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EXHIBIT 10.14

EMPRESA COLOMBIANA DE PETROLEOS ECOPETROL

"CAJARO" ASSOCIATION CONTRACT

#### ASSOCIATION CONTRACT

ASSOCIATE : HARKEN DE COLOMBIA LIMITED

SECTOR : CAJARO

EFFECTIVE DATE: February 18, 2002

The contracting parties, as such: on one Part, the Empresa Colombiana de Petroleos hereinafter referred to as ECOPETROL, an industrial and commercial State-owned enterprise authorized by law 165 of 1948, actually ruled by its by-laws, reformed by Decrees 1209 of June 15, 1994 and 2933 of December 10, 1997, with head office in Bogota, D.C., represented by ALBERTO CALDERON ZULETA, of legal age, bearer of citizenship card No. 19'248.238 issued in Bogota, based in Bogota, D.C., who states: 1. That in his capacity as President of ECOPETROL, acts in representation of this Company, and 2. That for the execution of this contract he has been authorized by the Board of Directors of ECOPETROL, as witnessed in Minutes No. 2264 of December 14, 2001, and on the other hand HARKEN DE COLOMBIA LIMITED, company organized pursuant to the laws of the Caiman Islands, with a branch established in Colombia and with head offices in Bogota, D.C., pursuant to Public Deed No. 406 of February 19, 1993, executed in Notary Eleven (11) of Bogota, represented by GABRIEL GUSTAVO CANO VELASQUEZ, of legal age, Colombian citizen, bearer of citizenship card number 8'265.559, who declares: 1. That in his capacity as the Main Legal Representative he acts as the representative HARKEN DE COLOMBIA LIMITED, 2. That to execute this contract he is fully authorized as per the Certificate of Incorporation and Legal Representation issued by the Chamber of commerce of Bogota, D.C., and 3. That THE ASSOCIATE assures to have the financial capacity, technical competence and the professional abilities necessary to execute the activities to which this contract refers to.

Under the above conditions, ECOPETROL and THE ASSOCIATE declare that they have entered into the contract contained in the following Clauses:

# CHAPTER I - GENERAL PROVISIONS

# CLAUSE 1 - OBJECT OF THIS CONTRACT

- 1.1 The object of this contract is the exploration of the Contract Area and the exploitation of such nationally owned hydrocarbons that may be found therein, described in Annex A that is part of this contract.
- Pursuant to Article 1o. of Decree 2310 of 1974, the exploration and exploitation of nationally owned hydrocarbons are entrusted to ECOPETROL, company that may, directly or under contracts with Private Parties, carry out such activities. Based on such provision mentioned, ECOPETROL has agreed with THE ASSOCIATE to explore the Contract Area and to exploit such Hydrocarbons as may be found therein, under the

forth in herein, in Annex "A", Annex "B" (Operating Agreement) and Annex "C" (Lineaments for the Preparation of the Development Plan) that make part of this contract.

- 1.3 Without prejudice of the provisions hereunder, it is understood that THE ASSOCIATE shall have the same rights and obligations in respect to the Hydrocarbons produced in the contract area and to its share of the same as are assigned under the Colombian Laws to anyone exploiting nationally owned Hydrocarbons in this country.
- 1.4 ECOPETROL and THE ASSOCIATE agree to carry out the exploration and exploitation operations within the terms of this contract in the Contract Area, that they shall share between themselves the costs and risks thereof in the proportion and under the terms set forth in this contract and that the Hydrocarbons produced shall belong to each Party pursuant to the proportions set forth in this contract.

## CLAUSE 2 - APPLICATION OF THE CONTRACT

This contract applies to the Contract Area, identified, and the boundaries of which are described in Clause 3 and Annex A of this contract, or to such portion thereof, when areas have been restituted pursuant to this contract.

## CLAUSE 3 -CONTRACT AREA

The area Contract comprises thirty four thousand one hundred and ninety five (34.195) hectares with seven thousand fifty eight (7.058) square meters and is located within the municipal jurisdiction of Mani in the department of Casanare. The cartographic information was taken from the Political Map of Colombia, digital file of the I.G.A.C., on scale 1:1'500.000.

This area is described on Annex "A" that is part of this contract.

Paragraph 1. - Whenever a person files a claim pretending to be the owner of the property of the subsurface Hydrocarbons in the Contract Area, ECOPETROL shall handle the case and assume the obligations required.

Paragraph 2.- In the case in which part of the Contract Area extends over the areas that are or that have been reserved and declared to be within a system of National Parks, THE ASSOCIATE is obliged to obey the conditions ruled by the corresponding authorities, without it being considered that this contract has been modified and without there being a right to make any claim against ECOPETROL, pursuant to that agreed on in Clause 30 (numeral 30.2) of this contract.

# CLAUSE 4 - DEFINITIONS

For the purpose of this contract, the terms mentioned hereinafter, shall have the following meaning:

4.1 Contract Area: Is the land described in Clause 3 hereinabove, and described in Annex "A" of this contract.

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4.2 Field: Such portion of the Contract Area in which there are one or more structures and/or stratigraphic traps totally or partially overlaid, with one or more productive Reservoirs or that the capacity to produce Hydrocarbons in commercial amounts has been verified. Such

- reservoirs may be found vertically and/or laterally separated by geological barriers or impervious stratums, or both.
- 4.3 Commercial Field: Is the field accepted by ECOPETROL able to produce Hydrocarbons in economically exploitable quantity and quality, in one or more of the Production Objectives defined by ECOPETROL at the time of acceptance of the commerciality, without prejudice that during the exploitation phase other Production Objectives may be found.
- Gas Field: Is such that based on the information supplied by THE ASSOCIATE, is classified by ECOPETROL as a Non Associated Natural Gas Producer (or free natural gas) in the definition of its commerciality.
- 4.5 Executive Committee: Is the body established within thirty (30) days following the acceptance of the first Commercial Field, to supervise, control and approve all the operations and actions that are carried out during the term of the contract.
- Direct Exploration Costs: Are the monetary expenses reasonably incurred in by THE ASSOCIATE through the acquisition of seismic and the drilling of Exploratory Wells, as well as for the locations, termination, equipment and testing of such wells. The Direct Exploration Costs do not include administrative or technical support from the head office or central offices of the Company.
- Joint Account: Are the records to be kept by means of books of accounts pursuant to the Colombian laws, for crediting or debiting the Parties for their share in the Joint Account of each Commercial Field.
- 4.8 Budget Execution: Are the resources actually committed and/or spent in each of the programs and projects approved for a given calendar year.
- 4.9 Structure: It is the geometrical form with geological closing (anticlinal, synclinal, etc.) that present the formations in which fluid accumulations are found.
- 4.10 Effective Date: It is the day in which the sixty (60) calendar day period expires, as from the date of this contract is signed, as of which all the terms agreed upon therein shall be counted, independently from the date of approval of the contract by the Ministry of Mines and Energy.
- 4.11 Cash Flow: It is constituted by the movement of monies (income and disbursements) to be made by the Joint Account in order to meet the different obligations Contracted by the Operator for the normal progress of the operations.
- 4.12 Associate Natural Gas: Mixture of light Hydrocarbons in a gaseous state or in solution in the Reservoir and that is produced jointly with liquid hydrocarbons.
- 4.13 Non Associated Natural Gas (Production of): Are those Hydrocarbons produced in a gaseous state on surface and reported to standard conditions, with average values

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(pondered by production), of initial relation Gas/Oil greater than 15.000 standard cubic feet of gas per barrel of liquid Hydrocarbon and one molar composition of heptane plus (C7 +) less than 4.0%.

Direct Expenses: Are all expenditures payable by the Joint Account for payments of personnel directly engaged in the Company, purchase of

materials and supplies, contracting of services with third parties and other general expenses required by the Joint Operation in the normal performance of its activities.

- 4.15 Indirect Expenses: Are those expenditures payable by the Joint Account for technical and/or administrative support, which the operator with his own organization, gives to the joint operation.
- 4.16 Commercial Interest Rate: When referring to pesos, it shall be the current interest rate at the time of the delay; in dealing with dollars of the United States of America, it shall be the prime rate fixed by the LIBOR (London Interbank Borrowing Offered Rate), three (3) months for dollar deposits, increased by four percentage points (LIBOR +4%).
- 4.17 Interest in the Operation: Is the share in the obligations and rights acquired by each party in the exploration and exploitation of the Contract Area.
- Development Investment: The sums of money invested in goods and equipment capitalized assets for the joint operations in a Commercial Field upon acceptance of the existence by the parties.
- 4.19 Hydrocarbons: All organic compounds constituted mainly by the natural mixture of carbon and hydrogen as well those substances that accompany them or that are derived from them with the exception of helium and strange gases.
- Gaseous Hydrocarbons: All Hydrocarbons produced in a gaseous state in surface and reported to standard conditions (1. absolute pressure atmosphere and a temperature of 60(0)F.)
- 4.21 Liquid Hydrocarbons: Crude and condensed oil and those produced in such state as a result of the gas treatment when required, reported to standard conditions.
- 4.22 Production Objectives: Are the reservoirs located in the commercial field discovered and tested as commercial producers.
- Joint Operation: The activities and work performed or in the process of being performed, on behalf of the parties and on their own account.
- Operator: The person designated by the parties to directly carry out, on their behalf, and without representing them, the operations necessary to explore and exploit the Hydrocarbons found in the Contract Area.
- 4.25 Parties: On the Effective Date, ECOPETROL and THE ASSOCIATE. Subsequently and at any time, ECOPETROL on the one hand, and THE ASSOCIATE and/or its assignees on the other.

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- 4.26 Exploration Period: The time available to THE ASSOCIATE for complying with the obligations set forth in Clause 5 of this contract, which shall not exceed six (6) years as from the Effective Date, except in the cases contemplated in Clauses 5 (numeral 5.4), 9 (numeral 9.3) and 34.
- 4.27 Exploitation Period: The time elapsing from the end of the exploration period, or that of retention when necessary, to the end of this contract.
- 4.28 Retention Period: The time required by THE ASSOCIATE and granted by

ECOPETROL to being the exploitation period of each gas field discovered in the Contract Area, that due to its particular conditions is not able to be developed in a short term, requiring an additional term for the execution of feasibility studies, of construction of infrastructure and/or marketing development.

- Development Plan: Is the guide document to perform technical, efficient and economical exploitation operations of each field and shall contain, among other aspects, the development strategy, the environmental considerations, the activities to be developed, the Production forecasts for short and medium term, an estimate of the investment and expenses for the following five years and specifically, a description of the projects, the operations program and the Budget for the remaining of the present year or of the following year, as is the case. The lineaments for this development plan are described in Annex "C" that is part of this contract.
- 4.30 Exploration Well: Any well designated as such by THE ASSOCIATE to be drilled or deepened on its behalf, in the Contract Area in search of new reservoirs or to verify the extension of a reservoir or to determine the stratigraphy of an area. For the fulfillment of the obligations contemplated in Clause 5 of this contract, the corresponding drilling well shall be previously classified between ECOPETROL and THE ASSOCIATE.
- Discovery Well: Is that exploration well in which the existence of one or more reservoirs is discovered or confirmed and that may require subsequent evaluation to determine whether such reservoir or reservoirs may be commercially exploited.
- 4.32 Exploitation Well (or of Development): Any well previously scheduled as such by the Executive Committee for the production of Hydrocarbons discovered in the objectives of production in the area of each commercial field.
- 4.33 Budget: The basic planning instrument whereby the resources are allocated for specific projects to be applied within a calendar year or part of a year, in order to achieve the goals and objectives proposed by THE ASSOCIATE or by the Operator.
- 4.34 Extensive Production Tests: The operations performed in one or more producing Exploration Wells, to evaluate the production and behavior conditions of the reservoir with temporary production installations.
- 4.35 Reimbursement: Is the payment of fifty percent (50%) of the Direct Exploration Costs incurred in by THE ASSOCIATE.

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- 4.36 Exploration Operations. The operations performed by THE ASSOCIATE as related to the search and discovery of Hydrocarbons within the Contract Area.
- 4.37 Reservoir: All rocks under the surface where Hydrocarbons in their porous space are accumulated, under production or that has the capacity to produce Hydrocarbons and that behaves as an independent unit as far as its petrophysical and fluid properties and that has a common pressure system throughout its entire extension.

# CHAPTER II - EXPLORATION

# CLAUSE 5 - TERMS AND CONDITIONS

5.1 THE ASSOCIATE is committed to carry out the exploration operations

pursuant to the regulations and modern practices commonly accepted and in use by the international oil industry and to fulfill the legal and regulatory provisions in force. The exploration period shall be divided in three (3) phases, the first with a duration of twelve (12) months, the second phase with a duration of twelve (12) months and the third phase with a duration of twelve (12) months. The first phase begins on the Effective Date and the following on the calendar day immediately following the conclusion of the previous phase.

During the exploration period, THE ASSOCIATE is obliged to carry out, as a minimum, the following exploration operations: during the first phase, THE ASSOCIATE must carry out the drilling of one (1) Exploration Well until reaching the formations that can produce Hydrocarbons in the Contract Area. With this well, the exploratory obligation corresponding to the fifth year of the exploration period of the Bocachico Association Contract is fulfilled.

At the end of the first phase, THE ASSOCIATE shall have the option to resign from the Association Contract, provided having previously complied with the exploratory commitments agreed on for the present phase.

During the second phase, THE ASSOCIATE must carry out the drilling of one (1) exploration well until reaching the formations that may produce Hydrocarbons in the Contract Area.

At the end of the second phase, THE ASSOCIATE shall have the option to resign from the Association Contract provided having previously fulfilled the exploratory commitments agreed on for the present phase.

During the third phase, THE ASSOCIATE shall drill one (1) Exploratory Well to depth so as to reach the formations capable of producing Hydrocarbons in the Contract Area.

At the expiration of the exploration period, the contract shall end if the extension thereof has not been requested and authorized pursuant to Numeral 5.2 of this Clause, or if a field has not been discovered.

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- 5.2 If THE ASSOCIATE has satisfactorily complied with the obligations stipulated in Clause 5.1, ECOPETROL, at the request of THE ASSOCIATE, shall annually extend the exploration period, up to three (3) additional years, for such purpose, THE ASSOCIATE must inform its intention to continue with the exploration in the Contract block with an anticipation not lower than ninety (90) days of the date of termination of the Exploration Period, accompanying such request with the proposal of the Exploration Operations Program to be performed during each extension period. Within ninety (90) days following the date of receipt of the request of THE ASSOCIATE in ECOPETROL, the PARTIES shall be able to agree on the Exploration Operations Programs to be performed during such extensions. If no agreement is reached, THE ASSOCIATE is obliged to carry out as a minimum, Exploration Operations in the Contract Area, consisting in the drilling of one (1) Exploration Well per year. At the end of each of the extensions, which duration is one year, THE ASSOCIATE, shall have the option to resign from the Association Contract having previously fulfilled the exploratory commitment agreed on for each of them.
- At its judgment, and at its own cost and risk, THE ASSOCIATE may perform additional Exploration Operations to those agreed on for the Phase or Stage of the Exploration Period under development. However, if THE ASSOCIATE wishes to have such additional Exploration Work accredited to the fulfillment of the exploratory commitments of the

following phase or stage of the Exploration Period, it must request ECOPETROL to issue the corresponding approval. If the request is accepted by ECOPETROL, it shall determine the form and amount in which the transfer of the mentioned commitments is to be made.

- 5.4 If at the end of the six (6) year Exploration Period, THE ASSOCIATE has drilled one or several Discovery Wells that show the possible existence of a Commercial Field, previous written request by THE ASSOCIATE, ECOPETROL may authorize the extension of the Exploration Period for the time necessary, that shall not exceed two (2) years, so that THE ASSOCIATE may have the opportunity to prove the existence of such Commercial Field. To bring into effect that herein set forth, before finishing the Exploration Period and simultaneously with the request, THE ASSOCIATE must provide ECOPETROL with the maps and other descriptions of the area considered as capable of producing Hydrocarbons, the Exploration Operations program and other operations that THE ASSOCIATE plans to carry out and the budget to carry out such work at its own cost and risk, to determine the extension of the Reservoir or Reservoirs discovered and to show the existence of a Commercial Field, without prejudice of that established in Clause 8. To give application to the partial restituted of the areas during this extension of the Exploration Period, THE ASSOCIATE shall retain the area that is the largest between fifty percent (50%) of the Contract Area and the area it considers capable of producing Hydrocarbons plus its zone of reserve of two and a half (2.5) kilometers wide around the previous one, within the limits of the Contract Area. If the operations program proposed adjusts to the international standards and has the object to show the commerciality of the discovered Reservoirs within the term established, ECOPETROL shall issue its authorization for the execution of this program.
- During the life of this contract and observing that established in Clause 7 of the same, THE ASSOCIATE may carry out the Exploration Operations in the areas it keeps pursuant to Clause 8 and THE ASSOCIATE shall be the only one responsible for the risks and costs of these activities, and, therefore, it shall have the complete and exclusive control of such activities without the maximum duration of the contract being modified for such cause.

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## CLAUSE 6 - SUPPLY OF INFORMATION DURING THE EXPLORATION

- 6.1 ECOPETROL shall supply THE ASSOCIATE, whenever the latter may so request, with any information in its possession within the Contract Area. The costs of reproduction and supply of such information shall be charged to THE ASSOCIATE.
- 6.2 During the Exploration Period, THE ASSOCIATE shall give ECOPETROL, as it is obtained and pursuant to ECOPETROL's manual on information supply, all the geological and geophysical information, cores, magnetic tapes edited, processed seismic sections and all the information on the field supporting it, magnetic and gravimetric profiles, all in reproducible originals, copies of the geophysical reports, reproducible originals of all well logs drilled by THE ASOCIATE, including a final composite graph for each well and copies of the final drilling report that includes the analyses of core samples, the results of production tests and any other information related to the drilling, survey or interpretation of any nature done by THE ASSOCIATE for the Contract Area without any type of limitations. ECOPETROL is entitled to, at any time and by the procedures it considers appropriate, to witness all the operations and verify all information previously mentioned.

- The Parties agree that all geological, geophysical and engineering information obtained from the Contract Area in force during the development of this contract is confidential during the three (3) years following the date of acquisition or up to the termination of the contract, whatever happens first. The information made known is, but is not limited to seismic information, of potential methods, of remote sensors and geochemical, with its corresponding supports, surface and subsurface cartography, well reports, electric logs, formation tests, biostratigraphic, petrophysical and fluid analyses, and production background. Regardless of the confidentiality herein established, the Parties agree that in each case they may interchange with companies that are or not associated with ECOPETROL. It is understood that that agreed to herein shall take place without prejudice of the obligation to supply the Ministry of Mines and Energy with all information requested by it pursuant to the legal and Reglementary provisions in force. Nevertheless, it is understood and thus agreed, that the Parties may at their own discretion supply the information required by their affiliates, consultants, contractors, financial entities and that are required by the competent authorities with jurisdiction on the Parties or their affiliates, or by regulations of any stock markets in which the stocks of the Parties or corporations related are registered.
- Within the ninety (90) days following the date of termination of the drilling operations of each Exploration Well, THE ASSOCIATE shall inform ECOPETROL in writing of the condition of the corresponding well, its classification as to the results obtained (dry or discovery) and the type of fluids produced, if it is the case.

#### CLAUSE 7 - BUDGET AND EXPLORATION PROGRAMS

6.3

Observing that established in this contract, THE ASSOCIATE is obliged to prepare the programs, the chronogram of activities to be developed and the Budget to be executed in a short term (the following calendar year) and the vision for the following two (2) years with an estimated Budget, to carry out the exploration in the Contract Area. Such vision, programs, chronograms and Budgets <PAGE&qt;

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shall be presented for the first time to ECOPETROL, within the sixty (60) days following the date of the signing of this contract, and subsequently, December fifteen (15) of each year, the latest.

Every semester THE ASSOCIATE shall present a technical and financial report to ECOPETROL, including the different exploratory activities performed, and the perspectives of the area based on the information obtained, the Budget assigned and the exploration costs incurred in up to the time of the presentation of the report, commenting in each case the causes that originated the main deviations presented. Upon request by ECOPETROL, THE ASSOCIATE shall supply the necessary explanations to the report, in meetings programmed for such purposed. The information presented by THE ASSOCIATE in the reports and the explanations to which the present Clause refers to, shall in any case be understood as accepted by ECOPETROL. The financial information shall be subject to auditing by of ECOPETROL pursuant to that established in Clause 22 of Annex "B" (Operating Agreement) of this contract.

## CLAUSE 8 - RESTITUTION OF AREAS

Upon termination of the First Phase of three years of the Exploration Period or of such extensions thereof obtained by THE ASSOCIATE pursuant to Clause 5 (numeral 5.2), if a Commercial Field has been discovered and accepted by ECOPETROL in the Contract Area, said area shall be reduced to fifty percent (50%); two (2) years later the area shall be reduced to an extension equal to fifty percent (50%) of the

remaining Contract Area and two (2) years later such area shall be reduced to the area of the Commercial Field or Fields under production or development plus one reserve zone of two and a half (2.5) kilometers wide surrounding each Commercial Field, and this shall be the only part of the Contract Area that shall be subject to the terms of this contract. Within the areas retained by THE ASSOCIATE pursuant to the present numeral, the Commercial Fields discovered shall be included.

Notwithstanding the obligation to relinquish the areas referred to in Clause 8 (numeral 8.1), THE ASSOCIATE is not obliged to return the Commercial Fields that are under development or production, or in a Retention Period, including the reserve zones of two and a half (2.5) kilometers wide that surround such areas, except in the case in which by motives attributable to THE ASSOCIATE, the development or production operations are suspended continuously for more than one year without just cause, case in which such Commercial Fields shall be restituted to ECOPETROL, terminating the contract for said areas or part of the area. These stipulations are also applicable to the fields exploited under the modality of Sole Risk.

Paragraph: To show just cause, THE ASSOCIATE must present to ECOPETROL the reasons and fundaments of the same for its acceptance.

Retention Period: If THE ASSOCIATE has achieved the discovery of a Gas Field and presents a request for commerciality for such Field pursuant to that established in Clause 9 numeral 9.1, simultaneously with such application it may request ECOPETROL to issue a Retention Period, fully justifying the reasons to obtain such period.

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- 8.3.1 The Retention Period must be requested by THE ASSOCIATE and granted by ECOPETROL previous to the date in which the last restitution of areas to which numeral 8.1 of this clause refers to. In the case in which the Retention Period is granted, it is understood that the term set forth in Clause 9 (numeral 9.1) for ECOPETROL to speak out with respect to the acceptance or not of the existence of the Commercial Gas Field shall be postponed for the same term of the Retention Period.
- 8.3.2 The Retention Period may not exceed four (4) years. If the term initially granted as a Retention Period is insufficient, ECOPETROL, previous written and duly justified request by THE ASSOCIATE, may extend the Retention Period for an additional term, without having the sum of the initial retention period and its extensions exceed four (4) years. The Retention Period applies exclusively to the Gas Field area that ECOPETROL determines as capable of producing Hydrocarbons, including the reserve zone of two and a half (2.5) kilometers wide surrounding such area.

