# intelligent energy 2006

Oil & Gas Production in a Digital Age

11-13 April 2006 PTA, Amsterdam

A groundbreaking conference and exhibition for innovative solutions to optimise exploration and production efficiency

## preliminary technical programme

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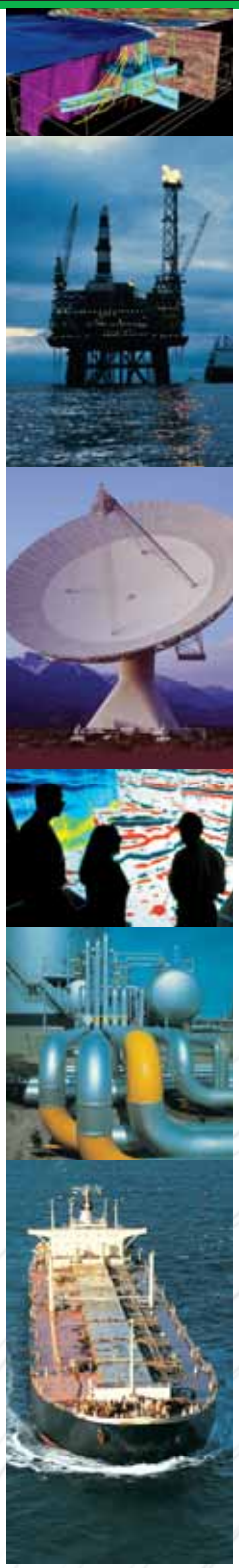
# Contents





# Welcome by John Darley, Executive Committee Chairman

On behalf of the Executive Committee, I have great pleasure in welcoming you to the Intelligent Energy Conference of April 2006.

This inaugural SPE Conference on the theme of Intelligent Energy – "Oil and Gas Production in a Digital Age" - aims to address innovative opportunities to radically improve the approach to the management of hydrocarbon resources in the 21st Century.

The increasing demand for hydrocarbons to satisfy global economic growth is projected to continue for many years to come. Our challenge is to increase the economic recovery from existing fields and basins, while developing new resources of hydrocarbons often in frontier areas. The application of innovative technologies and new work processes, made possible by leading edge IT capability, can increase the value and extend field life in both existing and new oil and gas assets.

The emergence of these technologies, work processes and IT systems has evolved rapidly over the recent years and it is timely to bring together the leading industry players with representatives of governments, academia and the financial community to build on the early work and position the industry to capture the additional value. The conference committee has structured the agenda to explore and build from current capabilities, to sketch the future opportunities and address the steps needed to move forward.

Many individual companies and organisations, whether in the service sector, national oil companies, integrated oil companies and academic institutes have developed capabilities in the area of Intelligent Energy. The conference provides the opportunity to bring together these ideas, learn from one another and take forward the experiences to a new level. The digital approach to oil and gas production requires that we develop new skills, learn from other industry applications, build an appreciation of the power of IT to change the way we work and capture the value from speedy implementation of new ideas. Companies and individuals represented at the conference cover the wide range of backgrounds and expertise needed to achieve this.

As an industry, we face the challenge to satisfy the growing global demand for hydrocarbons, while responding to the needs to address environmental concerns. Innovative technologies will be needed to meet these goals. This Intelligent Energy Conference brings together the leading players with the intent to move forward the Digital Technology capability.

I look forward to meeting you at this exciting and ground-breaking event.

John Darley

Director E&P Technology, Shell International E&P

# Welcome by Pieter Kapteijn, Programme Committee Chairman

On behalf of the Programme Committee, I am pleased to welcome you all to the Intelligent Energy Conference. The conference addresses a theme that should be of great interest to all people that work in the oil and gas industry or are considering joining it: how will the industry operate in the future?

Increasing demands for fossil fuels and a depleting resource base present our industry with major challenges. We not only have to produce and extract more from existing and new fields: we must also reduce the environmental impact of the production and use of oil and gas. To do that, the energy systems we design, build and operate must be optimized, at every level and all the time. Technological innovation and IT may provide part of the solution but have to be complemented with novel skills and redesigned work-processes. This in turn requires increased levels of integration and cooperation between disciplines and across organizational boundaries. We don't seem to get there just by extrapolating our current operating models. What initially looks to be a technical challenge now appears to require a more fundamental rethink of the way we manage and approach our business. Is our industry in need of a new paradigm? Could Intelligent Energy be it?

The programme committee hopes that the papers, panel sessions and discussions at this conference will help you answer that question. A large number of quality papers and posters have been submitted that covered many if not all the elements of 'intelligent design and operation'. We have tried to put together a programme that balances the technical, organizational and cultural elements of 'Energy Intelligence'. Special sessions have been included to convey to young professionals the appeal and excitement of working in an intelligent oil and gas industry. The conference will show not only what has already been achieved but, more importantly, what could be done if the industry further develops and implements these concepts.

Our industry was never a dull place to work, but the most exciting period may be just ahead of us! We look forward to sharing and discussing these and many other ideas with you at the conference.

Pieter Kapteijn

Smart Fields Programme Manager, Shell International E&P

# Executive Committee

**John Darley (Chairman)**
Shell International E&P

**Khaled A. Al-Buraik,**
Saudi Aramco

**Bill Bartling,**
Consultant

**Peter Bernard,**
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**Peter Breunig,**
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**Eric Deliac,**
Petris Technology (SAS)

**Christine Economides,**
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**Peter Goode,**
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**Mark Lochmann,**
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**Rolf Wiborg,**
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# Programme Committee

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Shell International E&P

**David Archer,**
POSC – Energy eStandards

**Roald Brouwer,**
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**Tony Edwards,**
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**Helen O'Connor,**
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**Ricardo Portella,**
Petrobras

**Helen Ratcliffe,**
SAIC (UK) Limited

**Ihab Toma,**
Schlumberger

**Cor van Kruijsdijk,**
Delft University of Technology

# Schedule of Events

(All functions are scheduled at the Passenger Terminal Amsterdam)

## Tuesday 11 April

| | | |
|---|---|---|
| 0830-1800 hours | Registration | Registration Area |
| 0830-1930 hours | Exhibition | Exhibition Area |
| 0830-0930 hours | Coffee | Exhibition Area |
| 0930-1030 hours | **Scene Setter Session** | Oceandiva Boat |
| 1030-1100 hours | Coffee break | Exhibition Area |
| 1100-1230 hours | **Plenary Session 1** | Oceandiva Boat |
| 1230-1330 hours | Lunch | Restaurant |
| 1400-1730 hours | **Technical Session 1** | Waterkant Room |
| 1400-1730 hours | **Technical Session 2** | Amsterdam Room |
| 1400-1730 hours | **Technical Session 3** | Volendam Room |
| 1530-1600 hours | Coffee break | Exhibition Area |
| 1730-1800 hours | **Speech by Dutch Minister of Economic Affairs** | Oceandiva Boat |
| 1800-1930 hours | Drinks Reception | Exhibition Area |

## Wednesday 12 April

| | | |
|---|---|---|
| 0830-1800 hours | Registration | Registration Area |
| 0830-1800 hours | Exhibition | Exhibition Area |
| 0830-1030 hours | **Technical Session 4** | Waterkant Room |
| 0830-1030 hours | **Technical Session 5** | Amsterdam Room |
| 0830-1030 hours | **Technical Session 6** | Volendam Room |
| 1030-1100 hours | Coffee break | Exhibition Area |
| 1100-1245 hours | **Plenary Session 2** | Oceandiva Boat |
| 1245-1400 hours | Lunch | Restaurant |
| 1400-1730 hours | **Technical Session 7** | Waterkant Room |
| 1400-1730 hours | **Technical Session 8** | Amsterdam Room |
| 1400-1730 hours | **Technical Session 9** | Volendam Room |
| 1530-1600 hours | Coffee break | Exhibition Area |

## Thursday 13 April

| | | |
|---|---|---|
| 0830-1800 hours | Registration | Registration Area |
| 0830-1800 hours | Exhibition | Exhibition Area |
| 0830-1030 hours | **Technical Session 10** | Waterkant Room |
| 0830-1030 hours | **Technical Session 11** | Amsterdam Room |
| 0830-1030 hours | **Technical Session 12** | Volendam Room |
| 1100-1245 hours | **Plenary Session 3** | Oceandiva Boat |
| 1245-1400 hours | Lunch | Restaurant |
| 1400-1630 hours | **Technical Session 13** | Waterkant Room |
| 1400-1630 hours | **Technical Session 14** | Amsterdam Room |
| 1400-1630 hours | **Technical Session 15** | Volendam Room |
| 1500-1530 hours | Coffee break | Exhibition Area |
| 1630-1730 hours | **Wrap-Up Session** | Oceandiva Boat |

**NOTE: Poster presentations will be displayed for the duration of the event on the 2nd floor Promenade Deck of the Passenger Terminal.**

# Plenary Sessions

## Plenary Session 1

**11.00 – 12.30 hours** **Oceandiva Boat**

**Plenary Session 1:** **Oil and Gas Production in a Digital Age**

**Session Moderator:** **John Darley, Shell International E&P**

The plenary session on the opening day of the Conference will bring together key players in the E&P Industry. Leading representatives of the Major Resource Holders, the Finance Community, the Technology Providers, Energy Policy Institutes and Government will discuss the challenges that the industry faces and the options that Digital Oil Field concepts offer to meet these challenges and continue to serve the world community. The objective of the panel discussion is to give the audience different perspectives on how the application of innovative technology and new work processes combined with IT can increase the value and extend the productive life of existing and new hydro-carbon assets. The panel aims to provide a historical perspective and show what is already being done and achieved today. It will also explore what more could be done and how all the energy stakeholders can help to accelerate the opportunity for a 'paradigm shift' in the EP Industry.

