# For the participation in Non-Exclusive Seismic Survey on the Continental Shelf of Western and Southern Greece

# 1. SUBJECT

The Ministry for the Environment, Energy and Climate Change, (hereinafter called the **MINISTRY**) intends to evaluate the hydrocarbon potential and further promote offshore areas for hydrocarbon Exploration and Exploitation on the Continental Shelf of Western and Southern Greece.

The Ministry, with head offices at Athens, Greece, invites companies to submit applications for the participation in non-exclusive seismic survey. The scope of the work is described in article 2 below.

The MINISTRY intends to enter into an agreement with selected company (ies), (hereinafter called **COMPANY**), to carry the said survey.

The institutional framework of the open invitation is based on the provisions of Law 2289/1995 (Government Gazette Issue 27/A/8.02.1995), titled "Prospecting, Exploration and Exploitation of Hydrocarbons and other provisions".

# 2. SCOPE OF WORK

Selected COMPANY should acquire, process and interpret a minimum of .... ..km of 2D seismic data, on the Continental Shelf of Western and Southern Greece (see attached map of the area-ANNEX I).

The objective of the planned seismic survey is to ensure data acquisition at the highest quality in accordance to the up to date oil and natural gas industry practices. These data will assist the evaluation of the hydrocarbon potential of the area and the promotion of a relevant international Licensing Round for Hydrocarbon Exploration and Exploitation, which is anticipated to be announced in mid 2012.

MINISTRY's personnel shall work closely with COMPANY's specialists in the planning of the survey, the determination of acquisition and processing parameters and the interpretation/evaluation of all available data. The MINISTRY has the right to oversee and control all stages of the project.

# 3. <u>ELIGIBILITY - CONTENT OF FOLDER - SUBMISSION OF THE</u> <u>APPLICATION</u>

1. Participation is open, on equal terms, to those Companies which meet the legal, financial and technical requirements set in the Invitation and which demonstrate the required professional adequacy and experience.

- 2. The application must contain technical and commercial proposal including:
  - Work programme, indicative location map, which should cover the entire area of ANNEX I, as well as acquisition and processing parameters (minimum requirements as per ANNEX II)
  - Identification of seismic anomalies applying appropriate processing techniques
  - Interpretation of the seismic data mapping geological targets to evaluate the hydrocarbon potential of the area (amongst other mapping at least Base Pliocene – Quaternary, intra Neogene carbonate build-ups, top Eocene – Oligocene carbonates, Triassic evaporates)
  - Time schedule, which should be in accordance with the MINISTRY's intention to announce the licensing round in mid 2012.
  - Mark up of the draft agreement
  - Commercial terms

The application must also include documents concerning COMPANY's qualifications, specifically:

- Qualifications of allocated personnel (detailed CV describing professional experience)
- List of similar type of work, undertaken by the COMPANY for the last 5 years, stating clients' names, locations, types of work, equipment and techniques employed. Provide for 3 of the listed contracts the names and addresses of the client and contact names, who may be contacted for references
- Audited annual reports for the last 3 years (including audited financial statements)
- Safety statistics for the past 3 years
- Evidence / documentation of an implemented quality system according ISO 9001, or equivalent
- Evidence / documentation for an implemented environmental system according to ISO 14001, or equivalent

• Evidence / documentation for an implemented health and safety system

The description of the minimum technical requirements for the acquisition, processing and interpretation is affixed to ANNEX II.

3. Each application should be in Greek or English language and must be submitted in a sealed folder, clearly labelled as follows:

- a) the interested company's registered name and address;
- b) the recipient: MINISTRY FOR THE ENVIRONMENT, ENERGY AND CLIMATE CHANGE, GENERAL SECRETARIAT OF ENERGY AND CLIMATE CHANGE, DIRECTORATE GENERAL OF ENERGY, 119 Mesogion Avenue, 10192 ATHENS, GREECE;
- c) Invitation with Ref. No. ..... for "Application for the Participation in non-exclusive seismic survey on the Continental Shelf of Western and Southern Greece"
- d) the phrase "CONFIDENTIAL/NOT TO BE OPENED BY THE OFFICE"

The folder must be accompanied by a cover letter stating the COMPANY's legal representative submitting the application.

Envelopes without this indication will not be accepted for further consideration and evaluation. The application must arrive at the latest by 12:00 hrs local time on .....(90 days min after the date of announcement)......2011. Envelopes reaching the Ministry after this date will not be accepted.

A draft agreement will be included in the final public invitation to be marked up by the applicants.

## 4. PARTICIPATION FEES

All applicants must pay a participation fee of the amount € ...... including in their application a bank cheque issued by a major international bank having a branch in Athens.

## 5. GOOD PERFORMANCE GUARANTEE

# 6. COMPANY'S SELECTION CRITERIA

The MINISTRY will select the preferred COMPANY based on the following selection criteria:

- International experience in non exclusive seismic surveys
- Technical ability to perform the work
- Experience in similar geological areas
- Mark up of the draft agreement
- Technical proposal
- Commercial proposal

MINISTRY reserves the right to approve the non exclusive seismic survey to be carried out by more than one company in the same designated area.

