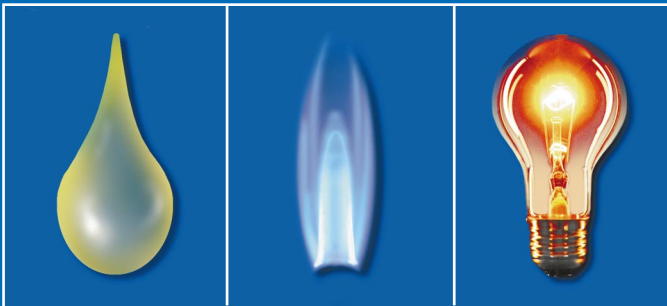


TWELFTH ANNUAL

International Petroleum Management Certificate Program

A Four-Week Management Development Program including a classic IHRDC Business Simulation Workshop



*September 9–October 4, 2002
Boston, Massachusetts USA*

Program Objectives and Format

The objectives of this program are to provide managers in the worldwide petroleum industry with an overview of the key business aspects of the upstream and downstream petroleum business; to explore the important functional management issues facing managers today, including technical, environmental, legal, financial, marketing and petroleum accounting; and to develop key management skills, including strategic planning, leadership, project management and the negotiation process, required by today's international petroleum industry managers. This four-week program can be taken consecutively in one year or individually over a period of a few years. Over the past eight years participants have consistently called this program "the BEST management program in the petroleum industry today!"

Who Should Attend

This program is intended for managers in the many functional areas of the international petroleum and natural gas industry, such as exploration, production, refinery and petrochemical operations, marketing, law, human resources, accounting or finance. Participants will expand their knowledge of the business aspects of the international petroleum industry, broaden their management skills and be given an opportunity to share experiences with others from similar backgrounds. Delegates from over 40 countries have attended this excellent, internationally focused program.

Instructional Format

The instructional format consists of a combination of lectures by highly respected specialists and team participation in a classic IHRDC business workshop. The workshop, which typically takes almost one half of the instruction time, has been highly rated by past participants for its effectiveness in internalizing the learning, generating discussion among team participants, and creating long-lasting friendships and contacts around the world. This combination of excellent lecturers and interactive workshop sessions has proven to be an ideal way to expose the participants to the practical needs of today's international energy managers.

Awarding of Certificate

A Certificate in Petroleum Management is issued to individuals who successfully complete all four units of this program.

Program Location and Accommodations

The program will be held at the John Hancock Conference Center in the attractive Back Bay section of Boston. Known as America's Walking City, Boston is also the historical, educational, and cultural center of the United States. For your convenience, IHRDC has reserved guest rooms for program attendees at several area hotels. Enrollees needing assistance with accommodations should contact IHRDC for bookings. Rooms are limited—early reservations are encouraged.

PROGRAM CONTENT

UNIT ONE

September 9–13, 2002

The Complex World of the International Petroleum Business: Upstream Sectors, Project Economics, and Petroleum Accounting

Exploration Agreements

Typical Host Country Exploration Agreements: Summary of the History and Key Provisions of Host Country Exploration Agreements including Bonus Payments, Royalties, License Fees; Production Sharing Arrangements; Participation Arrangements.

Petroleum Exploration

The Exploration Process: Petroleum Geology, Exploration Geophysics, Well Logging, Developing Exploration Prospects, Preparing and Interpreting Geological Maps; Case Studies.

Drilling, Field Development & Reservoir Management

Drilling of Exploration and Development Wells; Formation Evaluation; Well Completions; Estimating Reserves; Field Development: Inflow Performance; Surface Facilities Design; Reservoir Management; Enhanced Recovery.

Gas Processing and Marketing of LPG's

Properties of Gas and Gas Liquids; Processing of Associated Gas; Markets for LPG's; Natural Gas Pipeline Standards; Natural Gas Plants Economics.

