

LEGAL NOTICE NO. 45/2000

THE REVISED REGULATIONS ON PETROLEUM OPERATIONS

Issued by the Minister of Energy and Mines pursuant to the powers vested in him under Article 7 (1) of the Revised Petroleum Operations Proclamation No. 108/2000.

PART I PRELIMINARY

1. Short Title

These Regulations may be cited as “the Revised Regulations on Petroleum Operations - Legal Notice No. 45/2000.

2. Interpretation

In these Regulations unless the context otherwise requires-

"Commercial Discovery" means a Discovery that can be produced commercially after consideration of all pertinent operating and financial data collected during the performance of the appraisal work program and otherwise, including but not limited to Crude Oil or Natural Gas recoverable reserves, sustainable production levels and other relevant technical and economic factors, according to generally accepted international petroleum industry practices.

"Contract" means a Petroleum Agreement as defined in the Revised Petroleum Operations Proclamation No. 108/2000.

"Development and Production Operations" means operations for or in connection with the production of Petroleum .

"Discovery" means a significant occurrence of Petroleum recovered at the surface which was not previously known to have existed and which is measurable by generally accepted petroleum industry practices.

"Drilling" means operations for or in connection with the perforation of the earth's surface, whether the hole is vertical, inclined or horizontal, and includes all operations for preventing the hole from becoming filled by extraneous materials (including water) and the fitting of wellheads, or coring or logging, and any operations incidental thereto;

"Environmental Damage" means, *inter alia*, soil erosion, removal of vegetation, destruction of wild life and marine organisms, pollution of groundwater, pollution of surface water, land or sea contamination, air pollution, noise pollution, bush fire, disruption to water supplies, disruption to natural drainage and damage to archaeological, paleontological and cultural sites.

"Exploration Operations" means geological, geophysical and geochemical studies, aerial mapping, seismic surveys, investigations relating to the subsurface geology including structure test Drilling, stratigraphic test Drilling, Drilling of Exploration Wells and Appraisal Wells, and other related activities such as surveying, drill site preparation and all work necessarily connected therewith, that is conducted in connection with exploration for Petroleum.

"Factors constituting Control" means:

- Protocols, agreements or Contracts binding a Contractor with another Contractor or with third parties and relating to the conduct of operations and management of their companies, to the sharing of expenditures and profit, or to the sharing and disposal of products and, if such companies are liquidated, to the distribution of assets;
- Provisions of the Contractor's articles of incorporation and by laws relating to the head office, the rights attached to capital stock, the majority required in annual general meetings;
- The list and nationalities of any physical or legal Person which holds more than ten percent (10%) of the Contractor's capital stock;

- When the Contractor's debts maturing in more than four (4) years exceed its shareholders equity: names, nationalities and countries of residence of physical or legal Persons who hold debt in an amount of more than twenty percent (20%) of the said shareholders' equity as well as the nature and term of loans obtained from such Persons;
- And generally, any transaction the result of which is to make one or more physical or legal Persons gain or lose a controlling interest in the operations and management of the Contractor.

"Initial Regular Production" means the commencement of regular production from the first Field developed by the Contractor.

"Site Restoration" means all activities required to return a site to its natural state or to render a site compatible with its intended after-use (to the extent reasonable), after cessation of Petroleum Operations in relation thereto. Such activities shall include, where appropriate, removal of equipment, offshore structures and debris, pipelines, establishment of compatible contours and drainage, replacement of top soil, re-vegetation, slope stabilization, infilling of excavations, or any other appropriate actions.

"Well" means any opening in the ground made or being made by Drilling or boring, or in any other manner, in connection with exploration operations or development and production operations, other than a seismic hole.

Other defined words shall have the meanings ascribed to them in the Revised Petroleum Operations Proclamation No. 108/2000 or the Revised Petroleum Operations Income Tax Proclamation No. 109/2000. 23

PART II BLOCKS

3. Constitution of blocks

- (1) The Petroleum prospective territory under the sovereignty of Eritrea and its exclusive economic zone is divided into 21 blocks, numbered 1 to 21 and delineated according to the UTM grid, as shown on the map attached as Schedule 1 to these Regulations.
- (2) Each full block measures one degree by one degree square and comprises a surface area of approximately 11,800 square kilometers, and is itself divided into thirty-six sub-blocks measuring ten minutes square each comprising a surface area of approximately 330 square kilometers.

PART III BIDS

4. Applications and Petroleum Registry

Any individual or corporation intending to carry out activities relating to Petroleum Operations shall apply to the Minister in writing and every application shall include, *inter alia*, the following information:

- (a) the name, address and nationality of the applicant;
- (b) where the applicant is a corporation:
 - (i) the applicant's place of registration or incorporation, its principal place of business, its board of directors and senior management, the domicile and nationality of the members the board of directors and its capital structure;
 - (ii) the form of organization of the applicant, including information concerning the bidder's relationship with its parent company and ultimate parent company, if any, and other affiliated Persons;
 - (iii) the financial structure of the applicant and its parent company and ultimate parent company, if any, including annual reports, audited balance sheets and profit and loss statements for the past three years, and any reports which the applicant or its parent company may have filled with government agencies responsible for securities regulation during that period; and

- (iv) the Factors constituting Control of the applicant.
 - (c) the manner in which exploration and development activities would be financed if the application is successful and how performance would be guaranteed; and
 - d) the applicant's previous experience in Petroleum exploration, development, production, refining and marketing, as well as information on the applicant's research and development competence.
- (2) Where an application is submitted by a group of two or more Persons, the information referred to in sub-article 4 (1) of these Regulations shall be submitted for each Person and the group shall designate one Person as the negotiator.
 - (3) Where, following the submission of the information referred to in sub-article 4(1) of these Regulations, but prior to the selection of the successful applicant, there has been any change in the information so submitted, the applicant shall forthwith inform the Minister, specifying all particulars of the change.
 - (4) Upon payment by the applicant of the appropriate application fee listed in the schedule to these Regulations, the Minister shall cause the entrance of the application in a Petroleum Registry which shall be open for examination by the public. The information entered in the Petroleum Registry shall include the serial number of the application, the date of the application, the description of the area applied for, a map of the area applied for, the amount of fee paid and the status of the application. Each application shall be numbered sequentially and a receipt for the application and the application fee delivered to the applicant from a note book where each form of receipt is pre-numbered, with a duplicate receipt to be retained by the Minister.

