



## State of Israel

### Ministry of Energy – Natural Resources Administration

December 27, 2017

#### Petroleum Commissioner Guidelines for the Approval of a Discovery<sup>1</sup>

1. Interpretation: The terms used in these guidelines shall have the meaning assigned to them in the Petroleum Law-1952 (hereinafter “**the Petroleum Law**”).
2. Section 1 of the Petroleum Law defines a “discovery” as “*the discovery of a petroleum field.*” A “petroleum field” under the definition of this section is defined as “*the land and all geologic formations underlying it beneath which is a known accumulation of petroleum capable of being produced in commercial quantities.*” “Commercial quantities” under the definition of this section is defined as “*quantities of petroleum sufficient to permit production thereof on a commercial basis.*”
3. A petroleum right holder who carried out a drilling in his petroleum license, and following the drilling and the subsequent production tests that were carried out, signs of petroleum were found and the license holder has reason to believe that he has made a discovery, and without derogating from all his obligations according to Regulation 63 of the Petroleum Regulations-1953 (hereinafter – Regulation 63), shall submit an application for an approval of a discovery to the Petroleum Commissioner (hereinafter “**the Commissioner**”) comprising the following components:
  - a. Background for the application and details of the applicant;
  - b. Notification of a discovery that includes the items specified in Regulation 63 of the Petroleum Regulations-1953, as well as updated, reliable and corroborated data about the existence of petroleum in the petroleum field located in the license area;

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<sup>1</sup> The English version of all translated law and regulation documents is a non-binding, unofficial translation from the original, binding, Hebrew version and is published for the convenience of the Public. Only the Hebrew version, as officially published in the official gazette (Reshumot) or in the Ministry of Energy website, or in the Israel Government Secretariat, as applicable, shall be binding.

- c. A preliminary future plan regarding the manner of the development of the field and production of the petroleum discovered in the field (hereinafter: “**conceptual FDP**”);
- d. An economic calculation based on the data on the existence of petroleum in the field and on the conceptual FDP, including updated financial data on which the calculation was based on the date of submitting the request, which the Commissioner finds satisfactory to confirm that petroleum can be produced from the field on a commercial basis.

The details and documents that shall be attached to the application are described in **Appendix A** of these guidelines.

4. The application shall be submitted no later than 6 months of the completion of production tests, and after the license holder has performed production tests and sufficient economic calculations to enable him to submit the aforesaid components in a substantiated and verified manner. A place on which the license holder has not conducted production tests, then the application shall be submitted no later than 6 months after completion of drilling. Each of the above components shall be accompanied by reports, calculations, official certifications and a detailed explanation of each estimate, calculation, data, figure and price attached to the application. These documents must be prepared in keeping with best oil and gas industry practice.
5. The assessment of the discovery’s commerciality shall be based on the data submitted with the application, and in accordance with an examination of the net present value of the field that is the subject matter of the application at a discount rate of 10% (NPV 10). It is pointed out, that production tests re-enforce the certainty regarding the reservoir’s characteristics in order to appraise the commerciality of the discovery, and the data of an application that will be submitted following a well where no production tests have been carried out, will be assessed by the Commissioner based on a more conservative scenario, that takes into consideration the degree of certainty of the data.
6. The Commissioner may instruct the license holder to submit additional data and carry out additional assessments other than those detailed in these guidelines and the appendixes, or to provide clarifications therefor.
7. It is hereby clarified that the Commissioner’s opinion shall decide on any questions related to the reliability of the data and estimates.
8. Where the Commissioner has concluded that he cannot determine that a discovery has been made in the license area on the basis of the submitted data, he shall notify the license holder about his decision in writing, and this within 60 days of the date of completion of having submitted the data.

9. A license holder who wishes to apply to the Commissioner for an additional review of the application for an approval of a discovery, may do so in writing within 30 days of the Commissioner having provided his decision. The license holder may also add data to his original application or correct it, and present his claims to the Commissioner regarding the application for a new review verbally or in writing. The Commissioner shall examine the claims and notify the license holder about his final decision in writing. The above shall not detract from the license holder's right to appeal against the Commissioner's decision in accordance with the provisions of the Petroleum Law and all other statutes.
10. Where the Commissioner has concluded that the data submitted by the license holder is reliable and corroborated, prepared according to the best industry practice and includes sufficient information and reasonable assumptions, and that on the basis of this data he can determine that a discovery has been made in the license area, the Commissioner shall notify the license holder in writing his approval of the existence of a discovery in the license area, and this within 60 days of the date of having completed the submission of all the data.
11. The Commissioner may, under special circumstances and for reasons that will be stated, to extend the period mentioned in article 4 above, or to forsake one of the specific demands made in Appendix "A" of these instructions.

