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1994-1995

**ENVIRONMENTAL IMPACT ASSESSMENT
TECHNOLOGY TRANSFER TO THE
MALAYSIA OFFSHORE OIL AND GAS SECTOR**

**Malaysia
April 22 to 28, 1994**

Prepared for:

US - ASIA ENVIRONMENTAL PARTNERSHIP



WORLD ENVIRONMENT CENTER

DISCLAIMER

This project was sponsored by the U.S. Agency for International Development (USAID) through the World Environment Center's (WEC) Cooperative Agreement in support of the U.S.-Asia Environmental Partnership (US-AEP). The opinions expressed herein are the professional opinions of the author and do not represent the official position of the Government of the United States of America or the World Environment Center.

TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY	1
II.	INTRODUCTION	2
III.	FINDINGS	3
IV.	CONCLUSION	4

APPENDICES

- A. CURRICULUM VITAE
- B. ITINERARY
- C. PERSONS AND ORGANIZATIONS VISITED
- D. DOCUMENTS RECEIVED

I. EXECUTIVE SUMMARY

An Environmental Business Exchange (EBE) was conducted from April 22 to 28, 1994 bringing the President of Continental Shelf Associates, Inc., Dr. David A. Gettleson to Malaysia. The primary purpose of this trip was to meet with representatives of the Malaysian national oil company (Petroleum National Berhad - PETRONAS) and discuss Malaysian Environmental Impact Assessment (EIA) requirements and current methodologies. EIA methodologies including environmental monitoring techniques currently in use in the United States were also discussed. In order to perform EIA work for the oil and gas sector in Malaysia, a firm must qualify and be listed on the PETRONAS vendor list under the EIA category. The most efficient way to qualify and be listed for EIA was among the topics discussed. It was noted that a firm must also be registered with the Malaysian Department of Environment in order to qualify for EIA work.

A secondary purpose of this trip was to meet with representatives of oil and gas companies that were the foreign partners with PETRONAS on various offshore concession areas for drilling and production and potential Malaysian consultancy partners. Meetings were arranged by the local United States - Asia Environmental Partnership Program (US-AEP) office. Meetings were held with five oil companies and two potential partners with discussion topics ranging from firms currently offering EIA services, to the contractor selection process, and upcoming EIA needs. Discussions with the two potential partners included services offered by the respective firms and the services needed for EIA work. In addition, previous EIA's were reviewed in the Malaysian Department of Environment library and registration forms were obtained.

Based on discussions, it appears that there are opportunities in the long-term for obtaining EIA work related to the offshore oil and gas sector. In order to qualify for bidding on EIA projects, a local partner must be identified to work through in obtaining and performing the work. Follow-up work will involve the identification of a partner and continuing contact with potential clients.

Funding for this project was provided through a Cooperative Agreement between the World Environment Center and the United States-Asia Environmental Partnership (US-AEP).

II. INTRODUCTION

The purpose of the trip was to meet with representatives of PETRONAS, other oil and gas companies, and potential Malaysian partners regarding EIA projects. Dr. David A. Gettleison of Continental Shelf Associates, Inc. was the sole participant. Meetings were held with the following individuals:

Contact	Organization	Date
Ahmad Nordeen Salleh Group Manager Razali Mohd Taib Executive	PETRONAS - Petroleum National Berhad	26 April 1994
Bill Steven Manager, Drilling	Texaco Exploration Myanmar Inc. c/o Texaco Exploration Penyu Inc.	26 April 1994
Zamali Bin Midun Associate	Ranhill Bersekutu Sdn. Bhd.	26 April 1994
Cathy Fuselier Director Grace Wong Deputy Director	United States-Asia Environmental Partnership Program	26 April 1994
Yong Kong Hai Senior Drilling Engineer Tony Williams Manager	WMC Petroleum (Malaysia) Sdn. Bhd.	27 April 1994
James Kulleh	Shell Malaysia	27 April 1994
Library	Malaysian Department of Environment	27 April 1994
Tunku A'Amash Adnan President Faizal Farid Wajidi Senior Vice-President	Applied Physics & Process Technologies Sdn. Bhd.	27 April 1994
Jon Gean Operations Manager Cedric Philp Venture Manager	Mobil Petroleum Malaysia Inc.	28 April 1994
Tom Wong Safety & Environmental Conservation Manager	Esso Production Malaysia Inc. Esso Malaysia Berhad	28 April 1994

III. FINDINGS

Organizations visited are detailed in Section II (Introduction). The environmental issues discussed with PETRONAS included Malaysian EIA requirements and current methodologies. EIA methodologies included environmental monitoring techniques. In order to perform EIA work for the oil and gas sector in Malaysia, a firm must qualify and be listed on the PETRONAS vendor list under the EIA category. The most efficient ways to qualify and be listed were discussed. A firm must also be registered with the Malaysian Department of the Environment.