# CHAPTER III - EXPLOITATION

# CLAUSE 9- TERMS AND CONDITIONS

9.1 To initiate the Joint Operation hereunder, it is considered that the exploitation operations start on the date the Parties accept the existence of the first Commercial Field or upon compliance with the provisions of Clause 9 (numeral 9.5). The existence of a Commercial Field shall be determined by the drilling, by THE ASSOCIATE, within the proposed Commercial field of a number of Exploration Wells sufficiently to reasonably define the area and commerciality of the field capable of producing Hydrocarbons. If after evaluating the results obtained from the Discovery Wells, THE ASSOCIATE considers

that it has discovered a possible Commercial Field, it must inform ECOPETROL in writing, supplying all the surveys on which this conclusion and the corresponding Development Plan are based on. ECOPETROL within the term of ninety (90) days as of the date in which THE ASSOCIATE turns in all the back-up information and makes a technical presentation to ECOPETROL, must accept or object the existence of the Commercial Field. ECOPETROL may request any additional information considered necessary within thirty (30) days following the date of submission of the first back-up information.

- 9.2 Should ECOPETROL accept the existence of the Commercial Field, it shall, in this sense, notify THE ASSOCIATE within the term established in Clause 9 (numeral 9.1) specifying the area and the Production Objectives in the Commercial Field, and shall start to participate, under the terms of this contract, in the exploitation of the Commercial Field discovered by THE ASSOCIATE.
- 9.2.1 ECOPETROL shall reimburse THE ASSOCIATE for fifty percent (50%) of the Direct Exploration Costs carried out by THE ASSOCIATE on its own account and risk within the Contract Area previous to the date of acceptance of the commerciality by ECOPETROL of each new Commercial Field discovered, pursuant to numeral 9.1 of the present Clause and that have not been previously charged to an other Field.
- 9.2.2 The amount of such costs shall be determined in dollars of the United States of America, taking as a reference the date in which THE ASSOCIATE made such disbursements;

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therefore, the costs incurred in Colombian pesos shall be liquidated at the market exchange rate in effect on such date, certified by the Superintendencia Bancaria or by the corresponding entity.

Paragraph: Once the amount of the Direct Exploration Costs to be reimbursed in dollars of the United States of America is defined, this value shall be updated on a monthly basis pursuant to the average consumer index price of the industrialized countries, as of the date of its disbursement, to constant dollars on the date in which ECOPETROL begins the Reimbursement in the manner described on the Operating Agreement (Annex B) of this contract. The balances to be reimbursed shall be equally updated up to the date in which ECOPETROL fully reimburses its participation in the corresponding Commercial Field.

9.2.3 The Reimbursement of the Direct Exploration Costs, pursuant to that established on Clause 9 (numerals 9.2.1) shall be made by ECOPETROL to THE ASSOCIATE, as of the moment in which the Field is put in production by the Operator, with the amount in dollars equivalent to fifty percent (50%) of its direct participation in the total production of the respective field, after deducting the corresponding percentage from the royalties.

Paragraph: If concerning a Commercial Gas Field, such reimbursement shall be made by ECOPETROL to THE ASSOCIATE, as of the moment in which the Field is put under production by the Operator, with the amount in dollars equivalent to one hundred percent (100%) of its direct participation in the total production of such Field, after deducting the corresponding percentage from the royalties.

9.3 If with the information supplied ECOPETROL cannot accept the existence of a Commercial Field to which Clause 9 (numeral 9.1) refers to, it may advise THE ASSOCIATE about the presentation and execution of a program for additional operations to demonstrate the existence of a

commercial field, operations that will be carried out at the risk and cost of THE ASSOCIATE that may not require a term longer than two (2) years for its execution, and if it is the case, the Exploration Period for the Contract Area shall be extended automatically for a term equal to that already agreed on between the Parties, as necessary to execute the additional work in this Clause, but without prejudice of that stated with relation to the reduction of areas in Clause 8 (numeral 8.1). THE ASSOCIATE may present and execute a work program that meets the objective required or submit for expert analysis the requirement of additional information, pursuant to Clause 28 of this contract. In the event that the definition of the expert analysis is favorable to ECOPETROL, THE ASSOCIATE must fulfill the requirements and once again submit the studies of commerciality and the revised Development Plan to ECOPETROL for its consideration. In the event that the definition of the expert analysis is favorable to THE ASSOCIATE, it is understood that ECOPETROL has the necessary information and as a consequence, the term of ninety (90) days to which clause 9.1 refers to, to accept or to object the existence of a Commercial Field shall begin on the date in which ECOPETROL receives the report from the experts.

9.4 If, after the completion of the additional work or the disagreement solved by the expert analysis to which the previous numeral refers to, ECOPETROL accepts the existence of the Commercial Field to which Clause 9 (numeral 9.1) refers to, it will start to participate in the development operations of the field above mentioned in the terms established in this contract and shall reimburse THE ASSOCIATE as set forth in Clause 9 (numerals 9.2.2 and

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- 9.2.3) for fifty percent (50%) of the cost of the additional work requested and referred to in Clause 9 (numeral 9.3) and the work executed shall become the property of the Joint Account.
- 9.5 Modality of Sole Risk: If ECOPETROL does not accept the existence of a Commercial Field, after having performed the additional work referred to in Clause 9 (numeral 9.3), THE ASSOCIATE shall be entitled to execute such work as it may consider necessary in or to exploit such field and to reimburse itself two hundred percent (200%) of the total cost of the work executed at its own account and risk in the such field and up to fifty percent (50%) of the Direct Exploration Costs carried out by THE ASSOCIATE before the date of the presentation of the commerciality surveys of such field. For the effects of this Clause the reimbursement shall be done with the value of the produced Hydrocarbons, less the royalties referred to in Clause 13, deducting the costs of production, gathering, transportation and sale. If THE ASSOCIATE abides to the modality of sole risk, it is understood that the term of the exploitation begins on the date in which ECOPETROL informs THE ASSOCIATE of the nonexistence of a Commercial Field. For the purposes of liquidation of the value in dollars of the disbursements done in pesos, it shall be liquidated at the representative market rate certified by the Superintendencia Bancaria or by the corresponding authority, on the date in which THE ASSOCIATE has made such disbursements. For the purpose of this Clause, the value of each barrel of Hydrocarbons produced in such Field during a calendar month shall be the average price per barrel that THE ASSOCIATE receives from the sales of its participation in the Hydrocarbons produced in the Contract area during the same month. With reference to the reimbursement of the Direct Exploration Costs, that established in paragraph of clause 9 (numeral 9.2.3) shall be applied.

When THE ASSOCIATE has reimbursed itself of the percentage established in the present clause, all drilled wells, installations and all types of goods acquired by THE ASSOCIATE for the exploitation of the field

and paid for as indicated in the present clause, shall become the property of a Joint Account without any cost, previous the acceptance by ECOPETROL to participate in the development of such field.

- 9.6 ECOPETROL may, at any time, start to participate in the operation of the field discovered and developed by THE ASSOCIATE without prejudice to THE ASSOCIATE's right to reimburse itself for the investments it made at its expense, in the form and percentage stipulated in Clause 9 (numeral 9.5). Once THE ASSOCIATE is reimbursed, ECOPETROL shall enter to participate in the economic results of the wells developed at the exclusive expense of THE ASSOCIATE.
- 9.7 The demarcation of the boundaries of a Commercial Field shall take into consideration all the geological and geophysical information and that of the wells drilled within said field or related to the same.
- 9.8 If after the commerciality of one or more fields is accepted, THE ASSOCIATE continues to fulfill the exploratory obligations established in Clause 5, it may continue to simultaneously carry out the exploitation of such fields before the expiration of the Exploration Period established in Clause 4, but only as of the date of its termination shall the Exploitation Period begin. When concerning Gas Fields, and ECOPETROL has granted a Retention

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Period, the Exploitation Period for each Field shall begin on the date of expiration of the respective Retention Period.

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9.9 If as a result of the drilling of Exploratory Wells, after confirming the existence of a Commercial field, THE ASSOCIATE proves the presence of additional accumulations of Hydrocarbons associated to such Field, it must request ECOPETROL to extend the area of the Commercial Field and its commerciality, following the procedure set forth in Clause 9 (numeral 9.1). If ECOPETROL accepts its commerciality, it shall reimburse THE ASSOCIATE fifty percent (50%) of the Direct Exploration Costs exclusively related with the expansion of the area of the Commercial Field, in the terms established in numerals 9.2.2 and 9.2.3. If ECOPETROL does not accept the commerciality, THE ASSOCIATE is entitled to reimburse itself up to two hundred percent (200%) of the total cost of the work executed on its own cost and risk for the exploitation of the Exploratory Wells that have resulted productive and up to fifty percent (50%) of the direct Exploration Costs carried out by THE ASSOCIATE exclusively related to the expansion of the area requested before the date in which ECOPETROL notifies on the same. Such reimbursement shall be done with the production originated from the Exploratory Wells that have resulted productive, after deducting royalties, following the procedure set forth in Clause 21 (numeral 21.2) up to the percentages herein defined.

# CLAUSE 10 - OPERATOR

The Parties agree that HARKEN DE COLOMBIA LIMITED is the Operator and, as such, with the limitations set forth in this contract, shall have the control of all the operations and activities it may consider necessary for an efficient technical and economic development of the exploitation of the hydrocarbons found within the area of the Commercial Field. They also agree that, nevertheless that in this contract - executed for the commercial purposes established in Clause 1 of the same, HARKEN DE COLOMBIA LIMITED is the Operator, it is understood by the Parties, and thus determined, that for all labor legal effects, HARKEN DE COLOMBIA LIMITED does not act as a representative of the Parties, but as an only and true employer of the workers he contracts for the operation of the Commercial Field and, as

a consequence, shall be responsible for the labor obligations that arise from the respective relations or work contracts, such as salary payments and social benefits, para-fiscal contributions, affiliation and payment of bids or contributions for pensions, health and professional risks to the Sistema de Seguridad Social Integral, to which Law 100 of 1993 refers to and its Reglementary decrees or those regulations that substitute or modify it.

- The Operator has the obligation to carry out all of the development and production operations pursuant to the standards and practices generally accepted by the industry using the best technical methods and systems required for the economic and efficient exploitation of the Hydrocarbons and fulfilling the legal and regulatory provisions on the issue. Also, he must present on time, to the parties, the reports and documents mentioned in the contract, as well as any other information required by the Executive Committee with respect to the Joint Account and/or Operation.
- Due to the afore mentioned, and in view that for the execution and fulfillment of the operation of the Commercial Field, HARKEN DE COLOMBIA LIMITED shall perform all the activities with its own resources, with liberty and technical and directive autonomy, for all the

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purposes of this contract, such Operator shall be considered an entity different from The Parties hereto as well as for the purposes of the implementation of civil, labor and administrative legislation and for the Operator's relations with the personnel at his service, as set forth in clause 32.

- The Operator shall have the right to resign as such, by written notification to the Parties six (6) months in advance of the effective date of such resignation. The Executive Committee shall then assign a new Operator pursuant to Clause 19 (numeral 19,3,5). In case the Operator assigned by the Executive Committee is a third person different from the Parties, a contract must be executed between the Parties and the new Operator.
- The Operator shall carry out the operations described in this contract in a diligent, responsible, efficient and technically and economically adequate manner, being understood that at no time shall he be responsible for mistakes in criteria, or for losses or damages that are not the result of a serious fault by the Operator.
- The Operator shall have the right to execute any type of work by means of contractors, subject to the faculty that the Executive Committee has, pursuant to Clause 11 (numeral 11.1). To fulfill that herein established, the Operator shall carry out the contracting operations following the procedure described in Annex "B" and subject to the principles of good faith, transparency, economy, equity, responsibility, planning, quality, celerity and social and environmental responsibility that must rule in the contracting.

# CLAUSE 11 - EXPLOITATION PROGRAMS AND BUDGETS

11.1 Within the three (3) months following the acceptance of a Commercial Field in the Contract Area, the Operator shall present to the parties, a proposal for projects, programs and budget for the Development Plan of the commercial field for the remaining of the corresponding Calendar year, to be agreed on by the Executive Committee. In case there are less than six months and a half (6 - 1/2) for the expiration of such year, the Operator shall prepare and present a proposal for

projects, programs and Budget for the following calendar year, within a term of three (3) months.

11.1. The projects, programs and the Budget contained in the Development Plan of the Commercial Field shall be checked and adjusted on a yearly basis and presented by the Operator to the Parties during the month of May of each calendar year, for which the Operator shall send his proposal within the first ten (10) days of the month of May. Within the twenty (20) days following the receipt of the proposal of the projects, programs, and Budget of the Development Plan of the Commercial Field, the Parties shall inform the Operator in writing on the changes they wish to propose. When this occurs, the Operator shall consider the observations and proposed reforms made by the Parties for the elaboration of the revised Development Plan, that shall be submitted for final approval of the Executive Committee, at the ordinary meeting during the month of July of each year. In case the total Budget of the Commercial Field has not been approved before the month of July, those aspects of the Budget of the Commercial Field on which an agreement has been reached, shall be approved by the Executive Committee, and those aspects not approved shall be submitted immediately to the Parties, for study and final decision, as set forth in Clause 20.

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- 11.2. The Parties may propose additions or revisions to the projects, programs and the annual Budget approved for each Commercial Field, but, except in cases of emergency, these must not be formulated with a frequency of less than three (3) months. The Executive Committee shall decide on the proposed additions or revisions at a meeting called within thirty (30) days following the presentation of the same.
- 11.3. The main objectives of the projects, programs and Budgets are:
- 11.3.1 Determine the operations to be carried out and the expenses and investments (Budget) that the Operator is authorized to execute in each Commercial field during the following calendar year.
- 11.3.2 Maintain a vision of the development of each field in a horizon of medium and long term.
- The projects, programs and annual Budget approved by the Executive Committee and contained in the Development Plan of each Commercial Field constitute the work plan shown and the expenses and investments estimated to be carried out by the Operator in the different aspects of the operation, such as:
- 11.4.1 Capital investments in production: drilling for the development of Reservoirs, well workover or recovery, and specific production constructions.
- 11.4.2 General construction and equipment: industrial and camp facilities, transportation equipment, drilling and production equipment. Other construction and equipment.
- 11.4.3 Maintenance and operating expenses: production expenses, geological expenses, administration expenses for the operation.
- 11.4.4 Working capital requirements.
- 11.4.5 Funds for contingencies
- 11.5 The Operator shall make all expenditures and investments and shall carry out the development and production operations set forth in the

projects, programs and annual Budgets approved in the Development Plan for each Commercial Field referred to in Clause 11 (numeral 11.1), pursuant to the Operating Agreement (Annex B) that is part of this contract, without exceeding the total Budget for each year, except by authorization of the parties in special cases.

The Operator is authorized to carry out expenditures not contemplated expressly in the Budget of each Commercial field and chargeable to the Joint Account, without previous authorization of the Executive Committee, in the event of emergency measures aimed at safeguarding personnel or the property of the Parties, emergency expenses originating in fires, floods, storms or other disasters; emergency expenses essential for the operation and maintenance of the production facilities, including maintenance of the wells in a condition to produce with a maximum efficiency; emergency expenses essential for the protection and preservation of materials and equipment necessary in the operations. In such cases, the Operator shall call the Executive Committee to a special meeting as soon as possible, to obtain their approval in order to continue with the emergency measures.

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11.7 From the amount of the expenditures incurred in by and the contracts executed by the Operator for amounts that exceed the annual Budget approved by the Executive Committee for each Commercial Field, as set forth in Clause 19 (numeral 19.3.9), without them having been opportunely authorized by the Executive Committee, except the assumptives set forth in Clause 11 (numeral 11.6), the Operator shall be the only one responsible, who shall assume the totality of the corresponding value. When the expense or contract in question is confirmed by the Executive Committee, the corresponding value shall be paid to the operator, pursuant to the rules defined by the Executive Committee. In case in which the expenditure or contract is not accepted by the Executive Committee, the Operator, if possible, may withdraw the good in question reimbursing the Parties for any cost that its withdrawal may cause them. When it is impossible for the Operator to withdraw such goods, or he rejects doing so, the benefit or patrimonial increase resulting from these expenses or contracts, shall belong to the Parties in proportion to their Interest in the Operation.

# CLAUSE 12 - PRODUCTION

- Whenever necessary, the Operator shall determine, with the approval of the Executive Committee, the Maximum Efficiency Rate (MER) for each commercial Field. This Maximum Efficiency Rate (MER) shall be the maximum producing rate of Hydrocarbons that may be extracted from a Reservoir for the purpose of obtaining a maximum economic benefit in the final recovery of Reservoirs. In agreement with the economic and engineering principles and the practices and procedures generally used and in use in the international oil industry, in conditions and circumstances similar to those experienced in the activities under this contract. The estimated production must be adjusted as necessary to compensate the real or anticipated conditions of the operation, such as wells under repair that are not producing, limitations in the capacity of the collecting lines, in the pumps, in the separators, in the tanks, in the pipelines and in other facilities.
- The Operator shall determine periodically, at least once a year, with the approval of the Executive Committee, the area deemed capable of producing Hydrocarbons in a commercial quantity in each Commercial Field.

- The Operator shall prepare and deliver to each Party, at regular three (3) month intervals, a program showing each Party's share of production, and another one showing the distribution of each Party's production for the following six (6) months. The forecast for the production must be based on the Maximum Efficiency Rate (MER,) as set forth in Clause 12 (numeral 12.1) and adjusted to each party's rights according to this contract. The Production Distribution Program shall be determined based on each party's periodic requests, and, set forth in Clause 14 (numeral 14.2) with the corrections deemed necessary to ensure that none of the Parties, while being able to withdraw, will receive less than the quantity to which it is entitled to under provisions of Clause 14 and without prejudice to the stipulations of Clauses 21 (numeral 21.2) and 22 (numeral 22.5).
- 12.4 If either of the Parties foresees a reduction in its capacity to receive Hydrocarbons compared to the forecast given to the Operator, the Party must inform the Operator as soon as possible, and if such reduction is due to an emergency situation, the Party shall inform the Operator within the twelve (12) hours following the occurrence of the event that causes

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the reduction. As a consequence, such Party shall give the Operator a

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new receipt schedule based on the appropriate reduction.

The Operator may use the Hydrocarbons that are consumed in the development of the production operations in the Contract Area and these consumptions shall be exempt from the royalties to which Clause 13 (numeral 13.1) refer to.

# CLAUSE 13 - ROYALTIES

- 13.1 For the payment of the royalties for the exploitation of the nationally owned Hydrocarbons, the Operator shall give ECOPETROL the percentage of the production established by Law. The delivery of this production shall be carried at the same place and time in which the Parties distribute the production that corresponds them pursuant to Clause 14 of this contract. In the case of Fields under exploitation in the modality of Sole Risk, THE ASSOCIATE shall give ECOPETROL the percentage of the production that corresponds to the royalties in the place agreed on by the Parties.
- 13.2 From the percentage of the production given to ECOPETROL in the terms of the previous numeral, ECOPETROL, in the way and terms established by law, shall pay those entities mentioned by law the royalties that are caused in favor of the Nation on the total of the production of the Field and, in no case, shall THE ASSOCIATE be responsible for any type of payment before these entities.

# CLAUSE 14 - DISTRIBUTION AND AVAILABILITY OF THE HYDROCARBONS

The Hydrocarbons produced, except those that have been used in benefit of the operations of this contract and those that are inevitably wasted in these functions, shall be transported to the jointly owned tanks or to other measuring facilities agreed upon by the Parties. If there is no agreement, to the measuring site nearest to the control site established by the Ministry of Mines and Energy. The Hydrocarbons shall be measured pursuant to the regulations and methods accepted by the oil industry, and based on this measurement, the volumes to which Clause 13 refer to shall be determined. As of this moment, the remaining Hydrocarbons shall be the property of each Party in the proportions specified in this contract.

- After having deducted the percentage that corresponds to the royalties, the rest of the Hydrocarbons produced by each Commercial Field are the property of the Parties in the proportion of fifty percent (50%) for ECOPETROL and fifty percent (50%) for THE ASSOCIATE, until the cumulative controlled production of the corresponding Commercial Field reaches the amount of sixty (60) million barrels of liquid Hydrocarbons or the amount of four hundred twenty (420) cubic gigafeet of gaseous Hydrocarbons to standard conditions, what ever occurs first (1 cubic gigafoot = 1 X 109 cubic feet).
- 14.2.2 Independently from the classification of the Commercial Field given by ECOPETROL in the definition of commercialization, exceeding the limits set forth in numeral 14.2.1, the distribution of the production of each Commercial Field (previous the deduction of the <PAGE&gt;

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percentage corresponding to royalties) is the property of the Parties in the proportion that results from applying factor R as follows:

- 14.2.2.1 If the Hydrocarbon that reached first the limit established in numeral 14.2.1 of the present Clause was the liquid Hydrocarbon, the following table shall be applied:
- R FACTOR Distribution of Production After Royalties (%)
  ASSOCIATE ECOPETROL

  0.0 to 1.0
  50
  50
  1.0 to 2.0
  50/R
  2.0 or more
  25
  75
- 14.2.2.2 If the Hydrocarbon that reached first the limit established in numeral 14.2.1 of the present Clause was the gaseous Hydrocarbon, the following table shall be applied:
- R FACTOR Distribution of Production After Royalties (%)
  ASSOCIATE ECOPETROL

  0.0 to 2.0
  2.0 to 3.0
  50/(R-1)
  100 [50 /(R-1)]
  3.0 or more
  25 75
- 14.2.3 For the effects of the previous tables, factor R shall be defined as the relation of cumulative incomes, expressed in constant terms, over the cumulative expenses, equally expressed in constant terms, corresponding to THE ASSOCIATE for each Commercial Field in the following terms:

Where:

IA (Cumulative Income of THE ASSOCIATE): Is the valuation of the cumulative incomes corresponding to the volume of THE ASSOCIATE's Hydrocarbons produced, after royalties, at the reference priced agreed on by the Parties, excluding re-injected Hydrocarbons in the Fields in the Contract Area, those consumed in the operation and the flared gas.

The average reference price of the Hydrocarbons shall be determined by mutual agreement between the Parties.

To determine the cumulative incomes, the Monthly Incomes shall be taken as a base, which shall be determined as a result of multiplying the monthly average reference price by the production of the month pursuant to the formats established for such effect by the Ministry of Mines and Energy.

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ID (Cumulative Development Investments): Are fifty percent (50%) of the Cumulative Development Investments approved by the Executive Committee of the Association for each Commercial Field. The cumulative Development Investments done previous to the date of the initiation of the exploitation defined by the Ministry of Mines and Energy for the respective Field, shall be adjusted up to the present date in the same manner in which the Direct Exploration Costs are adjusted in the Paragraph of Clause 9 (numeral 9.2.2.).