John Darley of Shell will moderate the panel. It is expected that a large audience of International Oil Field executives and technology managers from both within and outside of the E&P industry will attend.

### Fahad A. Al-Moosa, Saudi Aramco

Fahad A Al-Moosa is the Vice President of Drilling and Workover since May 2005 overseeing all drilling and workover activities in Saudi Aramco with an anticipated drilling rig level approaching 120 rigs by the end of2006. He began his career with Saudi Aramco in November 1979, as a Petroleum Engineer in Production Engineering, progressing to VP Oil Operations in 2002, VP Employee Relations and Training in 2003, and VP of Petroleum Engineering in 2004 before his current position.

Mr Al-Moosa currently serves as the Chairman of Saudi Aramco Lubricating Oil Refining Company (Luberef), a joint venture of Saudi Aramco and ExxonMobil, which produces base oil in Jeddah and Yanbu. He also serves as a board member of the Arabian Geophysical & Surveying Company (ARGAS).

### Karim Rashid, Morgan Stanley

Karim Rashid is a Managing Director in Morgan Stanley's Global Energy Group, where he is responsible for the oilfield service sector. He has been with Morgan Stanley since 1998 and recently relocated to New York from London . He holds a BS in Economics from the Wharton School and an MBA from New York University.

### Bill Severns, The Energy Consulting Group

Bill Severns is the founder and managing director of The Energy Consulting Group (ECG). He provides clients with strategic insight on technology trends in the oil and gas business, helping them maximize the value of their development and commercialization investments. To that end, he has extensively researched the economic and strategic value of applying technology to the oil patch, as well as the associated best business and engineering practices. Prior to ECG Bill was a Senior Research Director for Oil and Gas Strategy at CERA where he was responsible for their oil and gas technology efforts, and initiated and oversaw the digital oil field initiative. He was also an engineering manager at ARCO, where he led new field development projects and technology initiatives in a variety of upstream settings in the US, Indonesia and the North Sea.

### Petter Stigset, Siemens AG

Petter Stigset is Senior Vice President for Siemens AG. In his position, he is responsible for the international Oil and Gas business for Siemens Industrial Solutions and Services. Mr Stigset holds a PhD in Chemical Engineering from University of Manchester Institute of Science and Technology and has been with Siemens for one year. Prior to his career with Siemens, Mr Stigset was responsible for the Upstream division of ABB Lummus Global in Houston and for the Floating Production Systems Division of ABB Offshore Systems in Norway. He has previously worked as Project Director and Process Engineer for AkerKvaerner, Saga Petrochemicals and Norsk Hydro.

# Plenary Sessions

## Plenary Session 2

**11.00 – 12.45 hours** **Oceandiva Boat**

**Plenary Session 2:** **Stop Procrastinating – Start Acting!**
**Session Moderators:** **Eric Deliac, Petris Technology**
**Peter Goode, Vetco International**

This plenary session aims to candidly examine what progress has been made in implementing the Digital Oilfield. It will examine how the petroleum industry compares to those in other sectors, and also try to cast a new light on the issues related to technology adoption, with a special emphasis on human factors, on the application of intelligence to our industry, and on the risk-reward situation for the different players, with frequent references to the smart field example.

### Léon Beugelsdijk, Shell International E&P

Léon Beugelsdijk has an MSc in Mining Engineering from Delft University of Technology. After his study, he joined BHP-Billiton as a mining engineer in Chile. He returned to Delft University of Technology to perform doctoral research on hydraulic fracture propagation in fractured reservoirs, followed by a three-year employment with Wintershall as a petrophysicist, where he was responsible for evaluations of their North Sea assets. In 2006, Beugelsdijk joined Shell Exploration and Production as a petrophysicist evaluating global assets and opportunities. Beugelsdijk served on the programme committee of the SPE European Formation Damage Conference in 2001 and 2005, and was a board member of the SPE ATW Young O&G Professionals in 2003. For the SPWLA, he served on the Dutch Petrophysical Society board from 1998 to 2000.

### Armand Carlier, Consultant

Armand Carlier graduated as a Mining Engineer (Ecole Polytechnique and Ecole des Mines de Paris), and worked as a Civil servant in the French Ministry of Industry (1974-1981). He worked on different assignments in the Schlumberger Group from 1982 to 1994: Schlumberger industries (metering) then Schlumberger Wireline and Testing Oilfield Services (V.P Africa-Mediterranean). From 1995 till 2002 he was CEO of Matra-Marconi-Space, then EADS-ASTRIUM, a joint venture between Lagardère and GEC, then between Aerospatiale-Matra, BAe and Daimler-Chrysler Aerospace: European leader of satellites and space launchers prime contractors. He was CEO of Matra-Automobile, car manufacturer ("Espace" cars) from 2002 till 2004. Armand Carlier is now an independent industrial expert in transition management and advisor to private equity investors for M & As projects.

### David Craig, McKinsey

David Craig is a partner at McKinsey's BTO (Business Technology Office) in London office and leads the global IT strategy practice. He has worked in IT for 15 years, across many industries including Telecoms, Industrials, Healthcare, Banks and Oil and Gas companies both as a consultant at McKinsey and a project manager. Whilst David now focuses most of his time advising major retail, corporate and investment banks, his role in IT strategy also means he sees the successes and challenges that other industries have to overcome in using IT to create sustainable competitive advantage

### Bruce Jette, Synovision

Details not available at time of print.

### Manoelle Lepoutre, Total

Manoelle Lepoutre graduated from the Ecole National Supérieur de Géologie de Nancy and from Ecole Nationale Supérieure des Pétroles et des Moteurs in 1981. She started in research in the Elf Group, in Basin modelling (petroleum evaluation).

Manoelle then had several positions in Exploration, as an operational geologist in France, then getting progressively larger responsibilities, as Area Exploration Manager in Netherlands. She was Vice President Exploration in Norway for Elf, then Vice President Geosciences in US for Total. Since January 2004 Manoelle has been VP Research and Development in the Upstream Branch of Total.

### Mike Utsler, BP

Mike graduated from the University of Oklahoma with a BS in Petroleum Engineering in 1978. In 1997 he also received a Management MBA from the University of Indiana.
He started his career with Amoco and then BP in a series of drilling, completions, production, facilities and reservoir engineering roles in western America from 1978 to 1984.
From late 1984 through to 1989, Mike was the Production Optimization Manager for the joint Amoco-EGPC enterprise (GUPCO) working in Ras Shukheir, Egypt. Between 1989 and 1998 Mike held a series of management roles in the Gulf of Mexico Shelf and Deepwater Operations for Amoco. Following the merger of BP and

# Plenary Sessions

Amoco in 1998, Mike held positions responsible for the Gulf of Mexico Shelf integration and then moved to the UK in 2001 to manage the Southern North Sea and Central North Sea operations for BP.
Mike moved to his current role as Technical Director for BP's North Sea exploration and production operations in June 2005. This role encompasses the responsibilities for managing all of BP's technical functions and activities ongoing in the North Sea, including managing organisational capability, assurance processes, resource and reserves development and operations excellence.

