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MINISTRY OF NATURAL RESOURCES, ENERGY AND ENVIRONMENT

SÃO TOMÉ AND PRÍNCIPE
1ST (EEZ) LICENSING ROUND

SCHEDULE 2

PETROLEUM OPERATIONS REGULATIONS



**AGÊNCIA NACIONAL DO PETRÓLEO DE
SÃO TOMÉ E PRÍNCIPE**
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SÃO TOMÉ AND PRÍNCIPE

PETROLEUM OPERATIONS REGULATIONS

All Petroleum existing within the Territory of São Tomé and Príncipe, as set forth in the Petroleum Law, are natural resources exclusively owned by the State.

This “Petroleum Operation Regulations” define the types, terms and conditions of contracts, the Petroleum Operations and practices, including the management of resources, health, safety and environmental protection, as well as the submittal, by the holders of rights to conduct Petroleum Operations, of plans, reports, data, samples and other information, within the ambit of the terms of Article 3 of the Fundamental Law of Petroleum Operations, Law No.16/2009 which also sets forth the rules for the award of the right to conduct such activities in order to ensure that Petroleum Operations are performed in a systematic manner and on such terms that allow for its comprehensive and coordinated supervision.

Approved by the Board of the National Petroleum Agency (ANP-STP) within the ambit of the terms of Article 78 of the Fundamental Law of Petroleum Operations, Law No.16/2009

PETROLEUM OPERATION REGULATIONS

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CHAPTER I
GENERAL PROVISIONS

ARTICLE 1
Definitions

Capitalized terms used herein shall have the meaning set out in the glossary of Annex “A”, which forms an integral part of these Regulations.

ARTICLE 2
Scope and Objectives

These Regulations are applicable to Petroleum Operations as defined in the Petroleum Law set forth the rules for the award of the right to conduct such activities in order to ensure that Petroleum Operations are performed in a systematic manner and on such terms that allow for its comprehensive and coordinated supervision.

ARTICLE 3
Powers

1. The Council of Ministers has the power to:
 - (a) Approve the execution of PSC;
 - (b) Approve Development plans and any substantial amendments thereto and to the terms of any PSC;
 - (c) Define the competencies of effecting other contracts in accordance with the applicable law;
 - (d) Perform any other duties attributed under the terms of the Petroleum Law and of any other applicable legislation.

2. The Minister responsible for the petroleum industry has powers to:
 - (a) Approve the award of survey contracts;
 - (b) Approve the appointment or change of Operator;
 - (c) Authorise the exportation of original documents and samples collected during Petroleum Operations;

- (d) Approve Decommission plans;
- (e) Authorise flaring of Natural Gas under the terms of the law;
- (f) Authorise termination of the rights and duties of a holder of rights to conduct Petroleum Operations and of subsequent contractual amendments.

ARTICLE 4

Confidentiality

In accordance with the provisions of Article 61 of Petroleum Law regarding confidentiality obligations the following applies:

1. The ANP-STP, as well as Persons which cooperate with it, shall keep confidential all data and information of a technical, economic, financial or other data or information supplied by Authorized Persons or their Associates.
2. Authorized Persons and their Associates, as well as the Persons which cooperate with them, shall keep confidential all data and information supplied by the ANP-STP.
3. The duty of confidentiality in respect of the data and information referred to above shall expire after the period set forth in the relevant Authorization.
4. The obligations of confidentiality as referred to in this Article and in Article 61 of the Petroleum Law shall not be applicable whenever such data or information is to be provided to other Persons as and when required by applicable law.

Without prejudice to the aforementioned the ANP-STP may make general statements on the Petroleum Operations conducted under a contract and the probabilities of discovering Petroleum.

CHAPTER II

OPERATOR

ARTICLE 5

Operator Requirements

1. The Operator must have the following requirements:
 - (a) Capability and experience in Petroleum Operations;
 - (b) Technical and operating capability supported by research and development competencies;
 - (c) Relevant experience in the type of activities in which it seeks to conduct operations under the corresponding PSC;
 - (d) Proven development and project management experience;
 - (e) Efficient organisational structures.

ARTICLE 6

Operator Duties

1. The Operator will be the Person responsible for reporting to the ANP-STP at all times in respect of the daily management and performance of Petroleum Operations, including *inter alia*, the following:
 - (a) The establishment and implementation of safety procedures and acceptable criteria for risk assessment;
 - (b) Informing the ANP-STP on the status of scheduled activities;
 - (c) Involving its personnel in the development and update of the Management System;
 - (d) Paying compensation in connection with the creation of public rights of access and expropriation of rights;
 - (e) Complying with applicable regulations to Petroleum Operations;
 - (f) Payment of the performance bank guarantees set by ANP-STP.

CHAPTER III
PLANS AND EVALUATIONS

ARTICLE 7
Types of Plans

1. All Petroleum Operations shall be subject to thorough and systematic planning.
2. The Operator shall submit the following plans to the ANP-STP for evaluation and approval:
 - (a) Exploration activities;
 - (b) Development and Production;
 - (c) Decommission.
3. The system regarding the submittal of reports and scheduling of meetings during the planning and execution phases of Petroleum Operations should be agreed upon between the Operator and the ANP-STP.
4. Plans submitted to the ANP-STP should be the final plans proposed to be used by the Operator for the respective Petroleum Operations.
5. Data, studies, interpretations, evaluations of possible risk factors, maps, models, and information on financing funds which support the Operator's plans and decisions shall be made available to the ANP-STP to support the plans submitted.

ARTICLE 8
Exploration Activities Plan

1. Each phase of the Exploration activity, including seismic surveys and drilling, shall be subject to a plan prepared in consultation with the AMP-STP and in accordance with the PSC.
2. The plan shall include, but is not limited to, the following information:
 - (a) Accurate data on the area to be explored, mentioning the location of both the facilities and equipment;
 - (b) Schedule of activities;
 - (c) Exploration methods and instrumentation;

- (d) Equipment chosen for use, transportation of equipment, including, in the case of offshore Exploration, the speed of vessels chosen for use, the length of seismic cables, the origin of the equipment, and unloading areas, as well as mention to the harbours which are planned for use as bases or ports of call for support of Exploration activities;
 - (e) The form in which the results will be made available;
 - (f) Assessment of environmental impact.
4. Each plan shall be submitted to the ANP-STP no less than five weeks prior to the date of commencement of each activity.
 5. Prior to commencement of each Exploration activity, the Operator shall ensure that the respective operations will be conducted in a safe environment and without affecting other activities in the area.

ARTICLE 9

Evaluation of a Petroleum Reservoir

1. The Operator shall report any discovery (commercial or not), within 45 days of the date of such discovery, to the ANP-STP, and keep the ANP-STP informed of the test results and their evaluation.
2. The Operator shall execute, subject to prior written notice to the ANP-STP, an Appraisal program to evaluate the discovery which includes drilling activities.
3. The Operator shall submit to the ANP-STP, within six months of the completion of the Appraisal program, an Appraisal report containing the results of the performed activities and their evaluation.

ARTICLE 10

Declaration of Commerciality

1. The Operator shall undertake the technical and commercial evaluation necessary to establish whether a discovery may be commercially developed.
2. The Operator shall, within two (2) years from the submittal of the Appraisal report, notify the ANP-STP if the Petroleum reserves covered by the discovery may be commercially developed, and such notice shall include a Declaration of Commerciality comprising of a complete description of the relevant data, surveys and evaluations which led to such conclusions.

3. If the report referred to in paragraph 2 above concludes that the Petroleum reserves covered by the discovery, either considered individually or jointly with other Petroleum reserves within the Contract Area, may be commercially developed, the corresponding notice will be deemed to be a Declaration of Commerciality.
4. The Operator's Declaration of Commerciality shall comprise the basis for the ANP-STP to decide whether the State will exercise the option to participate in Development and Production of the Petroleum reserves, for which purpose the ANP-STP may request additional information and clarifications from the Operator.
5. Should the Operator consider the Petroleum reserves comprised by the discovery unsuitable for a practicable commercial development, the commerciality report shall address the necessary measures to render their development commercially viable and propose additional tasks for the evaluation of the commerciality of said Reservoirs.

ARTICLE 11

Unitisation

1. If a Petroleum Reservoir is believed to extend into neighbouring areas which are covered by other PSC, the Operator(s) shall promptly report the matter to the ANP-STP and include detailed information on the subject matter in the report of Appraisal operations.
2. In the cases provided for in paragraph 1 above, the Operators of the respective Blocks shall endeavour to reach an agreement as to how the Appraisal work can be performed through their joint and co-coordinated efforts.
3. Should there be reasonable evidence to suspect that one or more of the Petroleum Reservoirs covered by the commercial development of a discovery extends into neighbouring Block(s), the Operator(s) of the respective Blocks shall, within six (6) months of the Declaration of Commerciality, in good faith and acting reasonably, seek to reach agreement on the most reasonable and effective manner of unitising the Development and Production of said Petroleum Reservoir(s). If such an unitisation agreement is not reached, the ANP-STP may serve notice to the relevant Operators requiring that such an agreement should be concluded and executed within three (3) months of that notice. If the Operators fail to reach an agreement within the mentioned deadline, the ANP-STP may refer the matter for the opinion of a sole expert.
4. The approval of a Development plan of a Petroleum Reservoir which covers more than one Contract Area will be contingent upon the signing of an unitisation agreement between the respective Operators.