A: Are the Direct Exploration Costs in which THE ASSOCIATE has incurred in, pursuant to Clause 9 of this contract and adjusted pursuant to that established in Paragraph of clause 9 (numeral 9.2.2)

B: Is the cumulative Reimbursement of the Direct Exploration Costs, previously mentioned, pursuant to Clause 9 of this contract.

GO: (Cumulative Operation Expenses): Are the cumulative operation expenses approved by the Executive Committee of the Association, in the proportion that corresponds THE ASSOCIATE, plus the cumulative transportation costs of THE ASSOCIATE. As transportation costs it is understood, the investment and operation expenditures for the transportation of Hydrocarbons produced in the Commercial Fields located in the Contract Area, from it to the port of export or site where it is agreed to take the price to be used in the calculation of incomes IA. Such transportation costs shall be determined by the parties in mutual agreement once the exploitation stage of the Fields begins, which commerciality has been accepted by ECOPETROL. Within the Operation Expenses the Special Contributions are included or those similar that have direct application on the production of Hydrocarbons in the Contract Area.

All values that, with posteriority to the date of initiation of the exploitation defined by the Ministry of Mines and Energy, included in the determination of factor R shall be taken in current dollars.

For such effect, the expenses in pesos must be converted into dollars at the market rate certified by the Superintendencia Bancaria or by the corresponding authority, in charge on the date in which the corresponding disbursements have been done.

14.2.4 Calculation of factor R: The distribution of the production based on factor R shall begin to be applied as of the first day of the third calendar month after which the cumulative production of each Commercial Field reaches the amount of sixty (60) million barrels of liquid Hydrocarbons or to the amount of four hundred twenty (420) cubic gigafeet of gaseous Hydrocarbons at standard conditions, pursuant to numeral 14.2.1 of this clause.

The calculation of factor R for each Commercial Field shall be done based on the accounting closing corresponding to the calendar month in which the cumulative control production of sixty (60) million barrels of liquid Hydrocarbons was reached or the amount of four hundred twenty (420) cubic gigafeet of gaseous Hydrocarbons at standard conditions, pursuant to numeral 14.2.1.

The resulting distribution of the production shall be applied until

June 30 of the following year. As of that moment, the distribution of the production with the application of factor R shall be done in one year terms (from July 1 to June 30), over its liquidation, based on the

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cumulative values to December 31 of the year immediately preceding pursuant to the corresponding accounting closing.

- In addition to the tanks and other jointly owned facilities, each Party shall have the right to build its own production facilities in the Contract Area for its own and exclusive use in compliance with the legal regulations. The transportation and delivery of Hydrocarbons by each Party to the pipeline and to other storage facilities that are not jointly owned shall be done on the sole account and risk of the Party that receives the Hydrocarbons.
- When production is obtained in places not connected by pipelines, the Parties may agree to install pipelines up to a point in which the Hydrocarbons may be sold, or to a place that connects with the pipeline. If the parties agree on the construction of such pipelines, they shall enter the contracts they consider suitable for this purpose and appoint the Operator pursuant to the legal provisions in force.
- 14.5 Each Party shall be the owner of the Hydrocarbons produced and stored as a result of the Operation hereunder and that are made available to it pursuant to the provisions of this contract, and on its account each Party must receive them in kind or sell them or dispose of them separately, according to that established in Clause 14 (numeral 14.3).
- 14.6 Should any of the Parties be unable for any reason to dispose of or separately withdraw from the tanks Jointly Account all or part of the Hydrocarbons it is entitled to pursuant to this contract, the following procedure must be followed:
- 14.6.1 If ECOPETROL is the Party unable to withdraw, in all or in part, its quota of Hydrocarbons (share plus royalties), pursuant to clause 12 (numeral 12.3), the Operator may continue to produce the field and delivering to the ASSOCIATE, in addition to the portion that the quota of THE ASSOCIATE represents in the operation on the basis of one hundred percent (100%) of the MER, all those Hydrocarbons that THE ASSOCIATE decides to and in the capacity of withdrawing up to a limit of one hundred percent (100%) of the MER, crediting ECOPETROL for subsequent delivery, the volume of Hydrocarbons that ECOPETROL had the right to withdraw but that did not do so. With regard to the not withdrawn volume of Hydrocarbons to which ECOPETROL is entitled to during the month for royalties, THE ASSOCIATE, at the request of ECOPETROL, shall pay ECOPETROL in dollars of the United States of America, the difference that exists between the amount of Hydrocarbons that for the concept of royalties ECOPETROL has lifted and the amount of Hydrocarbons that it is entitled to for the concept of the royalties to which Clause 13 refers to, being understood that any withdrawal of Hydrocarbons done by ECOPETROL shall be applied, in first place to royalty payment in kind, and subsequently, any additional withdrawals of Hydrocarbons performed shall be applied to the share that it is entitled to pursuant to Clause 14 (numeral 14.2).
- 14.6.2 Should THE ASSOCIATE be the Party unable to withdraw, in all or in part, its quota assigned under Clause 12 (numeral 12.3), the Operator shall deliver to ECOPETROL, on the basis of one hundred percent (100%) of MER, not only the share and the quota that corresponds to ECOPETROL, but also the Hydrocarbons that ECOPETROL is in the capacity of withdrawing up to a limit of one hundred percent (100%) of MER,

accrediting THE ASSOCIATE for its subsequent delivery, the part that corresponds to its quota and that it has been unable to withdraw.

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- When both parties are in the capacity to receive the Hydrocarbons assigned under Clause 12 (numeral 12.3), the Operator shall deliver to the Party that was previously unable to receive its quota of the production and, upon such Party's request, besides its share in the operation, a minimum of ten percent (10%) per month of the production that corresponds to the other Party on a monthly basis and, by mutual agreement, up to one hundred percent (100%) of the quota that was not received, up to the time in which the total amounts that were credited to the Party that was unable to received its Hydrocarbons, are cancelled.
- 14.8 Without prejudice of the legal provisions that rule the mater, each Party shall be free, at any moment, to sell or export its quota of the Hydrocarbons obtained, as agreed to in this contract, or to dispose of the same in any manner.

## CLAUSE 15 - USE OF THE ASSOCIATED NATURAL GAS

In the case in which one or more fields of associated natural gas are discovered, the Operator shall, within the three (3) years following to the date of the initiation of the exploitation of the Field defined by the Ministry of Mines and energy, submit a project on the use of the Natural Gas for benefit of the Joint Operation. The Executive committee shall approve the project and, if necessary, decide on the chronogram for the execution thereof. If the Operator fails to present any project within the three (3) following years or does not execute the project previously approved, within the time limits set by the Executive Committee, ECOPETROL may take, free of charge, for itself, all the associated natural gas available from the Reservoirs in exploitation, which is not required for the efficient exploitation of the Field.

# CLAUSE 16 - UNIFICATION

When an economically exploitable Reservoir extends continuously into other area or areas outside the Contract Area, the Operator shall implement, in agreement with the Parties and with any other interested parties, upon approval of the Ministry of Mines and Energy, a unified exploitation program that meets the Hydrocarbons exploitation engineering techniques.

# CLAUSE 17 - SUPPLY OF INFORMATION AND INSPECTION DURING THE EXPLOITATION

- The Operator shall deliver to the parties, as they are obtained, reproducible originals (sepias), and copies of the electric, radioactive and sonic logs of the wells drilled, historical records, core analysis, cores, production tests, reservoir surveys and other relevant technical information, as well as all routine reports made or received in connection with the operations and activities carried out in the Contract Area.
- 17.2 Each Party, at its own cost, expense and risk, shall have the right to inspect, through authorized representatives, the wells and the facilities in the Contract Area and the activities related thereto. Such representatives shall have the right to examine cores, samples, maps, logs for wells drilled, liftings, books and any other source of information connected with the performance of this contract.
- 17.3 To enable ECOPETROL to comply with the provisions of Clause 29, the Operator shall prepare and deliver to ECOPETROL all reports required by the National Government.

17.4 The information and data connected with exploitation operations shall be treated as confidential, in the same way as set forth in Clause 6 (numeral 6.3) of this contract.

## CHAPTER IV - EXECUTIVE COMMITTEE

## CLAUSE 18 - CONSTITUTION

- Within the thirty (30) calendar days from the acceptance of the first commercial Field, each Party must appoint a representative and corresponding first and second alternates, who shall form the Executive Committee, notifying the other Party in writing of the names and addresses of its representatives and alternates. Each Party may replace its representative or alternates at any time, but shall give written notice thereof to the other Party. The vote or decision of the principal representative of each Party shall be binding upon such Party. If the principal representative of any of the Parties is unable to attend a Committee meeting, the alternate, in its order first or second, shall attend, and shall have the same authority as the principal.
- The Executive Committee will hold ordinary meetings during the months of March, July and November, during which the exploitation program carried out by the Operator shall be reviewed as well as the development program and the immediate plans. Every year, at the July ordinary meeting, the Operator shall present the Executive Committee with the annual operating program and the investment and expenses Budget for each Commercial Field, for the next calendar year, and if it is the case, the Revised Development Program.
- The Parties and the Operator may request a special Executive Committee Meeting to analyze specific conditions of the operation. The representative of the interested Party shall notify the date of the meeting and the issues to be discussed with a ten (10) calendar day's notice. Any issue not included in the agenda of the meeting may be discussed during the meeting, upon acceptance of the representatives of the Parties on the Committee.
- 18.4 Each Party's representative shall have a vote in all matters discussed in the Executive Committee, equivalent to the percentage of that Party's total Interests in the Joint Operation. However, the decisions of the Executive Committee on the issues set forth in numerals 19.3.4 through 19.3.9 of Clause 19 of this contract, shall be adopted by a unanimous vote of the Parties.

Any decisions taken by the Executive Committee, set forth in the procedure established in this clause, shall be binding and final upon the Parties and the Operator.

# CLAUSE 19 - FUNCTIONS

19.1 The representatives of the Parties shall form the Executive Committee which shall have full authority and responsibility to establish and adopt exploitation, development and operations programs and Budgets in relation with this contract. A representative of the Operator shall attend the meetings of the Executive Committee.

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19.2 The Executive Committee shall designate a Secretary for each session.

The Secretary shall take full, detailed records and minutes of all the

meetings, including a summary of the discussions and decisions taken by the Committee. The Minutes shall be approved and signed by the representatives of the Parties within the ten (10) working days following the adjournment of the meeting and delivered to the Parties as soon as possible.

- 19.3 The responsibilities of the Executive Committee are, amongst others, as follows:
- 19.3.1 Adopt its own regulations.
- 19.3.2 Decide on those issues that the Operator submits for its consideration.
- 19.3.3 Supervise the performance of the Joint Account and of the Joint Operation
- 19.3.4 Create the necessary sub-committees and establish the functions they must perform under its direction.
- 19.3.5 Appoint the Operator in case of resignation or discharge, and dictate the regulations that the Operator must fulfill when he is a third person different from the Parties, definitely stating the motives for his discharge.
- 19.3.6 Appoint an External Auditor of the Joint Account.
- 19.3.7 Approve or reject the Development Plans and any subsequent modification or revision.
- 19.3.8 Determine the rules and policies on expenditures.
- 19.3.9 Approve or reject the projects, programs and the annual Budget of each Commercial Field and authorize extraordinary expenditures not included in the approved Budgets.
- 19.3.10 In general, to carry out all the functions authorized in this contract that do not correspond to the Operator, to any other entity or person under the specific clause hereof or under a legal or regulatory provision.

## CLAUSE 20 - DECISION IN CASE OF DISAGREEMENTS

- Any disagreement that cannot be solved in the Executive Committee, shall be directly submitted to the highest ranking executive of each of the Parties resident in Colombia, in order to reach a joint decision. If within the sixty (60) calendar days following the submission of the consultation, the Parties reach an agreement or a decision on the issue under discussion, they shall so advise the Operator, who, within the fifteen (15) calendar days following the receipt of the communication, shall call the Executive Committee to an extraordinary meeting, during which the agreement or decision adopted shall be approved.
- 20.2 If within the sixty (60) calendar days following to the date of the presentation of the consultation to the highest ranking executive of each of the Parties resident in Colombia, the Parties fail to agree on the issue, the procedures set forth in Clause 28 of this contract must <PAGE&gt;

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- If at any time one of the Parties wishes to drill an Exploitation Well not approved in the operations program, it shall notify the other Party written notice not less than thirty (30) calendar days in advance of the next Executive Committee meeting, of its wish to drill such well, including information such as location, recommendation to drill, and estimated depth and costs. The Operator shall include such a proposal among the issues to be discussed in the next Executive Committee Meeting. If such proposal is approved by the Executive Committee such well shall be drilled at the expense of the Joint Account. If such proposal is not accepted by the Executive Committee, the Party wishing to drill such well, hereinafter called participating Party, shall have the right to drill, complete, produce or abandon such well at its sole cost and risk. The Party not wishing to participate in the previous operation shall be called the non-participating Party. The participating Party must begin the drilling of such well within one hundred eighty (180) days following its rejection by the Executive Committee. If the drilling is not commenced within said period, it must again be submitted to the Executive Committee for its consideration. Upon request of the participating Party, the Operator shall drill the previously mentioned well on account and risk of the participating Party, provided that by judgment of the Operator such operation does not interfere with the normal development of the operations of the field, upon advance payment to the Operator by the Participant Party of such amounts as the Operator may deem necessary in order to drill. If said well is unable to be drilled by the Operator without interfering in the normal development of the operations, the participating Party shall have the right to drill such well directly or through a competent service company and, in this case, the participating Party shall be responsible for such operation, without interfering with the development of the normal operations in the Field.
- If the well referred to in Clause 21 (numeral 21.1) is completed as a 21.2 producing well, it shall be administered by the Operator and the production of such well, after deducting the royalties referred to in Clause 13, it shall become the property of the participating Party, who shall pay for all the operation costs of such well until the net production value, after deducting the production costs, gathering, storage, transportation and similar costs, as well as sale costs, is equal to two hundred percent (200%) of the drilling and completing cost of such well, which thereupon and for the purposes of this contract shall become the property of the holders of the Joint Account in the proportion established, as if it had been drilled with the approval of the Executive Committee for the account of both Parties; for such purpose the investments done and the costs incurred, in the exploitation of this well shall become part of Factor R of the Commercial Field. For the purpose of the present Clause, the value of each barrel of Hydrocarbons produced in such well, during a calendar month, before deducting the previously mentioned costs, shall be the reference price agreed by the Parties.
- If at any time one of the Parties decides to workover, deepen up to the Production Objectives or plug a well that is not in commercial production or a dry well drilled by the Joint Account, and if such operations have not been included in a schedule approved by the Executive Committee, such Party shall notify the other Party of its intention to workover,

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enforced. If at the well site there is adequate equipment to perform the operations proposed, the Party that receives the notification of the operations that the other Party wishes to carry out, shall have a term of forty eight (48) hours following the receipt of the notice, to approve or disapprove the operation, if during such term no answer whatsoever is received, it is understood that the operation shall be done on account and at the risk of the Joint Account. If the work proposed is carried out on account and sole risk of one participating Party, the well shall be administered pursuant to Clause 21 (numeral 21.2).

- If at any time one of the Parties wishes to build new facilities for the extraction of liquids from the gaseous Hydrocarbons and for the transportation and export of the Hydrocarbons produced, to be called additional facilities, such Party shall so advise the other in writing giving the following information:
- 21.4.1 General description, design, specifications and estimated costs of the additional facilities.
- 21.4.2 Projected capacity.
- 21.4.3 Approximate date of the initiation of the construction and duration of the same. Within ninety (90) calendar days from the date of notification, the other Party, by written notice, has the right to decide if it participates in the additional facilities projected. In case in which such Party decides not to participate in the additional facilities, or gives no answer to the proposal of the participating Party, from hereinafter referred to as the constructing Party, it may proceed with the additional installations and order the Operator to build, operate and maintain such facilities at the exclusive cost and risk of the constructing Party, without prejudice to the normal development of the Joint Operations. The constructing Party may negotiate with the other Party the use of such facilities for the Joint Operation. During the time in which the facilities are operated on the constructing Party sole account and risk, the Operator shall charge this party all operation and maintenance costs of the additional facilities pursuant to the accounting standards generally accepted.

#### CHAPTER V - JOINT ACCOUNT

#### CLAUSE 22 - HANDLING

- 22.1 Without prejudice to any provisions contained herein, the expenses covering Exploration Operations shall be on account and risk of THE ASSOCIATE.
- As from the time ECOPETROL accepts the existence of a Commercial Field and subject to the provisions in Clause 5 (numeral 5.2) and of Clause 13 (numerals 13.1 and 13.2), the property of the rights or Interest in the Operation of the Contract Area, shall be divided as follows: ECOPETROL fifty percent (50%), THE ASSOCIATE fifty percent (50%). From the moment of such acceptance, all expenses, payments, investments, costs and obligations incurred in and contracted for the development of the Joint Operation, in agreement with this contract, shall be charged to the Joint Account and the Direct Exploration Costs done by THE ASSOCIATE before a Commercial Field is accepted and its extensions, pursuant to Clause 9 (numeral 9.9), shall be registered in the Joint Account. Except for that established

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from there on for the fulfillment of the operation activities of the Commercial Field shall be paid for and belong to the Parties, in the same proportion established in the present clause.

- Within the first five (5) days of each month, the Parties shall supply the Operator, in the bank account of the Joint Account, the quota that corresponds them in the Budget of each Commercial Field pursuant to the needs and in the currency in which the expenses must be made in, meaning, in Colombian pesos or in dollars of the United States of America, as per request of the Operator pursuant to the programs and Budgets approved by the Executive Committee. When THE ASSOCIATE has insufficient Colombian pesos to cover the quota that corresponds it from its share in this currency, ECOPETROL shall have the right to supply such pesos and to receive a credit for the contributions it must make in dollars, liquidated at the market rate certified by the Superintendencia Bancaria or by the corresponding authority, of the day in which ECOPETROL must make the corresponding contribution, when such transaction is allowed by the legal provisions.
- The Operator shall present a monthly statement to the Parties within the ten (10) calendar days following the termination of each month, showing the funds advanced, expenses incurred, outstanding liabilities and a report on other debits and credits made to Joint Account; this report that shall be done as set forth in Annex "B", and in an independent Annex, the parameters and calculation of factor R as mentioned in Clause 14 (numerals 14.2.3 and 14.2.4). If the payments to which Clause 22 (numeral 22.3) refer to are not made within the term therein set forth and the Operator decides to cover the same, the Debtor Party shall pay the commercial interest in the same currency in which the payment has been incurred for the period of time for which the payment has been delayed.
- Should either party, in a timely manner, fails to supply the Joint 22.5 Account with the sums due and payable, as of the due at date such Party shall be considered as a Debtor Party, and the other Party, as the Prompt Party. If the Prompt Party has made the corresponding share to the Debtor Party, in addition to its own, after sixty (60) calendar days of delay such Party shall have the right to have the Operator issue it the total participation of the Debtor Party, in the Contract Area (excluding the percentage that corresponds to the royalty), up to an amount of production that shall allow the Prompt Party a net income for the sales made equal to the sums not paid by the Debtor Party, plus an annual interest equal to the Interest in Arrears after of commencement of default.. By "net income" it is understood the difference between the sales price of the Hydrocarbons taken by the Prompt Party, less cost for transportation, storage, loading and other reasonable expenses incurred in by the Prompt Party in the sale of the products taken. The right of the Prompt Party may be exercised at any time after thirty (30) calendar days from having notified the Debtor Party in writing of its intention to take part or all of the production shares that correspond to the Debtor Party.
- 22.6 Direct and Indirect Expenses.
- 22.6.1 All Direct Expenses of the Joint Operation shall be charged to the Parties in the same proportion in which the production is distributed after the royalties.
- 22.6.2 The indirect Expenses shall be charged to the Parties in the same proportion established in numeral 22.6.1 of the present Clause for Direct Expenses. The amount of these

expenditures shall be the result of taking the total annual value of the investments and direct expenditures (excluding the technical and administrative supports) and apply the equation a + m (X-b). In this equation "X" is the total value of the annual investments and expenditures, and "a", "m" and "b" are constants which values are shown in the following chart with relation to the amount of annual investments and expenditures:

	AMOUNT OF INVEST	'MENT	S AND EXPENSES		VALUES OF THE	CONSTANT
	"X" (U	S\$)		"a" (US\$)	M (frac.)	"b"(US\$)
1.	0	to	25.000.000	0	0.10	0
2.	25.000.001	to	50.000.000	2.500.000	0.08	25.000.000
3.	50.000.001	to	100.000.000	4.500.000	0.07	50.000.000
4.	100.000.001	to	200.000.000	8.000.000	0.06	100.000.000
5.	200.000.001	to	300.000.000	14.000.000	0.04	200.000.000
6.	300.000.001	to	400.000.000	18.000.000	0.02	300.000.000
7.	400.000.001	on		20.000.000	0.01	400.000.000

The equation shall be applied only one time per year, in each case with the value of the constants that correspond to the total value of the annual investments and expenditures.

- The monthly statements of the account referred to in Clause 22 (numeral 22.4) may be revised or objected by any of the Parties from the time they are received by the Parties up to two (2) years counted from the end of the calendar year to which they pertain to, clearly specifying the corrected or questioned entries and the reason thereof. Any account that has not been corrected nor objected within this period, shall be considered as final and correct.
- The Operator shall keep the accounting records, vouchers and reports for the Joint Account in Colombian pesos pursuant with the Colombian laws and every debit or credit to the Joint Account shall be made pursuant to the accounting procedure established in Annex "B", that is part of this contract. In case of disagreement between such accounting procedure and that established in this contract, that stipulated in this later one shall prevail.
- The Operator may sell materials or equipment during the first twenty (20) years of the Exploitation Period or the first twenty eight (28) years of the Exploitation Period, if it concerns a Gas Field, for the benefit of the Joint Account, when the value of that sold does not exceed five thousand dollars of the United States of America (US\$5.000) or its equivalent in Colombian pesos. This type of operations, per calendar year may not exceed the amount of fifty thousand dollars of the United States of America (US\$50.000) or its equivalent in Colombian currency. The sales in excess of these amounts or sales of real property shall be approved by the Executive Committee. The sale of such material or equipment shall be done at a reasonable commercial price pursuant to the conditions wear of the asset.

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22.10 Any machinery, equipment and other assets or personal property acquired by the Operator for the execution of this contract, charged to the Joint Account, shall be the property of the Parties in the same proportion to their Interest in the Operation. However, if one of the Parties has decided to terminate its interest in the contract prior to the end of the first seventeen (17) years of the Exploitation Period, with the exception of that established in Clause 25, such Party is obliged to sell its interest in such items to the other Party, at a price commercially reasonable or at book value, which ever is lower.

Should the other Party not wish to purchase such items within the ninety (90) calendar days following the formal offer of sale made to it, the Party wishing to withdraw shall have the right to yield to a third person the Interest that corresponds it in such machinery, equipment and items. If THE ASSOCIATE decides to withdraw after seventeen (17) years of the Exploitation Period, its rights in the Joint Operation shall pass to ECOPETROL free of charge, previous its acceptance.

