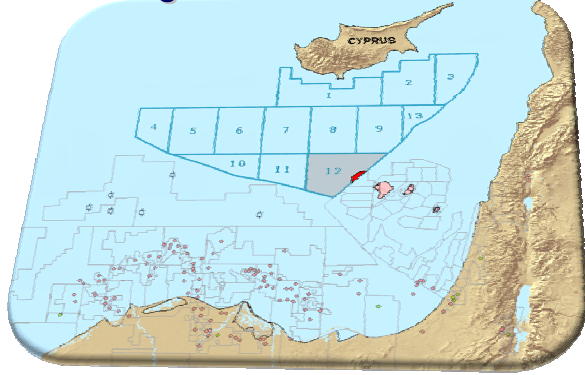


# Offshore Cyprus

## A New Frontier & Emerging Region

### The Legal & Fiscal Framework



Solon Kassinis  
Director - Energy Service

Ministry of Commerce, Industry & Tourism  
Republic of Cyprus

Offshore Technology Conference 2011  
Houston, Reliant Park - May 05, 2011



## Cyprus: Geostrategic Facts

- ▶ Third largest island in the Mediterranean Sea
- ▶ Located at the crossroads of big international energy routes
- ▶ Full member state of the European Union
- ▶ Open services-oriented market economy
- ▶ A strategic hub for business activities in the region



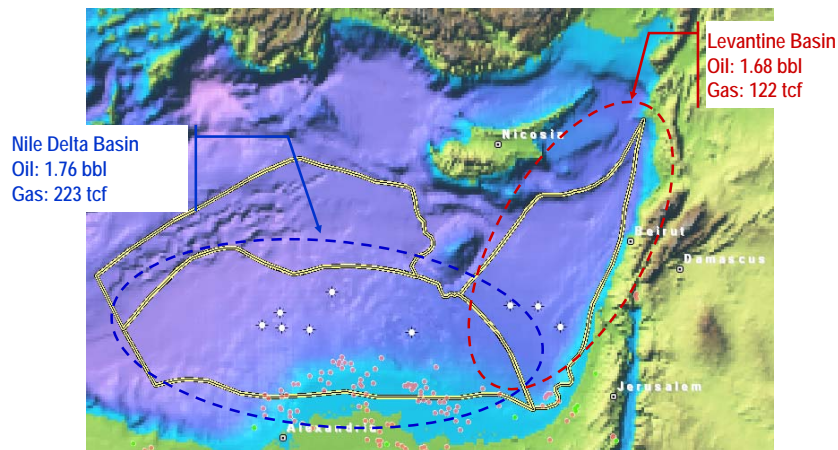
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## Regional Hydrocarbon System: Potential



Undiscovered Oil & Gas Resources in the Eastern Mediterranean Assessment by USGS



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## East Med Hydrocarbon System: Current Scene