Crude Oil and Natural Gas Pipeline Systems

Introduction to Crude Oil Pipelines; Major Considerations in the Design, Construction and Operation of Pipeline Systems; Estimating Project Costs; Pipeline Load Factors; Typical Pipeline Tariff; Examples of Recent Pipeline Construction Costs; New Pipeline Developments.

Measuring Financial Performance

Capital vs. Operating Cost; Depreciation and Depletion; Income Statement; Balance Sheet; Cash Flow Analysis; Taxation and Tax Codes; Preparing Corporate Financials; The Audit; Reading Published Financial Statements; Evaluations and Company Corporate Performance.

Petroleum Industry Accounting & Taxation

Successful Efforts vs. Full-Cost Accounting; Corporate Taxation; Petroleum Taxation; Accounting for Host Government and Joint Venture Agreements; Review of Oil Industry Financial Reports and Performance Indicators Including Supplemental Reserve Estimates.

Energy Project Economics

Economic Yardsticks; Project Cash Flow Before and After Tax; Tax Expenses and Benefits; Net Cash Flow Stream and Payout; Time Value of Money; Opportunity Cost and Present Value of Net Cash Flow; Discounted Cash Flow Analysis and Internal Rate of Return; Risk Assessment and Sensitivity Analysis; Examples of the Economic Analysis of Energy Projects.

UNIT TWO

September 18–20, 2002

The Complex World of the International Petroleum Business: Downstream Sectors and Petroleum Economics

Worldwide Petroleum and Natural Gas Economics

Worldwide Energy Supply; Demand; Reserves; Pricing; Corporate Strategy; Recent History and Prediction of Future Trends.

Markets for Associated Natural Gas

The Natural Gas Chain: Industry Structure and Regional Markets, Interfuel Competition; Gas Distribution; Regulation and Deregulation; Economics and Markets for Gas Including Combined-Cycle Power Plants, LNG, Ammonia and Methanol.

Crude Oil Tanker Transportation

The Tanker Industry: An Overview of the Main Characteristics; Capital and Operating Costs; Pollution at Sea and the New Regulations; Calculating Tanker Transportation Rates; World Scale and Charter Arrangements.

Refining and Petrochemicals

Refinery Capacity Evolution; Technology Changes in Refining Units; Refining Capital and Operating Costs; Profitability of Refining; Net-Back Estimation; Some Recent Trends. Petrochemicals in Perspective; Links to Refining; Key Product Families; Industry Drivers: Cost of Production, Supply /Demand; Profitability and Price Forecasting; Prospects for the Future: Maturity, Environmental Concerns, Global Competition.

Marketing of Crude Oil and Products

Development of the Free Market for Oil; Current International Market Structure; Regional Markets: Physicals, Futures, Forwards, Derivatives, Options; Roles of Participants, Price Formation, Price Volatility; Price Reporting, Crude Oil and Product Pricing; Negotiating and Pricing Petroleum Sales Contracts; Introduction to Hedging and Price Risk Management.

Distribution and Retail Marketing of Petroleum Products

Distribution and Retail Marketing of Petroleum Products.

UNIT THREE

September 23–27, 2002

Petroleum Project Development: Environment, Law, Financing and Project Management

Overview of Project Management

Applied Project Management; Project Definition: Developing a Project Execution Plan; Setting up a Project Organization; Resource Scheduling, Cost Estimating; Controlling Project Execution; Project Controls: Planning and Scheduling; Cost Engineering; Detailed Engineering; Procurement; Subcontract Administration and Control: Construction Management, Construction Progress, Productivity, and Supervision; Project Accounting and Auditing.

Application of Project Planning and Management to Energy Projects

Steps in the Development of a Petroleum Project: Screening Studies, Feasibility Studies; Detailed Engineering, Environmental Studies; Financing Construction and Operation. Project Management Examples of Energy Projects: the Integrated Field Development Decision and the Integrated Planning and Development of an International Combined-Cycle Power Plant.