## CHAPTER VI - DURATION OF THE CONTRACT

#### CLAUSE 23 - MAXIMUM DURATION

This contract shall have a maximum duration of twenty eight (28) years, counted as from its Effective Date distributed as follows: up to six (6) years as an Exploration Period pursuant to Clause 5 without prejudice of that set forth in Clause 5 (numeral 5.4) and in Clause 9 (numeral 9.3); and twenty two (22) years as an Exploitation Period as from the date of the termination of the Exploration Period. It is understood that in the events contemplated in this contract, in which the Period of Exploration is extended, in no case, shall the total term of twenty eight (28) years be extended.

Paragraph 1: The Exploitation period for the Gas Fields that are discovered within the Contract Area shall have a maximum duration of thirty (30) years as from the date of expiration of the Exploration Period or of the Retention Period granted. In any case, the total term of the contract for such Fields may not exceed forty (40) years from its Effective Date.

Paragraph 2: Notwithstanding the afore mentioned, ECOPETROL and THE ASSOCIATE, with an anticipation not less than five (5) years to the date of expiration of the Exploitation Period of each Field, shall study the conditions to continue with its exploitation subsequent to the term to which this Clause refers to. In such case in which the Parties agree to continue such exploitation, they shall define the terms and conditions within which it shall be performed.

# CLAUSE 24 - TERMINATION

This contract shall be terminated in any of the cases hereinafter mentioned and in which the rights of THE ASSOCIATE mentioned in this contract shall stop, both as interested Party, and in its character of Operator, if at the time of the expiration the two qualities mentioned concur in THE ASSOCIATE.

Due to the expiration of the Exploration Period without THE ASSOCIATE having discovered a Commercial Field, except for that provided in Clauses 5 (numeral 5.4), 9 (numerals 9.5) and 34.

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- 24.2 Upon expiration of the term of the duration of the contract as set forth in Clause 23.
- At any time at THE ASSOCIATE's will, upon fulfillment of its obligations as set forth in Clause 5 and of any others entered into hereunder, up to the date of its expiration.
- 24.4 If THE ASSOCIATE assigns this contract, fully or in part, without having fulfilled that set forth in Clause 27.
- 24.5 By not fulfilling the obligations acquired by THE ASSOCIATE pursuant to this contract.
- 24.5.1 ECOPETROL may not end this contract until after sixty (60) calendar days of having notified THE ASSOCIATE or its assignees in writing, clearly specifying the causes invoked to make such a declaration and

only if the other Party has not presented the satisfactory explanations to ECOPETROL or if THE ASSSOCIATE has not corrected the failure in the fulfillment of the contract, without prejudice of the right of THE ASSOCIATE to present the legal resources it considers convenient.

- If within the term previously mentioned THE ASSOCIATE presents the satisfactory explanations to ECOPETROL and the remaining term to complete the time of sixty (60) calendar days is insufficient to fulfill the pending obligations pursuant to the good oil industry practices, the Parties may agree on an additional term to allow such fulfillment, without prejudice of the right of ECOPETROL to demand the necessary guarantees to support it. If at the end of this term the operations agreed on have not been fulfilled, ECOPETROL shall terminate the contract.
- 24.6 At any time by mutual agreement of the Parties.
- 24.7 By the unilateral causes for termination mentioned in Clause 25.

# CLAUSE 25 - CAUSES FOR UNILATERAL TERMINATION

- 25.1 ECOPETROL may unilaterally declare this contract terminated, at any time before the expiration of the period set forth in Clause 23, in the following instances.
- 25.1.1 By death or permanent physical disability or judicial interdiction of THE ASSOCIATE, if a natural person.
- 25.1.2 By initiation of a process of liquidation of THE ASSOCIATE if a juridical person.
- 25.1.3 By legal injunction of THE ASSOCIATE that seriously affects the fulfillment of the contract.
- When THE ASSOCIATE is conformed by several legal and/or natural persons, the causes in numerals 25.1.1 and 25.1.2 shall be applied when they seriously affect the fulfillment of the contract.
- In the case of declaration of a unilateral termination, the rights of THE ASSOCIATE mentioned in this contract shall end, both as interested Party to the Contract, and as

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operator, if at the time of the declaration of a unilateral termination the two qualities mentioned concur in THE ASSOCIATE.

# CLAUSE 26 - OBLIGATIONS IN CASE OF TERMINATION

- Upon termination of the contract pursuant to Clause 24, either in the Exploration, Retention or Exploitation periods, THE ASSOCIATE shall leave in production any wells that are then producing and restitute the facilities, transfer pipelines and other real property of the Joint Account (located in the Contract Area), all of which, shall pass free of charge to ECOPETROL with the any rights of ways and assets obtained to the exclusive benefit of the contract, even though the former or the latter be located outside of the Contract Area.
- If this contract is terminated for any reason after the first seventeen (17) years of the Exploitation Period, all Interest of THE ASSOCIATE in the machinery, equipment or other assets or facilities used or obtained by THE ASSOCIATE or by the Operator for the execution of this contract, shall pass to ECOPETROL free of charge.

- 26.3 If this contract is terminated before the seventeen (17) years of the Exploitation Period, that set forth in Clause 22 (numeral 22.10) shall be applied.
- In case this contract is terminated by a declaration of a unilateral termination issued at any time, all the real and personal property acquired for the sole benefit of the Joint Account shall pass to ECOPETROL free of charge.
- 26.5 Upon termination of this contract by any cause and at any time, the Parties are obliged to satisfactorily fulfill their legal obligations between each other and before Third Parties and those acquired in this contract.

# CHAPTER VII - VARIOUS PROVISIONS

#### CLAUSE 27 - RIGHTS OF ASSIGNMENT

THE ASSOCIATE shall be entitled to assign or transfer all or part of its interests, rights and obligations originated from this contract, with the previous written authorization of ECOPETROL, to another person, company or group that has the financial capacity, the technical competence, the necessary professional abilities and legal capacity to act in Colombia.

For such purpose, THE ASSOCIATE shall submit a written request to ECOPETROL, indicating the essential elements of the negotiation, such as the name of the possible assignee, information on his legal, financial, technical and operational capacities, the cost of the rights and obligations to be assigned, scope of the operation, etc. Within the sixty (60) working days following the receipt of the request, submitted in a complete form, ECOPETROL, shall exercise the discretional faculty to study the information supplied by THE ASSOCIATE, after which it shall adopt its determination, without being obliged to motivate it.

27.1.1 When the assignments are in favor of companies that control or direct THE ASSOCIATE, or of any one of the companies that integrate it or their affiliates or subsidiaries, or between

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companies that conform the same economic group, it shall be sufficient to previously and timely notify ECOPETROL on the essential elements of the negotiation previously mentioned.

27.1.2 The operations performed under the development of this clause, and that pursuant to the Colombian Legal Tax legislation, are taxable, shall cause the payment of the corresponding taxes.

Paragraph: When THE ASSOCIATE is conformed by more than one company and one of them wishes to totally or partially assign its interests, rights and obligations in the contract pursuant to this clause, it must give preference to the other companies that integrate THE ASSOCIATE, offering them, before doing so to Private Parties, the interests, rights and obligations it wishes to assign, unless the companies that conform THE ASSOCIATE have agreed otherwise.

# CLAUSE 28 - DISAGREEMENTS

In the event of any discrepancies or inconsistencies in the interpretation of the Clauses of this contract with relation to those set forth in Annex "B" called the "Operating Agreement", those

stipulations of the first shall prevail.

- The disagreements that arise between the Parties on matters of rights related with the interpretation and execution of the contract and that cannot be solved in a friendly way, are subject to the knowledge and decision of the legal branch of the Colombian public authorities.
- Any difference as to the facto or technical matters that may arise between the parties hereto as a result of the interpretation or application of this contract and that cannot be solved in a friendly manner, shall be subject to a final decision of experts appointed as follows: one by each Party and, the third one, appointed by mutual agreement by the principal experts appointed. Should these two fail to reach an agreement as to the appointing of the third, the latter shall be designated upon request of either Parties by the Board of Directors of the Sociedad Colombiana de Ingenieros "SCI" (Colombian Society of Engineers), with offices in Bogota, D.C.
- Any differences of an accounting nature that may arise between the Parties hereto by reason of the interpretation and implementation of the contract, which cannot be solved in a friendly manner, shall be referred for the decision of experts who shall be professional public accountants designated as follows: one by each Party and, the third appointed by the two principal experts; should these fail to reach an agreement and by request of any of the Parties, such third expert shall be designated by the Central Board of Accountants of Bogota (Junta Central de Contadores de Bogota).
- 28.5 Both parties declare that the experts decision shall have all the full effect of a settlement between them and in consequence, such decision shall be final.
- In case of disagreement between the Parties on the technical, accounting or legal nature of the controversy, it shall be considered legal and Clause 28 (numeral 28.2) shall be applied.

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## CLAUSE 29 - LEGAL REPRESENTATION

Without prejudice to THE ASSOCIATE's legal rights and as a consequence of the legal provisions or of the clauses of this contract, ECOPETROL shall represent the Parties before the Colombian authorities on any matters concerning the exploitation of the Contract Area whenever it is necessary, and shall supply the officers and government entities with all the data and reports that may be legally required. The Operator shall be obliged to prepare and supply ECOPETROL with the corresponding reports. Any expenses incurred in by ECOPETROL to attend any matter to which this Clause refers to, shall be charged to the Joint Account, and when such expenses exceed five thousand dollars of the United States of America (US\$5.000) or its equivalent in Colombian currency, the previous approval of THE ASSOCIATE is required. The Parties declare, for any relation with Third Parties, that neither that established in this Clause nor in any other of this contract, shall imply the granting of a general power of attorney, moreover that the Parties have constituted a civil or commercial association or any other relationship under which, any of the Parties may be considered as jointly and severally liable for the acts or omissions of the other party or as having authority or mandate that may be binding upon the other Party in relation to any obligation. This contract is concerned to the activities within the territory of the Republic of Colombia, and even though ECOPETROL is a Colombian State-Owned and industrial company, the Parties agree that THE ASSOCIATE, given the case, may choose to be excluded from the enforcement of all the provisions of Sub-chapter K titled PARTNERS AND PARTNERSHIPS of Internal Revenue Code of the United States of America. THE ASSOCIATE shall make such election on its behalf and in the appropriate manner.

- The liabilities Contracted hereunder by ECOPETROL and by THE ASSOCIATE with relation to Third Parties shall not be joint and, in consequence, each Party shall be separately liable for its share in the expenses, investments and obligations that may result as a consequence of such liabilities.
- Environmental Management. During the performance of all of the 30.2 activities provided for in the contract, THE ASSOCIATE or the Operator, shall on time comply with the provisions of the National Code on Natural Renewal Resources and Environmental Protection, issued by the Colombian Government, as well as with all other relevant legal regulations. Also, motivate among their contractors, suppliers, intermediaries, and/or workers working in benefit of this contract, the conservation of a healthy environment, taking the necessary precautions to protect the environment, human life and property of others and prevent the contamination of the Contract Area. From the beginning of this contract, THE ASSOCIATE shall elaborate a general diagnostic on the environmental and social reality of the zones where the Exploration Operations shall be executed and shall establish the communication channels with the authorities and communities of the area.

THE ASSOCIATE is obliged to execute a permanent preventive program to guarantee the preservation and restoration of the natural resources within the zones where the operations of Exploration, exploitation and transportation set forth in this contract are carried out.

Such plans and programs must be made known by THE ASSOCIATE to the national and regional communities and entities related to this issue. Also, specific contingency programs must be established to face those emergencies that may occur and to carry out the

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necessary remedial actions. For such effect, THE ASSOCIATE must coordinate such plans and actions with the competent authorities.

The respective programs and Budgets must be prepared by THE ASSOCIATE pursuant to the corresponding Clauses of this contract.

All costs caused shall be assumed by THE ASSOCIATE during the Exploration Period and in the exploitation under the modality of sole risk, and by both Parties with charge to the Joint Account in the Exploitation period.

# CLAUSE 31 - TAXES, CHARGES AND OTHERS

The taxes and charges accrued after the opening of the Joint Account and before the Parties receive their production share, chargeable to the exploitation of Hydrocarbons, shall be charged to the Joint Account. Income, patrimony and supplementary or presumptive taxes, shall be to the sole account of each of the Parties as applicable to each of them.

#### CLAUSE 32 - PERSONNEL

- When THE ASSOCIATE is the Operator, the assignment of the Manager of the Operator shall be previously consulted with ECOPETROL.
- Pursuant to the terms of this contract and subject to the regulations established, the Operator in his condition as the sole and true employer, shall have the autonomy to assign the personnel required for

the operations hereunder, being able to set the salaries, duties, ranks and conditions. The Operator shall adequately and diligently train the Colombian personnel required to replace the foreign personnel that the Operator considers necessary for the performance of the operations of this contract. In any case, the Operator must fulfill all the legal provisions that show the proportion of national and foreign employees and workmen.

32.3 Technological Transfer - THE ASSOCIATE is obliged to pay for or perform at its cost the training programs for the professionals of ECOPETROL in areas related to the development of the contract.

For the fulfillment of this obligation in the Exploration Period, the training may also be in the areas of geology, geophysics and related areas, evaluation of Reservoirs and characterization of reservoirs, drilling and production. The supervised training shall be done throughout the entire Exploration Period of six (6) years and during its extensions, by integrating the professionals that are assigned by ECOPETROL, to the work group organized by THE ASSOCIATE for the Contract Area or for other activities handled by THE ASSOCIATE.

To be able to choose to resign as set forth in Clause 5 of this contract, THE ASSOCIATE must have previously fulfilled the training programs herein mentioned.

During the Exploitation Period, the scope, duration, place, participants, training conditions and other aspects, shall be established by the Executive Committee of the Company.

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All costs for guided training, with the exception of those of work caused in favor of the professionals that receive it, shall be assumed by THE ASSOCIATE in the Exploration Period and by both parties with charge to the Joint Account in the Exploitation Period.

PARAGRAPH: To fulfill all of the Technological Transference obligations pursuant to that herein mentioned, during the first three (3) years of the Exploration Period and for each year, THE ASSOCIATE is committed to carry out programs of guided training and technical exchanges for professionals of ECOPETROL in the areas of joint interest up to a value of forty thousand dollars (US\$40.000) per year. The subject and type of program shall be previously agreed to between ECOPETROL and THE ASSOCIATE. In the event that the Exploration Period is extended, the guided training shall consist of similar programs to that herein considered.

# CLAUSE 33 - INSURANCES

THE ASSOCIATE or the Operator shall obtain all the insurances required by the Colombian laws. Also, it shall require that each contractor performing any type of work during the development of this contract obtain all the insurances considered necessary, that must be maintained in force. Also, the Operator shall take all other insurances that the Executive Committee considers necessary.

At the expiration of this contract, at any moment during the exploitation period or by expiration of a term set forth in clause 23, the Operator and/or THE ASSOCIATE shall constitute an insurance policy that guarantees the payment of salaries, benefits and indemnifications and other working credits for eventual legal sentences derived from claims of the workers contracted by the Operator in his condition as a sole and true employer of the same and during the time of operation of the Commercial Field. The life of the policy shall not be less than three (3) years as of the date of the termination of the Association Contract and the sum insured shall be decided by the Executive Committee, subject to that

ordered in the labor regulations that apply to the respective labor contracts.

# CLAUSE 34 - FORCE MAJEURE OR ACT OF GOD

The obligations to which this contract refer to shall be suspended for the time in which any of the Parties is unable to fulfill them in whole or in part, due to unforeseeable events that constitute a force majeure or Act of God, such as strikes, lockouts, wars, earth quakes, floods or other catastrophes, laws or government regulations or decrees that hinder the provision of essential material and, in general, any non financial motive that really impedes the work, even when not previously mentioned, but that affects the Parties and that is out of their control. Should either Party be unable to fulfill its obligations with this contract due to force majeure or Act of God, it must immediately notify the other Party, for its consideration, specifying the causes of its impediment. In no case can the events of force majeure or Act of God extend or prolong the total period of exploration, retention and exploitation beyond a maximum duration of the contract pursuant to that set forth in Clause 23, but any impediment of force majeure during the period of six (6) years of exploration set forth in Clause 5, which duration is more than sixty (60) consecutive days, shall extend this period of six (6) years for the same period of the duration of the impediment.

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## CLAUSE 35 - APPLICATION OF THE COLOMBIAN LAWS

The Parties set the city of Bogota, D.C., Republic of Colombia for any purposes hereunder. This contract is governed ruled in all of its parts by the Colombian laws and THE ASSOCIATE abides by the jurisdiction of the Colombian Courts and waives any diplomatic claim in respect to its rights and obligations hereunder, except in the case of denial of justice. Denial of justice shall not be deemed to exist when THE ASSOCIATE in its condition as a Party or as Operator has had access to all the resources and ways of action that, pursuant to the Colombian laws, may be used before a jurisdictional branch of the public power.

# CLAUSE 36 - NOTIFICATIONS

Notices or communications between the Parties hereto in relation to this contract, shall require for their validity mentioned or the pertinent clauses and shall be sent to the representatives or delegates assigned by the Parties to the following addresses: ECOPETROL: Carrera 13 No. 36.24, Bogota, D.C., Colombia. To THE ASSOCIATE: Calle 114 No. 9-01 Bogota, D.C., Colombia. The change of address and of representative shall be notified to the other Party in advance.

# CLAUSE 37 - VALUATION OF THE HYDROCARBONS

The payments or Reimbursements set forth in Clauses 9 (numerals 9.2 and 9.4) and 22 (numeral 22.5), shall be made in dollars of the United States of America, or in Hydrocarbons based on the price in effect and with the limitations established or that may be established by the Colombian legislation for the sale of that portion of the Hydrocarbons payable in dollars, originated from the Contract Area, and to be refined within the national territory.

# CLAUSE 38 - PRICES FOR HYDROCARBONS

- The Hydrocarbons to which THE ASSOCIATE is entitled to in the development of this contract, to be refined or used in internal supply, shall be paid when situated at the refinery where they shall be processed or at the station where they are received as agreed to by the Parties, pursuant to the government rules and regulations in force or those that substitute them.
- 38.2 The differences that arise from the application of this Clause shall

be solved through the systems established in this contract.

#### CLAUSE 39 - DELEGATION AND ADMINISTRATION

The PRESIDENT of EMPRESA COLOMBIANA DE PETROLEOS - ECOPETROL appoints the administration of this contract in the Vice-President of Exploration and Production, pursuant to the rules and Reglementary provisions of ECOPETROL, with faculties to execute all the matters concerning the development of this Contract. The Vice-President of Exploration and Production is authorized to perform this assignment through the Assistant Vice-Presidents of Exploration and Production.

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# CLAUSE 40 - LANGUAGE

For all effects and acts related to this contract, the official language is Spanish.

CLAUSE 41 - VALIDITY

To be valid, this contract requires the approval of the Ministry of Mines and Energy.

In witness whereof, it is signed in Bogota, D.C., before witnesses, on the twentieth (20) day of the month of December of the year two thousand (2001).

EMPRESA COLOMBIANA DE PETROLEOS ECOPETROL

(Signed) illegible
ALBERTO CALDERON ZULETA
President

HARKEN DE COLOMBIA LIMITED

(Signed) illegible GABRIEL GUSTAVO CANO VELASQUEZ Principal Legal Representative

WITNESSES

(Signed) Illegible VICTOR EDUARDO PEREZ

(Signed) Illegible
ALBERTO TOVAR

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CAJARO SECTOR ANNEX A

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# ANNEX A CONTRACT AREA

# ANNEX TO THE ASSOCIATION CONTRACT OF THE CAJARO SECTOR

The area of the polygon formed by the vertices mentioned hereinafter is of thirty four thousand one hundred ninety five (34.195) hectares with seven thousand fifty eight (7.058) square meters and is located within the municipal jurisdiction of Mani in the department of Casanare. The cartographic information was taken from the Political Map of Colombia, digital file of the I.G.A.C., at a scale of 1:1'500.000.

as Annex "A", that is part of this contract, as well as the corresponding charts: The Geodesic Vertex "RECREO- 912" of the Agustin Codazzi Geographical Institute has been taken as the point of reference, which flat GAUSS coordinates with origin Bogota are: N-1'051.829,47 meters, E-1'158.055,62 meters, that correspond to the geographic coordinates Latitude 05(0) 03'58"0,207 to the North of the Equator, Longitude 72(0) 39'20"0,698 West of Greenwich. From this vertex it bears S 50(0) 43'3"0,552 E for a distance of 70.494,393 meters until reaching point "A" start off point of boundaries which coordinates are N-1007.196,48 meters, E-1'212.620,77 meters. From this point it bears S 67(0) 33'25"0.116 E for a distance of 3.709,75 meters until reaching point "B", which coordinates are N- 1'005.780,23 meters, E-1'216.049,54 meters. The line "A-B" is contiquous in all of its extension with line "C-B" of the Alcaravan Association Contract operated by Harken. From this point it bears S 58(0) 57'42"0.358 E for a distance of 18.968, 27 meters until reaching point "C" which coordinates are N-996.000,00 meters, E 1'232.302,00 meters. From this point it bears S 54(0) 42'41"0.066 W for a distance of 22.725,46 meters until reaching point "D" which coordinates are N-982.871,61 meters, E- 1'213.752,28 meters. The point "D" is contiguous with point "D" of the Vuelta Laraga Association Contract operated by the Emerald company. From this point it bears N 23(0) 38'28"0.601 W for a distance of 9.395,40 meters until reaching point "E" which coordinates are N-991.478,49 meters, E- 1'209.984,64 meters. From this point it bears N 51(0) 1'59"0.565 W for a distance of 9.036,48 meters until reaching point "F", which coordinates are N- 997.161,26 meters, E- 1'202.958,68 meters. From this point it bears N 43(0) 54'53"0.153 E for a distance of 13.930,60 meters until reaching point "A" start off point and closure of the boundaries. Lines "D-E", "E-F" and "F-A" are contiquous in all their extension with lines "O-N", "N-M" and "M-L" of the Bicudo Association Contract operated by the Braspetro company. <PAGE&gt;

The Contract Area is described as follows and, as it appears on the map enclosed

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ANNEX -A

EMPRESA COLOMBIANA DE PETROLEOS Calculation of Area, courses and Distances as of Gauss Coordinates. Origin Bogota

Data and Results Chart for the CAJARO Sector Municipal Jurisdiction of Mani in the Department of Casanare

POINT Coord. N. Coord. E. Distance Dif.N. Dif. East Courses < PAGE&gt;

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ANNEX B TO THE OPERATIONS AGREEMENT

ANNEX TO THE ASSOCIATION CONTRACT

FOR THE "CAJARO" SECTOR

Entered into by the Empresa Colombiana de Petroleos - ECOPETROL and HARKEN DE COLOMBIA LIMITED, with effective date February eighteenth (18th) year two thousand two (2002), which hereinafter shall be known as The Contract.

