SIXTH AMENDMENT TO
PRODUCTION SHARING CONTRACT
BETWEEN
THE REPUBLIC OF EQUATORIAL GUINEA
AND
MOBIL EQUATORIAL GUINEA INC.
AND
UMC EQUATORIAL GUINEA CORPORATION
(AREA B - OFFSHORE NW BIOCO)

This Sixth Amendment (hereinafter referred to as this "Amendment") made and entered into as of the 15th day of June, 1997, by and between The Republic of Equatorial Guinea (hereinafter referred to as the "State"), represented for the purposes of this Amendment by the Ministry of Mines and Energy of the State (hereinafter referred to as the "Ministry"), and Mobil Equatorial Guinea Inc., a corporation organized and existing under the laws of the State of Delaware, U.S.A. (hereinafter referred to as "Mobil") represented for the purposes of this Amendment by Arthur J. Green, its President, and UMC Equatorial Guinea Corporation, a corporation organized and existing under the laws of the State of Delaware, U.S.A. (hereinafter referred to as "UMC"), represented for the purposes of this Amendment by Jim E. Smitherman, its President.

# WITNESSETH

- A. WHEREAS, The State and United Meridian International Corporation ("UMIC") entered into that certain Production Sharing Contract dated the 29th day of June, 1992 (hereinafter referred to as the "Contract"), but having an Effective Date of July 8, 1992, covering the area described therein which is referred to as Area B Offshore NW Bioco; and
- B. WHEREAS, by that certain Assignment made and entered into the 21st day of October, 1992, UMIC assigned DuPont E&P No. 21 B.V. ("DuPont") an undivided seventy-five percent (75%) of all the right, title, interest and obligations under the Contract, and said Assignment was approved by the Ministry on 29 October 1992; and

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- C. WHEREAS, that certain First Amendment To Production Sharing Contract was made and entered into the 15th day of December 1992 by and between the State, represented by the Ministry, UMIC and DuPont; and
- D. WHEREAS, by that certain Assignment (Area B) made and entered into the 14th day of December, 1992, DuPont assigned an undivided twenty-five percent (25%) interest in and under the Contract, as amended, to each of Clyde Charter Company Limited to be renamed BP Exploration (Equatorial Guinea) Limited ("BP") and Den Norske Stats Oljeselskap a.s. ("Statoil") and said Assignment was approved by the Ministry on 23 December 1992; and
- E. WHEREAS, by that certain Assignment dated the 25th day of June, 1993 DuPont assigned to UMIC all of its rights, titles, interests and obligations under the Contract, as amended, and the Ministry consented to such Assignment on September 9, 1993; and
- F. WHEREAS, by letter dated July 6, 1993, UMIC elected to proceed into the Second Subperiod and has paid the bonus to proceed into the Second Subperiod in accordance with Section 9.2 of the Contract, as amended, and has paid the rentals due in accordance with Section 9.5 of the Contract, as amended, and by letter dated July 8, 1993, the Ministry authorized UMIC to proceed into the Second Subperiod; and
- G. WHEREAS, that certain Second Amendment To Production Sharing Contract was entered into on the 17th day of September, 1993 by and between the State, represented by the Ministry, and UMIC; and
- H. WHEREAS, by that certain Assignment made and entered into the 15th day of October, 1993, UMIC assigned one hundred percent (100%) of the right, title and interest under the Contract, as amended, to UMC and said Assignment was approved by the Ministry on the 15th day of October, 1993; and
- I. WHEREAS, that certain Third Amendment To Production Sharing Contract was entered into on the 1st day of March, 1994, by and between the State, represented by the Ministry, and UMC; and

