



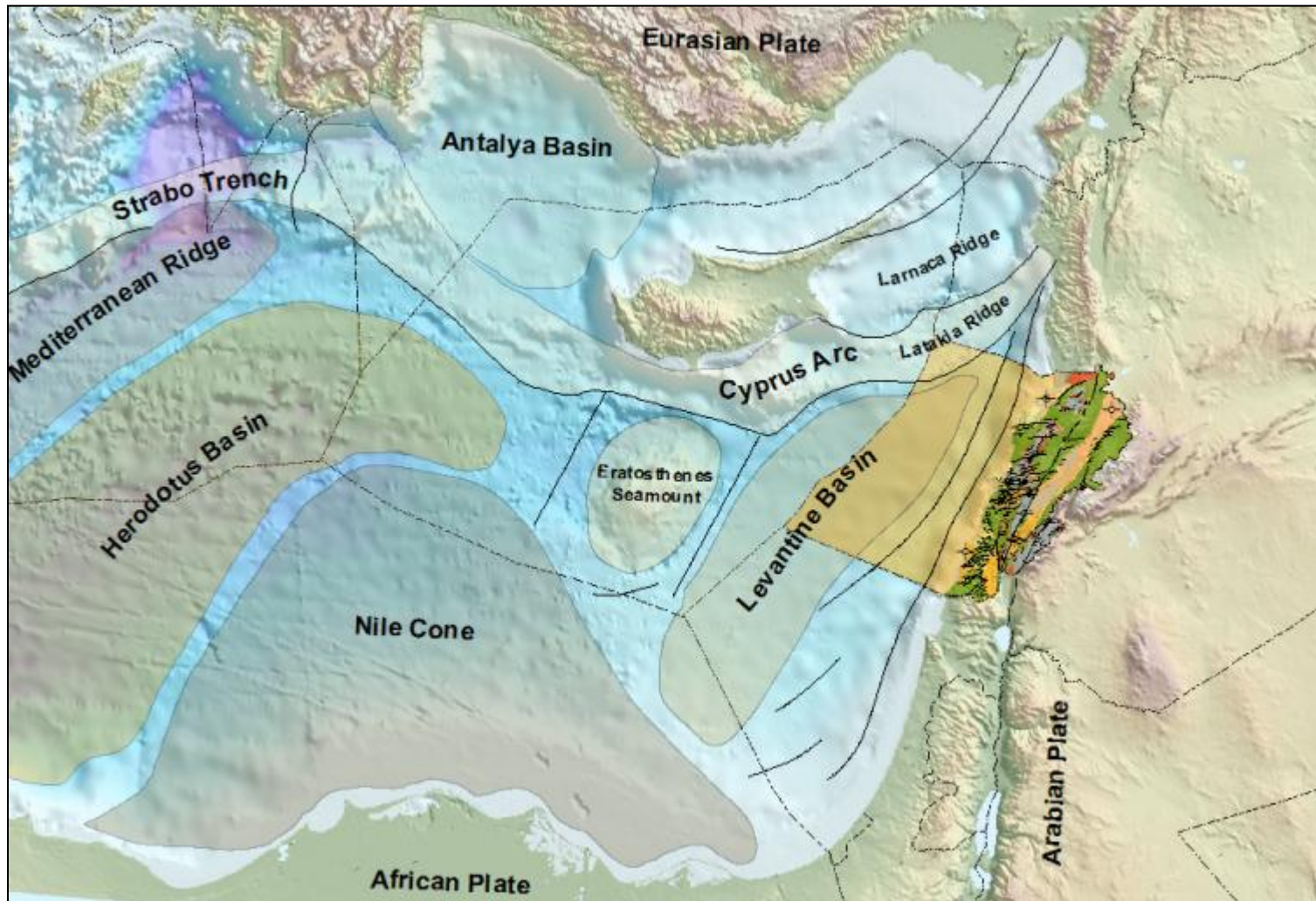
REPUBLIC OF LEBANON
Ministry of Energy and Water