PART 1 - TECHNICAL ASPECTS

Section One - Exploration

The geological and geophysical information that THE ASSOCIATE is to provide to ECOPETROL, shall be provided following the international norms accepted by the industry, compatible with the norms used by ECOPETROL (included in ECOPETROL's information provision manual) in order to allow for regional assessments of the

sedimentary basins. As a supplement of what is provided for in Clause 6 (number 6.2) in The Contract, THE ASSOCIATE or the Operator shall deliver to ECOPETROL, as it becomes available, the following information with respect to the exploratory activities that are undertaken by THE ASSOCIATE.

- The geological, geophysical, magnetometric, gravimetric information from remote sensors, electrical methods and, in general, from any Exploration Work performed by THE ASSOCIATE in the development of The Contract shall be submitted in magnetic media, in a reproducible original and one copy, with its respective support information, including the maps related with the acquisition and interpretation of the acquisition, processing and interpretation reports for the data acquired.
- 1.2 Processed seismic sections for each line, obtained in two scales, together with an interpretation report to contain: information used, background, seismic programs, geological information and geophysical, geological and economic considerations that back up the conclusions and technical recommendations.
- 1.3 Two (2) sets of magnetic tapes corresponding to the seismic lines, one with the de- multiplexed information and the other with the stacked information, with their support information and processing report. For the case of vibrators, a copy of the field tape is to be delivered in lieu of the de- multiplexed tape.
- One seismic shot-point map, in reproducible sepia and copy, with the information of coordinates and elevations. This information shall also be delivered on magnetic tapes.
- 1.5 Magnetic, gravimetric profiles and residual maps in reproducible originals, copies and magnetic tapes, with all of the support information generated.
- Report on the seismic, gravimetric and magnetometric interpretation, together with all of the sections, profiles and maps interpreted, submitted set forth in the norms that ECOPETROL has established for this information.
- 1.7 Geological, structural, isopach, isolithic, facies, seismic, etc. maps for The Contract area, in reproducible sepias and copies, with the scales established by ECOPETROL for each basin.
- 1.8 Before starting to drill the well: Intention to Drill (Form 4- CR of the Ministry of Mines and Energy), drilling program, well location map, isochronic or structural map of the prospective <PAGE&gt;

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area and the geological drilling prognosis, duly approved by the Ministry of Mines and Energy. In the event of Exploratory Wells, the following shall also be submitted in three scenarios: the calculation for the Reservoirs in the prospective area to be drilled and the forecast of investments and production. The location of the Exploratory Wells shall be referenced to the seismic maps that served as the basis for the definition of the prospect. For each of the Exploratory Wells that is drilled in The Contract area, a geodesic precision point shall be materialized, duly accepted by the Agustin Codazzi Geographical Institute - "IGAC," obtained by satellite and with its respective azimuth line.

1.9 Daily drilling and geology reports: These reports shall be delivered to ECOPETROL, preferably by telefax, and shall contain the basic information on the well, the drilling conditions, the properties of

the drilling fluid, the manifestations of Hydrocarbons that are being obtained, the geological description of the formations penetrated, the daily and cumulative cost and the program to be carried out. The ASSOCIATE or the Operator shall advise ECOPETROL with sufficient advance notice on the performance of electrical logs, cores and testing, so that the latter can send a representative to attend and witness all of the operations.

- 1.10 Copy of the reports sent to the Ministry of Mines and Energy (Form 5-CR) every two weeks.
- 1.11 Final Geological Report: This report is compulsory for any well that is drilled in the country, whether it be exploratory, stratigraphic, or development, and shall be submitted in Spanish, by a registered geologist, latest ninety (90) days after the date of termination or abandonment of the well, and shall include the following information by chapters:
- 1.11.1 Summary of all activities performed during the drilling operations
- 1.11.2 Location of the well and maps at a 1:250,000 scale.
- 1.11.3 Stratigraphy: shall include the stratigraphic column, determination of environments and age for each of the formations drilled.
- 1.11.4 Biostatigraphy: The dispersion charts, analyses performed and possible correlations are to be submitted.
- 1.11.5 Geochemistry: All of the analyses performed shall be included, both for the ditch samples and for each of the cores recovered.
- 1.11.6 Electrical logs: All of the calculations performed for the determination of RW, SW shall be included. The analysis of log velocity shall be included in this chapter.
- 1.11.7 Formation testing: All of the results obtained for each of the tests performed shall be included, as well as the results of the analyses performed in the laboratories for water and Hydrocarbons.
- 1.11.8 The Final Geological Report shall contain the following Annexs:
  - Annex A: Description of the ditch samples at every ten (10) feet.
  - Annex B: Detailed description of the cores and side wall samples that may have been recovered.
  - Annex C: All of the laboratory analyses that are performed on the cores and side wall samples.

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Annex D: Composite graphic log, in reproducible sepia and copy at a 1:500 scale. The symbols that are used by the American Association of Petroleum Geologists (AAPG) for these cases shall be used for the various lithologies included in the composite graphic log.

- Annex E: Final report issued by the company that performed the "logging" for the well, including the "Grapholog" log.
- 1.12 Reproducible sepias and copies of each and every log run in the well, including the velocity log, in 1:200 and 1:500 scales. In addition, the magnetic tapes in LIS format for each of the logs shall be delivered, together with the computer tabulations in the formats established by ECOPETROL for these cases.

- 1.13 Report on the formation and/ or production tests performed, including the analysis of bottom hole pressure (both open well and closed).
- 1.14 Two sets of ditch samples shall be delivered to ECOPETROL, one unwashed every thirty (30) feet and a dry one every ten (10) feet, with the detailed lithological description.
- 1.15 Coring report, whenever performed, including the detailed description for it, as well as on all of the analyses that are carried out. With this report, THE ASSOCIATE is to deliver photographs to ECOPETROL, as well as 50% of the core.
- 1.16 A report on all of the materials used during drilling.
- 1.17 Biostratigraphic analyses with their dispersion chart: These analyses shall be performed for Exploratory Wells, since the sedimentation environments and the age of each of the formations drilled are defined with this information. This type of analysis can also be performed on the various recovered cores.
- 1.18 Geochemical analyses performed on the ditch, side wall and core samples.
- 1.19 Official completion, plugging or abandonment report for the well (Form 6- CR or 10A- CR) and, in general, any other report related with the termination of the well (further work, multiple termination).
- 1.20 Final Well Report. Shall include all of the engineering information and a summary of the Final Geological Report. It shall be submitted in the Spanish language, latest ninety (90) days after the date of termination or abandonment of the well, with the approval of a duly registered petroleum engineer.
- 1.21 Copy of the Annual Technical Report (Geology and Geophysics and of the Engineering Report), with their respective support, submitted to the Ministry of Mines and Energy, set forth in the existing legal provisions.
- 1.22 Any other engineering or geology study that may be performed.

#### CLAUSE 2 - RESTITUTED OF AREAS

The areas that THE ASSOCIATE shall restitute to ECOPETROL, set forth in Clause 8 of The Contract shall be, inasmuch as possible, regular lots with a polygon shape, attempting to facilitate the demarcation of borders, without prejudice of the areas in the existing Fields. For such purpose, an imaginary grid or grille shall be superimposed upon the initially Contract area, divided into ten rows and columns in a north- south direction, the limits of which shall be given by the maximum and minimum border north and east coordinates,

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which shall define the base cells for the areas to be restituted herein. Every time an area is restituted, the imaginary grid or grille shall be adjusted, based on the new coordinates for the Contract Area.

2.2 THE ASSOCIATE shall determine the areas that it shall restituted to ECOPETROL, based on the imaginary grid or grille mentioned in the above point. For such purpose, it shall carry out the restitution of up to two lots made up by one or more cells that are contiguous and adjacent on their sides, and trying to conserve a sole polygon, unless THE ASSOCIATE demonstrates that this is not possible or convenient,

for which purpose it shall require ECOPETROL's approval.

#### CLAUSE 3 - EXTENSIVE PRODUCTION TESTS

The following is the established procedure for performing Extensive Production Testing for Exploratory Wells and for the handling of Hydrocarbons from such tests, prior acceptance or not of the existence of a Commercial Field by ECOPETROL, set forth in Clause 9 of The Contract:

- THE ASSOCIATE is entitled to perform Extensive Production Tests for the Exploratory Wells that turn out to be producers, with the purpose of assessing in the best manner, the Reservoir or Reservoirs discovered and prepare the Development Program for the possible Field. Before initiating the Extensive Production Tests THE ASSOCIATE shall obtain ECOPETROL's approval and subsequently, permission from the Ministry of Mines and Energy. Such tests shall be performed with temporary production facilities and shall not require more than ninety (90) calendar days, unless THE ASSOCIATE proves the contrary and obtains timely approval from ECOPETROL and from the Ministry of Mines and Energy, respectively.
- THE ASSOCIATE, on its own account and risk, shall, set forth in international oil industry recommended rules and practices, carry out the Extensive Production Tests accepted by ECOPETROL and authorized by the Ministry of Mines and Energy, set forth in the operations program. In order to obtain such approvals, THE ASSOCIATE shall prepare and submit to ECOPETROL the operations program for the Extensive Production Testing, which shall contain, among others, the following aspects:
- 3.2.1 Information of the completion of the Exploratory Well and of the Reservoirs to be tested.
- 3.2.2 Specific objectives for the Extensive Production Tests.
- 3.2.3 Information to be compiled on the Reservoirs and fluids, periodicity for sampling, analyses and data on the possible Field, such as type, quality and properties of rocks and fluids, pressures, volumes of "in situ" and recoverable Hydrocarbons, maximum economic Hydrocarbons production rate, production mechanism, etc.
- 3.2.4 Information on the subsurface equipment and temporary surface facilities to be used to handle and decant the volumes of fluids obtained and other equipment required to ensure the safety of the operations, including the location diagram for the temporary surface facilities on site.
- 3.2.5 Detailed chronogram on the main activities to be performed in order to achieve the specific objectives referred to in number 3.2.2. mentioned above.
- 3.2.6 Budget for the main activities to be carried out and the estimated disbursement schedule.

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- 3.2.7 Destination of the Hydrocarbons and other fluids to be recovered from the Extensive Production Testing.
- 3.2.8 Evacuation and marketing scheme for the Hydrocarbons from the Extensive Production Tests (including the volume the corresponds to royalties) and reference price proposal subject to be agreed upon with ECOPETROL for the valuation of such Hydrocarbons.

- 3.2.9 Draft contract and proposals (at least three) for the transport of the Hydrocarbons to be produced corresponding to the royalties set forth in Clause 13 of The Contract, from the Exploratory Well to the delivery point of such Hydrocarbons to ECOPETROL.
- 3.2.10 Any other information that THE ASSOCIATE may consider necessary.
- ECOPETROL may request clarification or suggest adjustments to the operations program submitted by THE ASSOCIATE for the execution of the Extensive Production Tests. When this occurs, THE ASSOCIATE shall submit the explanations to ECOPETROL and, if required, shall bear in mind the comments proposed by ECOPETROL, it being understood that, in any case, the responsibility and the risk for any operation that is included in the operations program for the Extensive Production Tests shall be the responsibility of THE ASSOCIATE. Once the operations program is accepted by ECOPETROL and the appropriate agreements have been reached, it shall be submitted to the Ministry of Mines and Energy by THE ASSOCIATE in order to obtain the corresponding permission.
- THE ASSOCIATE shall be responsible for one hundred percent (100%) of the disbursements incurred during the Extensive Production Tests, including the costs of transporting the volumes of hydrocarbons corresponding to the royalties, if this were the case, from the Exploratory Well to the delivery point that the Parties agree to, set forth in the transportation proposal accepted by ECOPETROL. The costs incurred on account of Extensive Production Testing for each Exploratory Well shall be charged as an increased value for the respective Exploratory Well and shall be considered as Direct Exploration Costs (without including administrative or technical support from Head Office, nor from the central headquarters of the Company) for purposes of their recovery or Reimbursement, set forth in the origin of their disbursement.
- The volumes produced during the Extensive Production Tests shall be 3.5 those recovered from the respective Exploration Well during the maximum time period for testing approved by the Ministry of Mines and Energy in the corresponding permit, discounting any volume of the Hydrocarbons that may be used as consumption in the testing operations. The remaining production, once the percentage corresponding to royalties has been discounted, which shall be paid directly by ECOPETROL, shall be taken by THE ASSOCIATE, and the income stemming from the valuation of such Hydrocarbons at the reference price agreed to by the Parties, shall be deducted from the Direct Exploration Costs for the respective Exploratory Well, up to a maximum of fifty percent (50%) of such costs, for purposes of their recovery or Reimbursement in the following order: i) Direct Exploration Costs in the Extensive Production Tests; ii) Direct Exploration Costs in the drilling and completion of the respective Exploratory Well; and iii) Direct Exploration Costs incurred in Exploration Work undertaken before the drilling of the respective Exploratory Well. Once fifty percent (50%) of the Direct Exploration Costs has been recovered, the production from the Extensive Production Tests shall be distributed between the parties in a proportion of fifty percent (50%) for ECOPETROL and fifty percent (50%) for THE ASSOCIATE.

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Prior consent by ECOPETROL, THE ASSOCIATE may carry out the sale of the portion of production of Hydrocarbons from the Extensive Production Tests corresponding to the royalties and to ECOPETROL. In this case, the Parties shall previously enter into the corresponding agreement.

THE ASSOCIATE shall keep at the disposal of ECOPETROL the daily logs of the production and consumption measurements of Hydrocarbons and fluids, the disbursements incurred and the valuation of the produced Hydrocarbons at the agreed to reference price, with their respective support documentation and the balance in the recovery of Direct Exploration Costs in the development of the Extensive Production Tests for each Exploratory Well. In addition to the periodic reports on the progress of the Extensive production Tests for each Exploratory Well, THE ASSOCIATE shall, within the first ten (10) days each month, submit to ECOPETROL, a report wherein the development of the operations program for the Extensive Production Tests, the results obtained in the fulfillment of the specific objectives for the tests and the status of income and disbursements are reflected, taking as the basis the cumulative values for the accounting closure for the month prior to that for which the report is submitted. The information that THE ASSOCIATE submits in the periodic reports shall be subject to audit by ECOPETROL under the terms provided for in Clause 22 of this agreement.

# Section Two - Exploitation

# CLAUSE 4 - COMMERCIAL FIELD

3.7

- THE ASSOCIATE, once it has obtained sufficient information related to the development of the Field, shall carry out the necessary studies to define the criteria on the petrophysical parameters, improved demarcation of the productive area, calculation of Reservoirs and commercial feasibility of the Field. Such studies shall be carried out by THE ASSOCIATE at its own expense, using the technical methods available in country or abroad; when the circumstances require it, the appropriate reviews shall be performed.
- 4.2 For new facilities, expansions or modifications, the basic production designs and detail engineering shall be submitted to the consideration of the Technical Subcommittee.
- The engineering for the production facilities shall be Contract with national companies, unless, in the decision of the Technical Subcommittee, their technological complexity requires the involvement of a foreign company, preferably in a consortium with a national company.
- The final mechanical completion of the wells passing to the Joint Account's property must agree upon by the Technical Subcommittee. The Reimbursement for such completion for the Exploratory Wells shall be made as set forth in Clause 9 (numbers 9.2.1 through 9.2.3) herein.
- 4.5 With respect to the dry Exploratory Wells, THE ASSOCIATE shall abandon them as set forth in the actual legal and environmental provisions.

CLAUSE 5 - SOLE RISK
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- The Reimbursement corresponds to two hundred percent (200%) of the total cost of the work executed on the account and risk of THE ASSOCIATE in the exploitation of the corresponding Field and of up to fifty percent (50%) of the Direct Exploration Costs made by THE ASSOCIATE on its own account and risk within the Contract Area before the date on which ECOPETROL makes a statement with respect to the commerciality of the Field, which have not been previously charged to a different Field. ECOPETROL shall carry out an audit to determine the amount of the reimbursable investments.
- 5.2 In the same manner as set forth in Clause 11 numeral 11.1 of The

Contract, THE ASSOCIATE shall submit to ECOPETROL the proposal on the projects, programs and Budget, set forth in the Field Development Program, for the first time, within sixty (60) calendar days following the date of the notification to ECOPETROL by THE ASSOCIATE with respect to its intention to exploit the Field under the sole risk method and subsequently, latest on the fifteenth (15th) of November of each year. ECOPETROL may, with the corresponding justification, request clarification or suggest adjustments to the programs, projects and Budget submitted by THE ASSOCIATE. When this were to occur, THE ASSOCIATE shall submit the explanations to ECOPETROL and, if this were the case, shall bear in mind the comments proposed by ECOPETROL in the preparation of the revised Development Plan, being understood that in all cases, the responsibility and the risk for any operation shall fall upon THE ASSOCIATE. The Development Plan for the Fields that are exploited under the sole risk method shall be reviewed annually and shall be consistent with international oil industry standards for the technical, efficient and economic exploitation of each field.

- During the exploitation of a Field under the sole risk method, THE ASSOCIATE shall deliver to ECOPETROL, within the first ten (10) days of each quarter, a report listing all of the technical, economic, legal, administrative and accounting information for the previous quarter, such as the entering into of contracts, well completion, flow lines, production facilities, measuring systems, storage capacity, wells in production, restriction orifices, production reports, economic studies, etc. It is understood that the various Clauses in The Contract and the clarification in this document are fully applicable in the case of Clause 21 of The Contract, Operations for the Risk of one of the Parties, for purposes of timely information, the technical control of Reservoirs and other administrative aspects.
- Within the first three (3) months of each year, THE ASSOCIATE shall contract an external auditor, accepted by ECOPETROL, to review the total costs of the work executed for the account and risk of THE ASSOCIATE for the exploitation of the respective field and the Direct Exploration Costs. The cost of the audit shall be part of the expenses that THE ASSOCIATE shall recover. THE ASSOCIATE shall deliver to ECOPETROL, immediately after having received them, the reports issued by the external auditor and shall maintain at its disposal all of the documentation on the costs in which THE ASSOCIATE has incurred in the exploitation of the respective field.

# CLAUSE 6 - INSPECTION OF THE OPERATIONS

For the inspection and audit of the activities that are carried out in the Contract Area, ECOPETROL may send its representatives. During their stay in the area, THE ASSOCIATE or the Operator shall provide lodging and other conditions designated by ECOPETROL, equal to those provided for its engineers. <PAGE&gt;

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# CLAUSE 7 - PRODUCTION

- 7.1 The Operator shall also transmit to the Parties any information of improvements in production techniques that it may develop during the Exploitation Period.
- 7.2 For the control and prevention of Hydrocarbon losses and damage to the environment, the Operator and the Parties shall apply the appropriate measures, with the generally accepted methods used by the oil industry in order to avoid Hydrocarbon losses or spills in any way during the drilling, production, transport and storage operations.
- 7.3 The Operator shall maintain a daily control of consumption of

Hydrocarbons for the operation and shall submit a monthly report of these to the Parties, attaching the forms that the Ministry of Mines and Energy has for this purpose.

#### CLAUSE 8 - DISTRIBUTION AND AVAILABILITY OF HYDROCARBONS

- 8.1 As per Clause 14 (number 14.1) of The Contract, the Operator shall carry out the measurement, sampling and quality control of the Hydrocarbons produced and maintain the measuring equipment or instruments calibrated, as set forth in the standards and methods accepted by the oil industry (ASTM, AGA and API) and the legal and regulatory provisions in force, performing the appropriate analyses and performing the pertinent corrections for the settlement of the net volumes of Hydrocarbons received and delivered under standard conditions. In order to preserve the integrity, reliability and safety of the facilities and the equipment or instruments for control, the Operator shall adopt all of the necessary actions and shall maintain, for purposes of review by the Parties, the records of periodic calibration of such equipment or instruments and of the daily measurements of production and consumption of Hydrocarbons and fluids. For the case of Extensive Production Testing and for Fields exploited under the sole risk, it shall be THE ASSOCIATE's responsibility to abide by the obligations assigned to the Operator in this number. The volumes of Hydrocarbons that the Operator accepts for its transportation shall be determined with the measuring equipment that the Operator shall have installed for this purpose at the receiving stations or delivery points.
- If at any time the Parties were to ascertain that there has been an error in the calculation of the R Factor set forth in Clause 14 (numbers 14.2.3 and 14.2.4) herein, and that on account of this error it turns out that a different R Factor than the one applied is to be applied, or that it should have been applied at a different time than the one it was applied at, the corresponding correction shall then be made, with effect for the year in which the error was incurred in, adjusting the percent participation that corresponds to each Party as of that year. To perform the respective corrections with regard to the distribution of production, a similar procedure to the one described in Clause 14 (number 14.7) of The Contract shall be followed.

#### CLAUSE 9 - SUPPLY OF HYDROCARBONS FOR EXPORT

For purposes of Clause 14 of The Contract, in order to proceed with the export of Hydrocarbons, THE ASSOCIATE's priority shall be the domestic requirements of the country, before performing any export of Hydrocarbons, set forth in the legal provisions that may be in force regarding this matter. <PAGE&gt;

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# PART II - ACCOUNTING AND FINANCIAL ASPECTS

Section One - Programs, Projects and Budgets

#### CLAUSE 10 - EXPLORATION BUDGET AND PROGRAMS

With respect to the Budget set forth in Clause 7 herein, THE ASSOCIATE shall differentiate and detail it, according to the type of Exploration Work and to the indication of the currency in which the disbursement is forecast to be made. With respect to the reports every six months, these shall be submitted within the first ten (10) calendar days of the months of January and July. The January report shall refer fully to the previous year and the July report to the first half of the current calendar year.

#### CLAUSE 11 - EXPLOITATION PROGRAMS AND BUDGETS

- 11.1 For purposes of Clause 11 herein, the Operator shall submit the proposal for projects, programs and annual Budget, set forth in the Development Plan for each Commercial Field, with a detail short- term and medium- term outlook. The short- term Budget shall be submitted annually and by quarters, in order to facilitate its execution and for the preparation of the corresponding treasury flows.
- The Operator shall submit to ECOPETROL the organization chart for the operation of each Commercial Field, which shall be agreed to at Subcommittee level and approved by the Executive Committee.

#### CLAUSE 12 - BUDGET PREPARATION AND PRESENTATION

The following norms and procedures constitute the guidelines for the preparation, presentation and control of the Budgets during the exploitation of each Commercial Field that may be discovered in the development of The Contract. The Budget shall be divided into three (3) parts, namely:

- 12.1 Income Budget
- 12.2 Expenditures Budget
- 12.3 Other provisions

#### CLAUSE 13 - INCOME BUDGET

This Budget, is in turn, broken down into two (2) sections: Current income Budget and Capital contributions.