- J. WHEREAS, by that certain Assignment dated the 28th day of March, 1994, BP assigned to UMIC all of its rights, titles, interests and obligations under the Contract and the Ministry consented to such Assignment; and
- K. WHEREAS, by that certain Assignment dated the 30th day of March, 1994, Statoil assigned to UMIC all of its rights, titles, interests and obligations under the Contract and the Ministry consented to such Assignment; and
- L. WHEREAS, by that certain Assignment dated the 7th day of April, 1994, UMIC assigned to UMC all of its rights, titles, interests and obligations under the Contract and the Ministry consented to such Assignment; and
- M. WHEREAS, by that certain Area B Deed of Assignment dated the 26th day of April, 1994, UMC assigned to Mobil an undivided sixty-five percent (65%) of the rights, titles, interests and obligations under the Contract, and the Ministry consented to such Assignment on May 10, 1994; and
- N. WHEREAS, the State, Mobil and UMC entered into that certain Fourth Amendment To Production Sharing Contract (Area B Offshore NW Bioco) dated as of the 29th day of June, 1994; and
- O. WHEREAS, by that certain Deed of Assignment dated the 20th day of October, 1995, UMC assigned to Mobil an undivided ten percent (10%) of the rights, titles, interests and obligations under the Contract, and the Ministry consented to such Assignment on 24th day of October 1994; and
- P. WHEREAS, the State, Mobil and UMC entered into that certain Fifth Amendment To Production Sharing Contract (Area B-Offshore NW Bioco) dated as of the 25th day of January, 1996; (the "Fifth Amendment") and
- Q. WHEREAS, the State, represented by the Ministry, Mobil and UMC have agreed that certain amendments to the Contract, as amended, hereinafter set forth should be made for the benefit of all Parties.

NOW, THEREFORE, in consideration of the premises and the mutual benefits to the Parties hereto, the State, Mobil and UMC agree as follows:

- 1. Words or phrases defined in the Contract, as amended, and used in this Amendment shall have the meanings set forth in the Contract, as amended, unless the context otherwise provides.
- 2 Section 1.2 (am) is deleted and the following language is inserted in place thereof:

"(am) Initial Exploration Period means the period commencing on the Effective Date of the Contract and ending at midnight local time, Malabo, Republic of Equatorial Guinea on 31 December 2002 or such later date as such period may be extended to pursuant to section 2.1 (C)."

- 3. The following new subsection (as), (at), (au) and (av) are added to Section 1.2 Definitions:
  - "(as) <u>Supplemental Petroleum Allowance</u> means three point two five percent (3.25%) of the sales proceeds of the Crude Oil lifted and sold from the Contract Area and not otherwise utilized in Operations.
  - (at) <u>Project or Projects</u> means construction or improvement of infrastructure or public works facilities for the social welfare and benefit of the people of the State".
  - (au) Mobil means Mobil Equatorial Guinea, Inc., a Delaware USA Corporation.
  - (av) <u>UMC</u> means UMC Equatorial Guinea Corporation, a Delaware USA Corporation."
- 4. The last sentence of Section 2.1 (a), as amended by the Fifth Amendment, is deleted and the following sentence is inserted in place thereof:

- "The third Subperiod shall have a term commencing with the termination of the Second Subperiod and ending on December 31, 2002, and shall be called the 'Third Subperiod'."
- 5. Section 3.1, as amended by the Fifth Amendment, is deleted and the following language is inserted in place thereof:
  - "3.1 Subject to Section 3.3, on or before December 31, 2002, the Contractor shall surrender forty percent (40%) of the original Contract Area.
- 6. Section 7.2, as amended by the Fifth Amendment is further amended by deleting the entire section in the original PSC and adding the following after the language of Section 7.2 contained in the Fifth Amendment:
  - Beginning January 1, 1997, the State shall be entitled to and the "7.2 Contractor shall pay to the State the Supplemental Petroleum Allowance until such time as the total amount of such payments to the State equals thirty million United States Dollars (US\$30,000,000), at which time the Supplemental Petroleum Allowance shall terminate. The Supplemental Petroleum Allowance shall be included in Petroleum Operations Costs for the purposes of cost recovery. After making Royalty payments to the State, the Contractor shall be entitled to recover all Petroleum Operations Costs out of the sales proceeds or other disposition of Hydrocarbons produced and saved hereunder and not used in Petroleum Operations. Any Hydrocarbons remaining after making the Royalty payments to the State and after all Petroleum Operations Costs are recovered by the Contractor shall be referred to hereinafter as "Net Hydrocarbons". Net Hydrocarbons shall be shared between the State and the contractor in accordance with the procedures outlined below which are designed to ensure total cost recovery by the Contractor of all Petroleum Operations Costs, followed by an escalation of the State's share based on increases in the Contractor's pretax rate of return, as set forth in the following tables:



(a) With respect to wellheads located in any water depth where production is from a reservoir all of which is located less than four thousand (4,000) meters below sea level:

Contractor's Pre - Tax Rate of Return	State's Share of (Net Hydrocarbons)	Contractor's Share of (Net Hydrocarbons)
up to 30%	0%	100%
Greater than 30% up to 40%	20%	80%
Greater than 40% up to 50%	40%	60%
Greater than 50%	60%	40%

(b) With respect to wellheads located in water depths of less than two hundred (200) meters where production is from a reservoir of which all or a portion thereof is located four thousand (4,000) meters or more below sea level:

Contractor's		. ,
Pre - Tax	State's Share of	Contractor's Share of
Rate of Return	(Net Hydrocarbons)	(Net Hydrocarbons)
up to 30%	0%	100%
•		
Greater than 30%		
up to 40%	20%	80%
Greater than 40%	4007	60%
up to 50%	40%	0070
Greater than 50%	70%	30%"
<del>-</del>		

(c) With respect to wellheads located in water depths of more than two hundred (200) meters where production is from a reservoir of which all or a portion thereof is located four thousand (4,000) meters or more below sea level:

Contractor's Pre - Tax Rate of Return	State's Share of (Net Hydrocarbons)	Contractor's Share of (Net Hydrocarbons)
up to 30%	0%	100%
Greater than 30% up to 40%	20%	80%
Greater than 40% up to 50%	40%	60%
Greater than 50%	60%	40%"

7. Subsections 7.4.1 (c) and (d) are amended as follows:

In Subsection 7.4.1(c), delete the reference to "25%" and replace it with "20%".

Subsection 7.4.1(d) shall be deleted and the following shall be added in its place:

- "(d) For purposes of applying the formula set forth in subsection (a) of this section 7.4.1, in the first Calendar Year Petroleum Operations Costs are incurred FSA(Y-1) shall be equal to zero and in any Calendar year immediately subsequent to a Calendar Year in which FSA(Y) is positive, FSA(Y-1) shall be equal to zero."
- Subsections 7.4.2(c) and (d) are amended as follows:
   In Subsection 7.4.2(c), delete the reference to "46.6666%" and replace it with "25%".

Subsection 7.4.2(d) is deleted in its entirety and the following shall be added into is place:

"(d) For purposes of applying the formula set forth in subsection (a) of Section 7.4.2, in the first Calendar Year Petroleum Operations Costs are incurred SSA(Y-1)

shall

be equal to zero and in any Calendar Year immediately subsequent to a Calendar Year in which SSA(Y) is positive, SSA(Y-1) shall be equal to zero."

9. Subsections 7.4.3(c) and (d) are amended as follows:

In Subsection 7.4.3(c), delete the first reference to "50%" at the end of the 21st line of the English version and replace it with "33.3333%".