## Plenary Session 3

**11.00 – 12.45 hours** **Oceandiva Boat**

**Plenary Session 3:** **Higher Recoveries From Existing And New Fields!**
**How Do We Engage The "Xbox" Generation To Succeed?**

**Session Moderator:** **Alex Lightman, Charmed Technology**

We continue to face the challenge of finding, developing and maximizing recovery of every oil and gas property in the world. This challenge will be even greater in 20-30 years when we've extracted the majority of the recoverable production of the mammoth fields we rely on today. Children today are able to use computers and internet technology in ways none of our current generation ever thought of using, they posses skills with video games that some geo-scientist and engineers would envy. As an industry we must be prepared to leverage the talent and technology of the "Xbox" generation to help develop the complex, risky, hazardous environments that we will face to deliver the necessary hydrocarbons for the future generations.

### Pat Cook, Halliburton

Pat Cook began his career with Halliburton over 20 years ago as a cement equipment operator in Morgan City Louisiana. His field experience grew over the next 10 years as he worked in various operations roles across the U.S., including his last assignment with the West Coast Marine Stimulation Department. It was not until 1990 that Pat's profession turned to Health, Safety and Environment, at which time he accepted the role as District HSE Supervisor for the West Coast. Since then, he has worked in a variety of HSE related roles ranging from bioremediation projects coordinator to Global Environmental Auditor. Pat serves as the HSE representative on the Halliburton Corporate HSE Executive Committee which is responsible for the development and communication of the Company's HSE Strategy. He reports quarterly to the Board of Directors on the status of HSE in the Business. At the end of 2003, Pat was given a 2nd role to lead the company in its efforts of Sustainable Development. Currently, his title is Global Director of HSE & Sustainable Development for Halliburton Energy Services Group.

### Eric Frost, San Diego State University

Eric Frost is Co-Director of the Viz Center at San Diego State University as well as the Center for Information Technology and Infrastructure. He and his colleagues work to bring data from many different sensors into a visualization, or command center, do data fusion with legacy data sets and provide actionable items for decision makers. He has taught geology at SDSU since 1980 and works in countries such as Kazakhstan, Kyrgyzstan, Indonesia and China, generally with visualization and fiber optics linking geospatial data sets to humanitarian and natural disaster needs, helping enable sustainability and leveraging assets for multiple purposes.

### John Henderson, Boston University

John C. Henderson is the Richard C. Shipley Professor of Management at Boston University. He also serves as the Director of the Boston University Institute for Leading in a Dynamic Economy (BUILDE). He is a noted researcher, consultant and executive educator, and is co-author of The Knowledge Engine. He serves as a member of BP's Digital & Communications Technology Advisory Group and the board of Directors for ICEX. Professor Henderson is currently leading the Technologically Connected Home research project with partners AC Nielsen and the US Department of Defense, which studies how technology can improve the quality of life for soldiers and their families.

### Alex Lightman, Charmed Technology

Alex Lightman is the CEO of Innofone, Inc., the first public company focused on building businesses out of Internet Protocol version 6 (IPv6), the 128-bit upgrade to the current 32-bit, 32-year old IPv4. He graduated from MIT in 1983 with a degree in Civil Engineering and paid his way by working as a roughneck and then a drilling engineer for Mitchell Energy and Development. He has 22 years of high technology management experience and has published 120 articles and the first book on 4G wireless broadband, Brave New Unwired World. He has chaired and organized nine IPv6 events in last 30 months, and was the initiator of the US Congressional hearings that led directly to the mandate for all US federal government agencies to be IPv6 capable by June 2008.

# Plenary Sessions

**En Ramlan Malek, Petronas**

En Ramlan is currently the General Manager of the Petroleum Resource Development Group in the Petroleum Management Unit of PETRONAS. Upon completion of his degree in Chemical Engineering from the United Kingdom, he joined PETRONAS in year 1979. Prior to assuming his current position in January 2004, he has held several positions in PETRONAS. One of them is as General Manager of Sabah Operations for PETRONAS' E & P operating arm, PETRONAS Carigali Sdn Bhd. He was also the General Manager of Technical for PETRONAS' R&D arm, PETRONAS Research & Scientific Services. In his current position, he stewards and focuses on domestic development of oil and gas fields, Improved Oil Recovery and Enhanced Oil Recovery projects implementation, development of upstream gas sales agreements, new field development agreements and post Production Sharing Contract arrangements.

# Programme

**(Changes/additions after 10 January may not be reflected in this programme)**

## Tuesday 11 April 2006

**08.30 – 09.30 hours** **Registration and Coffee**

**09.30 – 10.30 hours** **Oceandiva Boat**

**Scene Setter Session:** **Intelligence in Action**
**Session Moderator:** **Bill Pike, Hart Energy Publishing**

Much progress has been made toward intelligent operations in the upstream industry. However, a good deal of confusion continues to exist with regard to exactly what capabilities we have developed to date and where we are on the intelligent operations development timeline. This session will answer both questions. Attendees will have the opportunity to immerse themselves in the full life cycle of a simulated intelligent well/field by actually participating in decision making and intelligent analysis and implementation. The intelligent simulations will be accompanied by expert explanations of current intelligent operations processes.

**10.30 – 11.00 hours** **Coffee**

**11.00 – 12.30 hours** **Oceandiva Boat**

**Plenary Session 1:** **Oil and Gas Production in a Digital Age**
**Session Moderator:** **John Darley, Shell International E&P**

| | |
|---|---|
| Business Impact | Fahad Al-Moosa, Drilling & Workover VP, Saudi Aramco |
| Topic tbc | Bill Severns, The Energy Consulting Group |
| Financial Perspective | Karim Rashid, Morgan Stanley |
| Topic tbc | Petter Stigset, Siemens AG |

See page 6 for further information.

**14.00 - 17.30 hours** **Waterkant Room**

**Technical Session 1:** **Monitoring and Surveillance**
**Session Chairperson:** **Richard Ella, Halliburton**

For the last few years, the oil industry has been engaged in a dialogue about the digital oil field of the future. What will it look like? Just how advanced will it be? How will it evolve?
As we consider these questions, are we too future focused? Are we overlooking the advantages that existing technology could bring if properly leveraged? Intelligent monitoring and surveillance has the potential to lead the industry from its traditional reactive mode, acting on historical data, to a more responsive mode, acting on real-time data and ultimately, enabling proactive management of assets based on predictive technologies.

| | | |
|---|---|---|
| 1400 | **99849** | **Wireless Condition Monitoring**<br>H.M. Cassar, BP |
| 1430 | **99963** | **Continuous Real Time Well Production Flow Monitoring and Surveillance**<br>C. Moncur, Shell Global Solutions; S.V. Jakeman, Shell Global Solutions; H.N. Poulisse, Shell Intl. E&P BV; P. van Overschee, IPCOS |
| 1500 | **99696** | **In well Optical Sensing State Of The Art Applications And Future Direction For Increasing Value in Production Optimization Systems**<br>B.K. Drakeley, Weatherford; T. Bostick,III, Weatherford Completion Systems; E. Zisk, Weatherford International; E.S. Johansen, Weatherford |
| 1530 | | Coffee Break |
| 1600 | **99554** | **Intelligent Monitoring? Bore Hole Gravity Measurements!**<br>A.M. Loermans, Saudi Aramco |
| 1630 | **99927** | **Continuous 4D Monitoring is Now Reality**<br>C. Hofstee, TNO; J. Kooijman, TNO Inst. Appl. Geosciences |
| 1700 | **99449** | **Applications of Fiber Optic Real Time Distributed Temperature Sensing (DTS) in A Heavy Oil Production Environment**<br>J.J. Goiffon, Halliburton Energy Services Group; D. Gualtieri, Halliburton Energy Services; R. Pruett, Halliburton Co.; W.I. Redecopp, Halliburton Energy Services Group |

# Programme

**14.00 – 17.30 hours** **Amsterdam Room**

**Technical Session 2:** **Closed Loop Optimization**
**Session Chairpersons:** **Cor van Kruijsdijk, Delft University of Technology**

The goals of "Intelligent Energy" will not be achieved until we "close the loop" reliably. The papers in this session present the closing of various loops and discuss the current state-of-the-art.

| | | |
|---|---|---|
| 1400 | **99828** | **Learnings on Sustainable Model Based Optimisation – The Valhall Optimiser Field Trial**<br>B.J. Stenhouse, BP |
| 1430 | **99956** | **Right Time Decision of Artificial Lift Management for Fast Loop Control**<br>S.R. Campos, D.F. Filho, J.C. Dos Santos and E.H. Bolonhini, Petrobras |
| 1500 | **99555** | **Intelligent Integrated Dynamic Surveillance Tool Improves Field Management Practices**<br>S.M. Al Fattah, Saudi Aramco |
| 1530 | | Coffee Break |
| 1600 | **99453** | **A Case Study of Offshore Production Control through Advanced Process Automation**<br>S. Sankaran, Halliburton Digital & Consulting Solutions; R. Bumatay, Shell Philippines Exploration; J.J. Vazquez Esparragoza, KBR; G. Mijares, Landmark Graphics |
| 1630 | **99971** | **Well Test Optimization and Automation**<br>R. Cramer, S.V. Jakeman and L. Berendschot, Shell Global Solutions |
| 1700 | **99834** | **Intelligent Well Technology, Are We Ready For Closed Loop Control?**<br>W.S. Going, A.B. Anderson and P. Chok, Baker Oil Tools |

