Roe & Doe v. Unocal (884,122-7)

DEFENDANTS'
TRIAL EXHIBITS

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## MEMORANDUM OF UNDERSTANDING

AND

PRODUCTION SHARING CONTRACT

FOR APPRAISAL, DEVELOPMENT

AND PRODUCTION OF PETROLEUM

IN THE MOATTAMA AREA

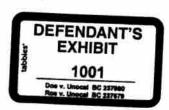
#### BETWEEN

MYANMA OIL AND GAS ENTERPRISE

AND

TOTAL MYANMAR EXPLORATION AND PRODUCTION

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## MEMORANDUM OF UNDERSTANDING FOR THE MOATTAMA GAS PROJECT

This Memorandum of Understanding (hereinafter "MOU") records the agreement reached this <u>Ja</u> day of <u>July</u> 1992 by and between:

THE MYANMA OIL AND GAS ENTERPRISE, an enterprise organized and existing under the Laws of Union of Myanma (hereinafter referred to as the "MOGE" which expression shall, unless repugnant to the context or the meaning thereof, be deemed to include its successors and permitted assigns), represented for the purpose of this MOU by THE MANAGING DIRECTOR, MYANMA OIL AND GAS ENTERPRISE,

of the one part

AND

TOTAL MYANMAR EXPLORATION AND PRODUCTION, a company existing under the Laws of France (hereinafter referred to as "TOTAL" which expression shall, unless repugnant to the context or the meaning thereof, be deemed to include its successors and permitted assigns), represented for the purpose of this MOU by its Chairman of the Board,

of the other part,

both MOGE and TOTAL hereinafter sometimes referred to either individually as "Party" or collectively as "Parties".

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WHEREAS MOGE has made two gas discoveries (hereinafter the "Discoveries") offshore Myanmar in the MOATTAMA area, namely the 3DA-X and 3DA-1 Structures on Blocks M5 and M6;

WHEREAS it is the desire of MOGE that the Discoveries be appraised and developed and TOTAL is willing to do same;

WHEREAS it is the intent of the Parties that if commerciality is declared the produced gas be exported to Thailand ("Export Market"), a part of such produced gas being however allocated to Myanmar domestic market ("Domestic Market");

WHEREAS the discovered gas is assumed to be dry but it is the intent of the Parties that the Project includes the development and production of the liquid hydrocarbons that may be discovered during the appraisal works;

WHEREAS MOGE and TOTAL now wish to record their agreement on the principles which shall apply to the MOATTAMA GAS PROJECT;

WHEREAS MOGE and TOTAL have executed on this same 3 day of 1992 a Production Sharing Contract for the appraisal, development and production of Petroleum in the Moattama area (hereinafter "the PSC");

WHEREAS the purpose of this MOU is to establish, together with the PSC. the basis of the Project structure and concepts and the main contractual and fiscal terms agreed by the Parties for the implementation of the MOATTAMA GAS PROJECT as hereinafter described;

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#### **SECTION 1 - DEFINITIONS**

For the purpose of this MOU and wherever used herein any terms defined in the PSC and not otherwise defined herein shall have the meanings set

forth in the PSC. The terms used below shall have the following meanings in this MOU:

- 1.1. "Contractor" means CONTRACTOR under the PSC.
- 1.2. "Effective Date" means the date following execution of the PSC and of this MOU by the Parties, on which the last act necessary to give the PSC and this MOU the full legal effect has been taken.
- 1.3. "Project" means the MOATTAMA GAS PROJECT.
- 1.4. "Proved Natural Gas Reserves" means the estimated quantities of Natural Gas which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from the reservoirs under existing economic and operating conditions, that is prices and costs as of the date the estimate is made. For the purpose of this definition there is 90 per cent chance that the actual quantity will be more than the amount estimated as Proved Natural Gas Reserves and 10 per cent chance that it will be less.