Financing of Energy Projects

Financing Petroleum Projects; Sources of Debt and Equity; Preparing the Financing Proposal; Negotiating Financing; Reaching the Decision to Proceed; Project Financing: Structuring, Role of Multilateral and Bilateral Agencies; Project Financing Case Studies: Project Financing of International Oil, Gas and Power Projects; Case Studies.

Health, Safety and Environmental (HSE) Challenges in Petroleum Operations

Worldwide Developments in HSE Performance, Management and Regulations; Key Technical, Managerial and Societal Issues and Responses; Sustainable Development, Eco-efficiency, Social Impact; Factors that Affect Cost; Integration of HSE in the Business; Risk Acceptance/Tolerance, Due Diligence, Accountability, Liability; Integrated Health, Safety and Environmental Management Systems, International Standards, ISO 14001 Certification, EMAS Verification, Audit, Reporting and Assurance to Stakeholders.

Petroleum Law

Legal Issues in Petroleum Management; Transnational and International Oil and Gas Law; The Role of Law in Commercial Relations: Role of the Legal System; Role of the Attorney; Commercial Relationships; Governmental Relationships; Oil and Gas Contracts and Agreements; Crude Oil Sales and Transportation; Risk Management and Dispute Resolution, Arbitration; Litigation; Case Analysis and Discussion; Taxation.

UNIT FOUR

September 30 – October 4, 2002

Key Skills for the Petroleum Manager

Strategic Management, Planning and Implementation

Strategic Management and Business Policy; Scanning the Environment; Strategy Formulation; Strategy Implementation and Control; Fundamental Changes and Resulting Transformations in the Energy Industry: The Underlying Drivers; Practical Approaches for Change; The New Performance Measures; Implementing the Balanced Scorecard.

Leadership Skills Needed for High Performance Organizations

Effective Leadership and Management: Motivation; Managerial Styles; Organizational Climate; Goal Setting and Action Planning; Leading Change Methodology; Simulation, Presentation, Discussion, Case Studies, Small Group Work, and Assessment.

Case Study: Transforming the US Marketing and Refining Division of a Major Oil Company

How a Major Oil Company, Between 1992–96, Went From Last to First in Net Margin Per Gallon in the Marketing and Refining of Gasoline in the US. How Strategic Planning, Leadership Skills and the Use of the "Balanced Scorecard" Were Fundamental To This Success.

Negotiating Skills Workshop: Getting to Yes

The Essentials of Positive Negotiation: The Process of Positive Negotiation Developed at the Harvard Negotiation Workshop: Key Objectives; Interests; Options; Standards; People; Alternatives (BATNA); Closure; Case Studies.

Manpower Planning, Virtual Learning and the Continuous Learning Organization

The Role of Manpower Planning and Development in the Performance of the Organization; Strategic Analysis; Defining Job Specific Development Plans; Advantages of a Learning Organization in Achieving Competitive Success; Creating a Learning Organization; The Five Disciplines of Organizational Learning; Delivery Systems That Support Organizational Learning; Case Examples of Learning Organizations.

Crisis Management: Responding to the Media

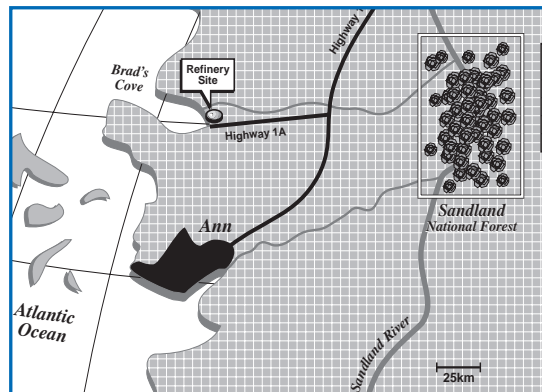
Introduction/Types of Crises; Why Crisis Communication is Critical Today; What is Effective Crisis Communication; How the Media Looks at a Crisis; Preparation and Anticipation; Methodology; LID (Limited Information Dissemination) Strategy; Planning; Benefits of Good Crisis Communication; Follow-up to a Crisis.

