



ARTA PREVEZA LEASE AREA ENVIRONMENTAL REPORT 2018

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HSE Policies & System, Environmental Studies and Implementation

1. Introduction

The following are representing the implementation of HELPE's policies and systems related to the Arta-Preveza Lease Area.

Hellenic Petroleum has operated during the past in this area as an operator and has gained a deep understanding and knowledge of the context, regulations, local communities' relations and management that could guarantee a smoother development process in the lease area with no impact to the environment and the local communities. On March 16th of 2018, the Greek State awarded a Lease Agreement for Hydrocarbon Exploration and Production in the onshore area of Arta-Preveza in Western Greece.

Hellenic Petroleum, acting as the sole Operator, is fulfilling its commitments and has planned the exploration work program by implementing the most up-to-date, safe and environmentally friendly technological methods and practices. According to the Lease Agreement and the Provisions of Article 12 for «Environmental Protection», the Lessee (Hellenic Petroleum) «shall not be liable for any environmental condition or damage existing in the Contract Area prior to the commencement of the Lessee's operation therein. For this purpose, the Lessee shall prepare a baseline report, to detail the condition of the environmental parameters and resources at the time prior to operation commencement. The baseline report will be submitted for review to the Lessor (Ministry of Environment & Energy). If no objections will rise by the latter within twenty (20) Business Days of its submission, the report is deemed accepted».

Furthermore and according to the Provisions of Article 12 for «Environmental Protection», in case of activities for which an Environmental Impact Assessment (EIA) is not mandatory, but it is reasonably expected that any minor environmental impacts might occur, as in particular for the case of geophysical surveys, the Lessee shall prepare an Environmental Action Plan (EAP). The EAP will aim to determine, assess and mitigate these impacts, focusing on prevention and minimization thereof in accordance with Good Oilfield Practices.

Hellenic Petroleum is planning to execute a 2D Land Geophysical Survey (LGS) with the utmost respect to the local social and physical environment of Arta-Preveza Lease Area. Throughout the course of the geophysical campaign, Hellenic Petroleum will develop policies, procedures and manuals related to this activity. A list of related tasks and documents includes as a minimum the following:

1. *Environmental Baseline Report prior to the commencement of the operations.*
2. *Environmental Action Plan for the 2D LGS for Arta-Preveza Lease Area.*

3. *A dedicated Environmental Monitoring Plan (EMP) aiming to minimize any possible impacts in proximity of the identified environmental sensitivities.*
4. *The establishment, organization and operation of a discrete Environmental Unit. This Unit will be organized and operated under the sole responsibility of Hellenic Petroleum that has been granted the right to explore and exploit hydrocarbons in the Lease Area.*

2. HSE Studies and Reports

2.1. Environmental Baseline Report & Environmental Action Plan

Environmental Baseline Report

The purpose of the Baseline Environmental Report is to collect and evaluate the existing data as well as the current state of the environment in the exploration area in order to:

Survey the condition of the environment within the exploration area before starting any work, to ensure non-liability of the contractor for environmental damage that may occur in the exploration area from other activities.

Be part of an integrated system for monitoring the condition of the environment in the exploration area, to allow the monitoring of any impact of the individual stages of the exploration program.

The elaboration of the Environmental Baseline Conditions within the Exploration Area, will be based on the requirements of JMD 10776/ 02.03.2017 (“Approval of Strategic Environmental Assessment (SEA) for hydrocarbon exploration and production in the area of Arta-Preveza”), according to which environmental indicators, shall be used as fundamentals of monitoring and they shall represent in a comprehensive way, important aspects of developments in the environment.

All environmental data will be collected and evaluated taking into account that this information will feed into the Environmental Action Plan (EAP) prior to be prepared and submitted for the 2D LGS. The contents of the Environmental Baseline Report (EBR) will be appropriately adapted to the conditions of the Lease Area and in compliance with Ministry’s requirements for:

- ✓ 1st Stage Environmental Baseline Report Arta-Preveza Block
- ✓ 2nd Stage Environmental Baseline Report Arta-Preveza Block

The Report shall address the existing physical, biological and socioeconomic environment and sensitivities of “Arta-Preveza” Lease Area and provide any updated information or newly published data not covered in the Strategic Environmental Impact Assessment (SEA). Under physical and biological environment, topics to be included are Topography and Landscape, Soil and Water, Geology, Tectonics Characteristics and Hydrographic Network (underground and ground water baseline study), Vegetation and Ecosystems / Flora & Fauna, Wildlife, Protected Sites and Conservation Areas. Under existing Socioeconomic Environment, topics to be included are Land Use and Socioeconomic Environment, Cultural Heritage and Infrastructure, Atmospheric and Acoustic Environment.

In addition, an essential element of the organization and monitoring of the state of the natural and human environment, as well as of the significant environmental impacts on individual environmental parameters, is the development of an environmental indicators catalogue. Environmental indicators are a numeric or descriptive classification of a large number of

environmental parameters, which have the objective to provide information extraction, which may become very useful in the assessment of environmental quality and so the appropriate decisions to be addressed. The use of indicators facilitates the comparison of environmental quality in different geographical areas and different periods.

Environmental Action Plan

Purpose of the Environmental Action Plan will be:

- the assessment and evaluation of impacts of the proposed activities on all environmental components;
- the assessment and evaluation of environmental risks for the geophysical acquisition activity;
- the proposition of mitigation measures in order to minimize the risks and impacts and the relevant monitoring during the project activities.

In particular, in the Decision of the approval of the SEA study the following requirements of the Environmental Action Plan were set as below:

- ✓ To identify the best option for the environment between technically suitable methods of vibration, especially with regard to the choice between controlled mild explosions or mechanical soil vibrator.
- ✓ To prevent damage to monuments and buildings.
- ✓ Identification of appropriate locations and time schedule of explosions or vibrations in order to minimize disturbance of ecological functions in areas with protected natural environment as well as anthropogenic activities in urban and rural areas.
- ✓ To ensure the application of the following requirements:
 - Compliance with all safety rules to prevent accidents with an impact on the environment,
 - Adjusting the parameters (charges, depths, etc.) to minimize permanent soil surface alterations.

The aforementioned objectives will be taken into account in the preparation of the Environmental Action Plan (EAP) for the area "Arta-Preveza" in a way that ensures the quality of the results under the existing environmental legislation and the best practices for the implementation of two - dimensional (2D) land geophysical acquisition internationally.

The potential impacts of the project activities will be identified, with regard to abiotic, biotic and human environment. Through the objectives set out in the decision to approve the Strategic Environmental Assessment (SEA) of "Arta-Preveza" area, it should be noted that the EAP should foresee impacts that may be observed as a result of key aspects or activities of the geophysical acquisition program and will define a baseline to understand the existing conditions in the proposed position of the geophysical acquisition program. Early recognition of the impacts that may occur in the area of impact of the proposed program reduces the likelihood of long-term adverse environmental impacts and allows the proposal and subsequent implementation of mitigation measures to avoid, reduce or address any possible complications.