## SECTION 2 - DESCRIPTION OF THE STRUCTURE OF THE PROJECT

2.1. Phases of the Project

The whole Project is structured in 3 Phases:

#### Phase 1

The appraisal work and the study of commerciality.

#### Phase 2

The field development and pipeline construction phase.

Phase 3

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The production and gas transportation phase.

Phases 2 and 3 are conditional upon the results of Phase 1.

- 4

A tentative Project Schedule is attached hereto as Annex 1. This tentative Schedule is based on the hypothesis that Commercial Discovery can be determined within eighteen (18) months from Effective Date.

2.1. a) Phase 1 will start after Effective Date. The appraisal work is necessary to establish the commerciality of the Discoveries.

The appraisal concerns the gas discoveries in the Contract Area, as it is defined in the PSC. There are 2 structures discovered by MOGE, the 3DA-X structure and 3DA-1 bright spot structure. The largest one is the 3DA-X structure and a successful appraisal of this structure is considered at this stage as an essential step in the process of establishing the commerciality of the Discoveries; therefore the appraisal work described below and in the PSC, concerns essentially the 3DA-X structure.

As stated in section 6.2. of the PSC, the Contractor shall provide MOGE with a detailed appraisal work programme after full review of all data and information available in relation to Contract Area. At this stage the minimum appraisal work programme consists in the drilling of 2 wells, and depending on the results of the 2 wells, 1 or 2 additional wells and additional seismic may be required for the evaluation of the reserves.

The term of the Appraisal Period is two (2) years. Eighteen (18) months is the minimum time estimated necessary to complete the appraisal work.

The completion of the appraisal work programme will be followed by a study of commerciality, whose aim is to allow a declaration of commerciality and subsequently to start the development of the appraised Discoveries.

Such a declaration implies that all the following conditions are met at the time of the declaration:

- (i) The Proved Natural Gas Reserves (which might have to be certified by an international independent expert) must allow to produce gas for 20 years at least, at a plateau for a minimum of 15 years followed by a decline of 5 years or more. The production plateau has to be at least of 320 Million of standard cubic feet per day ("MMscfd"); this corresponds to an amount of reserves of 2.2 Trillion Cubic Feet ("TCF") at least. During the plateau period, a minimum of 250 MMscfd will be exported to Thailand ("The Export Market Gas"), and a maximum of 70 MMscfd will be allocated to Myanmar domestic market ("The Domestic Market Gas"). During the decline, the above mentioned Export Market Gas quantities and Domestic Market Gas quantities will be reduced prorata. If the Proved Natural Gas Reserves are higher than 2.2 TCF, the above mentioned Export Market Gas quantities and Domestic Market Gas quantities will be increased prorata.
- (ii) Petroleum Authority of Thailand ("PTT") commits to buy export gas quantities as defined above, under a long term firm contract of 20 years at least, including a take or pay clause.

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- (iii) Agreement has been reached with MOGE on the long term supply of Domestic Market Gas quantities as defined above.

- (iv) The revenues derived from the gas sales will allow each segment of the Project, as defined below, to have an acceptable rate of return on the investment normally determined as 15 % in real terms.
- (v). The various main Agreements, which are listed in section 6 below, will have been executed and be in full force and effect.

MOGE and the Contractor shall jointly make every effort so that the above conditions can be met as soon as practicable after the completion of the Appraisal Program; however, if these conditions are not met before the end of the Appraisal Period, then the Contractor may retain the Contract Area as stated in Section 3.4. of the PSC.

- 2.1. b) The field development and pipeline construction Phase will only start when the Discoveries are declared Commercial Discovery.
- 2.1. c) The production and gas transportation Phase will start when the development and construction are completed.

#### 2.2 Sales and Delivery Points

Sales and Delivery Points are defined as follows:

- Export Gas Sales Point

The Export Market Gas to Thailand will be delivered and sold to PTT at Thailand border near the Three Pagodas Pass.

It will be transported there through an Offshore/Onshore

Export Pipeline.