Subsection 7.4.3(d) is deleted in its entirety and the following shall be added in its place:

- "(d) For purposes of applying the formula set forth in Subsection (a) of this Section 7.4.3, in the first Calendar Year Petroleum Operations Costs are incurred TSA(Y-1) shall be equal to zero and in any Calendar Year immediately subsequent to a Calendar Year in which TSA(Y) is positive, TSA(Y-1) shall be equal to zero."
- 10. Section 9.10 shall be added as follows:
  - 9.10 "Beginning in Calendar Year 1997, Contractor shall make available on behalf of the State up to a total of thirty million United States Dollars (US\$30,000,000), but not to exceed fifteen million United States Dollars (US\$15,000,000) in any Calendar Year, for the funding of Projects. Contractor shall have no obligation to provide funds for Projects beyond the amounts set forth in the preceding sentence, even if additional funds are required to complete the construction thereof. In such a case as the preceding sentence, State and Contractor shall meet to discuss the situation and, depending on the importance of the unfinished Project, attempt to find a mechanism to complete such a Project. The State (represented by the Ministry), Mobil and UMC shall establish a management committee (the "Management Committee") which shall have as its purpose and objectives choosing Projects to be funded hereunder, negotiating contracts with one or more third parties to manage Projects on behalf of the State (each a "Project Manager"), overseeing Project Manager and approving plans and budgets. The Management Committee shall consist of three (3) members, one (1) each from Mobil and UMC, respectively and one from the State. Each member may also appoint an alternate who may attend meetings and act in the absence of a member. The State

member shall be Chairman of the Management Committee. All decisions of the Management Committee shall be by unanimous vote. All financial and budgetary decisions related to Projects are the responsibility of the Management Committee which may establish procedures and rules for the handling of budgets, plans and contracts. Projects may be constructed at any time; however, no new Projects will be approved for construction after January 1, 2000. All amounts dedicated to be paid on behalf of the State under the terms of this Section 9.10 shall be held by Contractor and paid directly to Project Manager and third parties supplying materials, equipment, goods and services for the construction of the Projects. The Management Committee members and members of their family will not have any monetary interest in Projects, Project Manager, third party contractors or Members will serve without payment of compensation, except for reasonable and necessary travel expenses incidental to attend meetings of the Committee. The Management Committee may not engage in any other business, except as described herein, and will have no authority to sign contracts in its own name but may negotiate and approve contracts for signature by the appropriate authorized representative of the State. Upon completion of construction of any Project, the ownership and all obligations of ownership, including but not limited to operation, maintenance and enforcement of any contract right shall vest in the State. All amounts paid by Contractor under this Section 9.10 shall be considered Petroleum Operations Costs for purposes of the Contract. In the event gross revenue generated under the Contract from the sales of Crude Oil for any Calendar Month declines below eighteen million United States dollars (US\$18,000,000), Contractor shall have the right, exercisable in its sole discretion, to suspend the start of construction on any new Project. suspension, if invoked by Contractor, shall remain in effect until such time as the gross revenue generated under the Contract from the sales of Crude Oil for a Calendar Quarter exceeds fifty-four million United States dollars (US\$54,000,000).

11. Exhibit C, the Accounting Procedure, Subsection 2(h) as previously amended, shall be amended by deleting the words "...and 9.9..." in the second line and replacing it with the following:

", 9.9 and 9.10..."



- 12. In consideration of the premises and of the mutual covenants and agreements contained in this Amendment, the State, Ministry and Contractor hereby ratify the Contract, as amended, and hereby confirm that it is in full force and effect as of the date set out in Preamble Clause A to this Amendment.
- 13. Except as amended by this Amendment and the other amendments described above, the Contract, as amended, shall remain in full force and effect as originally written.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment in three (3) originals in the English and Spanish languages, as of the day and year first above written.

THE MINISTRY OF MINES

AND ENERGY OF

THE REPUBLIC OF

EQUATORIAL GUINEA

MOBIL EQUATORIAL GUINEA INC.