5. Additional Information to be furnished

- (1) Each application shall also include, *inter alia*, the following:
 - (a) a description of the block or blocks applied for, and if the application is made in respect of more than one block, the priority assigned to each block;
 - (b) a detailed description of the exploration program proposed for the block or blocks applied for and its geographical distribution over each such block or blocks;
 - (c) the minimum work and expenditure obligations proposed to be undertaken during the exploration period;
 - (d) proposals with respect to the training of Eritrean nationals and expenditures to be incurred therefor;
 - (e) proposals with respect to the sharing of net revenues or production between the applicant and the Government;
 - (f) any agreement, formal or informal, between any Persons relating to the manner in which Petroleum Operations are to be financed;
 - (g) information relating to the geological and geophysical data on which the application is based; and
 - (h) such other matters as may be required by the Minister or which the applicant wishes the Minister to consider.
- (2) Additional information on all matters referred to in sub-article 5(1) of this Regulation shall be promptly supplied by the applicant, if so requested by the Minister at any time after the application has been received.
- (3) All such application information shall be treated as confidential for five (5) years by the Minister and shall not be disclosed to third Persons without the written consent of the applicant.

6. Selection Criteria

The following shall be the criteria for the evaluation of all applications and selection of applicants for negotiations:

- (a) the technical competence and experience of the applicant with respect to Petroleum Operations;
- (b) the financial resources available to the applicant to fulfill the petroleum exploration, development and production obligations under a Contract;
- (c) the extent to which the applicant will provide advanced technology and skills to the Eritrean petroleum industry;
- (d) the specific contents of the application; and
- (e) applicant's willingness to accept the model production sharing Contract.

7. Grant and Rejection of Applications

The Minister shall decide whether to grant or reject any application hereunder. No rights of any kind shall be created in favor of any applicant by virtue of the submission of a bid proposal and the Minister reserves the right to accept or reject any or all applications without assigning any reason therefor.

PART IV TRANSFERS, ASSIGNMENTS AND CHANGES IN CONTROL

8. Transfers and Assignments

(1) An application for approval to assign, encumber or transfer any Contract, or any rights or obligations arising out of a Contract, shall be made in writing to the Minister, and every such application shall include:

- (a) the name and nationality of the proposed assignee or transferee, and, in the case of a corporate assignee or transferee, the place of its incorporation and principal place of business;
 - (b) evidence of the proposed assignee's or transferee's technical and financial ability to assume and undertake the work obligations and other commitments set forth in the Contract concerned;
 - (c) any agreement, formal or informal, between any Persons relating to the manner in which Petroleum Operations are to be financed;
 - (d) an unconditional written undertaking by the assignee or transferee to assume all the obligations assigned and transferred by the transferor or assignor under the Contract; and
 - (e) such other particulars as the Minister may reasonably require.
- (2) In addition to any information required under Article 8(1) of these Regulations the Contractor may be requested, before the application is disposed of, to submit further relevant information within a specified reasonable time, and where such further information is not supplied within the time specified, the application shall be deemed to have been withdrawn.
- (3) The assignment, encumbrance or transfer of any Contract or interest therein shall not affect any liability of the transferor or assignor incurred before the date upon which such assignment, encumbrance or transfer takes effect.

9. Changes in Factors Constituting Control

Any Changes in Factors Constituting Control, the result of which is to make one or more physical or legal Persons gain or lose a controlling interest in the operations and management of the Contractor, requires the consent of the Minister.

PART V
WORK PRACTICES

10. Work Practices and Directions

- (1) Every Contractor shall, in carrying out Petroleum Operations, always act in accordance with generally accepted practices in the international petroleum industry.
A Contractor shall:
 - (a) ensure that all materials, supplies, machinery, plant, equipment and installations used by the Contractor, and Subcontractors comply with generally accepted standards in the international petroleum industry and are of proper construction and kept in good working order;
 - (b) use the resources of the contract area as productively as practicable, prevent damage to producing formations and ensure that Petroleum discovered, mud or any other fluids or substances do not escape or waste;
 - (c) prevent damage to Petroleum and water bearing strata that are adjacent to a producing formation or formations and prevent water from entering any strata bearing Petroleum, except where water injection methods are used for secondary recovery operations or are intended otherwise in accordance with generally accepted international petroleum industry practice;
 - (d) continually monitor the reservoir during production to the extent possible, the contractor shall, in each zone of each Well, including injection Wells, regularly measure or determine the pressure and flow conditions, quantities produced or injected, the composition of components of oil, gas and water and the location of the contact zones between oil, gas and water;
 - (e) properly store Petroleum in receptacles constructed for that purpose, and not store Crude Oil in an earthen reservoir, except temporarily in an emergency;
 - (f) drain waste oil and salt water and place refuse into receptacles constructed for that purpose and situated at a safe distance from any tank, Well, storage or other facility and dispose of waste oil, salt water and refuse in accordance with generally accepted international petroleum industry practice, avoiding pollution; and
 - (g) ensure that all Persons working for him shall, in their respective fields comply with all generally accepted international practices as well as with all relevant laws and regulations of Eritrea.
- (2) Where the Minister considers that a Contractor has not acted in accordance with such practices and in particular with the conservation and work practices, he may notify such Contractor in writing accordingly and require him to show cause, within such reasonable time as the Minister shall specify, why he has failed to act in accordance with such practices.
- (3) Where, within the time specified in any notice issued under Article 10 (2) of these Regulations, the Contractor fails to satisfy the Minister that he has acted in accordance with such practices or that his failure to so act is justified, the Minister may direct the Contractor to take such steps as may be necessary to ensure compliance therewith.
- (4) Where a Contractor fails to comply with a direction given to him under Article 10(3) of these Regulations, the Minister may direct and cause to be done all or any of the things required by such direction.
- (5) Any cost or expenses reasonably incurred by the Minister under Article 10 (4) of these Regulations shall be a debt due to the Government by the Contractor to whom the direction was given and shall be paid into the bank to be designated by the Minister.
- (6) Nothing in this Article or in any direction given thereunder shall be construed as requiring any Contractor to do anything which is not, or to refrain from doing anything which is, in accordance with generally accepted practices in the international petroleum industry.