- Domestic Gas Sales Point

The Domestic Market Gas will be delivered and sold to MOGE at the inlet of the Domestic Pipe. The Domestic Gas Sales Point, to be decided later, can be either on the production platform, (in this case the Domestic Gas Sales Point is identical to its Delivery Point defined below), or at a junction point of the Export Pipe with the Domestic Pipe. In this last case the Domestic Market Gas will use a portion of the Export Pipe.

- Delivery Point to the Gas Transportation Company ("Delivery Point"):

The produced gas offshore is delivered after appropriate processing to the Gas Transportation Company, as defined below. The Delivery Point is therefore at the inlet of the Export Pipe, ex Field.

#### 2.3. Segments of the Project

There are 2 segments in the Project:

- a) The Petroleum Production segment.
- b) The gas transportation segment.

There will be 2 separate entities (Joint Venture and Company), one for each segment of the Project:

2.3 a) The Petroleum Production Joint Venture:

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The Contractor will perform the appraisal of the Contract Area as defined in the PSC, and if the Discoveries are proved to be Commercial Discovery, it will develop the field and produce it. The produced gas will be transported by the Gas Transportation Company and sold by MOGE and Contractor to the Export Market and Domestic Market.

#### 2.3 b) The Gas Transportation Company:

This Company will transport the produced gas from the Delivery Point to Export and Domestic Gas Sales Points as defined above.

After the Discoveries are proved Commercial Discovery, the Company will construct the Export Pipe to the Thailand border, and transport the gas produced in the Contract Area and eventually from other surrounding contract areas.

The Gas Transportation Company term shall extend as long as there is gas to be transported to Thailand through the Export Pipe.

Each segment of the Project will be subject to specific contractual terms.

# SECTION 3 - REVENUES DISTRIBUTION BETWEEN PETROLEUM PRODUCTION AND GAS TRANSPORTATION

The Export Market Gas Price (E) at the Thailand border will be the reference. This price will be splitted into:

- A Transportation Tariff (T) for the Export Gas from the Delivery Point to the Thailand border (Export Gas Sales Point).
- A "Net Back" price (NB) for the gas ex-Field defined as follows:

  NB = E T.

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The value of the Domestic Market Gas will be equal to the gas price ex-Field (NB) plus a transportation tariff calculated as a function of the portion of the Export Pipe used by the Domestic Market Gas, if any. So this tariff will be only a fraction (f) of the Export Market Gas one, and the Domestic Market Gas value (D) is:  $D = NB + (f) \times (T)$ . If the Domestic Gas Sales Point is identical to the Delivery Point, f will be equal to zero.

#### According to this scheme:

- The valuation of Natural Gas for the Gas Production Joint Venture will be equal to the gas "Net Back" price ex-Field (NB) defined above.
- The Gross Revenues of the Gas Transportation Company will be equal to the sum of Export Market Gas transportation revenues i.e. Export Gas quantity multiplied by transportation tariff (T), plus the Domestic Market Gas transportation revenues i.e. Domestic Market Gas quantity multiplied by transportation tariff (T), multiplied by the fraction (f) applied for Domestic Market Gas, plus the revenues of the transportation of any gas produced in other surrounding contract areas, and transported to Thailand through the Export Pipe, or a portion of it.

The Transportation Tariff (T), which will be at any time a fraction of the Export Gas Price, will be determined so that both segments of the Project will have a similar rate of return in real terms.

## SECTION 4 - CONTRACTUAL AND FISCAL TERMS FOR PETROLEUM PRODUCTION AND GAS TRANSPORTATION

#### a) Petroleum Production Joint Venture

The contractual and fiscal terms applicable to this Joint Venture are defined in the PSC entered into between MOGE and TOTAL for the Appraisal, Development and Production of Petroleum in Moattama Contract Area.

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The valuation of the Natural Gas for the PSC fiscal accounts will be the "Net Back" (NB) defined in Section 3 above.

The costs incurred up to Effective Date by MOGE in relation to the Contract Area shall be reimbursed to MOGE in the manner defined in Section 19.9. of the PSC.