LEBANON FIRST OFFSHORE LICENSING ROUND

Petroleum Administration

Lebanon – Located Eastern Mediterranean

Lebanon – First License Round





Lebanon First License Round

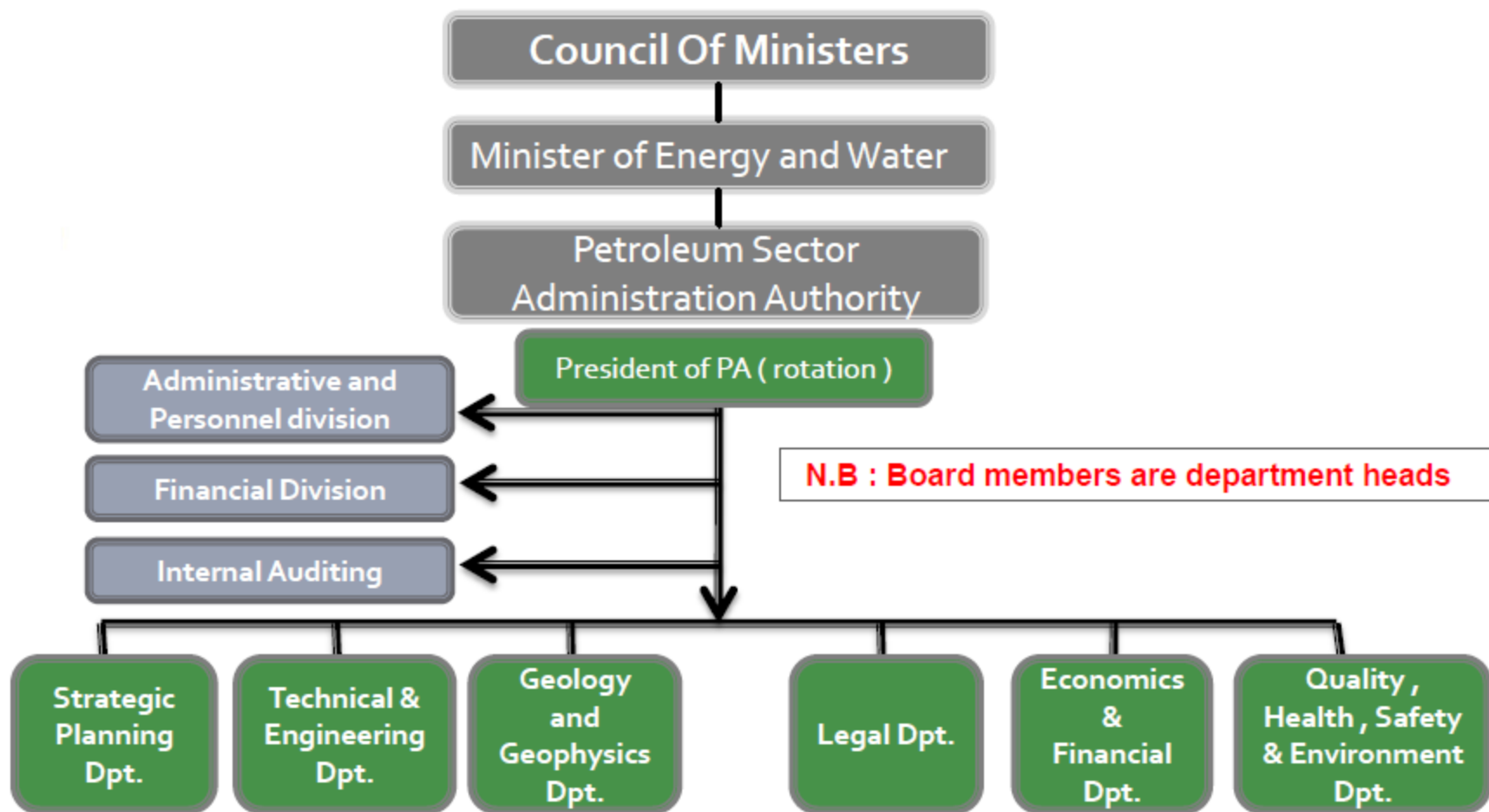
Lebanon – First License Round

- Lebanon is working towards its First License Round
- The seismic data and recent discoveries in the region show the area to be very prospective
- The Petroleum Administration was formed in November 2012
- Pre-qualification expected to open February 2013
- License Round expected to open in May 2013
- The License Round will be open for a minimum period of 6 months