**14.00 – 17.30 hours** **Volendam Room**

**Technical Session 3:** **Integrating Technology, Processes and People**
**Session Chairperson:** **Donna Garbutt, Schlumberger**

This session will explore the challenges, business value and operational benefits derived from the integration of technology, business and operational processes, and people. The evolution of the integrated operational environment from vision to reality will be explored through case studies and examples. The papers will cover a range of technology from downhole through to full field including integration across discipline. The complexity of operational and organizational issues associated with changing processes and the corresponding impact on the individual and work team will be explored and challenged.

| | | |
|---|---|---|
| 1400 | **96390** | **Real Time Asset Management: From Vision to Engagement An Operator's Experience**<br>M.K. Hauser and T. Unneland, Chevron Corp. |
| 1430 | **100024** | **Making Our Mature Fields Smarter – An Industry Wide Position Paper from the 2005 SPE Forum**<br>R.B. Murray, BP Exploration; G.J. De Jonge, Chevron Upstream Europe; C. Edwards, PDO; L. Ormerod, Edinburgh Petroleum Services; K.A. Gibbons, Helix RDS; C. Roy, Total |
| 1500 | **99408** | **From Reservoir to Well: Using Technology For World Class Results In Trinidad & Tobago**<br>K. Samsundar and R.S. Moosai, BP Trinidad & Tobago; R.A. Chung, BP Amoco Energy/Trinidad Tobago |
| 1530 | | Coffee Break |
| 1600 | **99807** | **The Central Role and Challenges of Integrated Production Operations (System Integration of Technology, Human and Operating Systems)**<br>L. Reid and R. Ella, Halliburton Digital and Consulting, Landmark; J. Goldader, BearingPoint |
| 1630 | **100275** | **New Work Processes and Operation Forms: Efficient Data Utilization And On line Cooperation**<br>G. Lamont, Honeywell |
| 1700 | **100710** | **BSP: An Evolution from Smart Wells to Smart Fields**<br>E. van der Steen and R. Knoppe, Brunei Shell |

**17.30 – 18.00 hours** **Oceandiva Boat**

Speech by L.J.Brinkhorst, Dutch Minister of Economic Affairs

**18.00 hours** **Exhibition Area**

Drinks Reception

# Programme

## Wednesday 12 April 2006

### 08.30 – 10.30 hours Waterkant Room

**Technical Session 4: Architecture, Information Management and Exchange**
**Session Chairperson: David Archer, POSC**

Intelligent Energy requires the effective management and exchange of a broad range of static and dynamic information. Presentations in this session include a case study of real-time data management for the offshore environment, a discussion of WITMSL(TM) and its use as a foundation for enhanced data exchange and reporting plus a report on a related multi-company effort (PRODML) to develop and to deploy exchange standards in support of production optimization. Intelligent Energy also benefits from commonly adopted architectural principles. A final presentation illustrates a Service Oriented Architecture (SOA) framework for executing the workflows at the heart of Intelligent Energy.

0830 **99257** **Real Time Data Management at the Statfjord Field Anno 2005**
J. Milter, O.G. Bergjord, K. Hoeyland and B. Rugland, Statoil

0900 **99805** **Efficient Data Management On The Rig Of The Future**
M.A. Kirkman, P.D. Chapman and C. Greaves, BP Exploration

0930 **99707** **A Multi Vendor Data Exchange Format To Support Digital Oilfields**
B. Weltevrede, Shell

1000 **99983** **A Service Oriented Data Composition Architecture for Integrated Asset Management**
R. Soma, A. Orangi, A. Bakshi and V. Prasanna, University of Southern California; W.J. Da Sie, Chevron Corporation

### 08.30 – 10.30 hours Amsterdam Room

**Technical Session 5: Building Blocks for Asset Management**
**Session Chairperson: Zuwa Omoregie, Chevron Corporation**

The intelligent field of the future will become a reality only after the industry adopts, develops or adapts intelligent tools and processes that are needed to manage the oil and gas assets. This session focuses on some of the building blocks in asset management. The papers range from high level discussions of intelligent field implementation to specific building blocks such as sensing, workflow optimization, failure mode analysis and well placement optimization. This session will be of interest to asset managers, operations and technical managers, reservoir and production engineers and team leaders, earth scientists and business planning analysts.

0830 **99468** **Implementing Real Time Asset Management: A Practical Perspective**
J. Nordtvedt, Epsis; T. Unneland, Chevron Corp.

0900 **99481** **Heavy Oil Production Optimization using Predictive Methods**
R. Peterson, Schlumberger ; G. Shepard, Husky Oil

0930 **99464** **Risk Minimization by The Use of Failure Mode Analysis in the Qualification of New Technology, Applied to Intelligent Field Systems**
J.A. Hother, Proneta

1000 **98198** **Closing the Loop Between Reservoir Modeling and Well Placement and Positioning**
Y. Jalali, Schlumberger; N. Liu, Chevron Corp.

### 08.30 – 10.30 hours Volendam Room

**Technical Session 6: Do Oil, Data and People Mix!?**
**Session Chairperson: Helen Ratcliffe, SAIC**

This session focuses on the importance of people in the successful and sustainable implementation of IE technologies and capabilities. Ranging from the challenges and insights of adopting a 'Basin Wide' technology implementation strategy in the North Sea to how IE applications and elements enable; and are enabled by integrated teams in the Far East. With a challenging workforce demographic the use of existing technology and improved workflow are being used to support the capture of knowledge and expertise and we will share some case histories.

0830 **99829** **The Challenges of Implementing At Scale Field of the Future Technologies In The North Sea**
G. Dudley, J. Perry, S. Goodwin and C. Critchley, BP; P.J. Hocking, BP Amoco Norge UA; M. Shahly and D. Saul, BP

0900 **99873** **The Use of Integrated Decision Making to Embed Sustainable Development**
M. Stephenson, Shell UK; M. Kuijper, Nederlandse Aardolie Maatschappij ; M. Howard, Shell EP Europe

0930 **99528** **Improving Storage and Workflow of Pressure Related Information – Don't Lose your Expert Community**
C.C. Purdy and J. Webster, Knowledge Systems

1000 **99243** **Integration of People, Process & Technology for Right Time Production Management & Optimization in Brunei Shell Petroleum**
S.M. Alkhadhuri, D. Narayasamy, S. Sh Said, Brunei Shell Petr. Co.

# Programme

**11.00 – 12.45 hours** **Oceandiva Boat**

**Plenary Session 2:** **Stop Procrastinating – Start Acting!**
**Session Moderators:** **Eric Deliac, Petris Technology**
**Peter Goode, Vetco International**

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| "A Fresh Eye" from Other Industries | Armand Carlier, Consultant |
| Technology adoption issues, Intelligence in E&P | Manoelle Lepoutre, Total |
| Adoption Speed, Field of the Future | Mike Utsler, BP |
| Digital Technology as a competitive weapon – what can Oil and Gas learn from other industries? | David Craig, McKinsey |
| Oil & Gas Companies challenges, new approaches for technology adoption | Léon Beugelsdijk, Shell International E&P |
| Human factors, drivers for intelligence, risks | Bruce Jette, Synovision Solutions |

See page 7 for further information.

**14.00 – 17.30 hours** **Waterkant Room**

**Technical Session 7:** **Reliably Advancing Operational Insights**
**Session Chairpersons:** **Marise Mikulis, Microsoft**

Reservoir optimization is accelerated with deeper understanding of project risk. "Old school" trusts their gut in executing programs. "New school" expects and demands illumination of patterns and trends within data using sophisticated modelling techniques and frameworks. How much are we trusting the models? Is project insight consistently improving? Or are we coming to the same conclusions but spending more time and effort to do so? Are these methods more overhead to satisfy management scrutiny? In this session, industry leaders reinforce the value of models and modelling for achieving sound insights to improve operations.