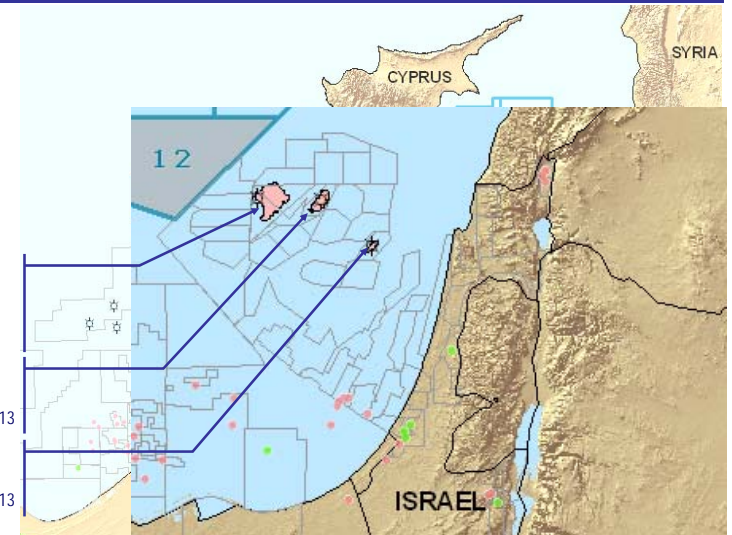


### ISRAEL

**Leviathan**  
Natural Gas: 21 tcf  
Oil: ?  
Production: 2015/16

**Tamar**  
Natural Gas: 8.4 tcf  
Production: early 2013

**Dalit**  
Natural Gas: 0.5 tcf  
Production: early 2013

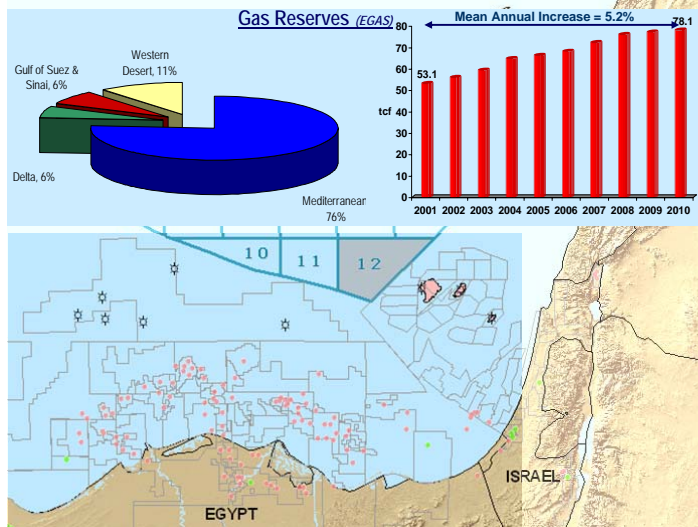


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## East Med Hydrocarbon System: Current Scene

### EGYPT

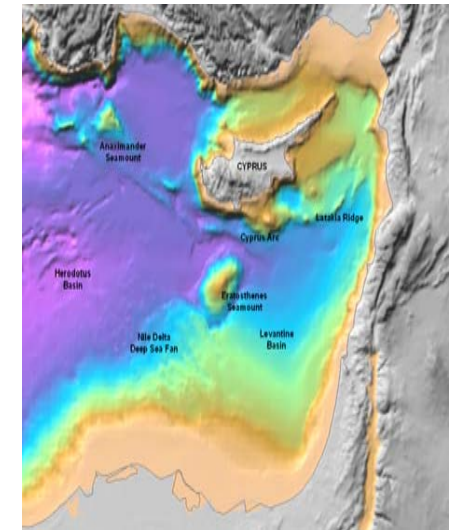


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## Offshore Cyprus: An Emerging Area

- ▶ A promising regional geological background:
  - ◊ A great number and variety of “play concepts” for Exploration associated to the different tectonic and stratigraphic domains
  - ◊ Many attractive major “plays” have been identified
  - ◊ An efficient regional seal: the Messinian evaporites
- ▶ Big hydrocarbon discoveries in the region (Tamar – 8.4tcf, Leviathan – 21tcf)
- ▶ Greater Mediterranean Region is a market with large potential for oil and gas trading

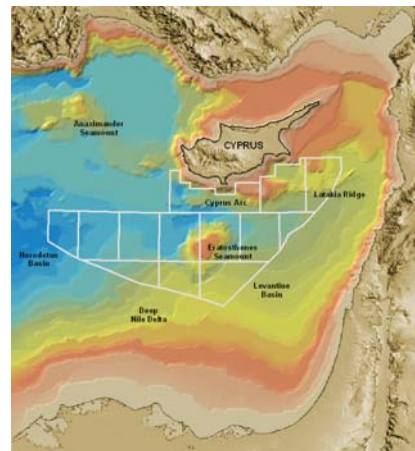


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## Offshore Cyprus: A Frontier Exploration Area