Applications of the Internet in the Petroleum Industry

Developments in IT Technology; Storage; Transmissions; PC's. Learning and Knowledge Systems e-commerce and portal applications.

WORKSHOP

It is well known that adults learn best when discussing issues or solving problems that are directly related to their daily job. The business workshop for this program was developed by IHRDC to allow participants from diverse functional and cultural backgrounds to learn about the business of the petroleum industry in the most effective, long-lasting and realistic way. It introduces the participant to the integrated petroleum industry from exploration to refining and transportation; from investment analysis and financing to income statements, balance



sheets and cash flow; and from strategic planning and leadership to environmental analysis and continuous learning. The setting for the workshop is the **Republic of Sandland**, a fictitious country on the West Coast of Africa. The business game occurs during the first two weeks of the program, but additional, stimulating workshop sessions continue over the final two weeks. For this reason, participants are encouraged to enroll for the full program. This workshop always stimulates and challenges the participants, because it is designed around the highest form of learning: that which occurs when practical, realistic problems are solved through team discussion and shared insight. *Workshop Sessions include:*

UNIT ONE

September 9–13, 2002

The Complex World of the International Petroleum Business: Upstream Sectors, Project Economics, and Petroleum Accounting

- Workshop Introduction
- Negotiating the Right to Explore in Sandland
- The Exploration Survey Stage
- Exploration and Delineation Drilling
- Reserves Estimation and Field Development
- Gas Processing
- Oil and Gas Pipelines and Port Facilities
- Sandland Operations Accounting

UNIT TWO

September 16–20, 2002

The Complex World of the International Petroleum Business: Downstream Sectors and Petroleum Economics

- Combined-Cycle Power Plants
- Oil Tanker Charter Decisions
- Refinery Development Decisions
- Financing the Port Expansion
- Ammonia Plants
- Gas Export Pipeline Decisions
- Crude Oil Marketing Decisions
- Strategic Planning and Decision Analysis

UNIT THREE

September 23–27, 2002

Petroleum Project Development: Environment, Law, Financing and Project Management

- Petroleum Law Issues and Decisions
- Financing an Expanded Oil Loading Terminal
- Managing Environmental Issues
- Project Management of a Merchant Power Plant

UNIT FOUR

September 30– October 4, 2002

Key Skills for the Petroleum Manager

- Strategic Planning and Corporate Transformation of the National Oil Company
- Building a Continuous Learning Organization
- Negotiating the Extension of a Host Government Agreement

INSTRUCTORS

PROGRAM DIRECTOR

Dr. David A. T. Donohue is the Founder and President of both IHRDC and Arlington Storage Corporation. Dr. Donohue is a technical specialist, businessman, attorney and lecturer who has worked in the development of energy projects where he has a senior equity position. He is a former Associate Professor of Petroleum & Natural Gas Engineering at Pennsylvania State University, and held various positions in engineering and research for Exxon before becoming a developer of energy organizations. He is an active developer of underground gas storage fields in New York State, an explorer for oil and gas in the US and Ireland, and a developer of innovative learning systems for the energy industry. He lectures broadly in the industry management programs. Dr. Donohue holds a Ph.D. degree in Petroleum and Natural Gas Engineering from Pennsylvania State University and a J.D. degree from Boston College Law School.

Owen L. Anderson is the Eugene Kuntz Professor in Oil, Gas & Natural Resources at the University of Oklahoma College of Law and a consultant on energy law and transactions. He has lectured on petroleum law in several countries, including Norway, China, and Canada. Professor Anderson is the co-author of several books including *International Petroleum Transactions, Cases and Materials on Oil and Gas Law*, and a multi-volume legal treatise, *the Law of Oil and Gas*, as well as the author of numerous articles on oil and gas law. Professor Anderson is a member of the Association of International Petroleum Negotiators and a Trustee of both the Rocky Mountain Mineral Law Foundation and the Energy and Mineral Law Foundation. He has B.A. and J.D. degrees from The University of North Dakota.