ARTICLE 12

Development Plan

1. The Development plan shall include, among others, the following:

- (a) Description of the strategy and of the Development model, as well as the criteria for the choices that have been made, description of subsequent Development stages, if any, tie-ins with other fields, and, if necessary, coordination with other Petroleum Operations;
- (b) Description of geological and Reservoir engineering aspects, with particular references to detailed analyses and evaluations of the geological, Reservoir engineering and Production engineering features and considerations which form the basis for the selection of the Production system;
- (c) Description of eventual additional planned Exploration activities;
- (d) Projected Production schedule and studies on the regularity of Production and transportation, including an evaluation of the impact of connections to existing or planned facilities and fields;
- (e) Status of permits for the land use and exploitation and authorisation to conduct Petroleum Operations in land or offshore in compliance with the law in force;
- (f) Technical description of the installations and equipment to be used, including the number and type of wells, equipment for Production, processing, the use of Petroleum as fuel on the Production site, injection of gas and water, measurement and storage, oil and gas pipelines between the various installations, including the transport system for buyers, storage or loading facilities, as well as technical solutions aimed at preventing and reducing the flaring of Natural Gas and environmentally harmful discharges and emissions;
- (g) List of the quality standards which will be implemented;
- (h) Information on the Management System, including information on the Development's planning, organisation, and implementation;
- (i) Description of the overall safety objectives and the fundamental safety and work environmental assessments which form the basis for the preference of a certain Development model, including a description of technical measures for emergency purposes;
- (j) Evaluation of the environmental impact,
- (k) Summary of the main implementation, operating and maintenance policies and procedures which will be implemented;
- (l) Information on evaluations and economic analyses which have been decisive for the selection of a specific Development plan, and estimates of capital costs, operating and Decommission costs, including a description of project's financing scheme;

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- (m) Information on the shutting down and abandonment of facilities and proposed measures to ensure its financing;
 - (n) Schedule for the implementation of the Development.
2. The approval process shall be as follows:
- (a) The Operator shall draw up a Development program, which shall be submitted to the ANP-STP for review and approval in the manner and within the deadline set forth in the applicable PSC.
 - (b) The deadline for submission of the Development program shall be determined by the ANP-STP after the conclusion of the respective unitization process and after consulting the Operator(s).
 - (c) The information to be included in a Development program shall be defined by the ANP-STP by means of regulation.
 - (d) The ANP-STP shall, within ninety (90) days of receiving the Development program, review and approve or reject the same. The decisions of the ANP-STP shall be given in writing.
 - (e) The Development program may, at any time, be amended on the express and duly substantiated request of the Operator to the ANP-STP; the deadline specified in paragraph 2.(d) above shall apply to the review and approval or rejection of any request for amendments.
 - (f) The Development program may not be implemented before the written approval of the ANP-STP is given.
 - (g) The ANP-STP may in exceptional circumstances, when the conditions of the Block and the interests of the State so demand, authorize a Operator to commence certain activities provided for in a Development program before the same has been formally approved.

ARTICLE 13

Decommission Plan

- 1. The Decommission plan must include, without limitation, the following:
 - (a) Termination of the Authorization; or
 - (b) When no longer required for Petroleum Operations; or
 - (c) The consent in writing of the ANP-STP and in accordance with the terms and conditions set out in the consent.

- (d) The Authorized Person shall prepare and deliver to the ANP-STP a detailed Decommission plan at least one (1) year in advance of the estimated date of completion of related Petroleum Operations or termination of the Authorization for the Decommission of all wells, facilities and equipment, the rehabilitation of the landscape and the continuation of Petroleum Operations, if applicable, upon the earlier of (i) six (6) years prior to the estimated commencement of Decommission operations, (ii) the date on which fifty percent (50%) or more of the recoverable Petroleum from the Development and Production area has been produced or (iii) one (1) year prior to the termination of the applicable Authorization or the proposed date of Decommission of any Production area included therein. Such plan shall be subject to the prior written approval of the ANP-STP and may be amended by the Authorized Person and the ANP-STP from time to time to take account of further Petroleum Operations.
- (e) The plan for Decommission shall provide the ANP-STP with sufficient information in order for it to properly assess the future of the applicable Authorized Area or part thereof from a technical, financial, safety and environmental standpoint and include details of the reserve fund to be established, if applicable.
- (f) An Authorized Person subject to a PSC must establish and contribute to a reserve fund to provide for all future Decommission costs. Such reserve fund must take the form of an escrow account to be opened in the name of the Authorized Person and the ANP-STP with an international financial institution acceptable to each of them. The amount to be deposited by the Authorized Person, as well as the timing of such deposits, shall be as established in the applicable PSC. After completion of all Decommission operations in accordance with the approved plan for Decommission, in the event that the reserve fund established is greater than the actual cost of Decommission liabilities, the account balance shall be distributed between the Authorized Person and the ANP-STP, in the same proportion as the allocation of Petroleum revenue at the time of Decommission operations, if applicable, or otherwise distributed to the ANP-STP. In the event that such reserve fund shall be insufficient to cover such costs, the Authorized Person shall be liable for the remainder.
- (g) Upon the Decommission of any Authorized Area or part thereof, the Authorized Person shall proceed to properly Decommission the well or wells in question and shall also take all other measures to Decommission facilities and other equipment and rehabilitate the landscape, all in accordance with the approved plan for Decommission, the applicable Authorization, Good Oil Field Practice, international standards for the protection of the environment and the laws of São Tomé and Príncipe.
- (h) Should the Authorized Person fail to deliver the plan for Decommission referred to above within the prescribed period or if such plan for Decommission is not carried out within the timeframe provided for therein, the ANP-STP may take all measures it deems necessary to ensure that all Decommission operations are prepared and executed in full, at the sole expense and risk of the Authorized Person.

- (i) In accordance with the terms of the applicable Authorization, the ANP-STP has the right to take over any Petroleum Operations proposed to be Decommissioned by an Authorized Person whereupon the reserve fund shall be transferred to the sole name of the ANP-STP, and the Authorized Person shall have no further liability in respect of Decommission operations in the applicable Authorized Area or part thereof. The ANP-STP is entitled to require the Authorized Person to provide all services and facilities to the ANP-STP in respect of any Petroleum Operations taken over by the ANP-STP for a fee to be agreed.

ARTICLE 14

Reports, Meetings and Plans

1. Prior to the commencement of the Development, the Operator and the ANP-STP shall agree upon a system of delivery of reports, scheduling of meetings and review of important phases of the Development activity.
2. The reports, meetings, and reviews set out in paragraph 1 above shall deal with an up-to-date status of Petroleum Operations, highlighting any variation in connection with the approved Exploration, Development or Decommission plans of activities.
3. The commencement of any of the following Petroleum Operations is deemed as an important phase of Development:
 - (a) Exploration or Production drilling;
 - (b) Regular Production;
 - (c) Substantial modifications or alterations;
 - (d) Decommission.
4. When any one of the phases of Development, as mentioned above, is reached, the Operator shall agree with the ANP-STP the timetable for the review of the plan and to provide additional information if required. If the ANP-STP has not raised objections to the plan within the limit set out in the agreed timetable, the Operator may carry on its activity in accordance with the submitted plan which shall be deemed approved.

CHAPTER IV
MANAGEMENT OF PETROLEUM OPERATIONS

ARTICLE 15
General Duties

1. In conducting Petroleum Operations, the Operator shall develop, implement, execute and update policies, strategies, evaluations, plans and techniques to:
 - (a) Ensure that Petroleum Operations are conducted in compliance with the established health, safety and environment policies and procedures and protection of the environment against pollution.
 - (b) Ensure that the Petroleum Operations are carried out using established and up to date technology and commensurate with technological development, and in accordance with the agreed commercial principles,
 - (c) Execute Petroleum Operations so as to optimise the extraction and use of Petroleum resources whilst ensuring the maximum recovery of commercially recoverable Petroleum in the existent Petroleum Reservoirs;
 - (d) Ensuring that all practical measures are taken in order to prevent the prejudicial entry of water or any other damage to the Petroleum-bearing formation which may be found during drilling, or upon abandonment of any well;
 - (e) Control the flow and preventing of the escape or loss of Petroleum;
 - (f) Avoidance of waste of the natural energy in the Reservoir;
 - (g) Identifying and remedying the existing or potential deviations in relation to the plans;
 - (h) Ensuring compliance with the regulatory principles and requirements;
2. The Operator has the responsibility to ensure that all of its personnel, or those of its contractors, are fully informed of the content of these Regulations.
3. The failure of the Operator to comply with the requirements of paragraph 2 above does not, in any way whatsoever, affect or diminish the responsibility the Operator and of each employer and employee to execute the work in compliance with these Regulations.

ARTICLE 16

Management System

1. The Operator shall implement a Management System which:
 - (a) Ensures the systematic management and implementation of its activities;
 - (b) Contributes towards the continuous effort in improving Petroleum Operations;
 - (c) Provides for comprehensive and coordinated regulatory supervision of the Petroleum Operations;
2. All Persons and their respective employees, Affiliates and contractors of any tier or third parties engaged in Petroleum Operations under the respective PSC shall be fully informed about the Management System and participate in the development, introduction and update of the same.
3. The Management System shall, inter alia, included the following elements:
 - (a) Description of the objectives of the Petroleum Operations;
 - (b) An overview of the relevant rules and regulations that are applicable and a description of the mechanisms for keeping information updated with regard to amendments or new regulations;
 - (c) Specific applicable requirements in respect of safety, work environment, environmental protection, and resource management that comprise the basis for the planning, implementation and updating the Petroleum Operations;
 - (d) Means of organisation of the planned activities, including a description with the distribution of responsibilities, authority and duties;
 - (e) Description of personnel required and respective qualifications;
 - (f) Guidebook of procedures, instructions, or other rules describing the planning and implementation of activities in order to achieve the proposed objectives;
 - (g) Procedures or instructions manuals describing the handling of events of breach of requirements;
 - (h) Plans for updating and further development of the Management System.

ARTICLE 17

Qualifications and Training of Personnel

1. The Operator shall have an independent organisation on site in order to allow for the evaluation of the safety and effectiveness of Petroleum Operations.
2. All staff engaged in Petroleum Operations shall possess the necessary qualifications and training for the efficient execution of work.
3. Specific criteria shall be established for the identification of relevant tasks with regards to safety and protection of the environment, as well as for the selection of personnel responsible for overseeing the project.
4. The Operator shall ensure that all personnel engaged in Petroleum Operations, whether its own personnel or those of its contractors, are thoroughly familiar with the facilities, policies and relevant operational procedures. The Operator shall also equally ensure that such personnel have adequate training and experience in dealing with emergency situations.