According to the PSC, the Contractor is subject to the provisions of the Union of Myanmar Foreign Investment Law. The taxable income is as defined in the PSC.

b) Gas Transportation Company:

A Company subject to the entitlements under the provisions of the Union of Myanmar Foreign Investment Law and of the Union of Myanmar Income Tax Laws will be established.

c) Fiscal terms applicable to the Petroleum Production Joint Venture and to the Gas Transportation Company.

The Petroleum Production Joint Venture and the Gas Transportation Company will be granted the following fiscal terms:

- Tax Holiday: 3 years starting from the Financial Year in which Commercial Production commences.
- Income Tax rate: 30 % inclusive of all taxes on income payable to the Union of Myanmar. No other tax will be imposed on the Foreign Participants in the Project except income tax imposed on expatriate personnel of Contractor for the portion of their income in Myanmar.

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  - Depreciation rate for capital assets: 25 % per year.

If any material change occurs after Signature Date to the economic benefits of the Petroleum Production Joint Venture and of the Gas Transportation Company due to the promulgation of new laws or regulations, adjustments will be made to maintain the economic

regulations, adjustments will be made to maintain the economic benefits at the same levels as if such laws or regulations had not been promulgated.

- Domestic Market Gas
  The Domestic Market Gas quantities (Qd) delivered each year to
  Myanmar, according to a long term contract, will be a part of
  Myanmar and MOGE revenues for the corresponding year, which will
  be taken "in kind". The Myanmar and MOGE total revenues (R) in a
  year are:
  - From the Petroleum Production joint venture:

    The Royalty, the Cost Petroleum and Profit Share of MOGE, the various Bonuses, and the Income Tax.
  - From the Gas Transportation Company:
     The Income Tax and MOGE profit share.

The value of the Domestic Market Gas (D) is determined above in Section 3; this value (D) multiplied by the Domestic Market Gas quantity (Qd) is the part of Myanmar and MOGE revenues which are taken "in kind". The remaining revenues: (R) - (Qd) x (D) will be taken "in cash" i.e. paid to Myanmar and MOGE by the Foreign Participants in the Project.

### SECTION 5 - OPERATORSHIP AND PARTNERSHIP

a) Operatorship

TOTAL will be the Operator for the whole Project during its 3 Phases under the PSC and for the Gas Transportation Company.

#### MOGE participation b)

MOGE may acquire up to fifteen percent (15 %) participation share in both segments of the Project. This right shall be exercised in accordance with section 19 of the PSC.

The rights and obligations of MOGE in the Gas Transportation Company to be established shall be in proportion to its participation share.

#### c) Foreign participation:

The following principles will apply:

- Each Foreign Participant will have the same participation share in the 2 segments of the Project.
- MOGE and TOTAL agree that Petroleum Authority of Thailand Exploration and Production (PTT(EP)) will have a right to participate in both segments of the Project with a participation share of up to 30 % of the aggregate Foreign Participants share.
- TOTAL intention is to keep a participation share of 30 % at least of the aggregate Foreign Participants share.
- The remaining of the Foreign Participants share can be offered to a third party or parties, with the approval of MOGE, which shall not be unreasonably withheld.

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Operations under both the PSC and the Gas Transportation Company will be conducted under Joint Operating Agreements to be established on the basis of international standard practices.

## SECTION 6 - SUMMARY OF THE MAIN AGREEMENTS BETWEEN THE VARIOUS PARTICIPANTS IN THE PROJECT

As explained above, the contractual relationship among the various participants will be materialized in the following agreements:

- The Petroleum operations and Pipeline construction and exploitation:
- PSC Production Sharing Contract between the Gas Production Joint Venture participants and MOGE.
- POA Production Operating Agreement between the Gas Production Joint Venture participants.
- GPPOA Gas Pipeline Participation and Operating Agreement between the Gas Transportation participants and MOGE and Myanmar Government
  - The Gas sales and transportation:
- EGSA Export Gas Sales Agreement between the Gas Production Joint Venture participants and PTT (Petroleum Authority of Thailand Production)
- EGTA Export Gas Transportation Agreement between the Gas Production Joint Venture participants and the Gas Transportation Company.
- DGSA Domestic Gas Supply Agreement between the Gas Production

  Joint Venture participants and MOGE.