11. Environment and, Pollution Control and Safety Measures

- (1) The Minister shall ensure that all Petroleum Operations comply with the requirements of environmental standards and the relevant laws of Eritrea.
Each Contractor, consistent with Article 30 of these Regulations, shall take necessary and adequate steps to:
 - a) ensure adequate compensation for injury to Persons or damage to property caused by the effect of Petroleum Operations; and
 - b) minimize Environmental Damage to the contract area.
- (2) If the Contractor's failure to comply with the provisions of sub-article (1) (b) of this Article and any relevant laws results in Environmental Damage, the Contractor shall take all necessary and reasonable measures to remedy the failure and the effects thereof.
- (3) If the Minister reasonably determines that any works or installations erected by the Contractor or any operations conducted by the Contractor endanger or may endanger Persons or third-party property, or cause pollution or harm wildlife and marine organisms or the environment to a degree which the Minister deems unacceptable, the Minister may require the Contractor to take remedial measures within a reasonable period established by the Minister, and to repair any damage to the environment. If the Minister deems it necessary, he may also require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such remedial measures or has repaired any damage.
- (4) The measures and methods to be used by the Contractor for the purpose of sub-article (1) (b) of this Article shall be agreed in timely consultation with the Minister upon the commencement of Petroleum Operations or whenever there is a significant change in the scope or method of conducting Petroleum Operations, and shall take into account the international standards applicable in similar circumstances, and the relevant "Environmental Impact Study" prepared, as provided in sub-article (5) of this Article.
The measures and methods, when finally agreed, shall be notified by the Contractor to the Minister and shall be reviewed from time to time in the light of prevailing circumstances.
- (5) The Contractor shall contract specialists, approved by the Minister, to carry out one or more "Environmental Impact Studies", the purpose of which shall be:
 - a) To determine the prevailing situation at the time of the studies, of the environment, and of the wildlife, marine organisms and human groups in the contract area;
 - b) To establish what could be the impact of carrying out the relevant Petroleum Operations in the contract area; and
 - c) To submit for consideration by the Minister methods and measures for minimizing Environmental Damage and carrying out Site Restoration activities.The first of the aforementioned studies shall be carried out in two parts, a preliminary one which must be ready before starting the field work for a seismographic survey which does not lie wholly offshore, and a later definitive one, applicable for the exploration Drilling stage. The second study shall be completed before starting the development and production operations, and shall be submitted as part of the development work program and work program budget submitted pursuant to Article 18 of these Regulations.
- (6) The studies mentioned in sub-article (5) of this Article shall contain proposed environmental guidelines to be followed in order to minimize Environmental Damage, and shall include, but not be limited to, the following, to the extent possible and as appropriate to the respective study:
 - Fuel Storage and Handling;
 - Use of Explosives;
 - Camps and Staging Areas;
 - Liquid and Solid Waste Disposal;

Cultural and Archaeological Sites;
Selection of Drilling Sites;
Terrain Stabilization;
Protection of Freshwater Horizons;
Blowout Prevention Plan;
Flaring During Completion and Testing of
Gas & Oil Wells;
Well Abandonment;
Rig Dismantling and Site Completion;
Reclamation for Abandonment; and
Noise Control.

(7) The Contractor shall ensure that:

- (a) Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with generally accepted international petroleum industry practice, and are monitored to ensure the same;
- (b) the pertinent completed Environmental Impact Study (EIS) is made available to his employees and to his Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and
- (c) to the extent pertinent, the contracts entered into between the Contractor and his Subcontractors, relating to the Petroleum Operations, shall include the provisions stipulated herein and any established measures and methods for the implementation of each Contractor's obligation under the relevant Petroleum Contract.

(8) Each Contractor shall prepare and submit prior to conducting Drilling, for review by the Minister, an oil spill and fire contingency plan. Such plan should be maintained during the development and production period. The contingency plan(s) shall be designed to achieve rapid and effective emergency response in the event of an oil spill or fire. In the event of an emergency or accident arising from the Petroleum Operations affecting the environment, the Contractor shall forthwith notify the Minister. In the event of any fire or oil spill, the Contractor shall promptly implement the relevant contingency plan. In the event of any other emergency or accident arising from the Petroleum Operations affecting the environment, the Contractor shall take such action as may be prudent and necessary in accordance with generally accepted international petroleum industry practice in such circumstances.

(9) The Contractor shall be liable for any Environmental Damage, without regard to fault, caused by his own activities, as well as the activities of:

(a) his Subcontractors and sub-suppliers of goods and services,

(b) the employees of the Contractor and his Subcontractors and sub-suppliers.

If there are several Contractors who are parties to the same Petroleum Contract, and one of them has been designated as the operator, claims for compensation shall initially be directed to the operator. If any part of the compensation is not paid by the operator, all Contractors may be held liable, jointly and severally.

The period of prescriptions for claims relating to Environmental Damage shall begin to run as of the time the victim has become aware of the occurrence of the damage and has established the identity of the perpetrator of the damage.

The high court of Eritrea shall have exclusive jurisdiction for all claims for Environmental Damage. 31

- (10) Unless otherwise directed by the Minister, on expiry or termination of a Petroleum Contract or relinquishment of part of the contract area, the Contractor shall:
- (a) remove all equipment and installations, structures, plants, appliances and pipelines from the relinquished area or former contract area in a manner agreed with the Minister pursuant to an abandonment plan; and
 - (b) perform all necessary Site Restoration activities in accordance with generally accepted international petroleum industry practice, and shall take all other action necessary to prevent hazards to human life or to the property of others or the environment.
- To ensure compliance with the requirements of this Article, the Minister may at any time during the currency of a Petroleum Contract, require the Contractor to post a guarantee acceptable to the Minister, or in the alternative, to fund a reserve for future estimated abandonment and Site Restoration costs.
- (11) Nothing contained in Article 11 of these Regulations shall be construed to relieve a Contractor from his obligations of indemnification as set out in his Contract.