Petroleum Sector Administration Authority

Lebanon – First License Round



General Preparations



Lebanon – First License Round



Legal and Institutional Framework



Lebanon – First License Round





Environmental Management

Lebanon – First License Round

- Phase one of the Strategic Environmental Assessment was completed in April 2012 and is organised in 8 volumes.
- The SEA report outlines the future steps including recommendations to Oil and Gas companies including the identification of the most vulnerable areas.
- Environmental Impact assessment decree issued through the Ministry of Environment
- National contingency plan ,Stakeholders management , Data gap analysis ,GIS and more



Framework GeoPackage

Lebanon – First License Round

- Lebanon 1st Offshore Licensing Round - Framework GIS**
 - Seismic Data Coverage
 - 2D Seismic Surveys
 - 3D Seismic Surveys
 - Wells
 - Lebanon Wells (Attachments, click the Identify Tool to open)
 - Well Correlation Sections (Hyperlinked)
 - Geology
 - Field Trip Photographs (Hyperlinked)
 - Geological Cross Sections (Hyperlinked)
 - Geology 1:200,000
 - Faults
 - Geology
 - Age
 - Basalt
 - Quaternary
 - Upper Cretaceous - Cenozoic
 - Cretaceous
 - Jurassic
 - Stratigraphic Columns (Hyperlinked)
 - Structural Elements
 - International Boundaries
 - Lebanon Onshore Boundaries
 - Boundary Legal 49 Points
 - Boundary Line
 - Lebanon Offshore Boundaries
 - Boundary Points
 - Boundary Line
 - International Boundaries
 - Culture Data
 - Seismic Interpretation
 - Profiles (Hyperlinked)
 - Horizons
 - Topography and Bathymetry

High quality digital information relating to:

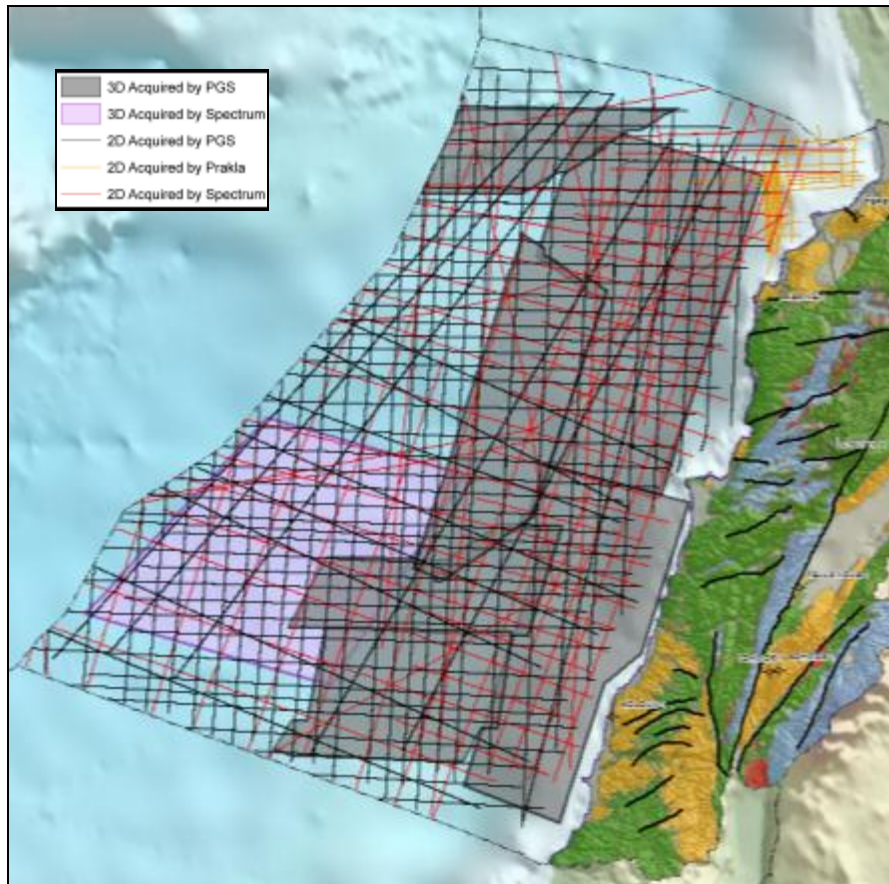
- Seismic Data Coverage
- Geology
- Wells
- Int. Boundaries
- Culture Data
- Seismic Interpretation (Water Depth)
- Topography & Bathymetry