ARTICLE 18

Documentation and Samples

1. The Operator shall prepare, maintain and disclose to the ANP-STP the material and documentation available for ensuring and proving the safe and effective execution and delivery of Petroleum Operations.
2. The Operator shall implement and maintain updated filing or storage systems of documentation and samples necessary for the prudent performance of Petroleum Operations and capable of allowing systematic access thereto and rapid recovery of data.
3. The Operator shall supply the ANP-STP with any documentation or samples gathered during Petroleum Operations, and proceed with the delivery of copies of the documentation or sample duplicates when such is requested by the ANP-STP.
4. The original documentation and samples collected shall remain in São Tomé and Príncipe and their exportation is subject to the prior approval of the ANP-STP.
5. Such documentation shall includes:
 - (a) Descriptions of geological and geophysical work carried out in the Contract Area;
 - (b) Data and results from seismic acquisition programmes and other geophysical and geological surveys;
 - (c) Maps, interpretations and reports resulting from geological, geophysical and technical work regarding the Contract Area;
 - (d) Records of drilling, logging, deepening, test, plugging and abandonment of wells;

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- (e) Records of the strata and subsoil penetrated by wells;
 - (f) Description of the original well outline, enhancements and any alterations;
 - (g) Records relating to the encountered occurrences of Petroleum, water, other economically viable minerals or dangerous substances;
 - (h) Interpretations, analysis, evaluations and studies undertaken on the basis of samples;
 - (i) Operational records such as pressure, temperature, flow, alarm and shut down status records;
 - (j) Inspection, accident and discharge reports.
6. Originals or certified copies of the acquired geophysical data, drilling records, well logs and well test data shall be submitted to the ANP-STP on magnetic tape, or in other appropriate medium and formats as previously agreed upon, such data shall be of good quality and capable of being reproduced.
7. The Operator shall file the documentation mentioned in this Article for the duration of the PSC or the pipeline contract, unless otherwise agreed with the ANP-STP. The original documentation and sample collections shall be delivered to the ANP-STP upon the termination of the contract.

ARTICLE 19

Procurement

- 1. The procurement of goods and services is made by means of public and competitive tender process unless otherwise agreed in advance with the ANP-STP.
- 2. The quality, price, delivery deadline and guarantees offered shall be taken into account for the purpose of evaluating bids to the tender process.
- 3. The Operator shall give preference to the purchase of local goods and services when such goods and services are internationally comparable in terms of quality, availability, quantity required, and are offered at prices inclusive of taxes not higher than ten percent of the available imported goods.
- 4. The public competitive tender for the procurement of goods and services in all major contracts shall comply the following principles:
 - (a) Invitations for pre-qualification or bidding shall be sent to a reasonable number of suppliers to the extent that they are able to deliver the goods or render the services required. A reasonable time limit shall be provided for the preparation of bids. All selected suppliers shall receive the same specifications.

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- (b) Specifications, tendering time limits, and terms of delivery must not be drafted so as to unduly exclude competitive suppliers.
 - (c) A copy of the list of pre-qualified bidders shall be submitted to the ANP-STP.
 - (d) The ANP-STP shall be informed of the Operator's decision prior to the award of major contracts.
5. If the ANP-STP, after having discussed the matter with the Operator, determines that the bidding procedures were not duly complied with, the ANP-STP may request the Operator to reconsider its decision.

ARTICLE 20

Insurance

1. The Operator shall possess adequate insurance in accordance with the São Tomé e Príncipe legislation in force from time to time and internationally established requirements.
2. insurance shall provide coverage for the following risks:
 - (a) Damage to the facilities;
 - (b) Damages caused by pollution;
 - (c) Third party liability.
 - (d) Removal of scrap and cleanup after accidents;
 - (e) Labour insurance for all of the Operator's employees engaged in the activities.

CHAPTER V

DESIGN AND CONSTRUCTION REQUIREMENTS

SECTION I

PRODUCTION FACILITIES

ARTICLE 21

Design and Construction

1. Facilities and work sites shall be planned, designed, built, equipped, and set up so as that the various Petroleum Operations can be performed safely and efficiently in accordance with good industry practices.
2. The Operator shall base his design on internationally recognised principles, codes and standards. Such principles, standards and codes shall be listed in the Development plans. The facilities and work sites shall also meet the requirements of all applicable national standards and codes. Different standards should not be applied within the same area.
3. Planning of new facilities and modifications to existing facilities shall take into account the available equipment, as well as new technologies, so as to maintain the Management System objectives set forth in these regulations.
4. Deficiencies which may trigger danger or accident situations must be considered during the design, construction or operation and Production phases to prevent their occurrence.
5. All facilities and work sites shall be kept in a proper and safe working condition during construction activities.
6. Functional requirements of the facilities must be documented, defining the operating lifetime of the design, for which purpose possible variations in flow rates, pressure conditions, temperatures, composition and nature of fluids shall be taken into account.

ARTICLE 22

Design of Facilities

1. The operating and maintenance requirements of the facilities shall be written down during the design phase in order to provide the grounds for the conception of the corresponding procedures.
2. While designing the facilities, the Operator shall ensure the best possible access for their inspection and maintenance.

3. Facilities shall be designed so as to ensure means of access and evacuation and shall have available adequate rescue equipment.
4. Facilities shall be designed and built so as to reduce the risk of fire and explosion. Systems and components shall be designed to minimise the probability of blow out, fire and explosions, as well as to enable effective fire-fighting and to limit the extent of personnel injury and equipment damage. Appropriate detection systems for fire and gas shall be installed.
5. Facilities shall be classified in terms of explosion risk and divided into zones according to such criterion, to internationally accepted standards and to good industry practices. Appropriate security zones shall equally be installed around each facility.
6. Buildings containing hydrocarbons must be ventilated and shall, if necessary, have built-in pressure relief panels.

ARTICLE 23

Risk Analysis

1. The Operator shall regularly perform mandatory risk analyses of the facility's operations and activities associated therewith, which shall be deemed part of the layout and designs.
2. Risk analyses shall be carried out in order to identify the potential risk to people, environment and goods, including financial interests, of single or sequential failures that may occur.
3. The risk analyses should take into account, among other elements, the design of the facilities, the operations to be carried out, equipment, work processes and training programmes for personnel engaged in the activity.
4. Measures shall be taken in the design of the facilities and planning of operations to eliminate or reduce the risks identified through risk analyses.
5. Risk analyses shall be carried out on a regular basis throughout the progress of Petroleum Operations.
6. Special emphasis shall be given to incorporation of the risk analysis results into operating manuals, procedures and reporting requirements.

ARTICLE 24

Project Supervision

1. The entity responsible for the supervision of the project shall be an independent organisation or entity from the entity executing the project.

2. If reference is made to recognised standards but with different specifications, the supervision carried out according to such standards shall be included as part of the entire verification.
3. The evaluation of the different methods of supervision to be used in the various phases shall take into account the complexity and critical intensity of the project.

ARTICLE 25

Registration of Data

1. The ANP-STP may require that facilities shall be equipped, at the cost of the Operator, with instruments for registration of data which may be deemed important to the conduction of Petroleum Operations.
2. The Operator is equally responsible for the maintenance, registration, and data processing and submittal of reports.

ARTICLE 26

Foundation Structures

1. The foundation structures meet the following minimum standards:
 - (a) Operate satisfactorily under normal conditions considering, among other factors, deteriorations, displacements, stability and vibrations;
 - (b) Have adequate safety mechanisms so as to resist accidents caused by their wearing out;
 - (c) Safely resist all potential deformation events such as ruptures or large inelastic displacements;
 - (d) Have adequate safety mechanisms against situations of potential risk or accident;
 - (e) In case of floating structures, to safely resist free drifting, capsizing and sinking.
2. The structural system, including its features and components, should be designed in such a way to:
 - (a) Show optimum ductile properties and minor susceptibility to local damage;
 - (b) Be simple to construct;
 - (c) Represent a uniform distribution of strains;
 - (d) Resist corrosion and other types of deterioration;

- (e) Allow simple monitoring, maintenance and repair activities;
- 3. The materials selected for the foundation structures shall be suitable for this purpose and its characteristics shall be documented. During the manufacturing of components and connections, these must be subject to the specifications of the manufacturer, to tests and controls which shall take into account the importance of each component to the safety of the structure. The structure must be protected against potential deteriorations.

ARTICLE 27

Corrosion and Erosion Protection

- 1. Due consideration must be given to the necessary measures to protect facilities from external and internal corrosion and erosion, as well as temporary protection during their construction.
- 2. Systems, equipment and procedures for permanent monitoring of corrosion and erosion shall be developed and installed to ensure safe operations throughout the lifetime of the facilities.

ARTICLE 28

Electrical Systems and Instruments

- 1. Electrical systems and instrumentation shall be designed and installed so as to reduce explosion risks to a minimum, to avoid personnel accidents, to ensure support to emergency operations and to maintain Production regularity. Electrical facilities shall comply with the appropriate area classification, as well as with local and international standards for petroleum facilities.
- 2. Instruments for monitoring and registration of data regarding safety conditions should be connected to an emergency source of power.

ARTICLE 29

Telecommunications

Facilities shall be equipped with adequate telecommunications systems for ensuring its safety, its operation in compliance with the terms of the São Tomé and Príncipe legislation in force, and the implementation of remote control telecommunication systems may be additionally required.

ARTICLE 30

Lifting Equipment

1. The installation of lifting appliances is mandatory and their operation shall be planned and carried out with so as to prevent errors or operational failures from developing into danger or accident situations.
2. The Operator shall implement technical, operational or procedural measures to counter danger or accident situations.
3. The Operator shall carry out risk analysis so as to identify the probability and consequences of the occurrence of single or sequential failures during the lifting operations and should take into account measures to reduce risks.
4. Lifting appliances and lifting gear shall be designed, operated and maintained according to national and internationally recognised standards. The selection of lifting appliances and lifting gear shall take into account the relevant standards and climate conditions.
5. Prior to the commencement of their operation, lifting appliances and lifting gear shall be examined by a skilled technician who will issue a certificate of compliance and lifting appliances and lifting gear shall thereafter be examined at least once every twelve months.
6. After each repair or modification, lifting appliances and lifting gears shall be subject to another certification by a skilled technician.
7. The Operator shall ensure that personnel engaged in lifting operations have the necessary qualifications for the safe operation of equipment.

ARTICLE 31

Work Environment

1. During design phase of the facilities, a work environment programme shall be prepared outlining the manner in which safety and work environment requirements will be achieved. Safety officers will have an active role in the preparation of the programme.
2. Work and settlement areas, access to facilities, transport routes and lifting appliances shall be designed so that work operations and the conveyance of people, equipment and goods may be carried out in a logical and satisfactory manner.
3. Living quarters and compounds shall be designed, equipped and located in areas which provide acceptable safety, environment, and health standards. The Development should be conceived so as to enable the separation of living quarters and encampments from drilling areas and auxiliary systems. A description of the needs of personnel shall be documented and the capacity of living quarters and encampments should be projected so

as to comply with said description. Living quarters and encampments areas shall possess adequate recreation facilities.