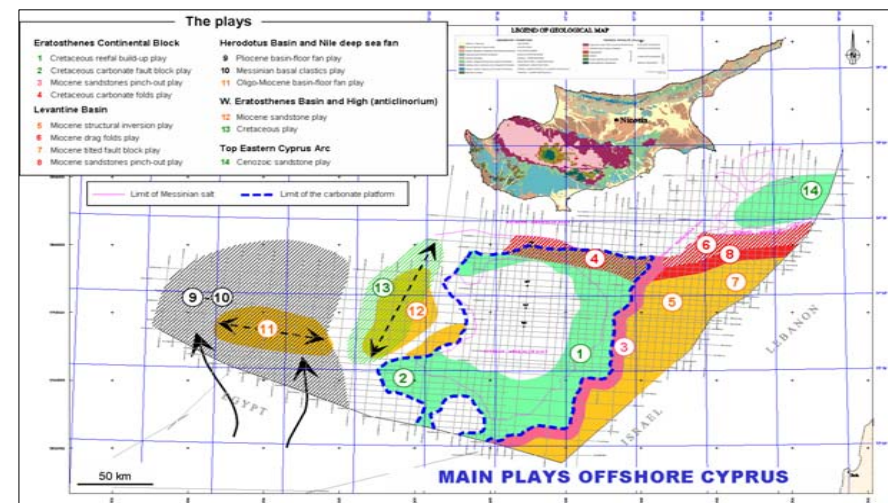
- ▶ Deep-water frontier exploration area of about 51,000 km<sup>2</sup> (part of Exclusive Economic Zone of the Republic Cyprus)
- ▶ Located south of the island of Cyprus
- ▶ 13 Exploration Blocks
- ▶ Promising frontier exploration area with proven potential in the vicinity
- ▶ Very thick sedimentary basins (12-15 km)
- ▶ Multiple possible clastics and carbonate reservoirs
- ▶ 14 plays and many leads of considerable size



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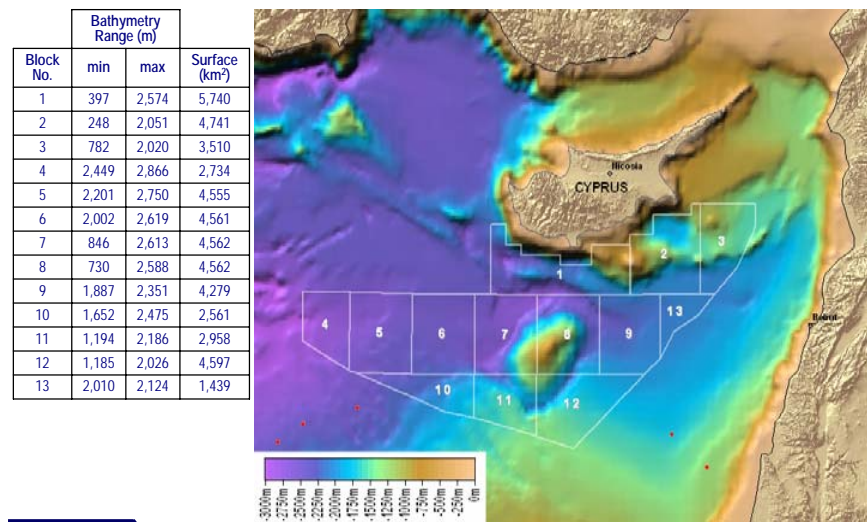
## Offshore Cyprus: 14 Recognized Plays



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# Offshore Cyprus: A Frontier Exploration Area



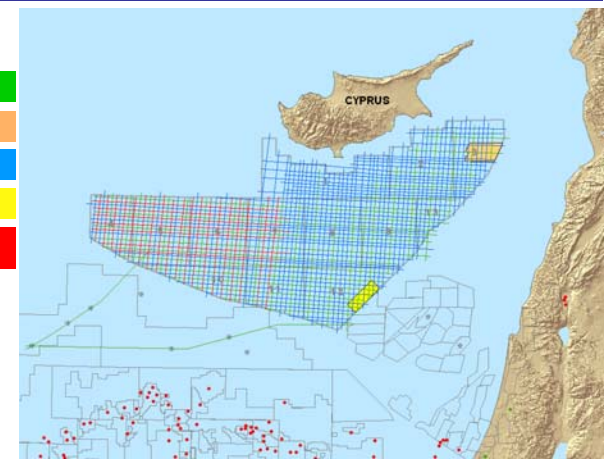
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# Geophysical Data