#### 13.1 Current Income:

All funds which regularly accrue in the Joint Account and which the Operator can forecast. Such income includes the following items, when applicable:

#### 13.1.1 Product sales:

Income from the sale of Hydrocarbons that the Operator may perform on behalf of the Parties, to one of the Parties, or to Third Parties (it shall be understood that these sales are different from those made by each of the Parties of the production to which they are entitled to).

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# 13.1.2 Services Furnished:

All services that the Operator furnishes to one of the Parties or to a Third Party, in accordance with the rates established by the Sub-Committees and approved by the Executive Committee.

#### 13.1.3 Sales of assets or materials:

Sales of equipment or materials which the Operator makes to the Parties or to third parties as provided in Clause 20 (numeral 20.2) of this Agreement.

#### 13.1.4 Other income:

All funds received by the Operator on account on behalf of the Joint Account, for items such as the yield on temporary financial investments and other income that may be forecast by the Operator.

## 13.2 Capital Contributions:

All funds received by the Operator on account of advances made by each of the Parties according to their share in The Contract. This income is given the name of advances or advance payments (cash calls) and shall be handled as set forth in the procedures in Clause 15 (number 15.5) in this Agreement.

#### CLAUSE 14 - EXPENSE BUDGET

As a prior step to its preparation, the Executive Committee, through the respective Subcommittees, shall set the policies and general parameters to be borne in mind when elaborating the Budget for the respective Commercial Field. The expense or appropriations Budget is made by the Operational Expenses Budget and by the Investment Budget, each of which shall be prepared in the currency of origin for its disbursement in pesos and in dollars of the United States of America, and shall be consolidated in dollars.

#### 14.1 Operations expense Budget.

The operations expense budget shall be prepared by the Operator as set forth in the norms and policies established by the Executive Committee as per Clause 19 (number 19.3.8) of The Contract, and taking as the base parameters and economic indicators, that the respective Subcommittee has defined as being the most representative for the budget execution term.

#### 14.1.1. Preparation Procedure

The Operator shall submit the Operating Expenses Budget, identifying the requirements of the Joint Operation, and shall detail the expense items set forth in the classification indicated in Clause 14 (number 14.1.2) of this Agreement.

The cost factors for the assessment of the various activities that it plans to carry out during the year to which the Budget refers to, shall correspond to the true figures known at the time of preparation or, to the best information available. In all cases, the operating expense Budget shall be calculated bearing in mind the costs that are required by the entities that,

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directly, render services to the Joint Account and, as such, are to be assumed one hundred percent (100%) by the Joint Account and charged back to the Parties in the proportion that Clause 22 (number 22.6.1) of The Contract refers to. The Indirect Expenses that are to be assumed by the Joint Account shall be charged to the Parties and shall be determined as set forth in Clause 22 (number 22.6.2) of The Contract.

# 14.1.2 Classification for the operating expenditure Budget

For all presentation purposes, the operating expenditure Budget shall be broken down into programs, groups and expenditure concept. The expenditure programs within the Budget represent homogeneous activities necessary for the development of the Joint Operation, including those programs related with the investment projects. The expenditure groupings in numerical and continuous order within each program and project represent the object of the expense, shall be duly supported and explained, and shall be expressed in expenditure concepts. Following is a listing of the groups and the main expenditure concepts to be used:

14.1.2.1 Personnel expenses - organization chart Salaries Social Benefits Parafiscal contributions 14.1.2.2 Material and operation supplies Repair and maintenance materials 14.1.2.3 Contracted Services Technical services for the operation and Field maintenance Services given by the Operator Other Services 14.1.2.4 General Expenditures Equipment and office rental Shared expenses. Insurances. Public Utilities. Community relations Other general expenses. 14.1.2.5 Environmental Management Materials Contracted services Well abandonment Area restoration Other expenses

14.1.2.6 Added tax value (IVA) <PAGE&gt;

# 14.1.2.7 Indirect expenses

14.1.3 Calculation base.

Calculation for the operating expenses Budget shall be based on the following:

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The salary and social benefits Budget shall be calculated as set forth in the organization charts approved by the Executive Committee and their estimate shall be made as set forth in Clause 18 (number 18.1.1) herein. The calculation of salaries, social benefits and other special extra-legal bonuses originated by national and foreign personnel shall be presented separately, according to the origin of the disbursement,

to be presented to the Subcommittees and the Executive Committee.

The estimate of the cost of materials and supplies shall be made based on actual prices or updated quotations and, in general, with the best available information.

Importation expenses shall be based on the FOB price calculations for the materials and/or equipment to be imported, and in their preparation the following factors shall be considered: freight, insurance, taxes for the use of Colombian ports, import duties and all other import expenses.

The value of maintenance and operational services contracted shall be estimated on contracts formalized or to be formalized that the Joint Operation may have at the time the Budget is prepared.

Indirect expenses chargeable to he Joint Account for services that are or may be provided by the Operator shall be calculated as set forth in Clause 22 (number 22.6.2) of The Contract).

The purpose for the Budget for environmental expenses is to appropriate the annual funds that are required to fulfill environmental norms.

General expenses shall be calculated taking into account the specific need of the Joint Operation in the normal course of its work. Shared expenses are those expenditures that are to be assumed by the Joint Account as a result of the use of facilities and/or services that are shared between Fields in the same Contract or with other areas. The Budget and the charges made to the Joint Account for general expenses shall be recommended by the Subcommittees and approved by the Executive Committee. Community Assistance will be budgeted on both the request of the interested parties and according to the policies that for such effect are established by the Executive Committee. In special duly-justified circumstances, the Operator may deal with requests according to its procedures, after first notifying each of the Parties on such matters

# 14.1.4 Budget Execution

Execution of the operations expense Budget shall be made as follows:

- 14.1.4.1 All services, purchases or contracts that are charged to the Joint Account on account of operations expenses shall be budgeted and fully justified.
- 14.1.5 Budget execution control <PAGE&gt;

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The Operator is responsible for controlling the expense budget execution and must see that expenses are properly managed.

Within the first ten (10) calendar days following the end of the respective quarter, the Operator shall prepare and submit to the Parties a report explaining the results obtained in the Budget execution, which shall contain:

- 14.1.5.1 Expenses accrued to date, itemized as per expense categories set forth Clause 14 (number 14.1.2) in this Agreement.
- 14.1.5.2 Special comments on items which deviate significantly from budget average or quarterly estimate.

- 14.1.5.3 Estimated expenses forecast for disbursements per quarter or for the rest of the year.
- 14.1.5.4 Justification for possible budget additions, adjustments or transfers that the Operator may deem necessary or that are proposed by one of the Parties.
- 14.2 Investment Budget

Constitutes the basic planning, execution and control tool for each of the investment programs and projects that the Joint Operation foresees it shall carry out, and acts as means to estimate the required funds in the execution of the various programs that are approved by the Executive Committee.

- 14.2.1 The investment Budget is composed of items allotted for the following items:
- 14.2.1.1 Purchase of durable goods, materials and services required for the execution of the different projects approved by the Executive Committee.
- 14.2.1.2 Purchase of major maintenance equipment and tools destined for the Joint Operation shops, in order to ensure the normal development of the operations.
- 14.2.1.3 Construction and/ or expansion of buildings that the operation may require, including the facilities destined for workers in the Commercial Field's organization chart.
- 14.2.2 Classification of the Investment Budget

For all presentation purposes, the Investment Budget shall be grouped into programs and projects. Programs, in numerical order within each Budget, represent a set of projects to be undertaken which, on account of their technical, operational and administrative characteristics, merit being controlled in a connected manner and which the Joint Operation shall execute through the Operator. Projects, in a numerical and continuous order within each program, constitute the set of activities that are common to a specific work or job and shall be duly supported and explained. Following are the main programs and projects to be used:

#### 14.2.2.1 Development Wells

Locations

Drilling

Completion

Surface equipment, artificial lifting, recompletion and services that are capitalizable to the wells.

# 14.2.2.2 Surface facilities <PAGE&gt;

Collection system and transfer lines

Separation and treatment system

Storage system

DISPOSAL OF WATER AND CONTAMINANTS

Pressure maintenance and/ or improved recovery system

Pump Stations

Hydrocarbon transport and transfer system

Other support systems

#### 14.2.2.3 Civil Work

Roads

Bridges

Constructions (camp, workshops, warehouses and offices)

#### 14.2.2.4 Other assets

Automotive equipment

Firefighting equipment

Communications equipment

Office equipment

Electromechanical maintenance equipment

Major tools

Cleaning or workover equipment

# 14.2.2.5 Special programs

Environmental management

Reservoir studies

Simulation studies

Pressure, interference, etc. tests

Others

# 14.2.2.6 Warehouses

For projects.

For maintenance materials.

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14.2.2.7 Each one of the above projects can be broken down into sub-projects as needed, using a uniform identification. Final presentation thereof shall be made on a project by project basis, according to the classification given above and using forms two (2) and four (4) established by ECOPETROL for such purpose which may be adapted by previous agreement between the Parties, through the corresponding Subcommittee. In order to achieve increased clarity in the preparation and structuring of the investment Budget, the following considerations are to taken into account:

#### 14.2.2.7.1 Maintenance investments

All investments made in equipment, materials and construction for the purpose of keeping facilities in good operating condition as well as their original capacity and performance limits.

#### 14.2.2.7.2 Enlargement Investment

The investments are to be classified as such if their objective is to increase the facility capacity, increase the authorized provision of automotive equipment, office equipment, etc.

#### 14.2.2.7.3 Special investments

These include all of those investments which, on account of their amount, their importance for the industrial activities or their impact on a social or ecological level, merit being classified as special.

#### 14.2.3 Preparation and presentation of the Budget

Each and every one of the projects within the various programs that make up the Investment Budget shall be fully justified and analyzed before being included in the general Budget. In this sense, the Operator shall prepare an investment draft which shall contain the following general information:

- a) Analysis of needs
- b) Project justification
- c) General project description
- d) Estimated amount of the investment
- e) Execution chronogram
- f) Critical path for the project
- g) Economic evaluation

The draft with the aforementioned information, plus any other information that may be considered necessary for its assessment that the Operator may submit, shall be studied jointly by the respective Subcommittees, which shall recommend or object to the viability of the project, as set forth in the policies drawn up by the Executive Committee.

Once such Subcommittees recommend that a specific project be undertaken, the project shall then be included in the Budget to be approved by the Executive Committee for the respective Commercial Field.

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All of the general information that is submitted to justify each project will be compiled in a Technical-Financial Annex, which shall serve as support when presenting the Budget for each Commercial Field for the approval of the Executive Committee.

#### 14.3 Budget Consolidation.

Once the Joint Operation's requirements have been defined, the Operator will consolidate the Operations Expense and Investment Budget for each of the Commercial fields, as set forth in classification in

Clause 14 of this Agreement (numerals 14.1.2 and 14.2.2 respectively) and shall present it to the Executive Committee for final approval. The Operation Expense Budget and the investment Budget, will be submitted in four columns that will contain the accrual origin in United States of America dollars, accrual origin in pesos, a consolidated statement in dollars and one in pesos, using the forecast of the exchange rate for the respective year for this purpose. In addition, the Operator shall prepare, for information purposes, a disbursement chronogram that indicates the cash requirements in the short term, itemized by quarter and by currency origin, at the level of expense group, program and investment project.

#### 14.4 Budget Execution

In all cases, the Operator is authorized to make all of the operations and investment expenses that the Joint Operation requires, set forth in the approved Budget and subject to the procedures in this Agreement, and those that the Executive Committee may establish. The execution of the budget shall be performed by the Operator through its various departments and set forth in the previously established execution schedules.

The appropriations assigned to each project shall be identified with a previously defined code, which shall be used on all documents that originate in carrying out its budgetary execution.

### 14.5 Budget Control.

The Operator shall be responsible for carrying out each of the investment programs and projects and shall be accountable for the execution of these within the conditions under which they were approved.

Similarly, it shall be responsible for the verification that the corresponding steps for the performance of the projects are taken adequately and on a timely basis. In the event that any problem is encountered that prevents the normal development of the projects, it shall immediately report it in writing to each of the Parties, in order to seek the solution to the difficulty that has been encountered. The Operator, as the responsible party for the Development Plan, the programs, projects and Budget, shall prepare the quarterly reports regarding the budget and technical advance of these, which it shall send to each of the Parties for their study and subsequent approval by the Executive Committee.

The quarterly report that is to be prepared and presented by the Operator within the ten (10) days following the end of each quarter, shall contain the following information:

- a) Period covered by the report.
- b) Project code and description.
- c) Total project budget.
- d) Financial advances from its start to final date. Investments per current-year, accumulated to date.

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- e) Technical progress of the work.
- f) Quarterly projection of work to be carried up to year-end, for information purposes.

# 15.1 Budget Additions

If, during the execution of the Budget, it were necessary to add supplementary items above and beyond the appropriations approved by the Executive Committee, the Operator shall request the corresponding modifications from the Parties in an extraordinary manner and their ratification shall be made in the next ordinary meeting of the Executive Committee.

On a periodic basis, requests for budget transfers or additions for expenses and investments may be submitted, studied and approved, every time the Executive Committee meets on an ordinary basis. However, the Executive Committee may meet in an extraordinary manner to deal with budgetary issues any time a special situation may so merit.

Every time that a budget addition is requested, the Operator shall initiate, with due lead time, the corresponding procedures, submitting the requests to the respective Subcommittee for its study and subsequent recommendation to the Executive Committee. In any event, the requests for budget additions shall be fully justified, explaining the reasons that gave rise to the variation in the appropriated items, with their respective technical and financial Annex, as specified in Clause 14 (number 14.2.3) in this Agreement.

### 15.2 Budget transfers

Those appropriations that are carried over from one year to another as a result of those projects that could not be concluded during the term for which they were budgeted for reasons such as the lack of availability of equipment, importation procedures, bad weather, among others, shall be considered to be budget transfers.

When a project is not totally completed, the value of the budget shall become part of the Budget for the immediately following year and shall be subjected to approval by the Executive Committee. The presentation of these projects within the Budget shall be singled out and specifically identified and shall be considered in the preparation of the disbursement schedule that Clause 15 (number 15.4) in this Agreement refers to. In addition, budget transfers shall give rise to an Annex wherein the cause for the budget transfer shall be explained, as well as the way in which it is to be executed during the following term.

#### 15.3 Approvals

The Executive Committee shall be entity entrusted with approving the programs, projects and the Budget recommended by the Subcommittees, and with authorizing the Operator to purchase or contract, for the account of the Joint Account, all of those goods and services that are required by Joint Operation.

#### 15.4 Disbursement Schedule

Together with the overall Budget, the Executive Committee shall approve the Budget by quarters submitted by the Operator and recommended by the Subcommittees for the immediately following year, and which shall constitute the basis on which the monthly cash calls shall be calculated.

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#### 15.5 Cash Calls

The requests for advances of funds or cash calls shall be made by the Operator to each of the Parties, based on the obligations entered into by the Joint Operation for the month immediately following the one of the request, referring to the quarterly Budget approved by the latest Executive Committee and the forecast cash flows. The management of the advances or cash calls that this Clause refers to shall be made through a bank account that the Operator shall establish for such purpose, for the exclusive use by the Joint Operation. In the preparation of the requests for advances or cash calls, the following requirements are to be followed:

# 15.5.1 Preparation

Based on the approved Budget and the obligations entered into on behalf of the Joint Operation for the following month, the Operator shall prepare the requests for advances, bearing in mind the following conditions:

- 15.5.1.1 The request shall be made by the Operator separately for each of the Commercial Fields being exploited in the Contract Area, identifying operations and investment expenses, in pesos and in United States of America dollars, depending on the origin in which the disbursement is forecast to be made.
- 15.5.1.2 The request shall be by programs and projects, in the case of investments, and by group and expense item in the case of expenses, in the same manner in which they are listed in the Budget approved by the Executive Committee.
- 15.5.1.3 For each of the projects and expense items listed in the request for advance funds to be considered, they must be included in the Budget; otherwise, they shall be deducted from the total amount requested.
- 15.5.1.4 The projects and expense groups shall necessarily have a sufficient Budget.

#### 15.5.2 Presentation

The request for funds (cash call) shall be made by the Operator within the first twenty (20) days of the immediately preceding month to the month in which the contributions are to be made. If the Operator were to have to make extraordinary disbursements, that are not provided for at the time that the monthly advance cash call is made, it shall request special advances in writing from the Parties, covering their respective share in such disbursements.

Every request for an advance or cash calls shall be submitted for processing in the form previously agreed to by the Parties in the respective Subcommittee and shall show the actual and estimated charges for investments and expenses and shall comprise the following documents:

#### 15.5.2.1 Letter of Request

- 15.5.2.2 Request format, wherein the financial status for each of the programs, projects and expense items is shown on the date on which the request is made.
- 15.5.2.3. General comments of a technical nature in which the destination of the requested funds is identified, within the main projects or expense items.

#### Section Two - Accounting Procedure

#### CLAUSE 16 - ACCOUNTING PROCEDURE

In each half- yearly report that Clause 10 (number 10.1) in this Agreement refers to, THE ASSOCIATE shall submit to ECOPETROL the direct Explorations Costs for the period of the report that could be subject to reimbursement in agreement with Clause 9 of The Contract, with the indication of the currency in which the disbursement was made and a consolidated statement in United States of America dollars. In addition, in this same report, THE ASSOCIATE shall submit the preliminary cumulative value that is to be included as variable "A" for the calculation of the R Factor that Clause 14 (numbers 14.2.3 and 14.2.4) in The Contract refers to, clearly showing the parameters used for the calculation, It is understood that the Direct Exploration Costs shall only be definitive once they have been audited and accepted by ECOPETROL.

During exploitation of each Commercial Field, the credits and charges incurred in by the Operator in development of the Joint Operation, shall be charged to the Joint Account set forth in the provisions of Clause 22 of The Contract. The Joint Account shall be divided into three main items, as stated below, for each Commercial Field discovered in performance of The Contract, and the consolidated statement, when there is more than one Commercial Field in the Contract Area:

16.1 General Joint Account (clarification, charges and entries).

This account shall reflect all of the movements, as is expressed later on, and shall be fully distributed on a monthly basis between the Parties, in a share of fifty percent (50%) for ECOPETROL and fifty percent (50%) for THE ASSOCIATE with respect to the investments, and in the proportion that is set out in Clause 22 (numbers 22.6.1 and 22.6.2) in The Contract for Direct Expenses and Indirect Expenses. That is to say, it shall serve as the basis for monthly billing, set forth in the provisions of this procedure, ending every month with a balance of zero (0).

All of the accounting operations related with this account shall be booked by the Operator in Colombian pesos, set forth in the laws of the Republic of Colombia, but the Operator may, in turn, keep ledgers wherein it shows the disbursements it may incur in any currency other than Colombian pesos.

16.2 Joint operations current account.

This account shall record the cash calls received from the Parties and the charges or credits corresponding to the invoicing of these and, at all times, shall show a balance in favor or against each of the Parties, as appropriate. This account shall be divided into two subaccounts, set forth in the monetary origin of the transaction, namely: Colombian pesos and United States of America dollars.

16.3 Joint property records.

Through the Joint Account, the Operator shall keep a record of all of the assets acquired that are subject to inventory, indicating in detail the kind of asset, the date of purchase and its original cost.

The accounts mentioned in Clause 16 (numbers 16.1, 16.2 and 16.3) of this Agreement shall constitute part of the Operator's official accounting records, but without mixing them with accounting records other than those of the Joint Account. The three aforementioned records shall be subject to Clause 22 of this Agreement.

The Operator shall send to ECOPETROL on a monthly basis, together with the information cited in Clause 17 (number 17.2.2) of this Agreement, in an independent Annex, the parameters and the calculation of the R Factor, set forth in the provisions of Clause 14 (number 14.2.3 and 14.2.4) of the Contract. The Operator shall keep in its files and at the disposal of the Parties, all of the support documentation for the charges made to the variables that are included in the calculation of the R Factor for each Commercial Field.

#### CLAUSE 17 - ADVANCES, INVOICES AND ADJUSTMENTS

#### 17.1 Advances.

Despite the fact that the Operator shall pay and clear, initially, all of the costs and expenses incurred set forth in The Contract, charging each Party with its percentage share, it is agreed that, to finance such share, each Party, at the Operator's request, shall advance to the latter, from the moment of acceptance by the Parties of the existence of a Commercial Field and, latest within the first five (5) days of every month, the proportion of the disbursements for the account of each and that were estimated for the operations of the given month. These advances shall be made in United States of America dollars and in Colombian pesos, set forth in the requirements established in the approved Budget by quarter and in the forecast cash flow for each Commercial Field and in the requests for advances (cash calls) prepared by the Operator, set forth in Clause 15.5 in this Agreement.

#### 17.2 Invoices.

- 17.2.1 The Operator shall prepare an initial invoice for ECOPETROL after the acceptance of the existence of each Commercial Field, in the amount of fifty percent (50%) of the Direct Exploration Costs incurred in before the date of ECOPETROL's statement regarding the commerciality of each new Commercial Field discovered, that is audited and accepted by ECOPETROL set forth in Clause 22 of this Annex and that has not previously been charged to another Field. In the Direct Exploration Costs for the Exploratory Wells, all of the direct costs incurred in drilling, termination and testing shall be included for the case of Exploratory Wells that are producers, and the cost of drilling and abandonment of the Exploratory Wells that are dry. Such invoice shall also include fifty percent (50%) of the costs of additional work that Clause 9 (number 9.3) in The Contract refers to, if applicable. For the monthly update of the values that the paragraph in Clause 9 (number 9.2.2) in The Contract refers to, one twelfth (1/12th) of the value resulting from averaging the percent annual variation available for the last two (2) years in the consumer price index for industrialized countries shall be used, taken from the "International Financial Statistics" of the International Monetary Fund (page S63 or its replacement) or, if not available, the publication that may be agreed to by the Parties. This invoice shall include a summary of the costs, expressing separately the currency in which the investments and the expenses were made, that is to say, in Colombian pesos or in United States of America dollars.
- 17.2.2 Set forth in Clause 22 (number 22.2) of The Contract, the Operator shall charge the Parties, within the ten (10) days following the last day of each month, their proportional share of the investments and operational expenses during that month. In the invoices, the details that may be available in the Operator's accounting procedures shall be noted, including a detailed summary of accounts, expressing separately the investments and operational expenses originating in pesos and those originating in United States of America dollars.

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17.2.3 Investments and expenses during the Retention Period.

The costs and expenses made by THE ASSOCIATE during the Retention Period to establish the commercial viability of a Gas Field shall be assumed by THE ASSOCIATE in their entirety.

#### 17.3 Adjustments

The invoices shall be adjusted between the Operator and the Parties after deducting the advances in United States of America dollars and in Colombian pesos.

When the advances made by either of the Parties differ from their share in the actual costs determined for each period, the difference in pesos and/ or in dollars shall be adjusted in the invoices for the following month.

17.4 Acceptance of the invoices.

The payment of the invoices shall not affect the right of the Parties to protest or inquire about the accuracy of these, set forth in the terms of Clause 22 (number 22.7) of The Contract.