4. Workplaces, equipment and work operations shall be organised in order to enable personnel to safely perform their work. This entails that:
 - (a) Workloads shall be planned in order to enable personnel to achieve, on an individual basis, reasonable effectiveness of their work efforts;
 - (b) Personnel shall not be subject to adverse conditions which may result in injury or disease;
 - (c) Workplaces and equipment shall be conceived and organised so as to enable a correct attitude and work posture on an individual basis;
 - (d) Equipment for monitoring, control and supervision of Production processes, technical appliances or work operations, shall be designed and organised in accordance with ergonomic principles deemed adequate for a proper man-machine interaction;
 - (e) Hand tools and work equipment in use shall be appropriate for preventing injuries and diseases to personnel.
5. Safety appliances for machinery shall be used so that employees are safeguarded from contact with dangerous equipment parts or being injured during their operation.
6. The workplace shall possess lighting conditions capable of ensuring that the work can be carried out in a safe and prudent manner in such aspects as:
 - (a) Lighting shall contribute towards emphasising terrain discrepancies, physical objects, and protruding parts;
 - (b) Lighting poles shall be designed and positioned so as to prevent accumulation of dust and corrosion, as well as to allow that their maintenance and change of light bulbs is carried out in a safe manner.

ARTICLE 32

Safety Measures during Construction

1. Preference shall be given to the use of materials which are harmless either in isolated use or in combination with other materials or gases.
2. The properties of materials shall be evaluated with regard to emissions of dusts, gases or vapours capable of producing adverse health effects, as well as to other effects on the work environment conditions and the well being of the personnel. The evaluation shall also comprise the exposure properties of materials to fires or excessive heat.

3. Plans shall be implemented in order to ensure that the equipment given to personnel is suitable for the safe performance of their work.
4. The danger of chemical exposure capable of producing adverse health effects, such as the storage, use, handling and disposal of chemicals, and in work operations and/or processes which produce chemical substances shall be reduced to a minimum. The danger of accidents and illnesses caused by long term exposure to chemicals shall equally be reduced to a minimum.
5. Personnel exposure to noise pollution shall be minimised to the extent possible mainly by means of the use of adequate technology such as:
 - (a) Noise levels within the facilities' areas shall comply with the possible levels that may be attained with the application of current technological standards.
 - (b) No employee shall endure exposure to noise levels which may harm his/her hearing;
 - (c) Warning signs shall be posted at the entrance of divisions or zones with a noise levels harmful to hearing.
6. Vibration in the form of whole-body vibration and hand-arm vibration shall be avoided to the extent possible.
7. Preventive measures shall be defined for their implementation in weather conditions which justify the restriction or suspension of work when such is performed in the open air. The conditions which require the closing or abandonment of facilities shall also be defined.
8. Safety signs shall be posted in accordance with internationally accepted standards at the entrance of divisions and areas close to equipment capable of causing injuries or harmful health effects to personnel.

SECTION II

Drilling

ARTICLE 33

Well and Drilling Installations

1. Suitable equipment and materials shall be used in the implementation of drilling and well activities and such equipment and materials shall be protected from anomalous loads. Separate well intervention units and equipment shall be designed, built, installed, tested, used and maintained in accordance with these Regulations.

2. The Operator shall establish safety procedures and tolerance criteria for risks and carry out the risk analysis as set out in Article 23 of these Regulations. A general safety objective for drilling and well activities is that no single failure shall entail life-threatening situations for the personnel involved or significant damage to material and to the environment. This applies both to operational errors and to failures related to equipment directly used in operations, as well as to equipment with auxiliary functions.
3. During drilling and well activities, at least two independent and sufficiently tested barriers shall be available in order to prevent an accidental flow from the well. If one barrier fails, well operations may not proceed before its restoration. A barrier plan shall be established for each projected operation to be carried out from a facility during the design phase. Operational requirements shall be defined with regard to the drilling capability of equipment and to its control, as well as to operative and mobilisation capability so as to comply with the barrier plan. All systems and components shall meet these requirements.
4. The installation, its classification as a safety area and the main safety plan shall be taken into account during the phases of design, manufacture, installation and operation of control systems. The control systems shall be operable by independent panels which must be conveniently located. The possibility of reducing the Operator's failures or its consequences shall be taken into account in outlining or designing of control systems. In the event of failure of the control system, its components with critical functions shall remain in good conditions or be transported onto a safe location.
5. Work areas within drilling and well activities shall be arranged so as to ensure adequate safety for personnel and operations. Special attention must be given to storage, assembly, disassembly and suspension of drill pipe, drill collars and casing in the rotary table, as well as to transport between the storage location and the drilling platform.
6. Pressure exposed equipment shall be designed, built, tested and maintained in accordance with requirements contained in these Regulations and with the internationally accepted technical standards. Safety devices shall be tested in accordance with established procedures. When safety devices are activated to avoid excessive pressure limits, a pressure control system shall be implemented so as to avoid injuries to personnel, to the environment and to assets and financial interests.
7. The facility shall be equipped with a tank with sufficient capacity to support the quantity of drilling fluid necessary to ensure full control of the well and to contain, at all times, sufficient quantities of drilling fluids and other substances. The drilling fluid system shall have adequate capacity to support a rapid increase of drilling fluid in an active system, as well as capacity for the increasing weight of the drilling fluid in the case of well instability. A reconditioning system with the necessary equipment for the separation of gas from drilling fluid shall be implemented in order to ensure the required quality of the drilling fluid. The composition of the drilling and completion fluids shall, at all times, be adjustable in order to ensure that the required properties of the fluid are preserved. It shall be possible to monitor, on a continuous basis, the fluids which comprise a barrier or that form part of the barrier's element.

8. The Blowout Preventer (“BOP”) shall be designed and installed in order to preserve its capability to function as a barrier and will be installed and start functioning during the initial phase of the operation.
9. Valves and actuators of the “Christmas tree” type and safety valves shall be installed in a sufficient number and in such a manner as to preserve their barrier functions and shall be tested in accordance with established procedures, as well as with a test programme. These procedures apply to operability tests and those regarding leaks or spills.
10. The drilling and well facilities shall be fitted with accessible equipment capable of ensuring control of the well, of allowing the work of personnel, and of shutting down the well in case of an uncontrollable influx into the well. In the event of equipment failure, mobile facilities shall be repositioned onto a safe area when the well is in an uncontrolled flow situation.

ARTICLE 34

Offshore Facilities and Vessels

1. In accordance with São Tomé and Príncipe legislation and internationally accepted marine standards, floating or fixed facilities used offshore shall be designed and equipped in such a manner capable of ensuring the stability or foundation necessary for their safe operation and the capacity to withstand the projected loads.
2. The docking gear, the anchorage system and the dynamic positioning system for ships or floating facilities used offshore shall be sized and operated in accordance with São Tomé and Príncipe legislation and internationally accepted marine standards.
3. A ANP-STP with prior authorization of the Minister responsible for the petroleum industry may, in accordance with maritime legislation, introduce other requirements related to the performance of Petroleum Operations by floating facilities or by vessels, independent of whether they are registered in São Tomé and Príncipe or in a foreign country.

SECTION III

PROCESSING AND AUXILLARY FACILITIES

ARTICLE 35

Processing and Auxiliary Facilities Requirements

1. Prior to the selection of design solution for processing and auxiliary facilities, a plan shall be established that takes into account, inter alia, the following features:

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- (a) Environment related features;
 - (b) Regularity of operations;
 - (c) The degree of qualifications of personnel;
 - (d) Maintenance strategy;
 - (e) Changes to operating conditions;
 - (f) Potential changes to operating conditions and future needs.
2. Processing and auxiliary facilities shall be designed and located in such way that the risk to personnel, to the environment and to assets and financial interests does not exceed the degree of risk set forth by the safety objectives.
 3. The selection of materials for processing and auxiliary facilities shall take into account the following features:
 - (a) The loads and environmental conditions that they may be exposed to during construction, installation, maintenance and operation;
 - (b) Potential changes in operating conditions;
 - (c) The principles behind the selection of critical materials shall be documented;
 - (d) When new materials are introduced, same shall be subject to examinations, calculations and tests in order to ensure that these comply with the applicable safety criteria.
 4. Flow and debit levels and the facility capacity shall be ascertained through consideration of the reaction times, capacity and reliability of control systems, and operational aspects such as vibration, noise levels, pressure oscillations, and water related effects.
 5. In the design of processing and auxiliary facilities, the qualifications of personnel, the suitability of the operation and the planned maintenance shall be taken into account. Instrumentation and control equipment for processing and auxiliary facilities shall be highly reliable.
 6. When processing and auxiliary systems facilities are fixed on mobile infrastructures, special consideration shall be given to the types movement of the facility in order to ensure that safe and efficient operation is achieved under the specified operational conditions.
 7. The reservoirs for formation and drained water shall be equipped with:
 - (a) one closed drainage facility for formation water;

- (b) one open drainage facility for areas which stand the risk of explosion;
 - (c) one open drainage facility for non-hazardous areas.
8. Power facilities shall have sufficient capacity to supply power to all simultaneous consumers on the facility. The start-up of the main power consumers shall be possible without the main power station becoming overloaded and creating the risk of shutdown, for which purpose the quantity of simultaneous consumers shall be taken into account.

ARTICLE 36

Safety of Processing and Auxiliary Facilities

1. Processing and auxiliary facilities arrangements and area classification shall be considered in conjunction with each other. All machinery and auxiliary equipment must conform to the area classification in which the equipment is to be installed.
2. Pressure chambers with foundations, rotating machinery, piping systems, including supporting structures and appliances of penetration into zones containing hydrocarbons, or other potentially dangerous means, and in accident situations, shall be resistant to fire and to exploding loads.
3. Processing and auxiliary facilities shall be equipped with pressure control devices capable of ensuring protection against abnormal pressure situations. Drainage devices shall be designed so as to avoid accidental outflow of liquid or gaseous hydrocarbons.
4. Area classification and results from risk analyses shall be included in the specifications of ventilation systems and these shall ensure that the concentration of smoke, particles, steam and gas is kept below specified limit values. The ventilation system shall be designed so as to ensure its capabilities of cooling and heating the equipment, as well as to guarantee greater ventilation to areas containing sources of ignition and which bear the risk of gas ingress.
5. In the case of modification to processing and auxiliary facilities, risk analyses shall be updated and measures shall be carried out so as to maintain or improve the original ventilation conditions. Areas with natural ventilation shall have sufficient air circulation so as to ensure that gas concentrations and pollution levels are kept within specified limit values. Closed and partly closed spaces with natural ventilation shall comply with recognised standards with regard to the size of openings in walls, floors and ceilings. In areas without sufficient natural ventilation, mechanical ventilation shall be assured in the projected form of motorised fans and other spark-preventing accessories in the ventilation facilities.
6. Boilers with a heating unit shall comply with the requirements stipulated in recognised technical standards. The heating unit for boilers shall be supplied with combustion air from non-hazardous areas. Exhaust gases shall be transported onto a non-hazardous area and exhaust gas ducts shall be designed so as to prevent possible combustion sparks

from becoming a source of ignition. In the case of offshore facilities, the exhaust gas shall be transported out of the facility so as not to be of inconvenience to people or cause hazardous situations for helicopter traffic or supply vessels.