## Seismic Surveys

- MC2D-CYP2006: 6,770 line km 2D
- MC3D-CYP2007: 659 sq. km 3D
- MC2D-CYP2008: 12,200 line km 2D
- BLOCK 12-3D (2009): 469 sq. km 3D
- MC2D-CYP2011: 3,300 line km 2D (planned)



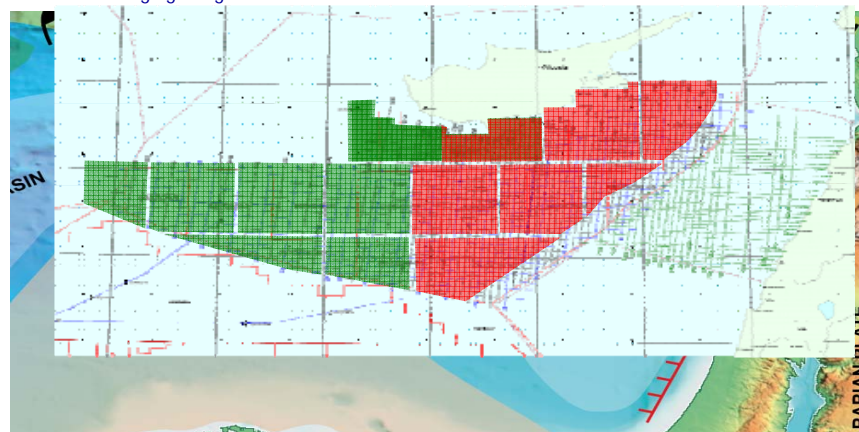
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# Geophysical Data

## Airborne Geophysical Surveys – Gravity and Magnetics (planned)

- ▶ 63,000 sq. km
- ▶ 10 km imaging margin



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# Multi Client Seismic Surveys

- ▶ **Multi Client 2D-2006**
  - ◊ Acquisition of 6,770 line-km, 2D seismic data in 2006
  - ◊ Covers an area of 51,000 km<sup>2</sup> within the EEZ
  - ◊ Ties to key wells in the NEMED Block (Egypt)
  - ◊ 10 x 20 km 2D seismic grid
- ▶ **Multi Client 3D-2007**
  - ◊ Acquisition of 659 km<sup>2</sup> of 3D seismic data in 2007
  - ◊ Area located close to Lebanon offshore boundaries
  - ◊ Identified several direct hydrocarbon indicators and amplitude anomalies
- ▶ **Multi Client 2D-2008**
  - ◊ Acquisition of 12,200 line-km of 2D seismic in 2008
  - ◊ First biggest multi-client survey to use the new GeoStreamer® technology by PGS
  - ◊ Enhanced resolution and better penetration revealing deeper targets
  - ◊ 10 x 10 km seismic grid on the western side of the area
  - ◊ 5 x 5 km seismic grid on the eastern side of the area



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## Interpretation Reports

- ▶ **"New Exploration Opportunities Offshore Cyprus: Exploration Plays and Leads (PGS, MC2D-CYP2006 and MC2D-CYP2008)"**
  - ◇ New Integrated 2D Seismic Interpretation Report
  - ◇ 4 volumes, 181 Figures, 19 Maps
  - ◇ Hydrocarbon prospectivity reassessed
  - ◇ Identification of 14 different plays for exploration
  - ◇ Regional geology, interpreted seismic sections, time and depth structure maps of key horizons, thickness maps of key intervals, plays and leads
- ▶ **"New Exploration Opportunities Offshore Cyprus: 3D Seismic Interpretation Report in Block 3 (PGS, MC2D-CYP2007)"**
  - ◇ 3 volumes, 151 figures, 19 Maps
  - ◇ TWT structural maps of 5 horizons, depth structural and interval maps, definition of reservoirs, seals and traps
  - ◇ Inventory and volumetrics of leads