12. Drilling Practices and Abandonment

- (1) Every Contractor shall ensure that his Well design and conduct of Drilling operations, including his casing, cementing, Well spacing, plugging operations, etc. are in accordance with generally accepted practices in the international petroleum industry.
- (2) Every Well shall be identified by a geographic name, number and geographic co-ordinates which shall be shown on maps, plans and similar records which a Contractor is required to keep, and the Minister shall at once be notified in writing of any change of the name of a Well.
- (3) Before commencing any work on or Drilling any Well, or recommencing work on any Well on which work has been discontinued for more than six months, a Contractor shall give the Minister seven (7) days' notice in writing of his intention and such notice shall include:
 - (a) the official name and number of the Well;
 - (b) a description of its precise location by reference to geographical co-ordinates;
 - (c) a detailed report on the Drilling technique to be employed, an estimate of the time to be taken and depth objective, the material to be used, and the safety measures to be employed, in the Drilling of the Well; and
 - (d) a summary of the geological, geochemical and geophysical data, and any interpretations thereof, upon which the Contractor made his proposal to drill the Well in the particular location.
- (4) Where any work or Drilling relating to any Well is discontinued for a period exceeding thirty (30) days, a Contractor shall notify the Minister in writing to that effect.
- (5) Before recommencing any work on or Drilling, with respect to any Well on which work has been discontinued for more than thirty (30) days but for less than six (6) months, a Contractor shall give forty-eight (48) hours' notice in writing of his intention to do so.
- (6) Except with the written approval of the Minister, no Contractor shall drill a Well from any surface area within the contract area which is less than one thousand (1000) meters from a boundary of such contract area.
- (7) No Well shall be drilled from within a contract area through any vertical boundary of such contract area.
- (8) A directional Well drilled under a contract area from a surface location on nearby land not within such contract area shall be deemed to have the same effect for all purposes of the Revised Petroleum Operations Proclamation No. 108/2000 as a Well drilled from a surface location within such contract area and, in such circumstances, the production of Petroleum from the contract area through a directional Well surfaced on nearby land, or

Drilling or reworking of any such directional Well shall be considered production, Drilling or reworking operations, as the case may be, in the contract area.

- (9) Nothing contained in sub-article 12 (8) above shall be construed to grant to a Contractor any leasehold interest, license, easement, right-of-way or other right which such Contractor is required to acquire under the Revised Petroleum Operations Proclamation No. 108/2000 or any other law.
- (10) Before abandoning any Well, the Contractor shall give, in the case of a producing Well, not less than thirty (30) days, and, in the case of any other Well, not less than seventy-two (72) hours' written notice to the Minister of his intention to abandon and such notice shall be accompanied by a satisfactory program for the abandonment and plugging of the Well identified in the notice.
- (11) A Contractor shall state in its notice of abandonment of a Well whether the Well is capable of providing a fresh water supply and shall comply with the provisions of Article 17 (4) of the Revised Petroleum Operations Proclamation No. 108/2000.
- (12) Subject to the terms and conditions of a Contract, a Contractor may, upon the expiration of the relevant period of notice or upon receipt by the Contractor of the written approval of the Minister of the program submitted pursuant to the preceding sub-article, whichever is earlier, commence the abandonment operations in relation to such Well; provided that in all cases the Contractor shall have given the Minister reasonable notice of the commencement of such operations and the Contractor shall:
 - (i) undertake to securely plug such Well to prevent pollution and possible damage to the deposit, and shall, except as the Minister may otherwise direct or the Contract may otherwise provide, remove all equipment, materials and facilities relating thereto;
 - (ii) not withdraw cemented strings or other forms of casing without the prior written approval of the Minister; and
 - (iii) permit a representative of the Minister to observe such operations.

13. Construction of Offshore Installations, Pipelines and Related facilities

- (1) In conducting offshore operations the Minister shall furnish the Contractor maps and charts which identify major shipping channels and the Contractor shall, in accordance with generally accepted international petroleum industry practice and any applicable law and regulations, ensure that works and installations erected shall not hinder unduly navigation or fishing or cause pollution of the sea or rivers and shall be :
 - (a) constructed, placed, marked, buoyed, equipped and maintained so that there are safe and convenient channels for shipping;
 - (b) fitted with navigational aids approved by the appropriate Government authority;
 - (c) illuminated between sunset and sunrise in a manner approved by the appropriate Government authority; and
 - (d) kept in good repair and working order.
- (2) Each Contractor shall, prior to commencing the construction, significant alteration or operation of a pipeline, pumping station, storage facility or any other related facilities for the conveyance or storage of Petroleum from a contract area, apply in writing to the Minister for authorization.
- (3) The written application submitted pursuant to Article 13 (2) of these Regulations shall be accompanied by particulars of:
 - (a) the proposed design and construction of the pipeline, pumping station, storage facility or other related facilities;
 - (b) the proposed work program and budget and the technical and financial resources available to the Contractor for the construction, alteration or operation of the pipeline, pumping station, storage facility or any other related facilities; and

- (c) the proposed route to be followed by the pipeline and the location of any pumping station, storage facility or other related facilities to be constructed, altered or operated.
- (4) Subject to any conditions which may have been agreed in a Contract and the provisions of Article 13(5) of these Regulations and upon receipt of the Minister's written approval, a Contractor may commence the construction, alteration or operation of the pipeline, pumping station, storage facility or related facilities.
- (5) Where the Minister determines that the national interest will be best served and economic benefits achieved by constructing and operating facilities common to more than one contract area (including, but not limited to, roads, pipelines, processing facilities and other transportation, communication and storage facilities), the Contractors involved shall use their best efforts to reach agreement on the construction and operation of such common facilities and shall report to the Minister on the progress of their negotiations.
- (6) Contractors may use the facilities of other Contractors (including, but not limited to, roads, pipelines, processing facilities and other transportation, communication and storage facilities), where there exists excess capacity and on payment of a reasonable compensation which includes a reasonable return on investment and provided such use does not materially interfere with the Petroleum Operations of the Contractor which constructed the facilities.
- (7) If the Contractors fail to agree on joint construction and operation of facilities under Article 13(5), or on use of such facilities under Article 13(6) of these Regulations, within a reasonable time, the Minister may require that the Contractors involved refer their dispute for resolution by expert determination in accordance with the provisions of Part IX of these Regulations.
- (8) The award of a Petroleum Contract does not preclude Persons other than the Contractor, from being permitted by the Minister, in or over the area covered by the Contractor's Petroleum Contract, to:
 - (a) lay and operate pipelines or cables, or other installations,
 - (b) explore for and extract other natural resources other than Petroleum, or
 - (c) undertake scientific research,provided this does not unreasonably interfere with the activities of the Contractor.
- (9) Nothing contained in this Article is intended, or shall be construed, to grant any leasehold interest, license, easement, right-of-way or other right which the Contractor requires. Such interests and rights shall be acquired under the provisions of Article 16 of the Revised Petroleum Operations Proclamation No. 108/2000.