ARTICLE 37

Design of Processing Facilities

1. In areas bearing the risk of hydrate or ice formation, the facilities shall be equipped with appliances capable of injecting glycol or methanol or other similar measures. The risk of self-ignition or of pyrolysis shall be assessed in connection with the selection of materials, with inspection and maintenance procedures, and all components shall be fitted with thermal insulation.
2. Separation appliances shall have sufficient capacity to separate the components of the well stream. Whilst designing such appliances, it is mandatory to project the consequences of changes in the well stream in the course of time. These appliances shall also be designed so that the equipment located downstream is not negatively affected and possesses the means to remove and drain sands. The appliances shall also be capable of separating hydrocarbons from formation water and ensure their purity.
3. As a general rule, pressurised containers and containers with normal atmospheric pressure shall:
 - (a) Be designed and used in accordance with internationally accepted international standards;
 - (b) When containing hydrocarbons, be fitted with two separate devices for protection against significant pressure;
 - (c) Deformation or damage to internal equipment shall not affect significant pressure protection devices;
 - (d) Be equipped with pressure and vacuum valves of sufficient capacity;
 - (e) Endure the installation of equipment in their interior without such undertakings causing any deformation or damage thereto;
 - (f) Control and maintenance conditions shall be defined during the design and construction phases.
4. Piping shall be consistent with the requirements stipulated in internationally accepted standards. Loads mentioned in those standards and loads caused by abnormal conditions, such as water effects, shall equally be taken into account.
5. The following shall be observed in the analyses of load effects:

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- (a) The loads transferred to associated equipment shall be considered;
 - (b) Special consideration shall be given to piping subject to great oscillations, deformations and oscillation of facilities under specified environmental conditions;
 - (c) The control and maintenance conditions shall be set out during the design and construction phases.
6. In accordance with internationally accepted standards, valves and actuators shall be designed and produced so as to withstand the loads to which they may be exposed to. Valves and actuators that are part of an emergency shutdown system must be able to resist fire and explosion of loads to which they may be exposed to. Valves with great significance to safety shall be tested in accordance with established procedures and with the corresponding test programme, including operating, leaks, and spills tests.

ARTICLE 38

Design of Auxiliary Facilities

1. Rotating compressors shall be fitted with the necessary surge control equipment and necessary pressure relief. Piston compressors shall be fitted with necessary equipment to control and reduce the variation of the pressure pulsation. Compressors with a sealed oil arrangement shall have effective degassing equipment and must be protected from the system of sealing oil until such is depressurised.
2. Liquid separators shall:
 - (a) Protect the gas compression facilities and drainage of liquid shall take place in a safe and prudent manner;
 - (b) Be equipped with mechanisms capable of shutting down the gas compression facility in the event of an abnormally increase of fluid level;
 - (c) Possess a discharge valve for drainage that automatically closes in the event of an abnormal decrease of fluid level;
 - (d) Be capable of, in all operating conditions, efficiently collecting into the compressors the liquid drops and the liquid freed from the gas flow.
3. Facilities with fuel gas and fuel oil shall be arranged in order for the best possible operational regularity is achieved, for the supply of fuel in sufficient quantities, and shall be compliant with specified pressure, temperature and specified pollution limits. Drainage of fluid from liquid separators shall take place in a safe and proper manner. Liquid separators shall be equipped so that the fuel gas facility is shut down in the event of an abnormal increase fluid level. In the event of an abnormal decrease fluid level, the drainage discharge valve shall be closed automatically.

4. Pneumatic facilities for providing air to working instruments shall be designed in accordance with recognised technical standards for vessels, pipes and compressors. Limit values for dew point, purity, pressure variations and temperature of the air shall be defined. The facilities shall have adequate compressor capacity to ensure stable operating conditions. The facilities shall equally be equipped so as to comply with the specified air values.
5. Inert gas facilities shall be designed in accordance with recognised technical standards for vessels, pipes and compressors, including standards for the transport of gas containing vessels. The selection of the facilities location shall especially take into account the consequences of potential leaks and instrumentation for its detection. Specific measures shall be taken to protect structures that may be cooled down by leakage from vessels containing inert gas in liquid form. Hoses and couplings used for liquid inert gas must be suitable for this purpose and shall not be confused with air couplings or those of another nature.
6. Chemical using facilities shall be capable of adequately receiving, storing and distributing chemicals. Chemical using facilities shall, to the extent possible, have fixed storage for storage tanks and piping. The location of such facilities shall take into account personnel safety, Transfer operations from transportation tanks or supply vessels, and the risk of fire and explosion. Where piping is connected to facilities containing hydrocarbons or systems under high pressure, check valves shall be fitted as close to the injection point as possible.
7. In the selection of rotating machinery, such shall comply with internationally accepted standards and consideration shall, inter alia, be given to reliability, energy economy, ease of operation and maintenance, previous experience with the machinery, and new technology.

SECTION IV

SYSTEMS WITHIN THE FACILITIES

ARTICLE 39

Safety Systems

1. All facilities shall be equipped with adequate safety systems and designed to avoid failures or potential defects to endanger people, life, the environment or assets and financial interests.
2. Safety systems shall include, among others, the following devices:
 - (a) Fire alarm;
 - (b) Fire and evacuation alarm;

- (c) Emergency lighting;
 - (d) Safety shut-down systems;
 - (e) Systems of safety during operations;
 - (f) Systems of control during operations;
 - (g) Gas leakage detection system;
 - (h) Emergency power system;
 - (i) Fire extinguishers.
3. The systems shall be operational at all times and subject to regular maintenance to ensure and verify that the same maintains its individual operational capability, and shall be designed and protected so as to retain their operational capability for the required period of time in the event of an accident. Such systems and components must withstand the environmental conditions to which they may be exposed.

ARTICLE 40

Fire and Gas Detection Systems

1. Systems capable of detecting fire or inflammable and noxious gases shall be installed in areas of the facility where the occurrence of an accidental risk of fire or of gas leak or discharge has been identified.
2. The systems shall ensure a rapid and reliable detection of a fire or of a discharge of gas, trigger the corresponding alarm, indicate the location of the accident, whether it pertains to a real or potential fire, as well as in the case of a gas discharge. Parallel to triggering the alarm, measures to prevent or to limit the consequences of fire and gas discharge shall be implemented automatically.
3. The systems identified herein shall:
 - (a) Be independent of other systems and shall not be capable of being negatively influenced by failure in other systems;
 - (b) Include components capable of withstanding fixed loads so that their operational capability is maintained for a certain period of time;
 - (c) Be conceived so as to permit their control, maintenance, testing and modifications.

ARTICLE 41

Emergency Shutdown Systems

1. Facilities with equipment containing hydrocarbons shall have a highly reliable emergency shutdown system, which shall prevent or limit the consequences of leakage and shall eliminate potential ignition sources.
2. The processing unit shall have sectionalisation valves connected to the system so that a fire does not exceed the resistance capability of isolated sections.
3. Activating the emergency shutdown system shall ensure the safest possible condition for the facility and its equipment. Manual emergency shutdown devices shall be strategically located, well demarcated and protected against accidental activation. The system should be able of being activated manually or by other means.
4. Components incorporated in the system shall be independent or supplementary to other systems. Emergency shutdown valves may also be used as processing safety valves. The emergency shutdown system shall not be affected by failures in other systems. The valves, when installed, shall have the function of emergency shutdown valves, for which purpose the following are of greater importance:
 - (a) Valves in Production and injection tubing or designated as Sub Surface Safety Valves;
 - (b) Valves in Production and injection wing or wing valve;
 - (c) Main automatic valve;
 - (d) Valves in “Christmas tree” related to the injection of chemicals or gas lifting;
 - (e) Valves of the isolation into sections process.
5. Components incorporated in the system shall be designed for the loads to which they may be exposed to. Appropriate testing of the systems shall be possible without interrupting operations.
6. All accessible emergency shutdown valves shall be conceived so as to be easily accessible and equipped with a position indicator. The entire information on the status of every executed action shall be automatically transferred to the control centre.
7. The installation of emergency shutdown valves shall be effected in a safe and controlled manner.

ARTICLE 42

Processing Safety Systems

1. Facilities equipped with or connected to processing units shall normally be fitted with a processing safety system. The system shall be highly reliable, capable of detecting abnormal operating conditions which may entail danger and of preventing abnormal conditions from developing into hazardous situations.
2. The system shall be conceived to operate independently of other systems with the same level of safety of other systems. Emergency shutdown valves may be used as processing safety system valves.
3. Components incorporated in the processing safety system shall be suitable for the loads to which they may be exposed to.
4. Sensors activating shutdown functions shall give a warning signal when activated.
5. Appropriate testing of the processing safety systems shall be possible without interrupting operations.
6. Block valves incorporated in the system shall be fixed in the correct position.

ARTICLE 43

Processing Control Systems

1. The facilities with a processing unit shall be equipped with a highly reliable processing control system that provides safe control and regulation of the processing units and auxiliary systems.
2. The Components and equipment incorporated in the system shall be suitable for the loads to which they may be exposed to.

ARTICLE 44

Gas Exhaust Systems

1. Gas exhaust systems shall be installed when it is necessary to eliminate inflammable and noxious gases from the facility. These systems may be manually activated at a safe distance and at one which guarantees equipment protection.
2. Activation of the gas exhaust system shall ensure gas discharge onto a safe location and quick depressurisation of the equipment.
3. The system shall be implemented so that exhaustion of gas does not cause injury to personnel or damage to the environment or to assets and financial interests.

4. The condition of the components of the gas exhaust system shall be monitored. The system shall be conceived so that maintenance and functional testing can be expediently carried out without interrupting operations.