There are several oil and gas companies that are partners with PETRONAS on offshore oil and gas concession areas. These companies select contractors based on technical and cost proposals that are submitted in response to requests for tenders. These requests are sent to companies on the PETRONAS bidders list. Representatives of five oil and gas companies were present at meetings where discussion topics included firms currently offering EIA services, the contractor selection process, and upcoming EIA needs.

Meetings were also held with two potential partners in regard to services offered and needed for potential EIA work. The issue of Naturally Occurring Radioactive Material (NORM) was also discussed with Applied Physics & Process Technologies. NORM is an environmental topic associated with U.S. oil and gas production on the coast and offshore in the Gulf of Mexico as well as Malaysia.

EIA's were received in the Malaysian Department of Environment library. Copies of registration forms were also obtained. A meeting was also held with US-AEP personnel regarding potential opportunities.

IV. CONCLUSION

Based on discussions, it appears that there are opportunities for Continental Shelf Associates, Inc. over the long-term for obtaining EIA work related to the offshore oil and gas sector. A major finding was that in order to qualify for bidding on EIA projects, a local partner must be identified to work through in obtaining and performing the work. Follow-up activities to this EBE will involve the identification of a potential partner and continuing contact with potential clients.

APPENDIX A
CURRICULUM VITAE

DAVID A. GETTLESON, Ph.D.
President and Scientific Director
Continental Shelf Associates, Inc.

EDUCATION

Doctor of Philosophy in Biological Oceanography, Texas A&M University, 1976.
Bachelor of Arts in Biology, Rollins College, 1971.

CAPABILITIES

Dr. Gettleson has 18 years of scientific management experience with major research programs for Federal, State, and industrial clients. He has managed numerous complex, multidisciplinary oceanographic and coastal studies for the past 20 years and has participated in all of the scientific projects conducted by CSA since 1976.

Dr. Gettleson is an expert on the environmental impacts of drilling discharges and other aspects of offshore oil and gas operations. He has managed over 20 oil and gas monitoring studies in the Gulf of Mexico. He has co-authored five papers on the fate and effects of drilling muds in the marine environment. He has had extensive interaction with Federal and State agencies regarding the design of monitoring programs for offshore oil and gas operations and has been involved in the permitting of over 250 oil and gas lease blocks in the Gulf of Mexico and the U.S. east and west coasts, including Alaska. He has provided expert witness testimony regarding the effects of oil and gas operations on the biota of the Flower Garden Banks in the Gulf of Mexico. He has managed several international (Russia - Sea of Azov; Azerbaijan - Caspian Sea) environmental assessments associated with oil and gas activity.

Dr. Gettleson has written, edited, reviewed, or supervised the preparation of numerous environmental assessment documents, including Environmental Impact Statements, Environmental Impact Reports, Environmental Reports, and Monitoring Reports. The documents have covered a wide range of human activities in the marine environment, including oil and gas operations, dredging and dredged material disposal, beach restoration, artificial reef siting, underwater explosive testing, power plant effluents, sewage outfalls, and waste incineration.

EXPERIENCE

August 1976 to Present: Continental Shelf Associates, Inc. - Scientific Director.
(President - January 1987 to Present; Vice President - August 1976 to December 1986)

■ Program Manager/Program Director for over 20 oil and gas monitoring studies in the Gulf of Mexico. Locations included the Flower Garden Banks, other northern Gulf

hard banks, western Gulf soft bottom areas, eastern Gulf live bottom areas, Louisiana marshes, and coastal waters off Alabama and Mississippi. Supervised monitoring program design, negotiation, and execution, and presentation of results to Federal and State agencies (Various clients, 1976-Present).

■ Program Manager/Program Director for permitting of over 250 oil and gas lease blocks in the Gulf of Mexico and the U.S. east and west coasts, including Alaska (Gulf of Alaska and North Slope). Supervised all aspects of permitting, including preparation of Environmental Impact Reports, Area Environmental Reports, Site-Specific Environmental Reports, Oil Spill Contingency Plans (including computer trajectory modeling), Photodocumentation Survey Reports, and Environmental Monitoring Plans (Various clients, 1976-Present).

■ Program Director for several international environmental studies associated with oil and gas operations. Locations have included the Sea of Azov (Russia) and Caspian Sea (Azerbaijan) (Amoco Eurasia Petroleum Company, 1991-Present).