14. Measurement

- (1) Each Contractor shall supply, operate and maintain equipment for measuring the volume and quality of any Petroleum produced and saved pursuant to his Contract, including gravity, density, temperature and pressure measuring devices and any other devices that may be required, and all such equipment and devices shall, prior to their installation or usage be approved by the Minister and following such installation or usage shall not be replaced or altered without the prior written approval of the Minister.
- (2) Measurement equipment and devices shall be available for inspection and testing at all reasonable times by the Minister or any Person duly authorized by him; provided that any such inspection or testing shall not unreasonably interfere with the normal operation of the facilities involved.
- (3) Each Contractor shall measure the volume and quality of the Petroleum produced and saved pursuant to the relevant Contract, consistent with generally accepted practices in the international petroleum industry, with the frequency and according to procedures which shall be approved by the Minister.

- (4) Each Contractor shall give to the Minister timely notice of his intention to conduct measuring operations and the Minister shall have the right to be present at and supervise, either directly or through authorized Persons, such operations.
- (5) Where it is determined, following an inspection or test carried out by an authorized Person, that the equipment, devices or procedures used for measurement are inaccurate and exceed the permissible tolerances approved under Article 14(1) of these Regulations which shall be established by prior approval to the installation and usage of such equipment, devices or procedures, and such determination is verified by an independent surveyor acceptable to the Minister and the Contractor, such inaccuracy shall be deemed to have existed for the entire period since the last such inspection or test, unless it is proved that the inaccuracy has been in existence for a longer or shorter period. The corrections which are due as a result of such inaccuracy during such period shall be made within thirty (30) days from the date of such determination.

PART VI RETURNS, RECORDS, PLANS, ETC.

15. Notice of Commencement

- (1) Every Contractor shall, prior to the commencement of Petroleum Operations, or re-commencement of Petroleum Operations which have been discontinued for a period exceeding ninety days, give the Minister not less than forty-eight (48) hours notice in writing of his intention to commence or re-commence such operations.
- (2) Any notice given pursuant to Article 15 (1) of these Regulations shall include the name and address of the local resident manager under whose supervision such operations are to be carried out.

16. Report of Commercial Discovery and Development Plan

In the event that a Discovery of Petroleum is made in a contract area which the Contractor considers to be commercial, the Contractor shall, prior to the commencement of development and production operations, submit to the Minister the following:

- (a) a description and map of the area containing such Discovery which the Contractor proposes to delineate as a Field defined by reference to the UTM grid;
- (b) a detailed report accompanied by supporting data and all analyses and interpretations thereof, which demonstrates that the area described in paragraph (a) above contains, alone or in conjunction with other areas, as the case may be, a Commercial Discovery; the report required by this paragraph shall be accompanied by a report on the Discovery, setting forth all relevant technical and economic data, including, but not limited to, geological, geochemical and geophysical information, areas, thickness and extent of the productive strata, petrophysical properties of the reservoir formations, PVT data, the reservoir's productivity indices for the Wells tested at various rates of flow, permeability and porosity of the reservoir formation, the relevant characteristics and qualities of the Petroleum discovered, additional geological data and evaluations of the reservoir, Crude Oil and Natural Gas reserves estimates, and any other relevant characteristics and properties of the reservoirs and fluids contained therein, as well as all evaluations, interpretations and analyses of such data, and feasibility studies relating to the Discovery, prepared by or for the Contractor, with respect to the Discovery;
- (c) a work program and work program budget for the development of such Discovery.
Such development work program and work program budget shall set out detailed proposals, including cost estimates, Drilling schedules, number and types of Wells and Well spacing, amount of reserves to be developed, production forecasts and a timing schedule, in accordance with generally accepted engineering practices and economics of the international

petroleum industry for the establishment and operation of all the facilities, installations and services required for the production, processing, storage and transportation of Petroleum from the area in which the Discovery is located, and any other activities incidental thereto. The overall safety objectives as well as the general safety arrangements shall be described. Proposals relating to production procedures shall ensure that the area does not suffer an excessive rate of decline of production, or an excessive loss of reservoir pressure, and shall ensure environmental protection conforming to generally accepted practices in the petroleum industry and these Regulations. Such development work program and work program budget shall also contain particulars of feasible alternatives, if any, considered by the Contractor for the development and exploitation of the Discovery, and economic feasibility studies carried out by or for the Contractor with respect to the Discovery, taking into account the location, meteorological conditions, cost estimates, the forecast price of Petroleum, and any other relevant data and evaluations thereof;

- (d) full information as to the Contractor's current financial status, technical competence and experience;
- (e) detailed proposals for the design, construction, establishment and operation of all facilities (including their location) for and incidental to the planning, development, extraction (including plans for injection), production, processing, metering, storage, transportation (including the routing of any proposed pipeline), sale and other disposal of Petroleum, and a proposed time table for the commencement of Petroleum production;
- (f) a detailed forecast of capital investment requirements, operating costs and sales revenues and the anticipated type and source of financing;
- (g) proposals relating to necessary infrastructure investments, training and employment of Eritrean nationals, and plans to maximize the use of Eritrean materials, products and services ; and
- (h) such other matters as may be required under the Contract or as the Minister may reasonably require