# CLAUSE 18 - CHARGES

Subject to the limitations that are set forth below, the Operator shall charge the Joint Account and invoice each Party, set forth in the percentages established in Clause 16 (number 16.1) of this Agreement, for the following expenses:

- 18.1 Labor.
- 18.1.1 National and foreign employees
- 18.1.1.1 The salaries of the Operator's employees or workers that are working directly for the benefit of the Joint Operation, including the payment for overtime, nighttime surcharge, payment of Sundays and holidays and their respective compensatory rest periods and, in general, all payments that constitute salary.
- 18.1.1.2 Social benefits, compensation, insurance, subsidies, bonuses and, in general, any benefit that is not salary and that is awarded to the workers and/ or their relatives or dependents, whether it is granted individually or collectively, or whether it is granted to them by virtue of the labor contract, the law, arbitration conventions or sentences, with the exception of housing plans, with respect to which a special agreement shall be required. Among the aforementioned, one can cite, among others, the following: severance pay, vacation, retirement and disability pensions, benefits to retirees and their relatives, benefits and aid caused on account of professional or nonprofessional illnesses and accidents, service bonuses, life insurance, compensation or indemnity on account of contract cancellation, labor union benefits, all types of bonuses, subsidies and aid, for savings, health, education and, in general, for social security. In addition, the contributions to the Colombian Family Welfare Institute (ICBF), National Vocational Training Service (SENA), Social Security Institute (ISS) and other similar ones that may be established.
- 18.1.1.3 All expenses incurred for the benefit of the Joint Operation with respect to the maintenance and operation of the camp, its offices and service facilities at the site. Among these, the following expenses

are also included, not in a restrictive manner but rather as a listing, as indicated below, whether the services are rendered for free or for payment, or

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whether they be for the workers, their dependents or relatives, of that these be provided in a voluntary or compulsory manner.

Such services include the following:

- 18.1.1.3.1 Medical, pharmaceutical, surgical and hospital services.
- 18.1.1.3.2 Camp and full services thereof, including its repairs and sanitation.
- 18.1.1.3.3. Training and educational expenses.
- 18.1.1.3.4 Workers recreation.
- 18.1.1.3.5 Maintenance of schools for the workers, their children and dependent relatives.
- 18.1.1.3.6 Safety, social work and camp surveillance.
- 18.1.1.4 It is understood that the expenses and services outlined in the aforementioned Clause 18 (numbers 18.1.1.1, 18.1.1.2 and 18.1.1.3) shall be for the account of the Joint Account when, by provisions of law, labor agreements and/ or arbitration sentences or voluntarily, they are applicable in a direct or by extension to contractors, subcontractors, intermediaries and/ or their workers who are working for the benefit of the operation.
- 18.1.1.5 With respect to retirement pensions and disability compensation, the Executive Committee shall proceed set forth in the provisions of the Social Security and Pension System established by Law 100 issued in 1993 and other norms that regulate it or substitute it.
- 18.2 Materials, equipment and supplies

The materials and supplies that are necessary to undertake the operations shall be charged to the Joint Account. The materials and supplies shall be purchased for warehouse inventories for the projects or for the maintenance materials warehouse when it is convenient for the operation and shall be credited to it, at cost in the books, as they are withdrawn from the warehouse to be used. The capital equipment units shall be charged directly to the Joint Account. The book cost is determined as follows:

18.2.1 Book cost

It is understood that book cost means the last average price of the inventory in the warehouse, based on the cost obtained in the import liquidation sheets, or the local cost, as follows:

- 18.2.1.1 For imported materials, equipment and supplies, the book cost shall include the net price on the manufacturer or vendor's invoices, the cost of purchases, freight and delivery charges between the supply point and the loading point, freight to the entry port, insurance, import duties or any other tax, handling from the vessel to the customs warehouse and transport to the site of operations.
- 18.2.1.2 For materials, equipment and supplies purchased locally, the book cost shall include the seller's net invoice, plus sales taxes, procurement

expenses, transport, insurance and other similar costs paid to Private Parties, from the purchase location to the site of operations.

18.2.1.3 the materials shall be charged to the Joint Account set forth in the monetary purchase origin, so that it can similarly be charged to each Party.

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18.2.2 Return of materials to Joint Operation's warehouses, as the case may be.

The materials, equipment and supplies that are returned to the warehouses of the Joint Operation shall be valued as follows:

- 18.2.2.1 New materials, at book cost.
- 18.2.2.2 Second- hand materials, in good condition and that can render service, as well as equipment that can subsequently be used without repairs, can be reincorporated by the Operator to the corresponding warehouse at one hundred percent (100%) of their cost on the books, crediting the respective project in the Joint Account.
- 18.2.2.3 Second- hand equipment and materials which, when repaired, can be used, can be reincorporated by the Operator to the corresponding warehouse at one hundred percent (100%) of their cost on the books.

These materials, upon being used again, shall be charged at the new book value.

- 18.2.3 Sales by the Parties. The materials, equipment and supplies sold by the Parties to the Joint Operations shall be valued at the replacement price agreed to by the Parties. The corresponding transport costs shall be for the account of the Joint Operation. In the cases of sales by the Joint Operation to one of the Parties, these shall be valued at the replacement price agreed to by the Parties, and the transport costs shall be for the account of the purchasing Party.
- 18.2.4 Local transport of materials
- 18.2.4.1 For materials shipped through an external transporter, at cost, set forth in the invoice issued by the transportation company.
- 18.2.4.2 For materials sent in transportation units owned by the Parties, at the fees calculated to cover the actual costs, pursuant to the procedure established in Clauses 18 (number 18.4) and 23 (number 23.1.1) in this Agreement.
- Materials for projects that have been cancelled, postponed or changed. When there is an accumulation of inventory in the warehouse on account of the change, deferral or cancellation of projects approved by the Parties, the cost of such materials shall be charged to the warehouse account. These materials may be sold to Private Parties set forth in the provisions of Clause 20 (number 20.2.1) in this Agreement and what is obtained shall be credited to the Joint Account. Surplus materials from projects, purchased with direct charge. Once the project has been finalized, these should be reincorporated to the warehouse and credited to the corresponding projects. The Operator shall advise the Parties of this operation at the ordinary meetings of the Financial Subcommittee when this were to occur.
- 18.3 Travel expenses

All travel expenses incurred on behalf of the Joint Operation for

Colombian or foreign personnel, such as transport, hotels, food, etc.

#### 18.4 Service units and facilities

The value of the service rendered for equipment and facilities that are owned by any of the Parties shall be charged to the Joint Account at reasonable rates, as provided for in Clause 23 of this Agreement. The rates that are established shall be applied until such time as they are modified by mutual agreement.

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#### 18.5 Service

Services rendered by Private Parties, including contractors, to the Joint Operation, at their actual cost. Similarly, technical services, such as laboratory analyses and special studies, require the recommendation of the Technical Subcommittee and approval by the Executive Committee.

#### 18.6 Repairs

Expenses for repairs made to the equipment or elements of either of the Parties, destined for use by the Joint Operation, unless these costs have already been charged through leasing or in another manner.

# 18.7 Litigation

Expenses to the Joint Operation regarding the threat of effective lawsuits (including the investigation and collection of evidence), lifting encumbrances, sentences, legal claims and procedures for claims, compensation for accidents, settlement for death and funeral expenses, provided that these charges have not been recognized by an insurance company or covered by the proportional surcharges mentioned in Clause 18 (number 18.1.1) in this Agreement. When legal services are provided in these matters by permanent or external counsel, whose total or partial compensation is included in indirect costs, no additional charges shall be made for their services, but rather, these shall be charged to Direct Expenses incurred in such procedures.

18.8 Damages and losses of Joint Operation property and equipment.

All costs and expenses necessary to replaced or repair damage or losses caused by fire, flood, storm, theft, accident or any other similar event. The Operator shall notify the Parties in writing regarding the damages or losses occurred, as soon as possible.

# 18.9 Taxes and rentals

The value of all taxes paid or accrued in carrying out the Joint Operation shall be charged to the Joint Account, in keeping with the existing legal provisions.

The value of leases, right of way and indemnity for improvements, the occupation of land, etc. shall also be charged to the Joint Account.

# 18.10 Insurance

18.10.1 Premiums paid for insurance taken out for the benefit of the operations that The Contract refers to, together with all of the expenses and indemnities accrued and paid, an all losses, claims and other expenses that have not been covered by the insurance companies, including the legal services mentioned in Clause 18 (number 18.7) in this Agreement, shall be charged to the Joint Account.

18.10.2 When no insurance exists, the actual costs incurred, mentioned above, and paid for by the Operator, shall also be charged to the Joint Account.

#### CLAUSE 19 - CREDITS

#### 19.1 Incomes

The Operator shall credit the Joint Account for incomes resulting from the following items:

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- 19.1.1 Collection of insurance with respect to the Joint Operation, the premiums for which have been charged to such operation.
- 19.1.2 Sale of geological information, when previously authorized by the Parties, provided that the collection of such information was charged to the Joint Operation.
- 19.1.3 Sale of property, plants, equipment and materials owned by the Joint Operation.
- 19.1.4 Rental payments received, the reimbursement for claims of customs duties and tax or transportation, etc. shall be credited to the Joint Operation if such lease payments or reimbursements pertain thereto.
- 19.1.5 Any other income from operations or contractual income authorized by the Executive Committee on behalf of and for the service of the Joint Account.

# 19.2 Warranty

In the event of defective equipment, once the Operator has received the corresponding adjustment from the manufacturer or its agents, credit shall be made to the Joint Account.

#### CLAUSE 20 - DISPOSAL OF EXCESS MATERIALS AND EQUIPMENT.

## 20.1 Excess materials and equipment

The Operator shall advise the Parties in writing regarding the Joint Operation's surplus materials and equipment, thirty (30) days after finalizing the inventory that Clause 21 of this Annex refers to. Each of the Parties shall designate a representative to review the status and establish which materials or equipment are to be put up for sale. For the purchase of the useable materials or equipment, ECOPETROL shall have the first option and THE ASSOCIATE the second option; these options shall be exercised within sixty (60) days following the date of notification. In the event that they are not purchased by these, the Operator shall report it in writing and they shall be put up for auction.

20.2 Disposal of capital equipment and materials.

Set forth in Clause 22 (number 22.9) of The Contract, the Operator may sell the materials and equipment owned by the Joint Account under the following conditions:

20.2.1 The sale by the Operator to Private Parties of major materials and capital equipment that may have been charged to the Joint Account shall only be made with the approval of the Executive Committee. The revenue shall be credited to the Joint Account. Only for this

particular purpose, major materials are defined as any asset that has an estimated sales value that is greater than the amount that is approved by the Executive Committee for such purpose, as a result of the request submitted in advance by the Operator, set forth in Clause 19 (number 19.3.2) of The Contract.

- 20.2.2 Minor materials charged to the Joint Account and not required for the operation or which are returned to the warehouse, may be sold by the Operator and its proceeds shall be credited to the Joint Account.
- 20.2.3 For any abandonment and dismantling of the assets whose cost or estimated value is greater than the amount approved by the Executive Committee for this purpose, as a result of a request presented beforehand by the Operator set forth in Clause 19 (number 19.3.2) of The Contract, prior authorization by the Executive Committee is required.

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- 20.2.4 Neither of the parties is under the obligation to purchase the interest of the other in surplus materials, whether they are new or second- hand. The withdrawal of major items of surplus materials, such as towers, tanks, motors, pumping units and piping shall be subject to approval by the Executive Committee. However, the Operator shall have the right to dispose of the damaged or useless materials in any manner.
- 20.2.5 All of the taxes that may be caused on account of the sale or transfer of materials or assets from the Joint Account shall be the Operator's responsibility, for the account of the Joint Account.

#### CLAUSE 21 - INVENTORY

At ECOPETROL's request, the Operator shall submit the necessary information to perform the inventory analyses in warehouses and the Parties shall agree upon their joint participation in inventory control. The Operator shall provide the ease and cooperation that ECOPETROL may require to carry out the physical task of accounting for the fixed assets at the facilities at each Commercial Field, prior agreement with the respective Subcommittee, regarding the date, time and number of persons who are to perform the inventory.

#### 21.1 Inventory and Audit

Set forth in the existing norms and, at least once every three (3) years, the Operator shall perform an inventory of all of the Joint Operation assets.

- The notification of the intention of carrying out an inventory shall be given by the Operator to the Parties in writing with at least one (1) month advance notice to the date on which it is to commence, so that the latter can be present. However, non- attendance by one of the Parties to carry out the inventory does not jeopardize or reduce the validity and effectiveness of the inventory thus carried out by the Operator.
- The Operator shall provide the Parties with a copy of each inventory, with a copy of its reconciliation, and shall submit the results to the Subcommittees of the Joint Operation, which shall study the report and shall propose the actions to be taken in this regard.
- 21.4 Inventory adjustments for surpluses or shortfalls shall be brought to the attention of the Executive Committee for its consideration and approval.

With due timing and through midnight of the last day of the term set forth as the Exploitation Period, the Parties shall carry out inventories of the materials that are in the warehouses and that are the property of the Joint Account, as well as of the products produced that are in the collection batteries, the pipes that lead from them to the storage tanks and in the storage tanks, all within the exploitation sites, and such inventories shall be distributed between the Parties, after having deducted the royalties, in the same manner provided for in Clause 13 of The Contract.

#### CLAUSE 22 - AUDIT

Subject to Clause 17 (number 17.4) in this Agreement, the Parties may, through their own auditors or their representatives, examine and control the Operator's records related to the joint properties and the operation of these. Similarly, ECOPETROL may carry out audits to the records of the Fields exploited by THE ASSOCIATE under the sole risk method. In order to facilitate the review of the Direct Exploration Costs that Clause 17 (number 17.2.1) of this Agreement refers to, once THE ASSOCIATE or the Operator advises the Parties regarding the date on which any reimbursable < PAGE&gt;

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Exploration Work is to commence, THE ASSOCIATE or the Operator shall allow that, prior timely notification, ECOPETROL auditors periodically examine the accounts for such Exploration Work, in such a way that, when the existence or not of a Commercial Field is accepted, the aforementioned review has already been performed under the best conditions of timing and location. In the audit reviews that are provided for in this Agreement, in addition to the representatives for the Parties, representatives from the Comptroller General of the Republic may also intervene, if such organization deems it convenient for this to be the case. The costs and expenses of such review shall be for the account of the interested Party.

Once the audit report is delivered, THE ASSOCIATE or the Operator shall have a maximum six (6) month term in order to respond and support the objections made. Once this term expires, without the Operator having responded, it shall be considered that the objections have been accepted and consequently, all shall proceed accordingly. The notes or observations from the audit that are not resolved within the three (3) months following this term shall be resolved set forth in Clause 20 of The Contract.

# CLAUSE 23 - RATE AND FEE CHARTS

- Subject to the aforementioned limitations, the services rendered to the Joint Operation for facilities that are ECOPETROL or THE ASSOCIATE's exclusive property, shall be charged at the corresponding rates, in order to allow for the recovery of the actual costs. Such costs shall include the normal costs for work, salaries, social benefits, depreciation and other operational expenses, bearing the following in mind:
- The rate for transportation units that is normally calculated, using as a basis the time of operation, shall include the time required for loading and unloading, the time elapsed waiting to be loaded, and the waiting time for unloading to take place. Charges for transportation units assigned to the operation shall include Sundays and holidays, except when the vehicles are out of service for repairs.
- 23.1.2 When the material for aforementioned operations is transported together with other materials by river or land fleet that is the exclusive property of ECOPETROL or of THE ASSOCIATE, the charge shall be made based on the tonnage transported, at rates that are not any

higher than commercial ones.

23.2 Rates for the lease of equipment and tools

The procedure to calculate the lease rate for equipment and tools that are the property of the Parties, excluding drilling equipment and major equipment, where the rates are to be calculated separately and approved by the Executive Committee, shall comprise a value for depreciation plus a value for maintenance, and the procedure shall be as follows:

- 23.2.1 Description, model, number, date of purchase and original cost of the equipment.
- 23.2.2 Site where the equipment is to be used, reasons for leasing it and estimated time of use.
- 23.2.3 Value of the annual depreciation for the equipment, calculated based on the depreciated book value and its estimated remaining useful life (the minimum book value considered shall be ten percent (10%) of the original cost, that is to say, the salvage value).
- 23.2.4 The annual maintenance value shall be a percentage of the original cost, which may vary between five percent (5%) for new equipment and up to fifteen percent (15%) for equipment <PAGE&gt;

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that has already been depreciated, depending on the time it has been depreciated. For example:

Equipment A: (Five [5] years of life)

Time (in years) 1, 2, 3, 4, 5: equipment one hundred percent (100%) depreciated

Maintenance: 5, 6, 7, 8, 9: 15%.

Equipment B: (Ten [10] years of life)

Time (in years) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10: equipment one hundred percent (100%) depreciated.

Maintenance: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15: 15%.

Note: The time for useful life and depreciation shall be those that are established by accounting techniques applicable to oil operations.

- 23.2.5 The rate for annual lease is equal to the value provided for in Clause 23 (number 23.2.3) of this Agreement, plus the one established in number 23.2.4 of this same Clause.
- 23.2.6 The rate for monthly or daily lease of equipment shall be equal to the provided for in Clause 23 (number 23.2.5) in this Agreement, divided by twelve (12) or by three hundred and sixty five (365), as appropriate.
- 23.2.7 No lease charge shall be made for "stand by," but it shall be charged to Private Parties.
- 23.2.8 The aforementioned lease rates do not include transport, installation, operation, lube and fuel costs, which shall be charged to the operation that the equipment is destined for.

- 23.2.9 The aforementioned lease rates shall be applied to the possible use of one hundred percent (100%) equipment and tools owned by the operation, THE ASSOCIATE or the Operator, and vice versa.
- 23.2.10 In every case, the Subcommittees shall recommend to the Executive Committee the use of leased equipment and may apply the rate system that the latter may recommend.
- 23.2.11 The lease rate for equipment shall be calculated in United States of America dollars, but for the respective collection, it shall be invoiced in Colombian pesos, at the rate that the Parties may agree to.
- 23.3 Rate for rental for warehouses and fixed assets

For the calculation of the lease rate for warehouses that are the property of one of the Parties or of the Joint Account, for their complete or partial use, a procedure shall be followed which shall be agreed to by the respective Subcommittee.

# CLAUSE 24 - CONTRIBUTIONS IN KIND

ECOPETROL or THE ASSOCIATE shall contribute in kind, those materials that they may consider convenient, set forth in the agreements that may be established by the Parties. <PAGE&gt;

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#### PART III - ADMINISTRATIVE ASPECTS AND OTHER PROVISIONS

Section One - Executive Committee

# CLAUSE 25 - CONDITIONS FOR FUNCTIONING

For the exercise of its functions, the Executive Committee shall fulfill the conditions provided for in Clause 19 of The Contract, as indicated below:

- 25.1 The Executive Committee shall be alternately chaired by the Parties, beginning with ECOPETROL.
- The Executive Committee shall name its Secretary, alternating between the persons designated by ECOPETROL and by THE ASSOCIATE. The Chair and the Secretary shall fall n the same Party.
- The Executive Committee shall meet in an ordinary manner during the months of March, July and November, and in an extraordinary manner every time that the Parties and/ or the Operator may consider it necessary. At such meetings, the exploitation strategy being carried out by the Operator shall be reviewed, as well as the Development Plan and the immediate programs and plans. The Executive Committee may be attended by the advisors that each of the Parties may consider convenient, it being understood that each of the Parties shall bring along the smallest possible number of persons.
- For the ordinary meetings of the Executive Committee, the representative entrusted with presiding the following meeting shall notify the other representatives (the principal and his alternates) of the other Party and of the Operator, with ten (10) days advance notice of the date of the meeting, the venue and the issues to be discussed (agenda).
- Pursuant to Clause 18 (number 18.3) of The Contract, both for the regular meetings as well as the extraordinary meetings of the Executive Committee, the issues to be discussed that have not been

included in the agenda may be considered during the meeting, prior acceptance by the representatives of the Parties on the Committee.

#### Section Two - Sub Committees

#### CLAUSE 26 - CREATION OF THE SUBCOMMITTEES

In development of the function provided for in Clause 19 (number 19.3.4) of The Contract, the Executive Committee may create the advisory Subcommittees that it may consider necessary. In any case, the Executive Committee shall designate a Technical Subcommittee and Financial Subcommittee.

These Subcommittees shall be the organizations established to control and define the technical, financial and legal considerations of The Contract before the Executive Committee and shall be governed by The Contract and this Agreement. Each Subcommittee shall establish its own internal regulation, approved by the Executive Committee.

CLAUSE 27 - RIGHTS AND OBLIGATIONS
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- 27.1 Set forth in Clause 10 of The Contract, the Operator shall conduct the Joint Operations itself, or through its contractors, under the overall guidance of the Executive Committee. In any event, the Operator shall be responsible for the Joint Operation, set forth in the provisions of The Contract.
- 27.2 The following are among the Operator's obligations:
- 27.2.1 The preparation, presentation and implementation of the Development Plan, the Budgets and Exploration and Exploitation Programs, as well as for the approval of expenses.
- 27.2.2 The direction and control of all statistics and accounting services.
- 27.2.3 Planning and obtaining all services and materials required for the proper development of the Joint Operation.
- 27.2.4 Providing all the technical skill and consulting required for the efficient development of the Joint Operation.
- 27.2.5 Planning the tax effects and fulfilling all tax obligations that may be derived from the operations performed and providing the timely report to the Parties for the proportion that corresponds to each of them.
- 27.2.6 Establishing a bank account for the exclusive management of the Joint Account resources.
- 27.3 The Operator may not establish any encumbrance whatsoever on the properties of the Joint Operation.
- The resignation or removal of the Operator may be made without prejudice of any right, obligation or responsibility acquired during the time in which the Operator acted as such; if the Operator resigns or is removed before fulfilling the obligations established in The Contract, it may not charge the Joint Account for the costs and expenses in which it incurred on account of the change. But if the Executive Committee were to approve them, these charges and expenses may then be charged to the Joint Account.
- Once the Operator is notified of his removal or of the acceptance of its resignation, for the transfer or responsibilities, ECOPETROL shall

audit the Joint Account and shall perform an inventory of all of the properties of the Joint Operation. Such inventory shall be used for purposes or return and accounting for the procedure of such transfer or responsibilities. All costs and expenses incurred with respect to such inventory and audit shall be for the account of the Joint Account.

- The Operator shall not be responsible for any loss or damage on account of the Joint Operation, unless such damages or losses are the result of:
- 27.6.1 Gross negligence by the Operator
- 27.6.2 Failure to obtain and maintain any of the insurance required in Clause 33 of The Contract, except when the Operator has made all possible efforts to obtain it and maintain them, and the results of such efforts have been fruitless, a situation which the Operator must first communicate to the Parties in writing.