Ву: \_

UMC EQUATORIAL GUINEA

CORPORATION

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# Mobil Africa & Middle East Limited

# TELEFACSIMILE TRANSMISSION

TO:

JIM SMITHERMAN

FAX:

001 713 653 5009

**UMC** 

MOC

cc:

SKIP MARYAN

FAX:

001 703 846 4672

FROM:

A.J. GREEN

FAX:

44 171 412 2529

TEL:

44 171 412 4008

DATE:

Monday, 21 April 1997

PAGES:

10 (Inc. Cover Sheet)

cc: John Brock

Jim Dunlap

Jon Clarkson

John Patton

Jeanne Buchanan

Chris Cragg

Mark Mazzolini

Kevin McMillan

Joe Bruso

Steve Rose

Jack McFarland

#### IMPORTANT NOTICE

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April 21, 1997 London

Jim Smitherman
UMC Equatorial Guinea Corporation
Houston Texas
Fax 713-653-5009

MME negotiations regarding Revenue Acceleration

Dear Jim,

Attached is an English and a Spanish copy of the Memorandum of Understanding we reached with Minister Olo, Secretary of State Miguel Abia and representatives from Quad Engineering in our London meetings which concluded this Saturday. This complies with the Terms of Reference we discussed over the last few weeks.

You will also note we included a further extension of the relinquishment date until 2002.

Skip Maryan in Mobil's Fairfax office will be preparing the formal PSC amendment to cover these changes and will be in contact with John Patton.

Please call if you wish to discuss. I am in the London office today and can be reached at 44-171-412-4699. I will be travelling tomorrow and will be in Malabo on Wednesday.

cc Skip Maryan - Fairfax BM fax 8-466-4672

## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") dated as of April <u>19</u>, 1997, is executed by and between Mobil Equatorial Guinea Inc. ("Mobil") and The Republic of Equatorial Guinea (the "State"), represented for purposes of this MOU by the Ministry of Mines and Energy of The Republic of Equatorial Guinea (the "Ministry").

The purpose of this MOU is to document the general understanding reached between Mobil and the Ministry as to provisions to be incorporated into future documents between the State, Mobil and UMC Equatorial Guinea Corporation ("UMC EG"). Mobil and UMC EG shall hereafter together be referred to as "Contractor". This MOU is intended to be merely an expression of understanding between Mobil and the Ministry and is not intended to be a binding and enforceable document, which binding and enforceable document will only be created after Contractor and the State negotiate and execute a formal Sixth Amendment (as described below) and other documents. Prior to executing the Sixth Amendment and any other documents, Mobil and UMC EG will need to obtain the approval of their respective senior managements

In particular, this MOU describes the general terms and provisions to be incorporated into a future Sixth Amendment (the "Sixth Amendment") to that certain Production Sharing Contract originally executed by the State and United Meridian International Corporation (Area B - Offshore Bioco) dated June 29, 1992, as amended, (the "PSC").

This MOU also addresses two tax related issues that, although they will not be incorporated into the Sixth Amendment, these issues will be addressed in either future laws or documents, as may be agreed to by the State and Contractor.

#### A. Sixth Amendment Issues

For the purposes of this MOU, the parties agree in principle that the following provisions will be incorporated into a Sixth Amendment to be executed by the State and Contractor:

- 1. <u>Production Allowance.</u> Commencing January 1, 1997, the State shall receive a temporary, supplemental petroleum allowance of 3.25% of total production, until the State receives a total of \$30 Million, at which time this supplemental allowance will terminate. This amount shall be cost recoverable and allowable to Contractor as a deduction from its taxable income.
- 2. Infrastructure Contribution. As and from January 1, 1997, Contractor shall pay the sum of \$30 Million toward infrastructure improvements in the State (but no more than \$15 Million in actual expenditures for each calendar year). The State and Contractor will form a "Management Committee" for the purpose of choosing the infrastructure improvements to be made in the State and choosing and overseeing a third party construction management company to manage the construction of the

infrastructure improvements. The Management Committee will be under the chairmanship of the Ministry, but will make its decisions based on a unanimous vote of both Contractor and the Ministry. The Management Committee shall enter into a management agreement with the construction management company expressly stating that all financial and budgetary decisions are the responsibility of the Management Committee. Although the construction management company will hire contractors and buy materials for the infrastructure projects, the Contractor will make payments directly to contractors.