ARTICLE 45

Fire and Evacuation Alarm

1. Work and residential facilities shall be equipped with highly reliable warning systems for the events of a fire occurrence and of the need to evacuate.
2. The activation of the fire alarm system shall be possible to effect from the control centre and, if possible, from other relevant positions. The activation of the evacuation alarm system shall be possible to effect from the radio room or from the control centre.
3. Manual activation of fire-fighting systems shall set off the fire alarm.

ARTICLE 46

Emergency Power System

1. All facilities shall be equipped with a reliable emergency power system which shall be independent from other power supplying sources and provide sufficient power to safety systems and to other vital equipment for the necessary period of time in the event of failure of the main power system.
2. Uninterrupted power supply to emergency circuits shall be ensured during changeover from the main power system to the emergency power system.
3. The systems' principle engines shall have as few potential interruptions as possible so as to ensure its continuous operation.
4. The system shall be arranged and protected so as to remain operative in the event of the occurrence of an accident and testing shall be possible without interrupting operations.

ARTICLE 47

Emergency Lighting

Work and residential facilities shall be equipped with emergency lighting capable of ensuring sufficient lighting within the facilities in danger and accident events.

CHAPTER VI
OPERATIONAL REQUIREMENTS

SECTION I
SAFETY AND ENVIRONMENT

ARTICLE 48

General Requirements

1. Operations on the facilities shall be carried out in a safe and efficient manner and in compliance with the regulations, contracts and authorisations, as well as with good industry practices.
2. Manuals and procedures relating to operations, maintenance, and quality guarantee of all facilities related to Petroleum Operations shall be developed and disclosed to the ANP-STP prior to the commencement of operations.
3. Operations may not commence before the personnel involved has been informed of the content of procedure manuals and have been given sufficient training.
4. Prior to commencement of any operation, the Operator shall prepare a plan describing the execution form of the operation and stating which equipment will be used and applicable safety measures. A report stating the examinations undertaken prior to the commencement of operations shall be prepared and disclosed to the ANP-STP for its inspection.
5. A systematic maintenance programme of the facilities and its equipments shall be developed and it shall register failure incidents, restorations and replacements, as well as disclose the extent and frequency of the control routines.
6. If safety devices are deactivated during maintenance or abnormal conditions, said deactivation shall be clearly indicated by means of warning signs fixed in visible locations and providing unambiguous indication of the devices affected by the failure.
7. The Operator shall examine, on a regular basis, the facilities, the systems and their operation so as to determine whether they are in an acceptable technical condition and to repair or adjust them so as to ensure fulfilment of the planned safety levels. All reports of the undertaken examinations and repairs shall be disclosed to the ANP-STP.

ARTICLE 49

Work Environment

1. Specific work environment procedures and policies shall be drawn up for the various phases of Petroleum Operations and these shall be compatible with those of the Operator.
2. The specific requirements of the work environment shall be drawn up in accordance with the requirements stated under Articles 37 to 45, Section III and IV of Chapter V of these Regulations.
3. The work environment programme developed in accordance with the provisions of Article 45 of these Regulations shall outline the implementation of the work environment objectives, for which, the safety deputies and work environment committee shall take an active part in the preparation and implementation the programme.
4. The employer shall ensure that employees medically examined on a regular basis in order to detect possible long-term effects are arising from working conditions and to implement adequate measures.

ARTICLE 50

Safety

1. Risk and safety analyses shall be made and used as the basis for implementing preventive measures of injuries and loss of human lives as a result of work related accidents or other types of accidents. The employees shall be informed of the safety and health related work regulations, as well as of the necessary risk reducing measures.
2. In accordance with internationally accepted standards, safety signs shall be posted at the entrance of compartments and zones near to equipment capable of causing injury or hazardous health effects to personnel.
3. The Operator shall ensure that the work equipment and facilities placed at the disposal of personnel is suitable for the work to be carried out within a safe and secure environment.

ARTICLE 51

Exploration

1. The Operator shall provide the ANP-STP with documented information on the time and place of the Exploration activities as well as of the movement of equipment, vehicles and vessels during Exploration activities. Such information shall be provided on a weekly basis unless otherwise stated in applicable regulations, in the PSC, in the Exploration plan or in the Development plan.

2. The Operator shall, on a quarterly basis, submit reports to the ANP-STP on the progress of Exploration activities which have been carried out in the preceding quarter.
3. Copies of all the documentation concerned with the undertaken Exploration activity and the results thereby achieved shall be submitted to the ANP-STP no later than three months subsequent to the completion of such activities.

SECTION II

DRILLING AND OTHER WELL OPERATIONS

ARTICLE 52

General Requirements

1. Drilling and well activities shall at all times be carried out in a safe and proper manner. This entails that:
 - (a) Measures shall be taken to ensure regularity and prevent the interruption of operations;
 - (b) Operating and maintenance procedures shall take due consideration of relevant equipment specifications such as their predetermined operating and maintenance limits;
 - (c) Operational measures shall be taken to prevent fires, explosions, pollution, or any other sort of damages;
 - (d) Well casing shall be conceived and developed so as to be under control at all times;
 - (e) Safety equipment for drilling shall be installed in accordance with the requirements of the planned activities and with these Regulations;
 - (f) The ground or seabed shall be examined prior to drilling or prior to the installation or setting up of well facilities so as to ensure that the external environment will not cause damage to existing facilities.
2. The Operator shall:
 - (a) Establish plans and procedures for drilling and simultaneous operations on wells;
 - (b) Identify, by means of risk analyses, situations where well control may be lost or other hazardous situations that may occur as a result of simultaneous activities;

- (c) Establish the operational limits applicable to drilling and well activities undertaken within the same facility;
 - (d) In accordance with the established procedures, shut down wells in areas where falling objects are capable of causing damages thereto.
3. Prior to drilling and well activities are commenced, the Operator shall:
 - (a) Develop an emergency plan for the cases of a blow out of oil, gas or water, and that identifies suitable locations for drilling of a relief well;
 - (b) Develop a plan for the mobilisation and organisation of personnel, as well as for equipment and services required both for drilling the relief well and control of an erupting relief well, inclusive of a possible direct intervention in the erupting well.
4. The position of the well shall be determined in accordance with recognised positioning methods.

ARTICLE 53

Documentation, Reports and Samples

1. The ANP-STP may require the Operator to submit a Development plan, prior to the commencement of the following activities:
 - (a) Drilling;
 - (b) Formation testing;
 - (c) Completion or re-completion;
 - (d) Well reconditioning;
 - (e) Well plugging.
2. The Operator shall disclose documentation describing the technical, organisational and administrative principles on which the safety of the planned activities is based.
3. During drilling operations, the Operator shall provide the ANP-STP with copies of daily reports on the drilling operations. In the events of significant changes to the activities programme, interruptions of operations, and dangerous incidents and accidents, the Operator shall immediately notify the ANP-STP.
4. Fragment samples resulting from drilling shall be taken and, if necessary, evidence from the sampling of geological formations. In addition, logs shall be obtained and samples of formation fluids shall be collected in connection with formation testing. Samples, logs

and copies of any analyses performed, including stratigraphic and lithological interpretations, shall be made available to the ANP-STP if so requested.

5. No later than three months subsequent to the completion of an Exploration or Appraisal well, a final report on the well shall be submitted to the ANP-STP and such report shall include a composite well log and a summary of the results of the surveys performed and their interpretation. In the case of a discovery, the report shall also contain the Operator's assessment.

ARTICLE 54

Operation Requirements

1. In case of a proven probability of finding surface Natural Gas, the Operator shall take the necessary measures to ensure that operations are safely carried out.
2. During drilling in well sections with proven resistance of the geological formation, the Operator shall carry out an estimate of the location where such formation resistance is weakest. Procedures for the implementation of drilling operations and estimation of formation strength shall be documented in the drilling programme. In case of insufficient consistency of the geological formation, the implementation of the programme shall be revised and corrective procedures shall be defined. Registration of relevant data for measuring formation pressure shall begin early on in the drilling process.
3. In accordance with safety and operational criteria, oil based and synthetic oil based drilling fluids shall only be used when such is required.
4. Fluid volumes shall be verified prior to, during and subsequent to the removal of equipment from the well. Procedures shall be established to remove the unintentional influx of fluids from the well, as well as to maintain pressure control in the event of their loss.
5. Formation testing including drilling, hydraulic fracturing, acid treatment or other physical or chemical treatment of the well shall be done according to requirements in these Regulations and with the best practices of the petroleum industry.
6. Well control equipment shall be periodically tested and examined under pressure so as to verify that its barrier functions.
7. Prior to temporary or permanent plugging of a well is carried out, the zones with flow potential shall be located so as to prevent the eruption of hydrocarbons and other formation fluids.

ARTICLE 55

Production

1. Unless specifically stated in the approved Development plan, Production of Petroleum from multiple zones with Reservoirs through one Production line shall be subject to the approval of ANP-STP.
2. The Operator shall regularly monitor the Reservoir performance during Production in order to ensure a balanced recovery of Petroleum. In each distinct zone of each well, including injection wells and other indicators, the Operator shall, to the extent possible, measure on a regular basis or determine among other things, the pressure and flow conditions, produced or injected quantities, the quality of oil, gas and water produced as well as the location of the contact zones between gas, oil and water.
3. Petroleum used for flaring, fuel or other Production purposes at the Production site shall be closely monitored and recorded in order to keep such consumption of Petroleum low and efficient.
4. Documentation on Reservoir and Production monitoring shall be disclosed to the ANP-STP if so requested.

ARTICLE 56

Testing, Inspection and Reporting

1. Prior to operating the facilities, the Operator shall undertake testing, inspections and checks so as to ascertain that the safety requirements established in these Regulations or in other applicable regulations are complied with. A report comprised of documentation on the assessment of the activities, the results of any undertaken tests, inspections and checks, and an evaluation of such results shall be disclosed to the ANP-STP for its consideration.
2. With the purpose of determining whether the facilities are in a technically acceptable and safe condition and to proceed with restorations and modifications thereto so as to ensure that the planned safety levels are being complied with, the Operator, during the operation of the facilities, shall develop and implement a programme for frequent testing and inspection. Results of each inspection and restoration shall be documented and disclosed to the ANP-STP.

ARTICLE 57

Registration, Follow-up and Reporting of Incidents and Damage

1. The Operator shall develop a system for the registration, evaluation and follow-up of any accident, damage, injury or any other significant occurrence in terms of security.
2. Injuries to personnel, significant material damage, hazardous incidents, as well as the results of the enquiries to such incidents, shall be immediately reported to the ANP-STP.