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| 1400 | **99484** | **Towards a Framework for Better Decision Making Under Subsurface Uncertainty**<br>R. Peterson, Schlumberger ; S.D. James, Shell Intl. E&P |
| 1430 | **100347** | **Integrated Production Modelling in the Harweel Project, Oman**<br>J.E. Fraser, Petroleum Development Oman |
| 1500 | **100271** | **Integration of a Risk Management Tool and an Analytical Simulator for Assisted Decision Making in IOR**<br>V. Alvarado, SMD C&S LLC; E. Reich, Rogaland Research Centre; Y. Yunfeng, Rogaland Research; K. Potsch, OMV |
| 1530 | | Coffee Break |
| 1600 | **99667** | **Development of Surrogate Reservoir Models (SRM) For Fast Track Analysis of Complex Reservoirs**<br>S.D. Mohaghegh, West Virginia U.; C.A. Modavi, Abu Dhabi Co. Onshore Oil Opn.; H.H. Hafez, Abu Dhabi Co. Onshore Oil Opn.; M. Haajizadeh, BP Amoco; M.M. Kenawy, Geisum Oil Co.; S. Guruswamy, Abu Dhabi Co. Onshore Oil Opn. |
| 1630 | **99847** | **Facilitating Risk Management in E&P Using Data Visualisation and Collaboration Tools**<br>G.M. Cain and E.P. Deliac, Petris Technology |
| 1700 | **99451** | **A Consistent Approach towards Reservoir Simulation at Different Time Scales**<br>S. Sankaran, Halliburton Digital & Consulting Solutions; M. Nikolaou, U. of Houston; S. Cullick, Landmark Graphics; L. Saputelli, Landmark; G. Mijares, Landmark Graphics |

**14.00 – 17.30 hours** **Amsterdam Room**

**Technical Session 8:** **Remote Operations and Virtual Training: Industry Analogies as an Example for E&P Practice**
**Session Chairperson:** **Roald Brouwer, Shell International E&P**

In the first half of this session, we look at what we can learn from the space and the gaming industry to improve the future of the oil industry. In the future, daily intelligent field operations may look much like an ordinary day in a space project operation. In addition, games are becoming increasingly sophisticated and realistic. The oil industry may learn from it how to train future employees and how to build the best virtual working environments.

**Standardization Panel**
**Session Chairperson:** **David Archer, POSC**

The role of standards is a common point of emphasis at virtually every industry conference related to Intelligent Energy. However, the deployment of the required standards, with a few notable exceptions, seems to continue to be something to do in the future. In this session, a panel of energy industry experts and standardization professionals will discuss the requirements, benefits and current initiatives for standardization of infrastructure and information in pursuit of the Intelligent Energy vision. After brief statements from each of the participants, follow an interactive discussion in which the panellists will field questions from the moderator and from the delegates in the audience.

# Programme

**14.00 – 17.30 hours** **Volendam Room**

**Technical Session 9:** **Collaboration Centres**
**Session Chairpersons:** **Tony Edwards, BP**
**Mike Hauser, Chevron**

This session is specially designed to present views from some of the leading practioners of "Collaboration Centers". The topics will cover a broad spectrum of case studies, challenges, decision making, workflows based on the experiences & designs of today. The session will also set the stage for future learnings to be explored as industry moves into this key area in the next phase of the evolving intelligent, digital oilfield.

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| 1400 | **100113** | **Advanced Collaborative Environments In BP**<br>T. Edwards, M. Saunders, K. Moore Cernoch, BP |
| 1430 | **99485** | **Challenges in Integrated Operations Centers**<br>K.M. Landgren, and S. Sood, Schlumberger |
| 1500 | **100704** | **Collaborative Decision Making in Operation Centre Environments**<br>D. Taylor, SAIC; K. Fosse, Epsis |
| 1530 | | Coffee Break |
| 1600 | **99928** | **Production Planning in an Operation Center Environment**<br>I. Floysand, S. Olsen, J. Nordtvedt and F. Sekkingstad, Epsis |
| 1630 | **100711** | **Production Optimization Collaboration Centre in Brunei**<br>E. van der Steen and R. Knoppe, Brunei Shell |
| 1700 | **99778** | **BP Norges Integrated Operations Environment Implementation - A Case Study**<br>P.J. Hocking, BP Amoco Norge UA |

## Thursday 13 April 2006

**08.30 to 10.30 hours** **Waterkant Room**

**Technical Session 10:** **Model Based Optimization**
**Session Chairperson:** **Iraj Ershaghi, University of Southern California**

In this session intelligent solutions for smart operations is addressed from the standpoint of optimizing work processes. Concepts include optimization of global sweep efficiency for a wag process by the use of utility theory; use of Kalman filter for production optimization with non-linear path constraints and control of downhole chokes for maximizing cumulative oil production; partitioning of injection rates to control displacement front and the use of analytical models to history match multiwell reservoir systems.

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| 0830 | **99959** | **Production Optimization with Adjoint Models under Non linear Control State Path Inequality Constraints**<br>P. Sarma, K. Aziz and L.J. Durlofsky, Stanford U.; W.H. Chen, Chevron Corp. |
| 0900 | **99690** | **A New Approach for Dynamic Optimization of Water Flooding Problems**<br>R.J. Lorentzen, A. Berg, G. Naevdal, and E.H. Vefring, Rogaland Research Centre |
| 0930 | **100009** | **Optimization of the WAG Process Under Uncertainty in a Smart Wells Environment: Utility Theory Approach**<br>T.E. Esmaiel, Delft U. of Technology; J.C. Heeremans, Delft U. of Technology |
| 1000 | **99524** | **Control of a Displacement Front in Potential Flow Using Flow Rate Partition**<br>M.H. Fyrozjaee and Y. Yortsos, USC |

**08.30 – 10.30 hours** **Amsterdam Room**

**Technical Session 11:** **Intelligent Asset Management Case Studies**
**Session Chairpersons:** **Ricardo Portella, Petrobras**
**Christian Bos, TNO**

This session focuses on field cases. Chevron will present the i-field implementation of San Ardo field where the automation will improve steamflood and water management operations. Another big onshore smart field implementation will be presented by Weatherford that will stress the cost reduction and workflow process changes that were key factors in the success of this implementation. A Saudi Aramco paper will focus on the coupled simulation of reservoir flow and surface facilities that is essential for a closed looped management of a smart field. Finally, a paper will present a survey of the required technologies to be used in an implementation of a smart field, stating the actual status and the technological gaps.

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| 0830 | **99446** | **Real Time Production Optimization of Offshore Hydrocarbon Production Plants: A Technology Survey**<br>H. Bieker, Norwegian U. of Science & Tech; O. Slupphaug, ABB Process Automation; T. Johansen, Norwegian U. of Science & Tech |
| 0900 | **99548** | **Implementing Chevron's i field at the San Ardo, California, Asset**<br>J.R. Ouimette, Chevron Energy Technology Co; K. Oran, Chevron North America Exploration and Production |

# Programme

0930 **99949** **Real Time Field Surveillance and Well Services Management in a Large Mature Onshore Field: Case Study**
L. Ormerod, Weatherford; J. Mehta, eProduction Solutions

1000 **100027** **Production Optimization through Coupled Facility Reservoir Simulation**
E.M. Hayder, M. Dahan and M.N. Dossary, Saudi Aramco

## 08.30 – 10.30 hours Volendam Room

**Technical Session 12: Beyond the Big Crew Change**
**Session Chairpersons: Trond Unneland, Chevron Upstream Europe**
**Ihab Toma, Schlumberger**

Organizational Capability is a huge challenge for the industry at the current activity level. The industry demographics will dramatically alleviate this challenge in the years to come. This session will focus on how Intelligent Energy can mitigate the demographical challenges, and how this technology will affect Organizational Capability beyond the Big Crew Change.

0830 **99777** **Field Of The Future: Making BPs Vision A Reality**
C.E. Reddick, BP Exploration Co.

0900 **99885** **Beyond The Big Crew Change, Dumbing Down Or Getting Smarter?**
M. Heaney, Benchwhistler Associates; J. Davidson, Facilitators UK

0930 **99774** **Capability Development with Remote Drilling Operations**
K. Lauche, T. U. Delft; S.J. Sawaryn, BP Exploration; J.L. Thorogood, BP Exploration & Production

1000 **100712** **Intelligent Energy in E&P: When Are We Going to Address Organizational Robustness and Collaboration as Something Else than a Residual Factor?**
V. Hepsoe, Statoil

## 11.00 – 12.45 hours Oceandiva Boat

**Plenary Session 3: Higher Recoveries From Existing And New Fields!**
**How Do We Engage The "Xbox" Generation To Succeed?**
**Session Moderator: Alex Lightman, Charmed Technology**

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| An Even Smarter World | Alex Lightman, Charmed Technology |
| Virtual electronic connectivity in the future, what will it look like? | Eric Frost, San Diego State University |
| People, working, training and where will we get them? | John Henderson, Boston University |
| The future of HSE in 30 years, what will we do to have 0 incidents? | Pat Cook, Halliburton |
| National Oil company perspective Resource Rich/Poor, how to expand and stay connected | En Ramlan Abdul Malek, Petronas |

See page 8 for further information.