Meg Annesley, former President of Tricentral Oil Trading in London and Houston, has more recently acted as an independent trading advisor and consultant. During this period, she has concentrated on the international oil trading markets for crude oil and petroleum products, hedging and risk management strategies, and trading in domestic markets. Previous experience includes eight years with BP involved in international supply and trading. Ms. Annesley is a Fellow of the Institute of Petroleum, former Director of the International Petroleum Exchange of London, and Secretary of the Association of U.K. Oil Independents.

Bruce F. Burke is the leader of Chem Systems, Inc.'s Energy and Refining Practice, where he directs energy-related consulting assignments in North and South America, as well as in Asia. He specializes in petroleum refinery planning and strategic analysis, refining/petrochemical interface optimization, project feasibility and financing, and market and profitability forecasting. Mr. Burke received a B.S.Ch.E. Degree from the University of Pennsylvania.

Timothy D. A. Donohue is Director of Media Production at IHRDC. He has been responsible for all of the significant advances that IHRDC has made in both the system and content of its knowledge and learning systems: from the first publication of IPIMS in CD-ROM format to the delivery today of IPIMS and the Virtual Learning System over Internet/Intranet. Building the production team and meeting difficult production deadlines have been a continuous challenge for Tim which he has managed by developing a strong team and maintaining a Silicon Valley schedule. Tim is also responsible for IT systems and functions for all IHRDC offices. He holds a B.S. degree in Geology from Colorado College and a M.S. degree in GeoSciences from Pennsylvania State University. Prior to joining IHRDC he worked as an Environmental Specialist with Camp, Dresser & McKee in Boston with a specialty in hydrogeology.

Dr. Marie N. Fagan is Director, International Gas Programs for IHRDC. Prior to joining IHRDC in 2001, she was with Cambridge Energy Research Associates (CERA), providing expertise in upstream technology, economics, and financial performance; and assisting clients in developing corporate strategy and upstream business plans. Previously, she served as an economist with the US Department of Energy, responsible for coverage of petroleum company profitability, industry structure, and analysis of market incentives; and with Decision Analysis

Corporation of Virginia, where she performed econometric modeling of energy markets. She received an MA and PhD in Economics from The American University and a BS in Business Administration (Magna Cum Laude) from the University of Connecticut.

Maher Habbal is a Financial Analyst at IHRDC. He is responsible for internal financial reporting, analysis and forecasting. Before joining IHRDC, he was a Teaching Assistant at Arthur D. Little School of Management in the Masters of Science in Management Program. Mr. Habbal also spent three years as a Senior Accountant/Financial Analyst with Arthur D. Little, Inc. where he redesigned the financial reporting systems. He has special expertise in building computer models, including four business simulators for IHRDC, one each for the oil and gas industries, and two for the power industry. Mr. Habbal holds a Master of Science Degree in Management from Arthur D. Little School of Management and a Bachelor's Degree in Business Economics from the Lebanese American University.

Lynn Kettleison is Vice President of Clarke & Company and has directed hundreds of crisis communication management programs and public affairs strategies for its many clients. He has special expertise in corporate and financial crises. Prior to joining Clarke & Co., Mr. Kettleison spent 15 years in the newspaper business with the last five years as a business and financial editor at The Boston Herald. He is currently an adjunct professor at Boston University School of Communication and has been a guest lecturer at Harvard Business School, the Boston College Graduate School of Business and Emerson College. He is a graduate of Iowa State University.

Richard A. Norman is the Founder and President of Essex Hydro Associates, L.L.C., a developer and operator of small-scale hydroelectric projects regulated by the U.S. Federal Energy Regulatory Commission. Mr. Norman has held energy project management positions at the Cabot Corporation, J. Makowski Associates, Inc., and Oxford Energy, Inc. He graduated from the U.S. Naval Academy and received an M.B.A. degree from Harvard University.