17. Quarterly Reports

- (1) Every Contractor shall submit to the Minister, on or before the 30th day of January, April, July and October, a report in respect of the preceding quarter containing or showing:
 - (a) a description of the results of all Petroleum Operations carried out by the Contractor;
 - (b) in the case of exploration operations, a summary of all geological, geochemical and geophysical work carried out by the Contractor, including a summary of all Drilling activities;
 - (c) a list of maps, reports and other geological, geochemical and geophysical data prepared by, or on behalf of, the Contractor in respect of the period concerned;
 - (d) in the case of development and production operations, the gross volume and quality of all Petroleum produced, saved, sold or otherwise disposed of from his contract area, the consideration accrued or received the quantity disposed of and identity of the Person to whom such quantity was disposed, and the balance of stocks on hand at the end of the period concerned;
 - (e) the average number of Persons employed in Eritrea, in terms of Eritrean nationals and expatriate personnel, in connection with the Petroleum Operations carried out;
 - (f) the sums disbursed in Eritrea in respect of wages, overtime, allowances or other emoluments or benefits;

- (g) the sums disbursed in Eritrea and externally, for the purchase of fuels, stores, foodstuffs or other materials, equipment or services;
- (h) the total Revenue and Capital Expenditures incurred, both in Eritrea and externally, in respect of the Petroleum Operations carried out, determined in accordance with the relevant Petroleum Contract;
- (i) all data resulting from Petroleum Operations, including, but not limited to geological, geophysical, geo-chemical, petrophysical, engineering, Well logs, production data, completion status reports, and any other data which the Contractor may compile during the term of the relevant Contract, including all reports, analyses, interpretations, maps, and evaluations thereof prepared by the Contractor and any Contractors, Subcontractors or consultants to the Contractor, or by affiliated persons, that have been obtained or compiled during the term of the Petroleum Contract.

During the exploration period of any Petroleum Contract, the Contractor shall store for the Government, at its own expense, a copy of all digital tapes of data acquired through geological, geochemical, geophysical, engineering, and Drilling operations conducted as part of the work program. For the remainder of the term of the Petroleum Contract, such data shall be stored on a calendar year basis and delivered to the Minister as soon as practicable after it has been acquired ; and

- (j) any other relevant information which may be required by his Contract or which the Minister may reasonably require.

- (2) With respect to paragraphs (f), (g) and (h) of Article 17 (1) of these Regulations, when the precise amount is not ascertainable by the date upon which the report is due, figures which are the best possible approximation shall be given.

18. Annual Work Program and Budget

At least forty five (45) days prior to the beginning of each calendar year each Contractor shall prepare and submit for review by the Minister a detailed annual work program and work program budget of Petroleum Operations and Petroleum Operations Expenditures by Quarters for the contract area, setting forth the Petroleum Operations the Contractor proposes to carry out during the ensuing calendar year. Such annual Work programs and Work program budgets shall comply with the minimum work and expenditure obligations and other provisions of the relevant Contract.

19. Annual Report

- (1) Not less than ninety (90) days prior to the beginning of each calendar year following Initial Regular Production, the Contractor shall prepare and furnish to the Minister for approval, forecast statement setting forth by Quarters the total quantity of Crude Oil (by quality, grade and gravity) and Natural Gas that the Contractor estimates can be produced, saved and transported under its Contract, during such Calendar Year, in accordance with generally accepted practice in the international petroleum industry and market demand.
- (2) On or before the 31st day of March of each year, every Contractor shall submit to the Minister an annual report in respect of the preceding year containing:
 - (a) the information required by Articles 17 (1) (d) and (h) and 21 (1) (a) to (g) of these Regulations for the entire year;
 - (b) estimates (if available) of economically recoverable reserves of Crude Oil and Natural Gas at the end of the year concerned; and
 - (c)
 - (i) the boundaries of the contract area,
 - (ii) the total surface area of the contract area in square kilometers,
 - (iii) the location of any Wells drilled by the Contractor during that year, and

- (iv) the location or routing of any platforms, pipelines and similar permanent installations.

20. Periodic Reports

- (1) During the conduct of Drilling operations, every Contractor shall be required to submit daily Drilling reports to the Minister describing the progress and results of such operations.
- (2) Every Contractor shall within one hundred and eighty days (180) of the completion of any survey, test or Drilling operations, or, in the case of data that cannot reasonably be obtained or compiled in that period, as soon as possible thereafter, submit to the Minister the following samples and data including any interpretations thereof:
 - (a) geological data including but not limited to:
 - (i) surface/subsurface maps of the area explored,
 - (ii) stratigraphic data, including measured stratigraphic surface sections, lithological groups, information relating to the porosity and the permeability of Petroleum bearing zones,
 - (iii) lithologic and/or paleontologic samples, and
 - (iv) summary reports of the geological data including references to the survey and processing techniques utilized;
 - (b) geophysical data including but not limited to:
 - (i) seismic data, including -
 - (A) shot point and elevation maps,
 - (B) interpretive contour maps on critical or outstanding mapping horizons,
 - (C) seismic record sections,
 - (D) summary reports of the seismic data including references to the survey and processing techniques utilized, and
 - (E) copy of seismic tapes,
 - (ii) gravimetric data, including -
 - (A) observed gravity value contour maps and any derivative maps,
 - (B) gravimetric survey notes,
 - (C) summary reports of the gravimetric data including references to the survey and processing techniques utilized, and coordinates of the stations, and
 - (D) recorded gravity values;
 - (iii) magnetic data, including -
 - (A) station and/or flight line base maps,
 - (B) total intensity value maps and any derivative maps,
 - (C) summary reports of the magnetic data including references to the survey and processing techniques utilized, and
 - (D) recorded magnetic values;
 - (c) Well completion reports including -
 - (i) engineering data,
 - (ii) geological data,
 - (iii) drill stem/production test results,
 - (iv) all wireline logs (at recommended scales of 1:1000, 1:500 and 1:200),
 - (v) samples and sample descriptions,
 - (vi) core samples, core descriptions and laboratory analyses of the same,
 - (vii) a composite Well log,
 - (viii) the measurements made pursuant to sub-article 10(1)(d), and
 - (ix) copies of any other analyses performed, including stratigraphic and lithological studies; and
 - (d) such other data as the Minister may, by written notice to the Contractor, reasonably require him to so submit.