## 14.00 – 16.30 hours Waterkant Room

**Technical Session 13: Increasing the Intelligence of Oil and Gas Planning, Production and Drilling Operations**
**Session Chairperson: Judson Jacobs, CERA**

Many seemingly mature oilfield activities; whether in asset development, production or drilling, lend themselves to improvement using 'intelligent' concepts. In this session, cases will be presented ranging from real-time drilling optimization to improved integrated reservoir modeling and production forecasting. The approaches used are very similar. Common design principles may be applied when designing 'intelligent solutions', even if the nature of activities and value drivers differ.

1400 **99948** **Integrated Multi-Zone Low Cost Intelligent Completion for Mature Fields**
H.D. Pereira Pinto, M.F. Silva, R.G. Izetti and G.B. Guimaraes, Petrobras

1430 **99945** **Simulation While Drilling: Utopia or Reality?**
A.D. Primera Navarro, C.E. Perez Damas and S. Kumar, Schlumberger; E. Rodriguez, Spectrum Consultores

1500 Coffee Break

1530 **99482** **Shell MARS Hydrocarbon Development Acceleration**
R. Peterson, Schlumberger ; S.D. James, Shell Intl. E&P

1600 **99979** **Model-based Framework for Oil Production Forecasting and Optimization: A Case Study in Integrated Asset Management**
C. Zhang, A. Orangi and A. Bakshi, University of Southern California; W.J. Da Sie, Chevron Corporation; V. Prasanna, University of Southern California

# Programme

**14.00 – 16.30 hours** **Amsterdam Room**

**Technical Session 14:** **The Future Is Now**
**Session Chairpersons:** **Will Da Sie, Chevron Energy Technology Co.**
**Paul Deutch, SAIC**

This session will focus on transformational technologies that pave the way for full integrated system optimization and management. These technologies address the challenges of assembling tools from diverse modelling and system optimization domains to create a new generation of collaborative solutions.

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| 1400 | **99779** | **The Field Of The Future Business Process Transformation: Insights and Challenges**<br>D. Feineman, BP America |
| 1430 | **99358** | **Production Optimization: A Moving Horizon Approach**<br>M. Nikolaou, U. of Houston; A.S. Cullick, Landmark Graphics Corporation; L. Saputelli, Landmark |
| 1500 | | Coffee Break |
| 1530 | **99469** | **From Reservoir Through Process, from Today to Tomorrow – The Integrated Asset Model**<br>M. Szatny, Aspen Technology; A. Howell, Schlumberger |
| 1600 | **100348** | **Closed-loop Reservoir Management**<br>D.R. Brouwer, Shell Intl. E&P; J. Jansen, Delft University of Technology; R. Arts, TNO |

**14.00 – 16.30 hours** **Volendam Room**

**Technical Session 15:** **New Professionals, New Working Environments, and New Technology: The Impact on Our Work**
**Session Chairperson:** **Roald Brouwer, Shell International E&P**

In this session we address the potential impact of various technical and non-technical factors on people themselves and on the way they do their jobs in the future oil industry. Topics to be discussed are the importance of young professionals for solving the big crew change, and on how we and our jobs may be affected by new technology, and new collaborative working environments, including some advice on protocols to live and work in such environments. Finally we discuss what, apart from technology, is required for the envisioned step change in business value of Intelligent Energy.

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| 1400 | **99924** | **Developing Young Exploration & Production Professionals to Solve the "Big Crew Change"**<br>L. Tealdi, Agip KCO; E. Kreft, TNO NITG; J. Donachie, Helix RDS |
| 1430 | **100195** | **How Collaborative Environments Influence Culture & Behaviour**<br>P. Williams, Williams Consulting Group |
| 1500 | | Coffee Break |
| 1530 | **99898** | **Identifying Future Leaders Through Knowledge Management**<br>K. Paylow, D. Zappa and A.J. Hickman, Halliburton Co. |
| 1600 | | Speaker tbc |

**16.30 – 17.30 hours** **Oceandiva Boat**

**Wrap-up Session: What Industry Leaders take away from the Intelligent Energy Conference**

In this session leaders of Oil Companies, Service Providers and Institutes will present and discuss how the conference has influenced their thinking about Intelligent Energy and which elements they plan to implement in their own organizations. The session, moderated by John Darley, is planned as a free flowing discussion between the attendees and the panel members, both to evaluate the conference theme and explore future trends and directions in Intelligent Energy.

# Programme

## Tuesday 11 April 08.30 hours – Thursday 13 April 17.30 hours

### Poster / Alternate Presentations

**99288** **Generalized Analytical Solution for Reservoir Problems with Multiple Wells and Boundary Conditions**
R. Banerjee, G.S. Busswell and R.M. Thambynayagam, Schlumberger; J.B. Spath, Schlumberger Data & Consulting Services

**99850** **ISIS A Real Time Information Pipeline**
J. Foot, BP; M.J. Webster, BP; D. Vaughan, BP Amoco Co; G.H. Yusti Calero, BP; T.D. Grose, BP Amoco

**99827** **Permanent Seismic Arrays And Their Place In The Digital Oilfield**
G. Watts, BP; T.A. Griffin, BP Amoco Norge UA; O.I. Barkved, BP Amoco Norge UA; D. Foster, BP

**99780** **Towards Top Down Reservoir Modelling: Deployment Of A New Technology**
D.G. MacDonald, BP Exploration; M. Espinassous, BP; G. Williams, BP; M. Mansfield, BP

**99880** **Use of Real Time Rig Sensor Data to Improve Daily Drilling Reporting, Benchmarking and Planning; A Case Study**
W. Mathis, TDE Thonhauser Data Engineering; G. Wallnoefer, and G. Thonhauser, University of Leoben; J. Ettl, OMV (UK)

**99336** **EPINET In ONGC India: Transforming E&P Information Into Energy Intelligence**
D. Chatterjee, Schlumberger; P.K. Mittal, Oil and Natural Gas Corporation

**100274** **The Influence of Uncertainty on Field Development Planning and Economics using Experimental Design Techniques in Reservoir Simulation: Stybarrow Oilfield Case Study**
N.A. Ementon, BHP Billiton Petroleum Americas; M. Robson, BHP Billiton; A.A. Curtis, BHP Billiton Petroleum Americas

**99466** **New Data Transmission Standard Facilitates Synchronous Remote Modeling and Surveillance via the Internet**
W.B. Standifird, Knowledge Systems; S. Edwards, BP America; N. Baksh, Baker Hughes Inteq

**100705** **Intelligent Energy: Using an Enterprise Architecture (EA) approach and Service Oriented Architecture (SOA) to break down the IT barriers to success**
D. Forrester and B. Tye, SAIC

**99926** **Automatic On Line Dynamic Well Test Analysis**
S. Olsen and J. Nordtvedt, Epsis AS

**99728** **Multiscale Smart Well Management**
M.O. Lien, Matematisk Institutt; J. Jansen, Delft U. of Technology; R. Brouwer, Shell

**99261** **Novel Approach to Predict Potentiality of Enhanced Oil Recovery**
J. Hou, U. of Petroleum China; W. Huang, Shengli Oilfield Limited Company

**99929** **Should "Proactive" or "Reactive" Control be Chosen for Intelligent Well Management?**
D.R. Davies and F. Ebadi, Heriot Watt U.