Robert F. Ryan, the former Chief Executive Officer of McBer and Company in Boston, is a management consultant who works with corporations to increase individual and group effectiveness and performance. The primary focus of his work is improving leadership through coaching, assessment and selection, and the design and implementation of leadership development systems. Mr. Ryan's clients include Mobil Oil Corporation, General Electric, Rohm and Haas and Texas Instruments, both domestically and internationally. He received both his B.S. and M.S. degrees from Boston College.

Rob Taylor is a Manager of Business Development. He joined IHRDC in 1999 to coordinate worldwide sales and be responsible for business development in Asia. He has spent his full professional career in international sales and business development for petroleum related service companies. He first assignment was with Otis Engineering in the United States and then he held positions of increasing responsibilities in Indonesia, Dubai, Norway, and Kuwait. Because of the merger of Otis with Halliburton, he completed his career as Manager of Business Development, Eastern Hemisphere for Halliburton. He received the BS degree in Mechanical Engineering from the University of Kentucky.

Dr. Ir. J. P. Visser formerly the Manager of Health, Safety and the Environment for Shell International E&P, in The Hague, and Chairman of the Shell Group HSE Committee, is currently consulting on HSE management. He was with Shell for 27 years where he played a major role in the development Health, Safety and Environment (HSE) Management Systems. His involvement with the Society of Petroleum Engineers (SPE) included chairing program committees of several conferences on HSE. Currently he advises companies and governments on HSE and sustainable development, is member of the Netherlands Transportation Safety Board and of the Health Council, and is involved in a number of academic programs. He received a Master of Engineering degree from Technical University Delft, and a Ph.D. degree in Chemistry from the University of Pittsburgh.

ENROLLMENT FORM

Social Activities and Administrative Assistance

An IHRDC Program Coordinator assists participants with non-program needs including shopping, travel arrangements and individual administrative concerns. Participant social events are organized in the evenings and excursions by bus to regional sites of interest are scheduled each weekend to such places as Cape Cod, the White Mountains and Maine.

1. Registration Fees

US\$3,400 Per Week or US\$12,000 for Full Program

This fee includes instruction, instructional materials, receptions, continental breakfast and lunch during the session days, weekend bus trips and miscellaneous conference expenses.

Please enroll me in: **International Petroleum Management Certificate Program**

- Full Program: September 9–October 4, 2002**
- Unit One:** September 9–13, 2002 **Unit Two:** September 16–20, 2002
- Unit Three:** September 23–27, 2002 **Unit Four:** September 30 – October 4, 2002

In addition, please send me more information on the following 2002 program(s):

- International Petroleum Business Management Program** April 22–May 3
- Petroleum Industry Site Visit** May 6–10
- Upstream Oil and Gas Asset Management** May 13–24
- International Gas Business Management Certificate Program** June 3–14 and Sep 30 – Oct 11
- Outlook for Oil, Gas and Power: An IHRDC Executive Forum** June 17–21
- Oil and Gas Industry Site Visits** Petroleum Industry: May 6–10 Gas Industry: October 14–18

2. Enrollment Information: *(Please print clearly.)*

Name _____

Title _____

Company _____

Address _____

Tel: _____ Fax: _____

E-mail: _____

3. Payment Method:

Fee Enclosed Please Invoice (Send to the attention of:) _____

Mastercard Visa American Express Discover

Card Number _____

Expiration Date _____ Signature of Cardholder _____

Payment/Substitutions/Cancellations

The fee is due and payable to IHRDC before the first day of the program. If an enrollee is unable to attend the course, the enrollee or the company may appoint a substitute at any time without penalty. One half of the registration fee must be paid by those registrants who commit to attend the program and then cancel less than 30 days before the first session.

4. Please FAX or Mail this form to:

IHRDC Management Programs, 535 Boylston Street, Boston, MA 02116 USA
Tel: (617) 536-0202 • Fax: (617) 536-4396 • E-mail: mgmt.programs@ihrdc.com
Web Site: www.ihrdc.com