- (3) Originals of records, magnetic tapes and other data can be exported by Contractors upon prior notification to the Minister, provided, however, that magnetic tapes and any other data which must be processed or analyzed outside of Eritrea may be exported if a comparable record is maintained in Eritrea and provided that such exported originals of records, tapes and data shall be repatriated to Eritrea within a reasonable time. Ownership of all original data shall vest in the State when such data is acquired.

21. Records, Accounts, etc., to be maintained

- (1) Every Contractor shall, in respect of his contract area, keep at his registered office in Eritrea, accurate records containing full particulars of the following matters:
- (a) the Drilling operation, deepening, plugging or abandonment of Wells;
 - (b) the strata and subsoil through which Wells are drilled;
 - (c) the casing inserted in Wells and any alteration to such casing;
 - (d) any Petroleum, water and other economic minerals encountered;
 - (e) the areas in which any geological, geochemical or geophysical work has been carried out;
 - (f) accurate geological maps and plans, geophysical records, representative geological samples and test results, and all interpretations thereof; and
 - (g) such other matters as may be provided in his Contract or as the Minister may reasonably require by notice in writing to the Contractor.
- (2) Every Contractor shall keep at his registered office in Eritrea accurate accounts containing full particulars of the following:
- (a) the gross quantity of any Crude Oil and Natural Gas produced and saved from the contract area;
 - (b) the grades and gravity of any Crude Oil produced and the composition of any Natural Gas produced;
 - (c) any quantities of Crude Oil, Natural Gas and sulphur, in any form, or any other minerals, gases, liquids or solids disposed of by way of sale or otherwise, the consideration received, the quantity disposed of and the name and address of the person or company to whom any such quantity was disposed;
 - (d) the quantity of Crude Oil, Natural Gas and other liquids or gases injected into a formation;
 - (e) the quantity of Crude Oil and Natural Gas consumed for Drilling and other development and production operations (other than quantities reported under paragraph (d) above) and consumed in pumping to field storage, refineries in Eritrea or the point of export;
 - (f) the quantity of Crude Oil refined by or for the Contractor in Eritrea;
 - (g) the quantity of Natural Gas treated in Eritrea by him or on his behalf for the removal of liquids and liquified Petroleum gases and the quantity of butane, propane and any other liquids, gases or any solids obtained;
 - (h) the quantity of Natural Gas flared; and
 - (i) such further information as may be required by his Contract or as the Minister may reasonably require.

22. Final Reports

Prior to the termination of a Contract, or upon the relinquishment of any part of a contract area, the Contractor shall forthwith submit to the Minister, in relation to the contract area or part thereof, copies of such documents or materials not previously furnished as the Minister may, by notice given to the Contractor, reasonably require the Contractor to so submit.

23. Modification of Duties

The Minister may, on application made to him in writing by a Contractor, by notice in writing, dispense with or modify any of the requirements of Articles 20 to 25 and Article 30 of these Regulations which are of a non-fundamental nature and whose dispensing with or

modifications do not affect or distort the essence of the obligations attendant to the said Articles.

24. Confidentiality

(1) All returns, reports, plans and other information submitted under these Regulations shall be treated as confidential by the Minister and shall not, unless otherwise provided in a Contract, be disclosed to third Persons prior to the relinquishment of the area to which they relate or prior to the end of the exploration period if such area is not sooner relinquished:

Provided that –

- (a) any surface geological maps and interpretations may be utilized at any time by the Government departments concerned for incorporation into official maps;
 - (b) annual statistical information may be published at any time by the Government in a form which does not disclose the operations of any particular Contractor; and
 - (c) the Government may make such returns, reports, plans, data and other information available at any time to professional consultants, legal counsel, accountants, underwriters, lenders and such Government entities as may need to be made aware thereof.
- (2) No Contractor shall, unless otherwise provided in a Contract, disclose any returns, reports, plans, data, records and other information compiled, received, maintained or submitted pursuant to these Regulations or the terms and conditions of a Contract without the prior written approval of the Minister.
- (3) Provided that a Contractor may make such returns, reports, plans, records and other information available, without the approval of the Minister, to professional consultants, legal counsel, accountants, underwriters, lenders, companies in which a Contractor maintains a controlling interest and such Government entities as may need to be made aware thereof or have the right to require such disclosure.
- Any disclosure made by a Contractor or the Minister to third parties pursuant to this sub-article shall only be made on terms which ensure that the information so disclosed is treated as confidential by the recipient.

25. Power of Entry and Inspection

- (1) Any Person authorized by the Minister may at all reasonable times :
- (a) enter any area, building, structure, vehicle, vessel or aircraft or examine or have examined by a qualified Person any machinery or equipment, which has been, is being or is to be, used in connection with Petroleum Operations;
 - (b) take or remove samples of Petroleum, water or other substances for the purpose of testing or analysis;
 - (c) inspect, make copies of or take extracts from, any document, book or data relating to Petroleum Operations; and
 - (d) make such examinations and enquiries and carry out such functions as may be necessary to ensure that the provisions of the Revised Petroleum Operations Proclamation No. 108/2000 and these Regulations or the terms and conditions of a Contract are being complied with.
- (2) Where there is a Person present who is or appears to be in charge of the area, building, structure, vehicle, vessel, aircraft, machinery, equipment or matter or thing in respect of which any of the powers under Article 25(1) of these Regulation are to be exercised, any authorized Person shall, before exercising any such power, identify himself to that first mentioned Person and shall, if so requested by that Person, produce evidence of his authority.
- (3) In exercising his power under Article 25(1) of these Regulations, an authorized Person shall not unduly interfere with any Petroleum Operations being carried out.

- (4) Any Person who is an occupier or Person in charge of an area, building or structure, or the Person in charge of any vehicle, vessel, aircraft, machinery, equipment, records and reports or matter or thing referred to in Article 25 (1) of these Regulations shall provide the authorized Person with all reasonable facilities and assistance for the effective exercise of his functions under these Regulations. The Contractor shall provide: (a) transportation to and from vessels and installations, (b) accommodation, (c) medical attention, and (d) other amenities and facilities which are located offshore. The costs of such facilities shall be borne by the Contractor.
- (5) The Contractor shall make available to the Minister those computer programs which are necessary to process the information submitted by the Contractor, including the necessary documentation. The Contractor shall also pay the costs of transmissions to the users' computers.