ARTICLE 58

Changes, Modifications and Repair of Damage

Changes and modifications to facilities and equipments, as well as restoration of damage, shall be performed in accordance with specific procedures capable of safeguarding safety levels.

ARTICLE 59

Hazardous Material

1. Transport storage and use of hazardous material shall take place in a controlled manner and in accordance with national legislation, as well as with internationally accepted rules and principles, for which purpose documented rules and procedures of their handling shall be made available.
2. The danger of chemical exposure involving health hazards shall be minimised in the storage, use, handling, and disposal of chemicals, as well as in work operations or processes which produce chemical substances. Chemicals hazardous to health shall be classified, labelled and identified in accordance with internationally accepted standards.
3. If chemicals are moved into other containers or appliances, it must be ensured that the contents are labelled and clearly identified so as to allow the identification of their contents by personnel, of which hazards are connected with the use of such chemicals, and of which safety precautions should be taken. Prior to the use of chemicals hazardous to health, a table of instructions, regarding the applicable safety rules of each of such substances, shall be available at the work site.
4. Personnel shall wear individual protective equipment against risks which may not be otherwise avoided or limited to an acceptable extent. Use of radioactive substances shall be restricted on a need of use basis.

ARTICLE 60

Petroleum Measuring

1. Petroleum produced and transported shall be measured in accordance with internationally accepted standards and the respective equipment, as well as, the measuring procedures shall be approved by the Minister responsible for the petroleum industry.
2. The ANP-STP may, at any time, inspect the equipment and measuring procedures that are used. If the equipment or procedures used are found to be defective or ineffective, the Operator shall effect the necessary corrections as soon as possible.

3. If the ANP-STP concludes that the equipment or procedures used have generated an incorrect calculation of the Production levels, this state of affairs shall be considered to be existing since the last inspection took place, unless specific reasons warrant the conclusion that such state is prior thereto or if the Operator is able to demonstrate that such defect or insufficiency existed for a shorter period of time.

ARTICLE 61

Information on Petroleum Produced

1. The Operator shall provide documentation on the quantity, composition, specific weight and other properties of Petroleum produced from each individual Petroleum Reservoir on such regular intervals as determined by the ANP-STP.
2. Documentation shall be equally disclosed regarding the quantities of Petroleum which have been sold, used as fuel at the Production site, flared, injected or which have escaped, for which purpose the ANP-STP may require additional documentation.

ARTICLE 62

Flaring of Natural Gas

1. Petroleum used for flaring, fuel or other purposes at the production site shall be strictly controlled and registered with the purpose of keeping consumption low and efficient.
2. Flaring of Natural Gas for short periods of time with the purpose of testing wells, verification of facilities and for safety reasons does not require authorisation, notwithstanding the need to notify the ANP-STP.

CHAPTER VII

EMERGENCY AND CONTINGENCY REQUIREMENTS

ARTICLE 63

General

1. The Operator shall be prepared to handle accidents and emergencies which may lead to loss of life, injuries, pollution or major damage to property.
2. The Operator shall take the necessary measures necessary to prevent or minimise harmful effects of accidents and to restore the environment in accordance with a contingency plan which shall identify the potential accident events and consequences of such events.
3. The Operator shall cooperate with other operators on the conception of the contingency plans.
4. Under specified circumstances, the ANP-STP may issue orders and stipulate conditions for such cooperation, including the participation of operators in the financing of the contingency arrangement.
5. In case of emergency, the ANP-STP may propose the intergovernmental coordination of contingency measures.
6. In the event of accidents or emergencies, the Minister responsible for the petroleum industry may coordinate the measures proposed in the contingency plan and has powers to:
 - (a) Order other parties to provide emergency related resources and equipment;
 - (b) Undertake other measures to obtain the necessary additional resources through other means.

ARTICLE 64

Contingency Plans

1. The Operator shall submit to the ANP-STP a contingency plan for handling accidents and hazardous situations which may occur during Petroleum Operations and such plan shall, among other items, contain the following information:
 - (a) An organisational chart with a precise description of responsibilities, channels of reporting information, and duties of each individual in the event of accidents and dangerous situations;

- (b) A list of the equipment intended for use in each accident or in each danger situation with a precise description of the nature and type of equipment, its capacity, location, means of transport, usage and corresponding area of use;
 - (c) A programme of action with a precise description of the alarm and communication systems, including means of communication with authorities, of the duties of private parties, of when and on which terms emergency equipment is to be used, of how the operations shall be performed, of the measures for limiting the extent of the damage in case accident or hazard, and the procedures for winding up the operations.
2. The plan shall be updated, compatible with national contingency systems and submitted to the ANP-STP and to other relevant entities.
3. The ANP-STP shall be notified prior to the carrying out of emergency exercises and shall receive a report on such emergency exercises.

ARTICLE 65

Emergency Equipment

The ANP-STP may require the installation of emergency equipment such as fire-fighting equipment, oil barriers, vehicles, standby boats or aircraft's near or at the facilities or at major equipment involved in Petroleum Operations and stipulate the operational requirements of each of such equipment under these circumstances.

CHAPTER VIII

FINAL AND TRANSITORY PROVISIONS

ARTICLE 66

Health, Safety and Environment

1. The Operator shall promote a high level of safety and establish overall safety and work environment objectives for the specific phases of Petroleum Operations. The Operator and its contractors shall establish safety and work environment requirements for Petroleum Operations.
2. The Operator shall ensure compliance between its specific requirements and those of its contractors.
3. The Operator's regulations or policies shall include the identification of the specific safety and work environment requirements for the performance of Petroleum Operations which will comprise the basis for decision making or for the carrying out of examinations to deviations in regard to the established procedures.
4. Evaluations shall systematically be carried out in order to verify the safety and environment conditions and the results shall be used to reduce risks.

ARTICLE 67

Environment

1. Environmental impact assessments, including impact reduction measures, shall be carried out in all areas which may be affected by Petroleum Operations.
2. Registration of all environmental aspects affected by the Petroleum Operations shall be created and maintained for all phases.
3. The Operator shall prevent:
 - (a) Accidents and material damage resultant from its activities and from the facilities' operation;
 - (b) Damage or risk of damage to third parties' personnel and assets;
 - (c) Damage to animals, vegetation, marine life and monuments;
 - (d) Sea pollution and of water fountains discovered in the course of Petroleum Operations;

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- (e) Air pollution;
 - (f) Damage in Petroleum Reservoirs.
4. The Operator shall monitor and reduce the effect of all operational and accidental discharge, handling of waste and pollution emissions into the air, sea, lakes, rivers, and soil. Operational discharges shall be within the limits defined by the entity with authority over environmental matters.
 5. The Operator shall inform the ANP-STP of the amount of operational and accidental discharges, leakages and waste and such information shall be made public.
 6. The Operator shall take remedial measures and repair damage to the environment when the Petroleum Operations it carried out endanger the physical safety of persons or property, or cause pollution or other environmental damage harmful to persons, animals, marine life, monuments or vegetation.
 7. Preferential treatment shall be given to materials and chemicals least dangerous to health and of greater safety so as to minimise the risk to persons, to the environment and to the facilities. The recycling of materials and chemicals shall be duly taken into account.
 8. The Operator shall have due consideration for the health of personnel, as well as of the qualification and requirements applicable to medical staff. Health related aspects shall include, inter alia, the following:
 - (a) Health service;
 - (b) State of readiness in respect of health care and health services;
 - (c) Transport of sick and injured personnel;
 - (d) Hygienic aspects;
 - (e) Supply of drinkable water, catering and distribution of food supplies.
 9. A system of safety delegates and a work environment committee for each facility shall be established.

ARTICLE 68

Assignment of rights

An assignment, to an Affiliate or to a third party, of all or of any part of the rights and obligations of the holder of rights to conduct Petroleum Operations, shall be subject to the prior approval of the ANP-STP.

ARTICLE 69

Regulations, Instructions, Administrative Directives

1. The ANP-STP may approve additional regulations or administrative measures necessary for the implementation of Petroleum Operations.
2. The ANP-STP may issue notices containing orders, instructions and directives in respect of the conduct of Petroleum Operations.
3. The notices shall be given in writing, documented and with deadlines for compliance and penalties, with exception to cases of imminent danger of causing damage to persons or property in which verbal orders, instructions and directives may be issued without prejudice of such having to be documented as soon as thereafter possible.
4. In order to cease an exceptionally dangerous activity, authorities may, as a strict safety measure, require the suspension of certain activities.
5. Orders, as well as specific administrative instructions or directives, shall take due regard of their potential commercial consequences.
6. The Operator shall disclose to its personnel, and to those of its contractors, the orders, instructions and directives issued by the ANP-STP.

ARTICLE 70

Inspections

1. The ANP-STP may inspect sites, buildings and facilities where Petroleum Operations are carried out.
2. The ANP-STP shall, by giving prior written notice to the Operator within a reasonable time limit, be entitled to observe the carrying out of Petroleum Operations and to inspect all assets, records and data kept by the Operator.
3. The Operator shall assist and provide the necessary means, including transportation, to the inspectors of the ANP-STP.
4. The representatives of ANP-STP responsible for the inspection shall fully comply with all applicable health, safety and security procedures established by the Operator and shall not interfere with the Petroleum Operations.

ARTICLE 71

Guarantees

1. As a guarantee for the fulfilment of the contractual obligations arising under the PSC, the holder of rights to conduct Petroleum Operations shall provide the ANP-STP with an irrevocable performance bank guarantee or parent company guarantee from its ultimate parent company in an amount equivalent to minimum work program obligations.
2. The performance bank guarantee shall only be released upon the term of one year subsequent to the termination of the Production operations or of the PSC.
3. The fees mentioned herein shall be charged by the ANP-STP on the corresponding delivery act, delivered to the Treasury Department.

ARTICLE 72

Fees

1. The holders of the rights to conduct Petroleum Operations shall pay the fees identified in Annex B which forms part of these Regulations.
2. The Ministers responsible for the finance and petroleum sectors have the authority to update the amounts of the fees set out in the Annex B referred to in the preceding paragraph.

ARTICLE 73

Fines

1. The non-compliance with orders and with specific administrative instructions or directions are subject to the payment of a fine for each day of default as may be established by means of a regulation issued by ANP-STP.
2. The size of a fine imposed shall depend on the gravity of the infraction and its consequences, considering internationally accepted standards in the petroleum industry.
3. The fines mentioned herein shall be charged by the ANP-STP and delivered to the Treasury Department.