Upon completion of any projects, the ownership, and all obligations of ownership, including, but not limited to, the operation and maintenance of the projects, will be turned over to the State. The amounts paid by Contractor shall be cost recoverable and allowable to Contractor as a deduction from its taxable income. The payment amounts for the infrastructure improvements shall be treated as intangible capital costs for the purposes of calculating income taxes (ie. written off for income tax in the year costs are incurred).

The third party management contract will provide that Contractor shall have the right and option to suspend the start of work on new infrastructure improvements if gross revenue during any 30 day period from Block B drops below \$18 Million, until revenue increases over such threshold for at least three consecutive 30-day periods thereafter.

- 3. Extension of Relinquishment Period. The State shall extend Contractor's relinquishment period, as described in Section 3 of the PSC, to December 31, 2002. The extension provisions will include similar language to the extension granted in the Fifth Amendment to the PSC requiring additional minimum exploration work obligations.
- 4. <u>Adjustment to Profit Share Percentages</u>. The parties shall revise the State's share of hydrocarbons for reservoir depths less than 4000 meters, regardless of the water depth, to the following percentages:

Rate of Return	1	*	State Share
30% to 40%			20
40% to 50%	-		40
>50%			60

- 5. State's Share of Hydrocarbons. The parties shall clarify that in the first year in which share account(s) go positive, profit will be split between Contractor and the State on a partial year basis to ensure that Contractor gets 30% pre-tax rate of return on investment.
- 6. <u>Calculation of Cost Recovery</u>. The parties shall clarify their understanding of the calculation of cost recovery for the purpose of determining Contractor's net hydrocarbons to ensure that cost recovery is allowed in the year costs are incurred.

#### B. Tax Issues

For the purposes of this MOU, the parties agree in principle that the following provisions will be addressed in either future documents, or future laws, to the mutual satisfaction of both the State and Contractor:

- 1. <u>Discharge of Contractor's and Subcontractors' Tax Obligations.</u> The parties shall clarify the State's agreement that the contractors and subcontractors of Contractor have no obligation to pay Impuesto Sobre Cifra de Negocio Interior, or any other tax imposed on transactions that may be adopted in the future and that would otherwise be imposed on transactions, which relate directly or indirectly to the conduct of petroleum operations.
- 2. <u>Tax Loss Carry-Forward</u>. The State shall expressly allow that losses incurred for income tax purposes during a calendar year may be carried forward to offset taxable income in subsequent calendar years until such losses have been completely utilized.

The State and Mobil have executed this MOU as of the date described above.

The Minister of Mines and Energy of The Republic of Equatorial Guinea

Mobil Equatorial Guinea Inc.

## 1998 Equatorial Guinea Project Planning

## Block D North 3D Interpretation Project

Manpower

2 geophysicist, 1 geologist, 1/3 System Administrator, 1/2 geotech Ho Baik (project Manager 1/3)

Kirk Geno (consulting geologist ½), D.S. Choi (Yukong geologist ½)

Bon Wiener (consulting geophysicist ½), M.H. Lee (Yukong Geophysicist ½), Michael Cline (consulting geophysicist ½) New Geophysicist (new hire- 1/2)

Tracy Clark (System Administrator 1/3), Chigozie Nwokeafor (geotech-1/2)

## Tasks (1<sup>st</sup> Quarter)

- Load Block D North and Perenco 3D data, Load key well log curves
- Establish reliable seismic-well ties (generate synthetic traces for all wells in the block)
- Generate drillable prospects Isongo, Qua Iboe and D-1 sands
  - 1) Depth Structural Maps and key Horizon slices using post stack migrated data set
  - 2) Establish a depth conversion method for Block D
  - 3) Amplitude and AVO analysis with 2D seismic modeling
  - 4) Propose well locations and site survey recommendation
- Generate structural and stratigraphic cross sections using key wells
- Establish chronostratigraphy and refine biostratigraphic correlation for Equatorial Guinea (Seismic mappable horizons and inter-regional markers need to be consistent with biostratigraphic markers)
- Quality Contol: Reevaluate velocity analysis for the Pre-Stack time migration (the data set will be delivered around mid-February)
- Interpret Perenco's 3D data in the vicinity of Tsavarita area and propose Tsavarita-3 development location
- Generate Isongo toe-thrust and Isongo slope channel/basin floor fan prospects and utilize Mobil's structural reconstruction work for Block B
- Produce prospect montages for key prospects for 1998 drilling
- Prepare farm-out data package and presentation