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# Section Four - Contracting Procedure

#### CLAUSE 28 - SUPPLIER REGISTRATION AND BIDDERS LIST

- It shall be the Operator's responsibility to maintain an updated registration of vendors, classified pursuant to the various activities that the operation may require, as well as to establish the qualification criteria for the firms to be included in the bidders' list. The respective Subcommittee may request a review of the criteria before approving the bidders' list.
- ECOPETROL may review the Operator's vendor registration on an annual basis and may suggest to it, through the respective Subcommittee, that vendors be included or excluded from the registration. Despite the above, ECOPETROL may, at any time, by means of a request that duly explains the motives, request the withdrawal of persons or entities from the registration.
- In all cases that imply soliciting proposals to contract, the vendor registration shall be consulted, recording a statement on the corresponding document.
- The persons or entities that are included in the vendor registration shall accredit technical, moral and economic solvency, in addition to the experience, not only of the company but that of its partners as well, and also that of its technicians that are permanently hired by it.
- 28.5 Set forth in the aforementioned criteria, the Operator shall establish a registration of qualified vendors, which shall be updated periodically, set forth in their performance.
- In the Fields that are exploited under the sole risk, THE ASSOCIATE shall have the right that is provided for in Clause 10 (number 10.6) of The Contract.

#### CLAUSE 29 - BIDDING PROCESS

- 29.1 Responsibility: The Operator shall be responsible for preparing the Request for Proposals in due time, and shall submit it to consideration by the corresponding Subcommittee.
- 29.2 The list of those invited to submit proposals shall be prepared based

on the information in the Registration of Vendors.

- In every bidding process, the Operator shall invite at least three companies. If this were not to be possible, a statement shall be made with respect to the justification in the report of recommendations to the respective Subcommittee.
- It shall be endeavored not to invite more than six (6) companies, in order to avoid additional costs in the assessment of the proposals and, similarly, to provide a greater opportunity to the participating companies to successfully obtain the respective contract.
- 29.5 All other factors being the same, the order of priorities to be included in the list of bidder shall be as follows: Companies registered and with headquarters in the department or departments where the Commercial Field or Fields are located, but with a branch established in such department. Colombian companies whose headquarters are outside the department or departments where the Commercial Field or Fields are located, but with a branch established in such department. Foreign companies with a branch in Colombia. Foreign companies that do not have a branch in Colombia.

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- In the list of companies to be invited to submit proposals, those companies that are technically and commercially qualified and that have not had the opportunity to participate in similar bids in the past shall also be kept in mind.
- 29.7 The Operator shall prepare the bid documents and shall submit these to the consideration of the respective Subcommittee with sufficient advance notice.
- 29.8 It shall be clearly expressed in the bidding documents that:
- 29.8.1 Cost shall be one of the criteria to be considered, though not the sole one, for the award of the contract;
- 29.8.2 The assessment of the bid shall bear in mind other factors other than cost, which shall be included in the bid documents;
- 29.8.3 All proposals that exceed the range of real cost for this activity shall be disqualified;
- 29.8.4 The proposals are to be submitted set forth in the terms of the invitation, and the failure to observe this requirement may lead to not being considered as valid proposals;
- 29.8.5 The request for proposals shall include a table with the details of the prices which is to be filled out by the bidders, in order to facilitate comparing the proposals;
- 29.9 The list of bidders shall be reviewed and approved by the Technical Subcommittee before the invitations to bid are sent out.
- Once the bid documents have been distributed, the following rules shall apply:
- 29.10.1 Any information, modification or clarification of the original bid documents shall be sent out to all the bidders. The Procurement and Supplies Department of the Operator shall be responsible for these changes. The changes shall be duly justified by means of a document in writing.

- 29.10.2 No bidders can be added or deleted from the list of bidders originally approved by the corresponding Subcommittee.
- 29.10.3 Any bidder that does not abide by the bid procedures and rules, or that may violate the Operator's business ethics code shall be disqualified immediately.
- 29.11 The content and format for all of the materials in a request for proposals shall fulfill the requirements of the procedure known as "Documentation format submitted to the Technical Subcommittee" and shall be submitted to the consideration of the corresponding Subcommittee.
- The internal approvals that are required by the Operator and by ECOPETROL depend on the estimated value of the contract, set forth in the internal procedures of the former and the latter.

#### CLAUSE 30 - AWARDS OF CONTRACTS AND PURCHASE ORDERS

The Operator is responsible for awarding bids for contracts and purchase orders. For this purpose, it shall submit its recommendation to the respective Subcommittee, subject to the procedures that have been established by the Executive Committee for this purpose.

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- Value: The awards shall be based on the best global (overall) value. The lowest price does not always mean the best proposal, since, in addition to the amount, other aspects are borne in mind, such as scheduling and quality, experience, reputation and the Colombian content submitted by the bidder. In the event that the contract is not awarded to the lowest amount proposal, such decision should be justified.
- Justification in writing: The Operator shall present a recommendation in writing to the corresponding Subcommittee, justifying the contract and purchase order award, subject to the procedures that are established for such purpose by the Executive Committee. Such justification shall include a summary of the commercial and technical assessments of the proposals received and the basis for the Operator's recommendation.
- Direct contracting: Direct contracting shall be supported and presented in writing to the respective Subcommittees, clearly identifying their justification. The Operator may contract directly, without having to go through a bidding process, in any of the following events:
- 30.4.1 When only one vendor can be obtained, within the time frame required to satisfy the project schedule;
- 30.4.2 When an item or service Contract before in a direct manner does not have an equivalent or satisfactory substitute;
- When a service or work is derived from a previous one or is an extension to an existing contract or work order issued during the last ninety days and the commercial conditions are not modified, or when the evidence stemming from a recent bid justify contracting without undergoing a bidding process;
- 30.4.4 When the Operator has standardized a specific item or service for all of the applications within its are of operations and there is only one known vendor for such item or service;

30.4.5	When it is	considered t	hat a	sole	item or	service	fulfill	s the
	Operator's	requirements	withi	n a s	specified	deliver	ry time	period;

- 30.4.6 When an item or service is obtained for testing or assessment;
- 30.4.7 When there is an emergency. The Operator shall notify ECOPETROL at the corresponding Subcommittee's immediately next meeting after such emergency.
- Partial awards: A bid can be awarded partially to two or more bidders, provided that all of the following conditions are met:
- 30.5.1 The possibility of a partial award is specifically indicated in the request for proposals;
- 30.5.2 The successful bidders have fulfilled the requirements established in the Request for Proposals;
- 30.5.3 The partial award represents the best value for the items or services that shall be obtained;
- 30.5.4 Any change in the scope of work or in the award criteria shall be clearly communicated to all of the bidders before the partial award.
- 30.6 Rejection of proposals: The Operator may declare a bid null and void when the respective Subcommittee finds motives to justify such decision and/ or when the proposals are out of line with the actual costs.
- Notification to the unsuccessful bidders: The result of the award shall be communicated in writing to all participants.

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- Clarification: During the assessment period, the Operator may request clarification from the bidders. The Technical Subcommittee shall approve the significant commercial clarifications. No new approval shall be required by the respective Subcommittee when clarifications refer to technical issues. Clarifications that may affect the bid shall be communicated in writing to all of the bidders.
- CLAUSE 31 MANAGEMENT OF CONTRACT AND WORK ORDER
- The Operator shall be responsible for managing the contracts and purchase orders during their execution.
- The bases for contract or purchase order management are their execution itself, which shall include all of the agreed- to prices, schedule and quality requirements.
- The Operator shall maintain a written record of all modifications to the original contract. The cost impact for each change to the contract shall be assessed by the Operator and negotiated with the vendor or contractor before the contract price is changed.
- Any change in the initially approved value of the contract shall be subject to consideration by the respective Subcommittees and, if required, shall be approved by the Executive Committee, set forth in the procedure that is established for such purpose by the Executive Committee.
- 31.5 The Operator is responsible for cost control.
- 31.6 Any additional work or job under the terms of the contract shall be

authorized by the Operator's Project Manager or Operations Manager, who shall consult with the Procurement and Logistics Manager or with the departments that fulfill these functions, before making any modification to the contract. This dual responsibility ensures control for the integrity of the change process. In the event that the changes imply modifications to the text of the contract, these shall be submitted to approval by the Operator's Legal Department.

- Quality control shall be managed with the QA/QC (Quality Control / Quality Assurance) process, which shall include the independent inspection and verification of the work and shall be performed at appropriate moments during the execution of the work.
- 31.8 The processes used by the Operator for cost control shall be described in a cost control procedure.
- The Parties shall receive a monthly report on work progress, with cost documentation and schedule, including the analysis of the variations with respect to the originally agreed- to Budget for the main contracts and purchase orders.
- Once the main contracts and purchase orders have been executed, a detailed analysis shall be undertaken to assess the experiences learned that could be applied to similar contracts or work orders, and also in order to allow for improvements in their control.

#### CLAUSE 32 - INSURANCE

For purposes of Clause 33 in the Contract, with respect to Insurance, the Operator shall deliver the following information to ECOPETROL, for the latter to insure fifty percent (50%) of the assets corresponding to the Commercial Field: <PAGE&qt;

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- 32.1 Description of the assets, differentiated, inasmuch as possible, as follows:
- 32.1.1 Offices, camps and other non- industrial facilities
- 32.1.2 Collection stations, specifying tanks (number and capacity) and other equipment.
- 32.1.3 Diverse warehouses and other facilities
- Note: The external pipelines and the wells are not insured under the fire policy, since, in this case,

ECOPETROL assumes the risk directly.

- 32.2 Value of the assets, indicating only the value of the part that belongs to ECOPETROL and indicating the percentage of the value that it represents.
- 32.2 Geographic location.
- Date of receipt, as of which the risk is transferred to the Joint Operation.

#### CLAUSE 33 - FORCE MAJEURE OR ACTS OF GOD

33.1 Clause 34 of The Contract only suspends fulfillment of those specific obligations whose performance becomes impossible on account of events that constitute force majeure or acts of God. Similarly, it only interrupts the obligations on the assets, properties, production facilities, etc. that are affected by the aforementioned circumstance.

The affected Party shall notify the termination of the force majeure, providing details on the magnitude of the damages and the corrective actions that affect the system.

- If one of the Parties cannot, on account of force majeure or acts of God, fulfill the obligations of this Contract, it shall notify this to the other Party for its consideration, within ten (10) working days following the date on which the cause was produced, specifying the causes of its impediment, the estimated period of suspension of the activities and the way in which it affects fulfillment of the corresponding affected obligation. The other Party shall respond in writing, either accepting the cause or not for force majeure or acts of God.
- The Party affected by the cause for force majeure or acts of God shall recommence fulfillment of the affected obligations within a reasonable term once such cause has disappeared, for which it shall advise the other Party within ten (10) working days after the cause has disappeared. In the event of partial or delayed execution of the obligation affected by force majeure or acts of God, the Party that is obligated to its fulfillment shall exert its best efforts to execute it within the terms and conditions agreed— to between the Parties in this Contract, having to continue with the fulfillment of the remaining contractual obligations.
- If the force majeure cause were to affect the execution of any of the Exploration Work agreed to as part of the exploratory activities that Clause 5 of this Contract refers to, the guarantee that supports the fulfillment of the affected Exploration Work shall be extended for the same period of time that the impediment may last, which were not executed during this period of time. For such purpose, THE ASSOCIATE shall extend or substitute such guarantee, as the case may be.

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#### CLAUSE 34 - REVISION OF THE OPERATIONS AGREEMENT

This Operations Agreement may be revised when the Parties consider it convenient to do so, at the request of any of the Parties. For its revision or modifications the Executive Committee is fully empowered to do so. This Operations Agreement shall be valid until one of the following events occurs:

- 34.1 Termination of The Contract
- 34.2 Agreement in writing between the Parties
- 34.3 The signing of a new Agreement.

In faith of the previously mentioned, the Parties sign the present Operations Agreement, in contract paper of ECOPETROL on the twentieth (20) day of the month of December of the year two thousand two (2002).

EMPRESA COLOMBIANA DE PETROLEOS ECOPETROL

(Signed) illegible
ALBERTO CALDERON ZULETA
President

HARKEN DE COLOMBIA LIMITED

(Signed) illegible
GABRIEL GUSTAVO CANO VELASQUEZ
Principal Legal Representative

(Signed) Illegible VICTOR EDUARDO PEREZ

(Signed) Illegible
ALBERTO TOVAR

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ANNEX C - LINEAMENTS FOR THE PREPARATION
OF THE DEVELOPMENT PLAN

# ANNEX C - LINEAMENTS FOR THE PREPARATION OF THE DEVELOPMENT PLAN

The present Annex establishes the main aspects that must be considered for the preparation of the initial Development Plan and of the programs, projects and annual Budget for each of the Fields discovered in the development of The Contract, which shall be subject to the consideration of ECOPETROL. In this document the general conditions of the Development Plan are described without including a detailed explanation of the format or of the level of detail to be presented, further than the coverage of the main issues identified herein. Additional information may be presented in each Development Plan as it is considered appropriate.

- A. INITIAL DEVELOPMENT PLAN
- 1. Outline of the Development Strategy

Summary of the background of the Field, of the development strategy and of the most relevant aspects of the economic and commercial conclusions.

2. Description of the Field

Includes the geological synthesis of the Reservoirs discovered and the determination of the geometry of the field. In this section the area capable of producing Hydrocarbons of the different Reservoirs is determined and the commercial area is delimited, using the plain Gauss coordinates, by the projection in surface of the lowest level of Hydrocarbons commercially exploitable.

## 3. Reservoir Engineering

This implies the evaluation of the properties of the rocks and of the fluids contained in the Field Reservoirs and other analysis that conduce to:

- a) Determine the original volumes of Hydrocarbons in each Reservoir, the tested, probable and possible Reservoirs of the Field (in each case, based on its useful life, independently from the duration of the Exploitation Period established in The Contract) and discriminated by Liquid Hydrocarbons and Gas Hydrocarbons.
- b) Establish the forecast for production of Hydrocarbons that THE ASSOCIATE expects to produce during each year of exploitation of the Field, both for the tested Reservoirs and for the tested Reservoirs plus those probable.
- c) Define the strategy for exploitation so that the production profile, in the case of tested Reservoirs, achieves the Maximum Degree of Productive Efficiency (MER) or the top of the production, in that case in which THE ASSOCIATE identifies restrictions to achieve he MER, and expose the preliminary strategy of exploitation of the probable Reservoirs.

d) Specify the program of obtainment of information to be executed for the adequate administration of the Reservoirs.

4. Criteria of the Design of the Development Plan

Description of the logics and coherence of the Development plan and synopsis of the criteria, bases and presumptives taken into consideration for the design of the plan.

5. Development Drilling and Completion

Back ground of the main aspects that refer to the drilling and completion of Development Wells.

6. Surface Installations

Presentation of the options of development that were taken into account, the justification of the option chosen, its general specifications, key aspects and diagram of each of the Production Systems; Treatment and Storage; Transportation and Transfer, and of Support to the production of Hydrocarbons that come from the Field.

7. Construction and Assembly

Explanation of the strategy for the Development drilling and the construction and assembly of the surface facilities and the assurance of the quality.

8. Operation and Maintenance

General Description of the scheme and logistics of the operation with its corresponding proposal of the Organizational Letter for the handling of the field with a background of the contingency plans for the control of the critical factors.

9. Abandonment of the Field and Restoration of the Area

Synthesis of the program, methods and practices foreseen for the abandonment of the wells and the withdrawals of the surface facilities and alternatives considered for the provision of funds for the abandonment of the field and the recuperation of the area

10. Economic and Commercial Aspects.

They include the evaluation of the commercialization options of the Hydrocarbons discovered, the economic viability of the Field and the reasons why such alternative was chosen. It must also include:

a) Estimate of the Direct Exploration Costs incurred in before the presentation of the initial Development Plan. <PAGE&gt;

- b) Annual budget and chronogram for disbursements on account of capital expenses (investments) and operational (Direct and Indirect Expenses) in current dollars during the exploitation of the Field, with relation to the Reservoirs tested and the Reservoirs tested plus those probable.
- c) Main economic indicators obtained in the economic evaluation and optimization carried out for the determination of the commerciality of

the Field.

d) When it is necessary to unify the field or when the design of the Development Plan suggests the need to share the production facilities of the Field with other Fields discovered in the development of the same Contract, or of another Association Contract, the proposal of a unified exploitation plan that THE ASSOCIATE proposes to submit for the consideration of others interested and/or the proposal of the agreement to share facilities or other assets, including cost assignments and other distributions necessary, must be attached.

#### PROGRAMS, PROJECTS AND ANNUAL BUDGET

The Operator, or THE ASSOCIATE if concerning a field exploited under the modality of only risk, pursuant to that established in The Contract and in the Operating Agreement (Annex B), shall prepare and present to the Parties the proposal of the programs, projects and Budget for the following calendar year, pursuant to the initial Development Plan accepted for the field.

For all effects of the presentation of the annual programs and projects, by program it is understood the group of projects to be developed, or that by their technical, operational and administrative characteristics deserve to be controlled in a joint manner (for example: Building of Battery X). Each program includes the presentation of the projects to be carried out, their sequence of execution and the general conditions to which they must abide by to obtain a determined result.

By project it is understood the group of activities proper of a work or an specific necessary work for the development and production of the field. (example: Civil work, Access roads, Facilities, Separation and Treatment System, etc.). Each project shall be duly supported with the explanatory documents and the technical and economic specifications.

The annual Budget shall be divided into Expense Budget and Investment Budget. For all effects of the presentation, the Expense Budget shall be divided into programs, groups and concepts of expenses and that of Investments in programs and projects, in numerical order and continuous within each section of the Budget. With respect to the Expense Budget, the programs and projects shall be divided into expense groups and these into concept of expenses. By expense groups it is understood the purpose or object of the expense (for example Personnel Expenses) and by concept of expenses the specific assignment granted (for example: Salaries, Social Benefits).

#### EXAMPLE OF THE INDEX OF THE INITIAL DEVELOPMENT PLAN

- 1. Development Scheme of the field
  - . History and Location of the Field
- . Development Strategy <PAGE&gt;

- . Production Curve and Investment and Expense Program
- . Commercial and Economic Conclusions
- 2. Description of the Field
  - Geology
    - Regional Frame
    - . Local Frame

- . Structural
- . Geology of Reservoirs (Stratigraphy, Sedimentology and factors that control the quality of the reservoir)
- . Geophysics Seismic Information
  - . Seismic Data Base
  - . Seismic Data Processing
  - . Analysis and Interpretation of Seismic Data
- Petrophysics
  - . Subsurface Logging Information
  - . Data on recovered Nucleus
  - . Calibration of the information on Logs and Nucleus
  - . Analysis and Interpretation of Petrophysical data
- . Maps and Geological Patterns
  - Isopachous
  - . Structural
  - . Isoporosity
  - . Others

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3. Reservoir Engineering

- . Basic Reservoir Information
  - . Rock Properties
  - . Fluid Properties
  - . Analysis of Nucleus and PVT
  - . Gas-Oil and Oil-Water Contacts
  - . Productivity of the wells
- . Simulation of Reservoirs
  - . Models of Reservoirs
  - . Predictions
- Original Hydrocarbons "in-situ". OOIP and OGIP
  - . Uncertainties
- . Calculation of Reservoirs (scenarios for Tested, Probable and Possible Reserves)
- . Production Forecasts (of Tested Reservoirs and of Tested plus

	•	Exploitation Strategy							
		•	Development Wells Spacing (Productive and Injectors)						
		. Pressure Maintenance Projects							
	•	Conservation and/or Use of Gas							
	•	Admin	Administration of Reservoirs and Obtainment of Data						
		. Well Testing							
		. Pressure Measurement and Fluid Sampling							
		. Coring and Logging							
		Production Behavior							
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				81					
		•	Production Optimization						
	•	Projects of Improved Recovery							
	•	Opportunities for Future Developments							
		•	Well Testing						
4.	Crite	eria o	of the Design of the Development Plan						
	•	Logic	s of the Design						
	•	Regul	ations and Standards Observed						
	•	Environmental Criteria							
		•	Environmental Diagnostic and Impacts						
		•	Operational Limits						
	•	Functional Criteria							
		•	Production Mechanisms of the Reservoirs						
		•	Flow Rates and Production Capacities						
		•	Useful Life						
		•	Specifications of the fluids produced						
	•	Geotechnical Criteria							
5.	Devel	lopment Drilling and Completion							
	•	Development wells							
			Location						

Design of the Wells (pursuant to the purpose of the well, type

and trajectory of the hole.

Probable)

- Drilling Strategy and Chronogram
- . Critical success factors (technical and operational)
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- . Completion of Wells under Development
  - . Design of the completion of Producer and Injector Wells
  - Artificial Lifting
- . Subsequent Operations
  - . Overhauling
  - . Stimulation
- 6. Surface Installations (Diagram, Specifications and Key Aspects)
  - Production System
    - . Systems considered
    - Justification of the system(s) proposed
    - . Sub-system of Pressure Maintenance
    - . Improved Recovery
  - . Treatment and Storing System
    - Gathering
    - Separation and Treatment
    - . Measurement and Sampling
    - . Water, gas and impurities disposition
    - . Storing
    - . Pumping
  - Support Systems
    - . Safety and Control of the Production
    - . Telecommunications
    - . Power Generation
    - . Camping, Warehouses, workshops, Offices and Transportation Terminals

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. Transportation System and Transference of Hydrocarbons.

- 7. Construction and Assembly
  - . Strategy

- . Coordination of Activities
- . Permissions and Licenses required
- . Construction and Assembly Chronogram
- . Required Services
- . Quality Assurance and Control
- 8. Operation and Maintenance
  - . Proposal of an Organizational Letter of the Field
  - . Operational Limits of the surface and subsurface systems.
  - . General Vision of the Logistics of the Operation
    - . Production
    - . Health, Safety and Environmental Monitoring
    - . Relations with the Community and the Government
    - . Personnel lodging
    - Warehouses
    - . Materials and Supplies
    - . Displacement and Transportation
    - Communications
    - Others

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Contingency Plans

- . Evaluation of Operational Risks
- . Organization and Training for Emergencies Response
- 9. Abandonment of the field and Restoration of the Area
  - . Methods and Practices of Abandonment and withdrawal of installations
    - . Development Wells (Producers and Injectors)
    - . Surface Installations
  - . Restoration and recuperation of the area
- 10. Economic and Commercial Aspects
  - . Commercialization
    - . Market Opportunities and Options considered
    - . Justification of the Option(s) proposed
    - . Estimation of Incomes

- . Critical success factors
- . Direct Exploration Costs caused before the design of the Plan
  - . Acquisition of Seismic Information
  - . Exploratory Wells
- . Estimation of Capital Costs and Operation Expenses
  - . Investments (Distributed between the main operations or goods)
  - . Direct Expenses (Distributed between the main activities)
  - . Indirect Expenses

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. Disbursement Chronograms

- . Investments
- . Expenses
- . Total
- . Economic Analysis and Evaluation of the project
  - . Economic Indicators
  - . Sensibility Analysis
  - . Exploratory Wells

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