MINISTRY reserves the right, at any time, in its sole discretion, to declare any application or the entire Procedure void or to disqualify any applicant-qualified.

Applications shall be valid for 90 calendar days after the final submission due date, that is .....

## 7. GOVERNING LAW – SETTLEMENT OF DISPUTES

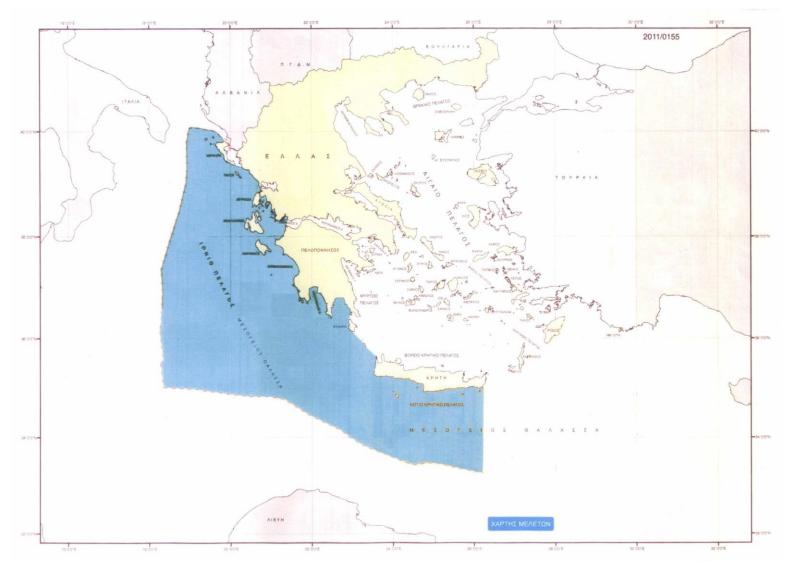
The application to carry out non exclusive seismic data and the agreement to be concluded shall be governed and construed in accordance with the Greek Law. Any dispute that may arise can be settled by Arbitration to be held in Athens, according to the provisions of Law 2289/1995.

## 8. ADDITIONAL INFORMATION - CLARIFICATIONS

For any additional information, interested parties can contact: .....

Clarifications may be also given in writing by the MINISTRY, at its own initiative or after the query of an applicant and will be communicated to all Applicants.

ANNEX I Offshore areas for seismic surveys



The limits of the are $\alpha$  under exploration (seismic survey) are based on the principle of median/equidistance line after taking into consideration all territories of the involved states

#### ANNEX II

#### **Minimum Acquisition Parameters**

#### Streamer

Digital seismic streamer of 6000m or more of active length

Group interval 12.5 m

## Recording

Record length more than 9.0 sec or at least 6sec bellow sea bottom

Sampling interval 2ms

#### Source array

A larger than 3000cu fully functioning tuned air gun array (preferably sleeve guns)

Multiplicity 120 fold or more

## **Processing sequence**

A processing sequence should be applied, in accordance to the up to date standards of industry, including the following stages.

- Multiple attenuation
- Pre Stack Time migration
- Pre Stack Depth Migration in mutual selected lines

## Deliverables

At least the following datasets will be delivered

<ul> <li>Raw field data / shot ordered at 2ms</li> </ul>	SEG-D
<ul> <li>Processed source-receiver navigation</li> </ul>	UKOOA
<ul> <li>Post stack navigation - bin centre</li> </ul>	UKOOA
<ul> <li>Navigation merge at 2ms with P1/90 navigation</li> </ul>	SEG-Y
<ul> <li>Post multiple attenuation CDP gathers</li> </ul>	SEG-Y
<ul> <li>Pre-stack time migrated CDP gathers without NMO correction</li> </ul>	n SEG-Y
<ul> <li>Pre-stack time migrated CDP gathers with NMO correction</li> </ul>	SEG-Y
<ul> <li>Raw Migration (PSTM)</li> </ul>	SEG-Y
<ul> <li>Processed Migration (PSTM)</li> </ul>	SEG-Y

<ul> <li>Demig</li> </ul>	rated (PSTM) raw stack	SEG-Y
<ul> <li>Demig</li> </ul>	rated (PSTM) final stack	SEG-Y
<ul> <li>Raw M</li> </ul>	ligration (PSDM)	SEG-Y
<ul> <li>Proces</li> </ul>	ssed Migration (PSDM)	SEG-Y
<ul> <li>Demig</li> </ul>	rated (PSDM) raw stack	SEG-Y
<ul> <li>Demig</li> </ul>	rated (PSDM) final stack	SEG-Y
<ul> <li>Migrati</li> </ul>	ion and Stacking velocities	ASCII

Raw field data to be delivered in the same media type as acquired.

Other digital data to be delivered in LTO3 or 3592 Cartridges or other media types to be mutually agreed.

Final interpretation report will be delivered both in hardcopy and in digital form.

Final interpretation project should be delivered, in LTO3 or 3592 cartridges or other media types to be mutually agreed, in Landmark format or Petrel format or other format mutually agreed. Additionally all horizons, grids, contours, fault segments and polygons, cultural data and other elements of the final interpretation project will be delivered in ASCII format.

\* In case of discrepancy between the Greek language original text and the English language translation, the Greek text shall prevail.