Seismic Database



Lebanon – First License Round



PGS

- 8,800 Km 2D (2008-2011)
- 9,700 Km² 3D (2006-2012)

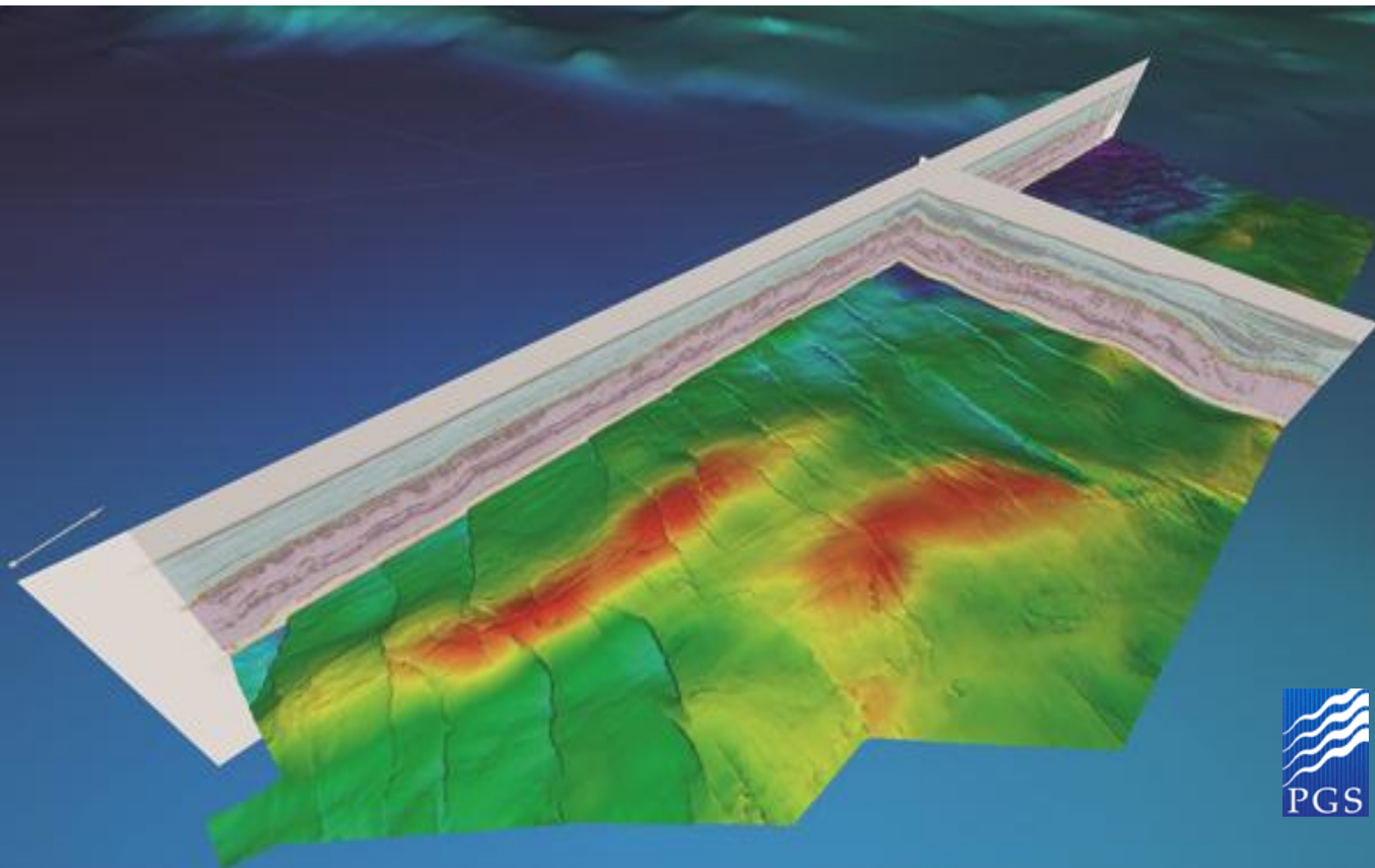


- 5,526 Km 2D (1975-2002)
- 3,000 Km² 3D (2012/13)