## **Appendix A**

The application for an approval of a discovery shall be submitted to the Commissioner in a hard copy and digital copy, and shall include the following information and documents:

### **1. Background for the application and applicant's details**

- a. Background for the application;
- b. Details of the license holder;
- c. Description of the license;
- d. Details of the operations carried out under the license;
- e. Details of the operator's contact person who can be contacted regarding the application: name, telephone number, fax number and email address.

### **2. Data on the existence of petroleum in a petroleum field located in the license area**

- a. Map of the area that includes the type and concentration of petroleum, location of the wells in the area which is the subject of the application and description of other adjacent rights and wells;
- b. Description of the geological structure of the reservoir, including structure maps, thickness maps and geological cross-sections, petrophysical data pertaining to the reservoir's layers and data on the reservoir's layers that inter alia relate to the properties of the reservoir rock, such as porosity, permeability and water saturation;
- c. Proof of the estimated discovery, including evidence of the existence of hydrocarbons in the reservoir's layers and data about the type of liquid and gasses it contains;
- d. Estimate of the gas/oil initially-in-place and an estimate of the recoverable resources prepared by an independent professional party in accordance with the guidelines for the submission of an application of the Petroleum Resources Management System (SPE-PRMS 2007). The data must be based on information obtained through well testing, sampling and logging, which combined with other reservoir parameters can confirm the existence of a certain amount of recoverable hydrocarbons within the accepted uncertainty and risk limits. The resource estimate shall be based on three dimensional (3D)

geological models, or if these are not possible on two dimensional (2D) models, and on evaluations at probability levels of 10%, 50% and 90%. Details about the methodologies the resources estimate was based on, the estimate's details and a sensitivity analysis shall be submitted as an integral part of the resources estimate.

- e. The aforesaid details must be submitted to the Commissioner in standard digital format, including the static model of the reservoir, the results of the various surveys and studies on the exploration of hydrocarbons, the raw data and the interpretation method applied thereto. In addition, previous data and studies must be referenced if such are submitted to the Commissioner.

### **3. Conceptual FDP**

- a. A schematic plan on the means for developing the petroleum field and producing the petroleum contained in the field which is the subject of the application for a discovery.

The plan shall inter alia include:

- 1. Details of the number and location of future drillings;
  - 2. The annual production forecast, until the date of completion of production;
  - 3. General description of the reservoir management, the drilling and production technologies and the facilities that will be used for extracting the petroleum;
  - 4. A preliminary timetable for installing the facilities above and below ground.
- b. For each component, it is necessary to refer to any future scenarios known at the time of the application's submission.
  - c. The reservoir's recovery factor and the gas/oil recovery volume shall be calculated according to the reservoir's development plan.

### **4. Economic calculation**

- a. Details and explanation of all evaluations and calculations that will enable the Commissioner to determine whether the discovery is commercial:
  - 1. Sale price and projected annual revenues;

2. Production quantity – based on the above data;
3. Production efficiency;
4. The investment costs, including relating to the drilling of wells, the establishment of facilities and the cost of other investments;
5. Operating costs and other ongoing costs;
6. Royalties and taxation of royalties, overriding royalties, corporate tax and the petroleum profits tax;
7. Cash flow report throughout the lifespan of the project (revenues minus all relevant costs: royalties, investment costs, operating costs, corporate tax, petroleum profits tax, overriding royalties, etc.). It is necessary to submit details on each of these parameters;

The projected net cash flow report, as stated in sub-section a1 (revenues minus costs), shall be submitted in three ways: undiscounted, discounted at a rate of 5% and discounted at a rate of 10%;

The project's net present value (NPV) shall be submitted in two ways: at a discount rate of 5% and a discount rate of 10%.

8. Sensitivity analysis – an NPV sensitivity analysis must be submitted of the changes in oil prices, the changes in production quantities and other changes, insofar as necessary;
  9. Any other information that could affect the commerciality of the discovery;
  10. Any other information that could affect the decision on the commerciality of the discovery;
  11. A summary of the calculation.
- b. The calculations and reports shall be submitted as MS Excel files. Summaries and supplementary letters shall be submitted as signed PDF files.
  - c. The reports shall be submitted using US dollar currency.
  - d. At the Commissioner's request, the applicant shall submit additional reports, data or explanations.