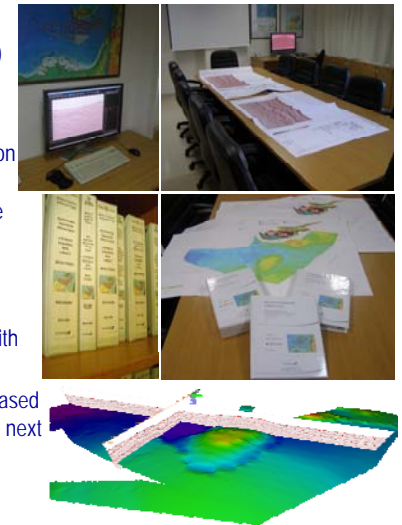


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## Geological & Geophysical Data

- ▶ **Multi-Client Seismic Surveys**
  - ◇ Conducted by Petroleum Geo-Services (PGS)
  - ◇ Review of the seismic data
    - Electronic and hard copies of the data
    - PGS data rooms in Oslo, London, Houston
  - ◇ The purchase of a minimum quantity of 2D seismic lines is required for participation in the next Licensing Round Offshore Cyprus
- ▶ **Interpretation Reports**
  - ◇ Prepared by Beicip-Franlab in collaboration with the Energy Service - MCIT
  - ◇ Part of the data package required to be purchased by companies interested in participating in the next Licensing Round Offshore Cyprus
  - ◇ Available by Energy Service - MCIT



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## Legal & Regulatory Framework

- ▶ The Hydrocarbons (Prospection, Exploration and Exploitation) Law L.4(I) of 2007
- ▶ The Hydrocarbons (Prospection, Exploration and Exploitation) Regulations of 2007 and 2009

### Hydrocarbon Exploration License

- ▶ Granted initially for up to 3 years; ability for two renewals of 2 years each
- ▶ Includes gravity and magnetic surveys, 2D/3D seismic surveys, as well as one exploration drilling
- ▶ On each renewal, at least 25% of the initial area is relinquished
- ▶ In case of a discovery, the licensee has the right to be granted an exploitation license

### Hydrocarbon Exploitation License

- ▶ Granted for an initial period of up to 25 years; ability for one renewal of up to 10 years



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## Legal & Regulatory Framework

### Model Production Sharing Contract

- ▶ Model PSC to be used in the licensing procedure and concluded between the licensee and the Republic of Cyprus
- ▶ Main terms include:
  - ◇ **Fundamental Obligations**
    - Minimum Exploration Work Obligations
    - Work Programs & Budgets
    - Appraisal & Development Plans
  - ◇ **Training Obligations**
  - ◇ **Guarantees**
  - ◇ **Accounting Procedure**
- ▶ Zero taxation
- ▶ The Director of the Energy Service, representing the Minister, negotiates the terms and conditions of the PSC

- ◇ **Fiscal Regime**
  - Cost Oil/Gas recovery (up to a max. %)
  - Profit Oil/Gas sharing % (according to production tiers and prices)
  - Signature and Production Bonus
  - Annual Surface Fees



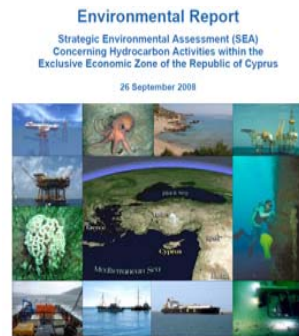
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## Legal & Regulatory Framework