Lebanon Prospectivity



Lebanon – First License Round



Blocks



Lebanon – First License Round

Blocks delineation scenarios taking into consideration the:

- ❑ Geology
- ❑ Economic value
- ❑ Environmental considerations
- ❑ Licensing strategy

Block delineation being finalized.

Lebanon First License Round



Lebanon – First License Round

- By Law Companies will need to pre-qualify
- By Law a Minimum of 3 Companies required in each Consortium
- Three Types of Licenses:
 - Reconnaissance – 3 years
 - Exploration – 10 years
 - Production – 30 years



Pre-Qualification

Lebanon – First License Round

Companies may pre-qualify as an Operator or Non-Operator.

Pre-Qualification criteria address the following main categories:

1. **Legal**

Joint stock company conducting Petroleum Activities as defined in Offshore Petroleum Resources Law

2. **Financial**

Right-holder Operator: Total assets of USD 10 Billion

Right-holder Non-Operator: Total assets of USD 500 Million

3. **Technical**

Right-holder Operator: Operatorship of at least one petroleum development in water depths in excess of 500m

Right-holder Non-Operator: Having an established petroleum production

4. **QHSE**

Evidence of established and implemented QHSE Management Systems



Bidding Documents

Lebanon – First License Round

The bidding documents (bid package) for the first offshore Licensing Round and given only to prequalified companies on the opening of the first licensing round.

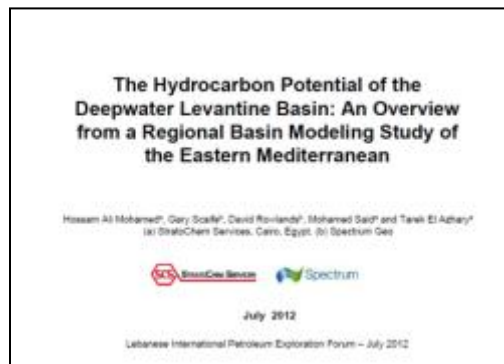
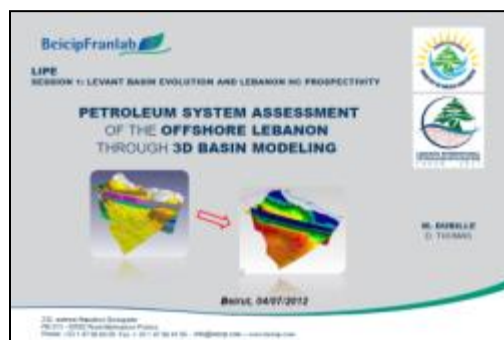
It will contain:

- ▣ Application / bidding documents
- ▣ Details of the contract areas on offer
- ▣ Minimum data purchase requirements
- ▣ Digital Atlas GeoPackage
 - Regional Interpretation
 - Representative seismic images
 - All the information contained within the Framework GeoPackage.

Resources on: www.lebanon-exploration.com



Lebanon – First License Round





Briefing Note

Lebanon – First License Round

REPUBLIC OF LEBANON
Ministry of Energy and Water

Petroleum Administration



LEBANON FIRST LICENSING ROUND

The Minister

It gives me great pleasure to invite you to evaluate the hydrocarbon potential of Lebanon in preparation for the First Licensing Round. Pre-qualification will open shortly and then qualified Companies will be invited to apply for an "Exploration and Production Agreement".

The newly formed Petroleum Administration was appointed in November 2012 and is working to complete all the technical, legal, fiscal and administrative documentation that are required to be in place. This work has been supplemented by a number of activities such as the "Lebanon International Petroleum Exploration Forum and Exhibition" to ensure that the international oil and gas exploration community has been kept informed and involved in our endeavours to exploit our hydrocarbon resources.