ARTICLE 74

Inspection Costs

The Minister responsible for the petroleum industry may require that direct expenses in connection with audits and inspections of Petroleum Operations shall be covered by the Operator, under the terms specified in the relevant PSC.

ARTICLE 75

Training of National Personnel

The Operator shall provide training to national personnel in accordance with the contractual obligations of the PSC.

ARTICLE 76

Safety Zone

1. A safety zone shall extend two hundred meters from the borders of Petroleum facilities, unless otherwise agreed in the PSC.
2. Without prejudice to applicable legislation, the installation of any infrastructure in the safety zone requires the prior authorisation of the Operator of the relevant Petroleum facilities and the approval of the ANP-STP.

ARTICLES 77

Accident Investigation

In the event of a serious incident which has led to, or could lead to an accident, the ANP-STP may monitor the actions undertaken by the Operator in order to restore the situation to its prior condition, visit the scene of the accident as soon as the situation has been brought under control, shall carry out its own investigations, as well as render assistance to other authorities carrying out investigations on the same case.

ARTICLE 78

Applicable Technical Standards

1. National technical standards shall be applied to Petroleum Operations and supplemented by the internationally accepted standards of the petroleum industry, such as the International Standard Organization, American Society of Mechanic Engineers and American Petroleum Institute.
2. The standards which will be implemented shall figure in each Development plan.

ANNEX “A”
DEFINITIONS

"Affiliate"	means, in respect of an Authorized Person, any Person which at any time: (i) a Person Controls; or (ii) Controls a Person; or (iii) is under the common Control with a Person;
“ANP-STP”	means the Agência Nacional do Petróleo de São Tomé e Príncipe being national regulatory authority of the State created by Law No. 5/2004, of the 14th of June, having responsible for the regulation, contracting and supervision of Petroleum Operations;
"Appraisal"	means the activities carried out following the discovery of a Petroleum Reservoir aimed at better defining the parameters of the Reservoir in order to assess its commerciality including, without limitation: <ul style="list-style-type: none">a. drilling of Appraisal wells and running tests; andb. running supplementary analyses, and the acquisition, study and processing of geological and other data;
"Associate(s)"	means any Affiliate, subcontractor or other Person associated with an Authorized Person in the conduct of Petroleum Operations;
“Associated Natural Gas”	means all Natural Gas produced from a Reservoir the predominant content of which is Crude Oil and which is separated from Crude Oil in accordance with generally accepted international petroleum industry practice, including free gas cap, but excluding any liquid Petroleum extracted from such gas either by normal field separation, dehydration or in a gas plant;
"Authorization"	means a PSC, a Prospecting Authorization or any agreement made in respect of such contract or Authorization;
“Authorized Area”	means the area from time to time the subject of an Authorization;
"Authorized Person"	means:

- a. in respect of a PSC, a Contractor; and
- b. in respect of any other Authorization, the Person to whom the Authorization has been granted;

“Barrel”	means a quantity or unit of Crude Oil, equal to 158.9874 litres (forty-two (42) United States gallons) at a temperature of fifteen point five six degrees (15.56) Centigrade (sixty degrees (60) Fahrenheit) at one (1) atmosphere of pressure;
"Block"	means an area designated as a polygon on a map with defined geo referenced coordinates designated by the ANP-STP pursuant to the Petroleum Law for the purposes of an Authorization;
“BOP” (Blowout Preventer)	an emergency shutdown valve installed at the top of a well during the drilling process or well testing and which incorporates a hydraulic systems capable of closing over the space around the drilling tube despite high pressure and thus preventing the escape of liquids or gases from a well;
"Commercial Discovery"	means the discovery of a Petroleum Reservoir or Reservoirs deemed able to justify Development;
"Constitution"	means the constitution of the Democratic Republic of São Tomé and Príncipe;
“Contract Area”	means the Authorized Area which is subject to a PSC, as further described and delineated in such PSC;
"Contractor"	means any Person or Persons with whom the ANP-STP, for and on behalf of the State, has entered into a PSC;
"Control"	means, in relation to a Person, having: <ul style="list-style-type: none">a. the right to exercise directly or indirectly the vote of more than fifty percent (50%) (or such lesser percentage which results in actual, de facto control) of the voting shares in such Person; orb. at least fifty percent (50%) (or such lesser percentage which in actual de facto control) of the interest in the profits of such Person; or; or the ability to control or determine the management of a Person whether by agreement, the election of members of

the board of directors or other governing body of such Person or by any other means;

"Crude Oil"

means crude mineral oil and liquid hydrocarbons in their natural state or obtained from Natural Gas by condensation or extraction;

"Declaration of Commerciality"

means - a report which, based on evaluation of all relevant data by the holder of an Exploration and Production right, concludes that a Petroleum Reservoir is or is not commercially viable;

"Decommission"

means, in respect of an Authorized Area or part thereof, as the case may be, to abandon, decommission, transfer, remove and/or dispose of structures, facilities, installations, equipment and other property and other works used in Petroleum Operations in an Authorized Area, to clean the Authorized Area, and make it good and safe, and to protect the environment, as further set out in the Petroleum Law, the relevant Authorization and applicable laws and regulations;

"Development"

means activities carried out pursuant to a PSC for a Commercial Discovery in order to achieve Production including, without limitation:

- a. geological, geophysical and Reservoir studies and surveys;
- b. drilling of Production and injection wells; and
- c. design, construction, installation, connection and initial testing of equipment, pipelines, systems, facilities, machinery and related activities necessary to produce and operate said wells, to take, treat, handle, store, re-inject, transport and deliver Petroleum, and to undertake re-pressuring, recycling and other secondary and tertiary recovery projects;

"Exploration"

means the set of operations carried out through the use of geological, geochemical and/or geophysical methods, with a view to locating Reservoirs, as well as the processing, analysis and interpretation of data so acquired as well as regional studies and mapping, in each case leaving an Appraisal or better knowledge of the Petroleum potential of a given area and the drilling and testing of wells that may lead to the discovery of Petroleum;

"Government"	means the government at any time and from time to time of the Democratic Republic of São Tomé and Príncipe, as provided for in article 109 of the Constitution of the Democratic Republic of São Tomé and Príncipe at any time;
"Petroleum Law"	means the Fundamental Law of the Petroleum Operations Law No. 16/2009, as amended, supplemented or modified from time to time, and any and all regulations made and directions given under it as published in the national Gazette;
"Management System"	the organisation, procedures, processes and resources that are necessary in order to ensure compliance with requirements stipulated in or pursuant to legislation as mentioned in these Regulations;
"Natural Gas"	means all gaseous hydrocarbons and inerts, including liquid mineral gas, dry mineral gas, gas produced in association with Crude Oil and residue gas remaining after the extraction of liquid hydrocarbons from wet gas, but not including Crude Oil;
"Oil Revenue Law"	means Law No. 8/2004 of the 30 th of December, as published in the national Gazette;
"Operator"	means the Person responsible for carrying out Petroleum Operations in an Authorized Area; the holder of the rights to conduct petroleum operation or the company performing the Petroleum Operations on behalf of such holder and who ultimately is responsible for complying with the present Regulations;
"Person"	means any individual or legal entity, consortium, joint venture, partnership, trust, heir, firm, company, body corporate (whether unincorporated or incorporated and regardless of the place of registration) organization, or government or any agency or local entity, whether national or foreign or resident or non-resident of São Tomé and Príncipe;
"Petroleum"	means: <ul style="list-style-type: none">a. any naturally occurring hydrocarbon, whether in a gaseous, liquid or solid state;b. any mixture of naturally occurring hydrocarbons, whether in a gaseous, liquid or solid state; or

- c. any Petroleum (as defined above) that has been returned to a Reservoir;

"Petroleum Operations"

means:

- a. activities undertaken pursuant to an Authorization;
- b. activities for the purpose of the Exploration, Appraisal, Development, Production, transportation, sale or export of Petroleum; and
- c. activities for the purpose of the construction, installation or operation of any structures, facilities or installations for the Development, Production and export of Petroleum, or Decommission or removal of any such structure, facility or installation;

"Production"

means the activities involved in the extraction of Petroleum including, without limitation, the running, servicing, maintenance and repair of completed wells, as well as of the equipment, pipelines, systems, facilities and plants completed during Development including all activities related to the planning, scheduling, controlling, measuring, testing, gathering, treating, storing and dispatching of Petroleum from the underlying Reservoir to the designated exporting or lifting locations and furthermore, the Decommission of wells, facilities, pipelines and Reservoirs and related activities;

"Prospecting Authorization"

means an authorization granted pursuant to the terms and conditions of Articles 8 to 10 of the Petroleum Law;

"PSC"

means a Production Sharing Contract or any other agreement whatsoever signed between the ANP-STP, for and on behalf of the State, and a Contractor in accordance with the Petroleum Law that authorizes the performance and regulates the conduct of Petroleum Operations defined therein;

"Public Registration and Information Office"

means the public registration and information services, as defined in article 18 of the Oil Revenue Law;

"Regulations"

means these Petroleum Operations Regulations contained in this document defining the conduct of the Petroleum Operation in the Territory of São Tomé and Príncipe;

- "Reservoir" or "Reservoirs"** means a porous or permeable underground formation containing an individual and separate natural accumulation of producible Petroleum that is confined by impermeable rock and/or water barriers and is characterized by a single natural pressure system;
- "São Tomé and Príncipe", "State" or "Saotomean State"** means the Democratic Republic of São Tomé and Príncipe, as defined in Article 1 of the Constitution of the Democratic Republic of São Tomé and Príncipe at any time;
- "Territory of São Tomé and Príncipe "** means the territory of São Tomé and Príncipe as well as maritime areas under jurisdiction of the State, including the territorial sea, the exclusive economic zone and the continental shelf, as defined by international law, treaties, national laws and resolutions of the State;
- "Year"** means the period between January 1st and December 31st.

=====*End of Annex "A"*=====

ANNEX “B”
APPLICABLE FEES

Identification of the Procedure	Fee Value
Filing an application for the award of rights to conduct Petroleum Operations	25,000 USD
Application for entering into Production period	500,000 USD
Application to assign an interest during Exploration Period	100,000 USD
Application to assign an interest during Production Period	300,000 USD
On application to terminate the PSC:	100,000 USD
Application for Contractor/Operator to commence drilling	25,000 USD

=====End of Annex “B” =====