PART VII UNITIZATION

26. Unit Development

- (1) If at any time in which a Petroleum Contract is in force the Minister shall be satisfied that the strata in the contract area or any part thereof form part of a single geological Petroleum structure or Petroleum deposit (hereinafter referred to as "an oil field") other parts whereof are formed by strata in areas in respect of which other Petroleum Contracts granted in pursuance of the Revised Petroleum Operations Proclamation No. 108/2000 are then in force and the Minister shall consider that it is in the national interest in order to secure the maximum ultimate recovery of Petroleum and in order to avoid unnecessary competitive Drilling that the oil field should be worked and developed as a unit in co-operation by all Persons including the Contractors whose Contracts extend to or include any part thereof the following provisions of this Article apply.
- (2) Upon being so required by notice in writing by the Minister the Contractor shall co-operate with other Persons holding Petroleum Contract under the Revised Petroleum Operations Proclamation No. 108/2000 in respect of any part or parts of the oil field (hereinafter referred to as "the other Contractors") as may be specified in the said notice in the preparation of a scheme (hereinafter referred to as " a development scheme ") for the working and development of the oil field as a unit by the Contractor and the other Contractors in co-operation, and shall, jointly with the other Contractors, submit such scheme for the approval of the Minister.
- (3) The said notice shall also contain or refer to a description of the area or areas in respect of which the Minister requires a development scheme to be submitted and shall state the period within which such scheme is to be submitted for approval by the Minister.
- (4) If a development scheme shall not be submitted to the Minister within the period so stated or if a development scheme so submitted shall not be approved by the Minister, the Minister may himself prepare a development scheme which shall be fair and equitable to the Contractor and all other Contractors, and the Contractor shall perform and observe all the terms and conditions thereof.
- (5) If the Contractor shall object to any such development scheme prepared by the Minister he may within thirty (30) days from the date on which notice in writing of the said scheme shall have been given to him by the Minister refer the matter to binding expert determination in the manner provided in Part IX of these Regulations.
- (6) Any such development scheme or the determination of any expert in relation thereto shall have regard to any direction issued pursuant to Article 27 of these Regulations in force at the date of such scheme.

27. Directions as to Oil Fields across International Boundaries

- (1) Where the Minister is satisfied that any strata in the licensed area or any part thereof form part of an oil field, other parts whereof are in an area which lies outside the jurisdiction of

Eritrea and the Minister is satisfied that it is expedient that the oil field should be worked and developed as a unit in co-operation by the Contractor and all other Persons having an interest in any part of the oil field, the Minister may from time to time by notice in writing give to the Contractor such directions as the Minister may think fit, as to the manner in which the rights conferred by the relevant Petroleum Contract shall be exercised.

- (2) The Contractor shall observe and perform all such requirements in relation to the contract area as may be specified in any such direction.
- (3) Any such direction may add to, vary or revoke the provisions of a development plan or development scheme.

PART VIII FINANCIAL PROVISIONS

28. Fees and Rentals Schedule

- (1) The fees and surface rentals set out in the Schedule shall be payable in respect of the matters specified therein.
- (2) All fees and annual surface rentals payable under these Regulations shall be paid in advance and without demand into the bank designated by the Minister.

29. Royalty and Production Payment Schedule

- (1) A royalty or production payment shall be payable at the rates prescribed in the relevant contract in respect of the annual gross production of :
 - (a) Crude Oil produced and saved in each year from a contract area, and
 - (b) Natural Gas produced, saved and sold in each year from a contract area.
- (2) The royalty due shall be payable within ten (10) days of the end of each Calendar Quarter.
- (3) The Minister shall be entitled to take royalty due under the Petroleum Contract, wholly or partly, in the form of Petroleum in kind. Notice of such election, and of suspension or termination thereof, as well as any subsequent new election must be given at least six months in advance. The Minister may require that the Petroleum is processed, transported, stored and made available at prices, priorities and other conditions which are no less favorable than those applicable to the Contractor's own Petroleum.

30. Insurance

The Contractor and its Subcontractors shall effect and maintain for the Petroleum Operations insurance coverage of the type and in such amount as is required by law and as is customary in the international petroleum industry in accordance with good oil field practice, including blowout insurance and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government as an additional insured and shall waive subrogation against the Government. The said insurance shall, without prejudice to the generality of the foregoing cover:

- (a) Loss or damage to any installations, equipment and other assets for so long as they are used in the Petroleum Operations; provided, however, if for any reason the Contractor fails to insure any such installation, equipment or assets, it shall replace any loss thereof or repair any damage caused thereto to the extent required for the proper conduct of Petroleum Operations;
- (b) Environmental Damage caused in the course of the Petroleum Operations for which the Contractor or the Government may be held responsible;
- (c) Property loss or damage or bodily injury suffered by any third party in the course of the Petroleum Operations for which the Contractor or the Government may be liable or the Contractor may be liable to indemnify the Government;
- (d) With respect to offshore operations, the cost of removing wrecks and cleaning up operations following any accident in the course of the Petroleum Operations; and 47

- (e) The Contractor's liability for any injury to its employees engaged in the Petroleum Operations.

**PART IX
RESOLUTION OF CERTAIN DISPUTES**

31. Expert Determination

Where this Petroleum Regulation provides that a certain dispute shall be resolved by expert determination the issue involved shall be submitted for international expert determination in accordance with the Rules of Technical Expertise of the International Chamber of Commerce.

**PART X
MISCELLANEOUS**

32. Offences

Willful or negligent violation of the provisions of these Regulations or any decisions or directions issued thereunder, is punishable by fines up to two hundred thousand (\$ 200,000) US dollars.

In addition, in case of serious or repeated violations of the Contractor's obligations, the Petroleum Contract may be cancelled.

33. Repealed Laws

The Regulations on Petroleum Operations – Legal notice No. 24/1995 are hereby repealed and replaced by these Regulations.

34. Effective Date

These Regulations shall enter into force as of the date of their publication in the **Gazette of Eritrean Laws**.

**Asmara, July 15, 2000
Tesfai Ghebreselassie,
Minister of Energy and Mines.**