**99882** **Innovative Approach to Assist History Matching Using Artificial Intelligence**
G. Zangl, Schlumberger; J. Thuwaini, Saudi Aramco

**99281** **Deployed Smart Technologies Enablers for Improving Well Performance in Tight Reservoirs Case: Shaybah Field, Saudi Arabia**
S.P. Salamy, A.H. Aborshaid, H.K. Al Mubarak and M.S. Al Ghamdi, Saudi Aramco

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| **Tuesday 11 April** | | |
| 08.30 – 09.30 | | C |
| 09.30 – 10.30 | | Intelligen |
| 11.00-12.30 | | Oil and Gas Produ |
| 14.00-17.30 | Technical Session 1<br>Monitoring and Surveillance | Cl |
| 17.30 – 18.00 | | Speech:<br>Econon |
| 18.00 – 19.30 | | Drinks |
| **Wednesday 12 April** | | |
| 08.30 – 10.30 | Technical Session 4<br>Architecture, Information Management and Exchange | Building |
| 11.00-12.45 | | Plenary Session |
| 14.00-17.30 | Technical Session 7<br>Transforming Data into Decisions, Under Uncertainty | Remote O<br>Industry Analo<br>an |
| **Thursday 13 April** | | |
| 08.30 – 10.30 | Technical Session 10<br>Model Based Optimization | Intelligent |
| 11.00-12.45 | | Higher Recove<br>How do we enga |
| 14.00-16.30 | Technical Session 13<br>Increasing the Intelligence of Oil and Gas Planning, Production and Drilling Operations | |
| 16.30 -17.30 | | Wrap-u |

| nsterdam Room | Volendam Room |
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| offee - Exhibition Area | |
| Scene Setter Session:<br>nce in Action – Oceandiva Boat | |
| Plenary Session 1:<br>uction in a Digital Age – Oceandiva Boat | |
| Technical Session 2<br>osed-Loop Optimization | Technical Session 3<br>Integrating Technology, People and Processes |
| L.J. Brinkhorst, Dutch Min. of<br>mic Affairs – Oceandiva Boat | |
| Reception – Exhibition Area | |
| | |
| Technical Session 5<br>Blocks for Asset Management | Technical Session 6<br>Do Oil, Data and People Mix!? |
| 2: Stop Procrastinating - Start Action!<br>– Oceandiva Boat | |
| Technical Session 8<br>perations and Virtual Training:<br>gies as an Example for E&P Practice<br>d Standardization Panel | Technical Session 9<br>Collaboration Centres |
| | |
| Technical Session 11<br>Asset Management Case Studies | Technical Session 12<br>Beyond the Big Crew Change |
| Plenary Session 3:<br>eries From Existing and New Fields!<br>ge the “Xbox” generation to succeed?<br>– Oceandiva Boat | |
| Technical Session 14<br>The Future is Now | Technical Session 15<br>New Professionals, New Working Environments,<br>and New Technology: The Impact on our Work |
| up Session – Oceandiva Boat | |

# Sample of Current Exhibitors

## Achilles Information Limited
www.fpal.com

First Point Assessment is the oil and gas supply chain database for the Netherlands and UK and is a division of Achilles Information Limited. FPAL is the key tool used by oil and gas purchasers to identify and select current and potential suppliers when awarding contracts or purchaser orders. The online process replaces internal approved vendor lists and eliminates costly duplication in pre-qualifying suppliers. There are approximately 2,400 suppliers and over 70 purchasers registered on FPAL. In the Netherlands NAM, Total, Wintershall, Petro-Canada, Stork, CH4, AJS, and ATP are registered purchasers. FPAL would like to invite you to meet some of the Industry's purchasers on stand 313.

## Advantek International
www.advantekinternational.com

## Biznet
www.biznet-solutions.com

## BP
www.bp.com

Through the application of new and existing digital technologies, BP aspires to operate its assets at the technical limit of efficiency, recovery and cost.

To make this aspiration a reality, BP has implemented a programme called FIELD OF THE FUTURE. The scope of this programme covers development and deployment of technology and business process solutions to most aspects of oil and gasfield operations.

The Intelligent Energy Conference is an opportunity for BP to demonstrate its portfolio of technologies needed to deliver its vision of FIELD OF THE FUTURE. The following technology themes form the core of BP's FIELD OF THE FUTURE Programme:

- Real-time reservoir management
- Production optimisation
- Remote performance monitoring and collaboration
- Advanced Collaborative Environments
- Connecting global know-how and expertise, 24/7

BP will demonstrate how the company is deploying these technologies and capabilities, with particular emphasis on the revised business processes and enhanced people capabilities needed to underpin successful deployment at scale across its assets.

## Data Horizon
www.datahorizon.net

DataHorizon has provided a unique data management service to the energy industry since 1997. We handle reservoir, production, operating, environmental and structural data sources. We provide fully integrated, reliable, secure, web-based data management systems that deliver quality assured, real time data from the field to the engineer's desktop anytime, anywhere.

## Energysys
www.digitalsteps.com

EnergySys Limited, a Digital Steps company, is the world leader in hydrocarbon accounting and production reporting systems. The newest release of its flagship product, GAMMA, delivers the first spreadsheet-driven, extensible enterprise solution flexible enough to cope with the changing commercial environment of modern oil and gas assets.

## Epsis AS
www.epsis.no

## European Reseller
www.europeanreseller.com

ERM is dedicated to the ICT markets in Europe. If you are looking for Venders, distributors, resellers, V.A.R. and system integrators we have a subscribed circulation of 60,000 European businesses.

## Halliburton's Digital and Consulting Solutions
www.Halliburton.com

Halliburton's Digital and Consulting Solutions (HDCS) Division is comprised of two leading brands, Landmark and GeoGraphix. HDCS is the leading supplier of software, services and hardware to the upstream oil and gas industry. Visit us on the Web at www.Halliburton.com for more information.

## IAC
www.intellagentcorp.com

## IBM Business Consulting
www-1.ibm.com/services/us/bcs/html/bcs_index.html

## Informateks
www.informateks.com

## Invensys
www.invensys

## Knowledge Systems
www.knowsys.com

Knowledge Systems is the industry's leading provider of geopressure and geomechanics software and services. Our Drillworks and Pressworks families of software products are used by majors and independents worldwide to reduce drilling and exploration risk, manage non-productive time and increase drilling performance. Products and Services Include: ·Drillworks and Pressworks software families ·Services for geopressure, geomechanics, and knowledge management.

## NSI
www.nsiupstream.com

## OilCareerFair
www.worldwideworker.com

## Petris
www.petris.com

Petris: Helping Your Enterprise Get the Most from Existing Assets - Petris Technology is focused on the challenge of integrating information and applications without replacing existing systems – actually maintaining the data in its native format while providing comprehensive access anywhere and anytime. Applications range from E&P data management to performance visualization and risk mitigation plans.

## Pipeline Magazine
www.pipelinedubai.com

# Sample of Current Exhibitors

## Precision Completion Systems / Nescos

www.precisioncompletion.com

Precision Completion Systems is an integrated design, development and manufacturing company formed in 1999 to provide technical expertise with completion applications for International Oil & Gas operations. PCS is currently involved in the development of new technologies for zonal isolation and control of new and existing well completions. PCS along with NESCOS AS (formally Triangle AS Norway) is developing second-generation life of well systems for its current customer base. PCS provides completion products for single and dual zone completions along with the accessories necessary to successfully complete oil and gas wells. Precision Completion Systems with United States offices located in Texas, Louisiana, and Alaska. International offices located in Brazil, and Nigeria.

## SAIC

www.saic.com

## Saudi Aramco

www.saudiaramco.com

Saudi Aramco, the national oil company of the Kingdom of Saudi Arabia, is the largest producer of crude oil in the world. The company has discovered and holds around one quarter of the world's proven conventional oil reserves and has operations in exploration, production, refining, marketing and international shipping. Saudi Aramco also owns and operates an extensive network of refining and distribution facilities, and is responsible for the gas processing and transportation installations that fuel Saudi Arabia's industrial sector. Visit www.saudiaramco.com for more information

## Scandpower Petroleum Technology

www.scandpowerpt.com

Scandpower Petroleum Technology is the leader in dynamic modelling for the oil and gas industry, employing highly skilled professionals worldwide. We develop and market OLGA®, Drillbench® and MEPO®, products that support solutions maximising operations and reservoir performance. edpm® is the truly dynamic and proven on-line real-time production support system, yielding the understanding of flow that enables sustained cost effective operations.

## Schlumberger

www.slb.com

Schlumberger is the world's leading oilfield services company supplying technology, project management, and information solutions that optimize performance for customers working in the oil and gas industry.

## Shell

www.shell.com

Shell is proud to be part of this groundbreaking conference and exhibition addressing the oil & gas industry's shift towards improved performance of core E&P processes. Smart Fields marks a step change in EP business responding to the energy challenge. A key component of our participation materialises in the conference programme, to which we contribute no less than 10 papers. They represent a cross-section of specialities and technologies in direct relation to the conference's theme. Our stand is the centre of attention at this exhibition with a multi-disciplined team available on the stand every day, showcasing our latest projects, partnerships and technologies. We tie the theme of innovation, integration and partnerships together. Visit our stand to win a number of 'Smart' prizes!

## TDE Thonhauser

www.tde.at

proNova - by TDE - is a novel project management solution for continuous drilling project tracking, controlling, comparing plan and actual of process parameters in a highly automated way. Conventional drilling planning and reporting is enhanced utilizing rig sensor data to perform automated operations reporting combined with integrated resource and project cost management.