### Environment – Health & Safety

- ▶ Republic of Cyprus has carried out a Strategic Environmental Assessment (SEA) to identify, describe and evaluate the likely significant effects on the environmental effects of implementing hydrocarbon exploration and exploitation activities
- ▶ Applicants are bound to follow and comply with the results and recommendations of the SEA
- ▶ Every licensee shall carry out hydrocarbons operations in a proper, safe and workmanlike manner and in accordance with good hydrocarbon field practices and the relevant national legislation
- ▶ Every licensee shall ensure that hydrocarbon operations are conducted in an environmentally acceptable and safe manner, consistent with the environmental legislation and the good international industry practice



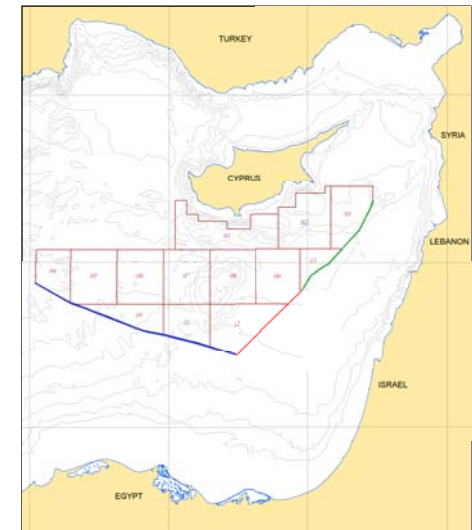
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## Legal & Regulatory Framework

### International Bilateral Agreements

- ▶ Arab Republic of Egypt
  - ◊ Delimitation of the EEZ (2003)
  - ◊ Framework Agreement concerning the development of cross-median line hydrocarbon resources (2006)
  - ◊ Confidentiality Agreement (2006)
- ▶ Lebanon
  - ◊ Delimitation of the EEZ (2007)
- ▶ Israel
  - ◊ Delimitation of the EEZ (2010)

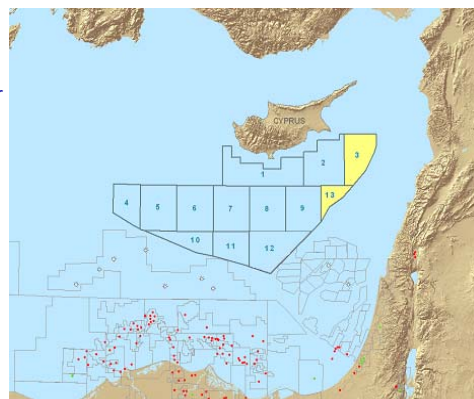


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## 1st Licensing Round

- ▶ Opening: 15 February 2007
- ▶ Closed: 16 August 2007
- ▶ 11 Blocks (46,000 km<sup>2</sup>) were on offer
- ▶ Blocks 3 and 13 were excluded
- ▶ Available Data:
  - ◊ MC2D-CYP2006 seismic survey (6,770 line-km)
  - ◊ Interpretation Report
- ▶ A total of 35,000 line-km of 2D seismic data were purchased by interested parties
- ▶ Three applications were submitted
- ▶ One Exploration Licence was awarded for Block 12

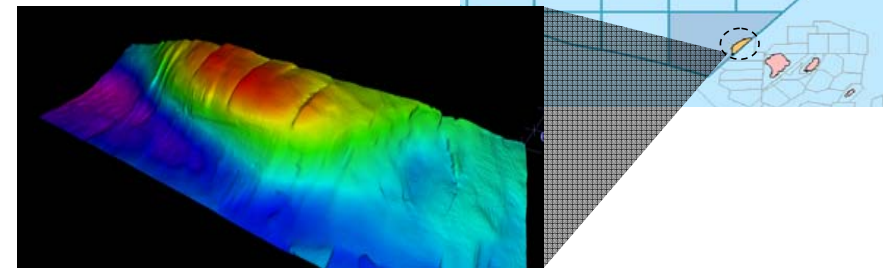


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## Block 12

- ▶ Oct. 2008: PSC with Noble Energy International Ltd
- ▶ Sept. 2009: 469 sq km 3D seismic survey
- ▶ Cyprus A: Prospect
- ▶ 4<sup>th</sup> Quarter of 2011: First Exploratory Well
- ▶ Tendering Procedure for Drilling Rig
- ▶ EIA

