian Gulf Oil Company (AGOCO) Benghazi-Libya

The Cyrenaica region extends over the northeastern part of Libya, covering an area of about 160,000 km². The region consists of five geological settings namely; the Cyrenaica Platform in the south, Al Jabal al Akhdar Anticlinorium and Marmarica Uplift in the north, the Soluq Depression in the west and the Marmarica Terraces and Cyrenaica platform flanks in the eastern and central parts respectively. The Cyrenaica region is bounded on the south by the Jaghbub High and the Ajdabiya Trough of Sirt Basin from the west. The northern part of the western desert of Egypt occupying the eastern boundaries, while the northern boundary is occupied by the off-shore basin.



Geologically, the vast region of Cyrenaica is composed of rock units that vary in their rock type from carbonates dominating the Cenozoic to clastic forming the majority of rocks in the Mesozoic and Paleozoic sections. These rock units have gone through complex and variable tectonic episodes which have led the region to its present geological setting.

Although Libya has a long history of hydrocarbon exploration, Cyrenaica region is poorly explored, with only 120 wells drilled in the entire area till today. Regardless of the fact that the first exploration well drilled in Libya in the fifties of the last century was on the crest of Al Jabal al Akhdar Anticlinorium (Well A1-18) the ratio of drilled wells in the area is very low (one well per 1300 km²) as of today. The extreme decline in exploration activity in the region was due to several factors. Perhaps the most important being the giant discoveries



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which have been made in the early stages of exploration in the rifted basin of Sirt and the intracratonic basin of Ghadames. On the other hand, the basic exploration methods (in particular 2D seismic, magnetic and gravity surveys) which were sometimes not capable to fully reveal the complex geology of the region, may have also contributed to the decline and the abandonment of exploration activity in the region.

The recent discovered pool (C-NC129) known as Sultan Field, made by the AGOCO in the Soluq Depression has demonstrated the latent potential of the region. The first well drilled in the Sultan Field was based on 2D seismic shot in the year 1995. During the subsequent years 3D seismic survey that was carried out over the pool led to a better assessment of pool extension and drilling of the rest of the appraisal and development wells.

Recently, based on published literatures, the Exploration Department of AGOCO has reviewed the successful exploration activity on the northern part of the Western Desert basins of Egypt (NWDBE). This revision has shown geological similarities between Cyrenaica region and NWDBE in terms of stratigraphy and tectonics.

In order to elaborate more on these observations and to have a well understanding of the geology and the petroleum geology of Cyrenaica region, AGOCO with the full support of the Libyan National Oil Corporation (NOC), intends to organize a workshop later this year 2024, focusing on the hydrocarbon potential of Cyrenaica region and the neighboring areas. It is hoped that this workshop will lead to a successful hydrocarbon exploration activity in Cyrenaica region in the coming years.

Scope of the Workshop

The workshop will merely deal with the subsurface geology and petroleum geology of the Cyrenaica region. This will include the tectonic elements of the region, i.e., the Cyrenaica (Platform and flanks), the Marmarica (Uplift and Terraces) and the Soluq Depression. The Al Jabal al Akhdar Anticlinorium and the offshore of Cyrenaica region and the north side of the Western Desert basins of Egypt (NWDBE) are also included. Contributions about surface and subsurface geology of areas other than the above mentioned, will not be considered by the organizers.

The workshop will hopefully offer an ideal opportunity and a platform for local and international professionals (Geologists & Geophysicists) from the oil industry and academic institutions to exchange the latest experiences and ideas on subsurface geology, and petroleum geology of the Cyrenaica region and the neighboring areas.



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Objective of the Workshop

The main objective of the workshop is to shed light on and reveal the hydrocarbon potentials of Cyrenaica region through:

- Reviewing the current subsurface geology and petroleum geology of Cyrenaica region.
- Carrying out correlations of subsurface geology and petroleum geology of the Cyrenaica region with neighboring areas.
- Investigating and evaluating the history of exploration activities.
- Reviewing exploration methods applied in the offshore and onshore of Cyrenaica region and neighboring areas and determine actions which have led to an increase in success rates.

These issues will be discussed during the workshop according to the following themes by a number of invited speakers and contributors.

1st theme: Geology, Petroleum Geology and Basin Analysis

- Overview and correlate the subsurface geology of Cyrenaica region and the neighboring areas.
- Overview of the petroleum geology elements of the target regions.
- Assessment of potential source rocks.
- Petroleum system analysis.
- Basin analysis: Tectonic history, stratigraphy and sequence stratigraphy.

2nd theme: Well Log Analysis and Reservoir Evaluation

- Well log analysis; parameters and techniques.
- Evaluation of potential reservoir properties.

3rd theme: Geophysical Interpretation and Structural Analysis

- Geophysical data interpretation and applied techniques.
- Structural analysis and modeling.
- Play fairway analysis and potential risk assessment.

4th theme: Reservoir Modeling and Dynamic Simulation

- Case study from the targeted regions.

5th theme: Exploration Technologies and Strategies

- Overview of exploration technologies and methodologies implemented in the regions of interest.



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- Advances in seismic acquisition parameters and processing.
- Integration of geophysical and well data to improve exploration success in the targeted regions.

Call for Extended Abstracts

The Organizing Committee considers the first circular as a call for submission of extended abstracts. The committee is ready to accept contributions on the address cyrenaica.science@agoco.ly according to the terms mentioned in the scope of the workshop and to authors guidelines.

In order to allow more time for the contributing researchers and scientists for their presentation and discussion of their findings in the workshop; it is only required from each contributor an extended abstract of no more than five pages, A4 size (inclusive of any illustrations and cited references).

Guidelines for Authors

Please refer to *Home Page* to access the guidelines

Important Dates

Extended Abstract Submission Deadline Date	31 st May 2024
Extended Abstract Acceptance Notification Date	31 st August 2024
Workshop Start Date	4 th November 2024
Workshop End Date	6 th November 2024
Field Trip Start Date	7 th November 2024
Field Trip End Date	8 th November 2024

Contributor Support

The Organizing Committee of the event will support the invited speakers and the first author of the accepted scientific contributions. This support shall include airline tickets to Benghazi, accommodation in Benghazi during workshop days and field trip.

Registration for Contributor

Geoscientists wishing to contribute in the workshop are kindly requested to fill the registration form. Please refer to *Home Page* to access the form.



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Field Trip

A two-day geological field excursion will follow the workshop. Details of the excursion will be issued in the second circular.

Inquiries

For any further information or inquiries regarding the workshop registration, please contact cyrenaica.info@agoco.ly