■ Program Manager/Program Director for environmental evaluations of dredged material offshore disposal sites, U.S. Navy ship-shock testing sites, and artificial reef sites; environmental assessments of beach restoration projects; studies of at-sea waste incineration; estuarine habitat and water quality projects; and environmental sampling programs in lakes, rivers, and streams (Various clients, 1976-Present).

■ Program Director for studies of power plant siting in Taiwan, R.O.C. Seven power plants in Taiwan were studied to determine compliance with environmental regulations. A separate study evaluated the impact on corals due to thermal discharge from a nuclear power plant in south Taiwan (FPL Qualtec, 1988-1989).

■ Program Manager and Co-Chief Scientist for the Southwest Florida Shelf Ecosystems Study. CSA was prime contractor for one year and subcontractor for three years of this six-year, multidisciplinary study (Minerals Management Service, 1980-1987).

■ Program Manager for CSA involving the preparation and negotiation of NPDES 301(h) variance applications for five wastewater outfalls along the southeast coast of Florida (CH2M Hill, 1982-1984).

■ Retained as an expert witness with regard to NPDES permits in the vicinity of the Flower Garden Banks, Gulf of Mexico (Vinson & Elkins and Liskow & Lewis, 1981).

■ Co-Principal Investigator and Co-Chief Scientist for the Gulf Reef Fish Study, which determined the most appropriate sampling devices for remotely assessing reef fishes and which compared fish populations between oil and gas platforms and natural hard bottom areas (Bureau of Land Management, 1980-1981).

■ Program Manager and Chief Scientist for the BLM South Atlantic Hard Bottom Study, which involved geophysical and video mapping of live bottom assemblages in the South Atlantic Bight (Bureau of Land Management, 1978-1979).

■ Chief Scientist on a two-month oceanographic cruise in the Gulf of Alaska and Principal Author of an environmental assessment concerning nine lease blocks on the outer continental shelf in the Gulf of Alaska (Exxon Company, U.S.A., 1976).

1976: Texas A&M University - Post-doctoral Research Associate.

■ Supervised two major research projects dealing with the meiofauna and macrofauna of the south Texas continental shelf which were funded by the BLM (Principal Investigator, W. E. Pequegnat).

1971 - 1976: Texas A&M University - Graduate Student (also employed by TerEco Corporation).

■ Participated in study of five submarine banks on the continental shelf of the northwest Gulf of Mexico (1975). Worked on baseline study of Stetson Bank (northwest Gulf of Mexico) to assess environmental effects of oil and gas drilling (1974).

■ Member of field team that tested a Biotal Ocean Monitor in the Gulf of Mexico (1975). Also member of field team that monitored the burning of chemical wastes by Shell Oil Co. on the incineration ship VULCANUS in the Gulf of Mexico (1974).

■ Participated in water turbidity measurements and the collection of neuston samples at St. Croix, Virgin Islands (1975). Also participated in an environmental assessment of south St. Croix for a supertanker SALM (1973).

■ Analyzed benthic samples from the northern Gulf of Mexico shelf and slope (1972).

APPENDIX B

ITINERARY

Date	Place Visited
26 April 1994	PETRONAS - Petroleum National Berhad
26 April 1994	Texaco Exploration Myanmar Inc. c/o Texaco Exploration Penyu Inc.
26 April 1994	Ranhill Bersekutu Sdn. Bhd.
26 April 1994	United States-Asia Environmental Partnership Program
27 April 1994	WMC Petroleum (Malaysia) Sdn. Bhd.
27 April 1994	Shell Malaysia
27 April 1994	Malaysian Department of Environment
27 April 1994	Applied Physics & Process Technologies Sdn. Bhd.
28 April 1994	Mobil Petroleum Malaysia Inc.
28 April 1994	Esso Production Malaysia Inc. Esso Malaysia Berhad

APPENDIX C

PERSONS AND ORGANIZATIONS VISITED

Contact	Organization	Date
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Library	Malaysian Department of Environment	27 April 1994
Tunku A'Amash Adnan President Faizal Farid Wajidi Senior Vice-President	Applied Physics & Process Technologies Sdn. Bhd.	27 April 1994
Jon Gean Operations Manager Cedric Philp Venture Manager	Mobil Petroleum Malaysia Inc.	28 April 1994
Tom Wong Safety & Environmental Conservation Manager	Esso Production Malaysia Inc. Esso Malaysia Berhad	28 April 1994

APPENDIX D

DOCUMENTS RECEIVED

The following documents were received:

- **General Guideline on License and Registration Application with PETRONAS**
 - List of Standardized Work Categories
 - List of Standardized Equipment/Material Categories

- **Jabatan Alam Sekitar, Borang Pendaftaran Jururunding EIA - Firma**
(Department of Environment Registration)