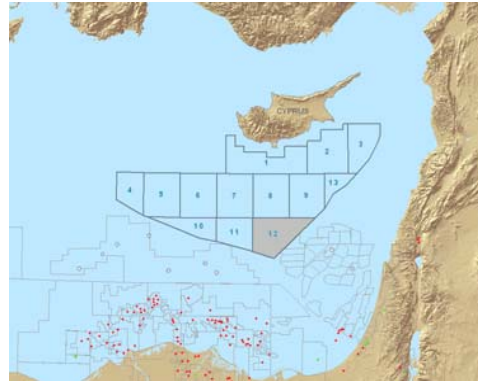


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## Prospected 2nd Licensing Round

- ▶ 12 Exploration Blocks (1-11 & 13) will be on offer
- ▶ Available data:
  - ◊ MC2D-CYP2006 survey data comprising 6,770 line-km
  - ◊ MC3D-CYP2007 survey data in Block 3 covering 659 km<sup>2</sup>
  - ◊ 3D Interpretation Report on Block
  - ◊ New MC2D-CYP2008 survey data comprising further 12,200 line-km
  - ◊ New integrated 2D Interpretation Report (MC2D-CYP2006 & MC2D-CYP2008)
- ▶ Promotional seminars with full documentation, including the bidding procedures, will be organized upon the official opening of the 2nd Licensing Round



## Submission of Applications

- ▶ General Procedure & Guidelines
  - ◊ Invitation for submission of applications published in the Official Journal of the European Union and the Official Gazette of the Republic of Cyprus
  - ◊ Applications are submitted to the Minister of Commerce, Industry and Tourism and handled by the Energy Service - MCIT
  - ◊ Evaluation of the applications is carried out by a special Governmental Consultation Committee
  - ◊ One application per Block
  - ◊ Content of Applications:
    - Technical, Financial and Legal Capacity documentation
    - Technical and Financial Proposal for the Block
      - ❖ Description of the exploration programme
      - ❖ Minimum exploration work (at least one exploration well) for each exploration sub-period
      - ❖ Economic terms with respect to the cost oil/gas recovery and to the profit oil/gas sharing
      - ❖ Minimum annual training budget during exploration and exploitation
      - ❖ Signature & Production bonuses
      - ❖ Short notice relating to the possible impact on and protection of the environment



## Submission of Applications

### Criteria for Evaluation

- ▶ The Technical and Financial ability of the applicant
- ▶ The ways in which the applicant intends to carry out the activities that are specified in the licence
- ▶ The financial consideration that the applicant is offering in order to obtain the licence
- ▶ Any lack of efficiency and responsibility that the applicant has shown under any previous licence or authorisation of any form in any country of the world
- ▶ National security and public interest will also be taken into consideration



## Gas Market Outlet: LNG



## Gas Market Outlet: LNG



- ▶ Evaluation for the construction of LNG plant: 15mtpa
- ▶ Gas production onshore Cyprus: mid 2014
- ▶ LNG plant starts operation: 2019



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## Gas Market Outlet: South-North Energy Corridor



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## Oil & Gas Potential Offshore Cyprus: Conclusions



- ▶ Known hydrocarbon system in the vicinity
- ▶ Big hydrocarbon discoveries in the region
- ▶ Several structures identified offshore Cyprus with Direct Hydrocarbon Indicators
- ▶ Cyprus offers a stable business environment within the EU
- ▶ Access to the EU market and the Greater Mediterranean Region market
- ▶ Attractive terms offered (zero taxation on revenues from offshore hydrocarbon exploitation)



*Offshore Cyprus: A promising new frontier with opportunities for high-potential hydrocarbon exploration activities*



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## Contact Details



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