# Block C 2D Interpretation Project

### Manpower:

1 geophysicist, ½ geologist, 1/3 System Administrator, 1/3 Geotech.

Ho Baik (Project Manager- 1/3)

Kirk Geno (Geologist –1/3) D.S. Choi (Geologist – ½)

Bob Wiener (Consulting Geophysicist –  $\frac{1}{2}$ ) New Geophysicist (new hire –  $\frac{1}{2}$ )

Tracy Clark (System Administrator- 1/3), Chigozie Nwokeafor (Geotech-1/3)

Tasks (1st and 2nd Quarters)

#### Block C West

- Detailed prospect mapping for main Isongo and Qua Iboe Prospects (south of Diamonte complex area)
  - 1) Depth structure map
  - 2) Amplitude Map
  - 3) Propose well locations and design site survey areas
  - 4) 2d seismic modeling using GX technology ray tracing software
- Update Isongo and Qua Iboe Play and Reservoir Fairway Maps TGS 2D spec. data and Exxon's OPL 222 and 223 evaluation
- Produce prospect montages for key prospects for 1998 drilling

# Block C East

- Detailed prospect mapping for Isongo basin floor and channel prospects
  - 1) Depth structure maps at base Qua Iboe, Top Isongo, and Massive Isongo
  - 2) Amplitude maps
  - 3) Build 2D seismic stratigraphic models to support the presence of reservoir facies with hydrocarbon
- Regional chrono/lithstratigraphic cross sections
- Produce prospect montages for key prospects for 1998 drilling

# Block A Interpretation Project

Manpower

½ Geologist, ¼ Geophysicist Ho Baik (Project Manager −1/4)

Kirk Geno (Interpreter- 1/3)

# Tasks (1<sup>st</sup> Quarter)

- Remap 5 Prospects (A,B,C,D, and Platino)
  - 1) Depth structural map- D-1, Intra Qua Iboe, and Isongo levels
  - 2) Sequence stratigraphic analysis and Seismic attributes
- Petrophysical Analysis for Dorado-1 well
- Prepare prospect montage for Prospect A with pre-stack depth migration -Spectrum
- Regional stratigraphic cross sections including wells in the Isongo Field in Cameroon
- Source rock richness analysis and maturation study
- Regional play and sand fairway map

#### Block B 3D/2D Interpretation Project

### Manpower

1 Geophysicist, 1/3 Geologist, 1/3 System Administrator, 1/3 Geotech Ho Baik (Project Manager 1/4)

> Michael Cline (consulting geophysicist- 1/2) Steve Knapp (Geophysicist- ½)

Kirk Geno (geologist- 1/3)

Tracy clark (system Administrator-1/3) Chigozie Nwokeafor (geotech-1/3)

# Tasks (1st and 2nd Quarters)

- Propose UMC's well locations for all 1998 budgeted exploration wells
- Recommend strong prospects in the western side of Block B to Mobil's management for 1998 drilling (Belliro, Azurita Canyon and QII prospects.)
- Map updip trap for the basal Massive Qua Iboe sand- Turquesa and QIT sands
- Provide technical expertise in AVO and Amplitude analyses technique to Block C & D team
- Map key inter-regional markers ( IQIQ, B/Qua Iboe, T/Isongo, Offlap break-shelf margin ) in the eastern side of Block B and western portion of Block D

, P

Develop and map major deep-seated Isongo toe-thrust trend