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- DGTA Domestic Gas Transportation Agreement between the Gas Production Joint Venture participants and the Gas Transportation Company.

## SECTION 7-OTHER CONSIDERATION ABOUT DOMESTIC GAS

## a) Early Production Scheme (EPS)

TOTAL, as operator for the Project, is ready to study at the time of the commerciality study, the technical and economical feasability of an EPS to be implemented in conjonction with the export scheme in order to accelerate the delivery of Domestic Gas at the inlet of the Domestic Market Gas Pipeline.

### b) Domestic Gas Pipeline

During the Commerciality Study, MOGE and the Contractor will study in detail gas reserves availability and gas demand forecasts for the domestic market in Myanmar.

If the study concludes that a deficit exists, domestic gas may be delivered from the Contract Area through the Domestic Gas Pipeline.

TOTAL considers that the Domestic Gas Pipeline falls within the category of investments which should be financed through loans from international financial institutions whose function is to support and permit the realization of projects which are vital for the economy of a country.

At the time of the commerciality study, TOTAL, as Operator, is willing to assist MOGE, at MOGE's request, in arranging such a financing.

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Should such a financing proved not to be available or feasible, MOGE and the Contractor will consider the possibility of including the Domestic Gas Pipeline in the Project. Provided that this additional

investment will not prevent the declaration of commerciality and consequently the field development decision, it will be included in the Gas Transportation company.

In this case, the definition of the Domestic Gas sales point will have to be amended and the Domestic Gas transportation tariff adjusted accordingly.

# SECTION 8 - NATURAL GAS DISCOVERIES OTHER THAN THE DISCOVERIES

If any Other Discovery of Natural Gas (other than the Discoveries) is made within the Contract Area as a result of additional exploration works made by Contractor as provided for in Section 6.8. of the PSC, it is hereby agreed that for the purpose of the determination of whether such Other Discovery is Commercial Discovery under Section 7.7.2. of the PSC:

- a) the integration within the Project of the reserves related to such Other Discovery will be studied as a first priority with the objective to optimize the use of the facilities already in place or to be put in place, in particular the Export Gas Pipeline;
- the conditions listed under Section 2.1.a) above will apply. However the minimum production plateau defined as per Section 2.1.a) (i) of this MOU and the minimum duration of 20 years applicable to the long term firm gas sales contracts as per Section 2.1.a) (ii) and (iii) of this MOU, will not be required.

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#### SECTION 9 - TERM

This MOU will come into force on Effective Date. It will terminate at the termination of the PSC as stipulated in Section 25 of the PSC.

IN WITNESS WHEREOF, this MOU has been executed at Yangon, the Union of Myanmar as of the day and year first abovementioned.

Signed, sealed and delivered on behalf of THE MYANMA OIL AND GAS ENTERPRISE

U PE KYI

Managing Director

<u>NV2</u>

#### WITNESSES:

1. CMDR. THEIN TUN

Director General, Energy Planning Department

2. U SOE MYINT

Deputy Director General, Energy Planning Department

Signed, sealed and delivered
on behalf of
TOTAL MYANMAR EXPLORATION AND PRODUCTION

Thierry DESMAREST Chairman of the Board

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## WITNESSES:

1. Jean-Marie BEUQUE

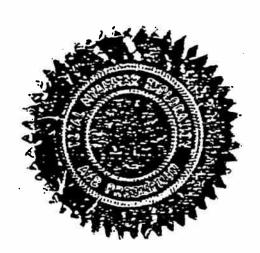
Chief Executive Officer Far East

fren

2. Guy ROMEU

Manager General Affairs Far East





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