Please be assured that the Lebanese Government is fully committed to make this project materialize through the first licensing round.

We thank you for your interest in Lebanon and we look forward to the future partnership between the Lebanese Government and the international oil and gas exploration community.

Eng. Gebran Bassil
Minister of Energy and Water

Technical Data

The Ministry has long recognized the hydrocarbon potential offshore Lebanon and in the last decade has commissioned 2D and 3D seismic surveys in preparation for the first offshore licensing round.

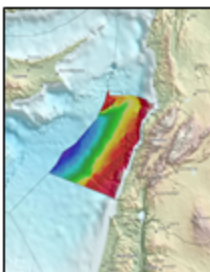
- Seismic data offshore Lebanon acquired by:
- Geoco (available at PA)
 - Spectrum (available via Spectrum)
 - PGS (available via PGS)

Lebanon Offshore

The Lebanese offshore area covers a total of 22,720km² in the Eastern Mediterranean and has never been previously licensed for hydrocarbon exploration.

The recent deepwater, sub-salt gas discoveries to the South and West, which encountered high quality Lower Miocene sands, have significantly increased the industry interest in Lebanon and the Eastern Mediterranean.

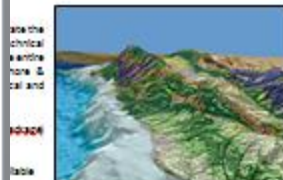
The Levantine basin within the Eastern Mediterranean region is regarded to contain some of the most exciting exploration plays in the region which are being re-evaluated through advances in seismic technology.



Over 460km of 2D seismic lines were acquired by Geoco (PA) in 1992 over a limited area offshore northern Lebanon.

The Spectrum data includes 2D seismic surveys (1975 to 2002) which have been reprocessed (amounting to about 200 km) and more recently 2D seismic acquisition on the offshore.

The PGS data includes two 2D seismic surveys (2009 to 2011), covering some 2,800 km) complemented by six 3D surveys (2009 to 2012), covering around 9,700 km². The location of a PGS 2D line is shown on the seismic base map in black & grey. The seismic database provides valuable information about the geospectroscopy of the offshore Lebanon area.



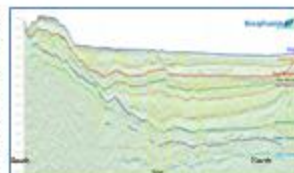
3D - Digital Terrain & Seismic

Lebanon Data Room

The available geoscientific data has been loaded to technical visualization projects and is available for visitors to view at the PA data room in Beirut. This includes the seismic and well data some of which is contained within the GIS project. In addition to reports, studies and publications on the geology and geospectroscopy of Lebanon (onshore/offshore).

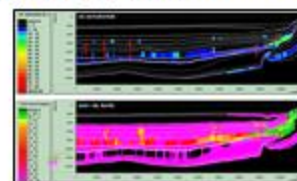
Geoco (PA) was contracted to interpret more than 10,000 km of 2D seismic interpretation report. This was followed by 3D interpretation analysis studies.

The 3D seismic data has provided a new understanding of the nature of the Levantine Basin offshore Lebanon.

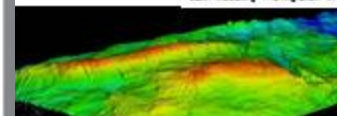


Regional Seismic Interpretation

3D seismic data and basin modelling has provided a new understanding of the nature of the Levantine Basin offshore Lebanon.



Basin Modelling - HC Migration in 3D



High-Resolution Seismic Tomography Data

Pre-Qualification Process

Petroleum Resources Law (Law No. 132 of August 24, 2010), the Petroleum Administration will conduct, prior to the launching of the Offshore Oil and Gas Licensing Round, a pre-qualification process for interested companies to apply for an "Exploration and Production Agreement".

The pre-qualification process will be conducted during the first quarter of 2013, and the 1st Licensing Round is expected to start in May 2013.

Interested companies should be invited to apply for an "Exploration and Production Agreement" during the first quarter of 2013, and the 1st Licensing Round is expected to start in May 2013.

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REPUBLIC OF LEBANON

Ministry of Energy and Water

Thank you for your attention

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Petroleum Administration

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Petroleum Administration