## Tech27 Systems

www.tech27.com

Tech27 Systems is a provider of innovative software solutions that helps organisations in the Oil & Gas industry to increase productivity and reduce cost. The company is a market-leader in developing handheld-based bespoke and real time applications in RFID, GPS and Wi-Fi for asset and people monitoring. Other services include SAP mobile application development and consulting, concept development and modeling, 3D & 2D animation and graphic design.

## Unique Data

www.unique-data.net

## vMonitor United States

www.vmonitor.com

vMonitor specializes in wireless and web-based remote monitoring and control systems for Oil & Gas. vMonitor's next generation low power wireless devices are made for real-time data acquisition and communication from remote sites virtually from anywhere. vMonitor's end-to-end solution can impact the bottom line and increase productivity resulting in substantial savings to the customer.

## Weatherford

www.weatherford.com

Weatherford is one of the largest global providers of innovative mechanical solutions, technology and services for the drilling and production sectors of the oil and gas industry. Supported by an infrastructure of highly experienced personnel, Weatherford operates in over 100 countries and employs more than 24,500 people worldwide.

## Zencus International

www.zencus.com

Zencus is a Wireless Field Data Acquisition and Desk-Top Visualization System. Zencus delivers real-time wellhead and field data to the users' desk-top utilizing wireless technology and web-enabled data visualization tools.

### For information on exhibiting please contact:

Adam Evan-Cook
Spearhead Exhibitions
Tel: +44 (0) 20 8439 8905
Fax: +44 (0) 20 8439 8897
Email: Adam.Evan-Cook@spearhead.co.uk
www.ie2006.com

# GENERAL INFORMATION

## Conference & Exhibition Venue:

Passenger Terminal Amsterdam
Piet Heinkade 27
1019 BR AMSTERDAM
telephone : (+) 31 (0)20.509 10 00
fax : (+) 31 (0)20.509 10 09
www.ptamsterdam.com

## Directions to the Passenger Terminal Amsterdam:

**By car:**

**Coming from Schiphol International Airport / The Hague (Den Haag):**

From Schiphol take the A4 to Amsterdam and then the A10 Amsterdam ring road (north). Leave the A10 Amsterdam ring road (north) at the S114 junction (follow the signs for "Centrum, Zeeburg and Artis").

Turn left at the end of the exit road. Follow the road until you have passed through the Piet Hein Tunnel. At the end of the tunnel turn right, following the signs for "Centrum and Centraal Station". You will pass three traffic lights; after the third light turn right at the second access road.

The entrance to the parking is situated in front of the terminal. The charge per hour is €2.00 per car.

**Coming from Utrecht / Amersfoort:**

On the A1 and A2 follow signs A10 Amsterdam ring road direction Zaanstad until exit number S114 (signed "Zeeburg and Artis"). From here follow description as above.

**By public transport:**

Arriving at Central Station you can take a taxi at the exit that leads to the city centre. Here, you will also find bus no. 32, bus no.39, bus no. 43 and bus no. 326 that passes the terminal frequently. From the station it is a 10-minute walk to the terminal. Take the northern exit and turn right. Walk along the waterside and you will find the terminal at your left-hand side after having passed the bridge.

## Registration opening times

Registration badges may be collected from the registration desk in the Passenger Terminal Amsterdam on:

| | |
|---|---|
| Tuesday 11 April, | 08.30 – 18.00 hours |
| Wednesday 12 April, | 08.30 – 18.00 hours |
| Thursday 13 April, | 08.30 – 18.00 hours |

Please note: No badges will be mailed in advance.

A full registration includes: access to the exhibition area, all conference sessions, one set of CD ROM Conference Proceedings, luncheon tickets for Tuesday, Wednesday and Thursday; and a Reception ticket for the evening of Tuesday 11 April.

**Attendance of the Exhibition only is complimentary.**

## Cancellation policy

Cancellations must be submitted in writing to the SPE Office in London before 13 March in order to receive a refund.

Cancellations prior to 13 February will receive a full refund less a £30 handling fee.

Cancellations received between 13 February and 13 March inclusive, will receive a 50% refund.

For cancellations received on and after 13 March, no refunds will be paid although substitutions may be made.

## Accommodation info

Through the intermediary RAI Hotel Service, hotel accommodation can be reserved at reduced rates in the hotels mentioned below, either online at www.rai.nl/hotelservice or by completing the form at the back of this brochure. The RAI Hotel Service works with more than 80 hotels in Amsterdam, from tourist class to luxury hotels. Accommodation can also be booked in other hotels not mentioned.

## Proceedings

One copy of the Proceedings on CD ROM is included in the full registration fee. After the conference, additional copies of the CD ROM proceedings may be ordered by contacting books@spe.org.

## Reception

A reception will take place on the evening of Tuesday 11 April from 18.00 hours in the exhibition area of the Passenger Terminal Amsterdam.

# 2006 SPE European student paper contest

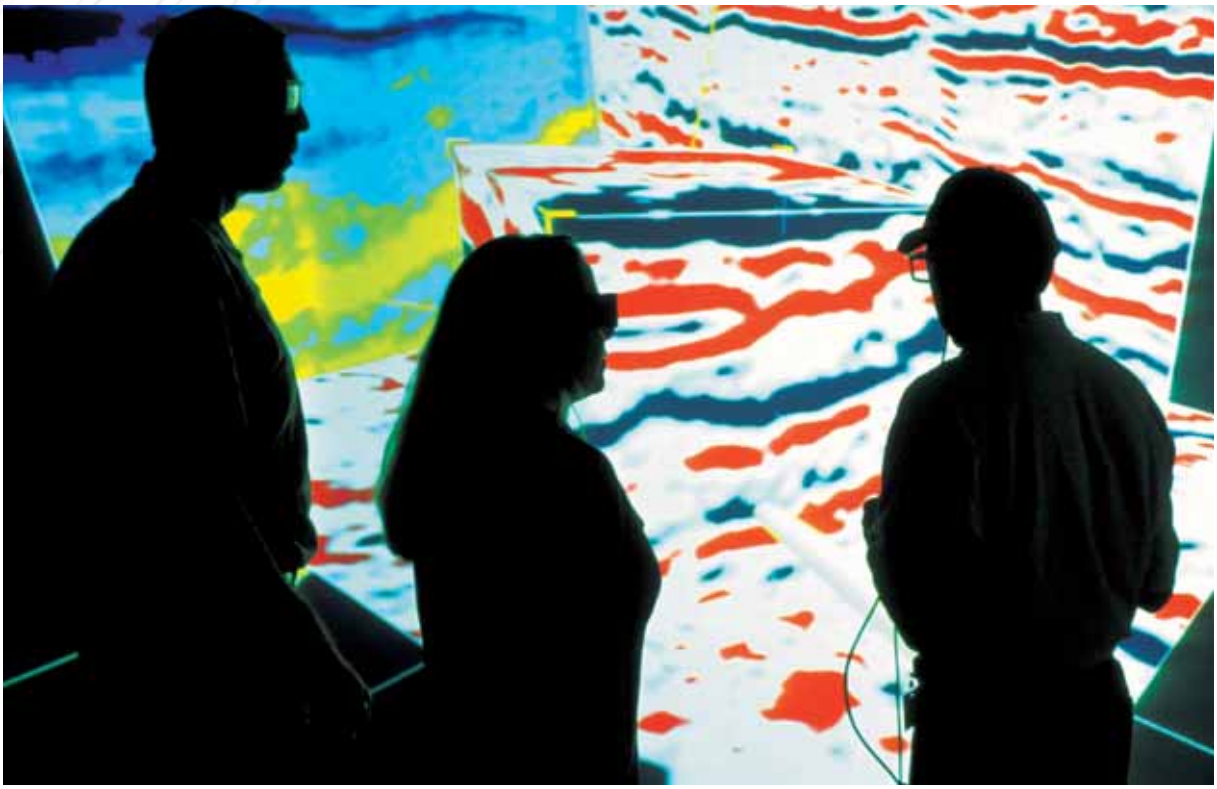
## 11 - 12 APRIL 2006

Don't miss your chance to take part in the 2006 European Student Paper Contest to be held alongside Intelligent Energy in Amsterdam.

The contest will be divided into two divisions – Undergraduate Division and Masters and Doctorate Division.

The winners of each division will be invited to take part in the SPE International Student Paper Contest at the 2006 ATCE in San Antonio, Texas, USA.

To submit a paper for the contest please send a 300 word abstract to relson@spe.org by FRIDAY 24 FEBRUARY 2006. If you have any queries please contact Becci Elson at the above mentioned email address.



# Hotel Accommodation

Through the intermediary RAI Hotel Service, hotel accommodation can be reserved at reduced rates in the hotels mentioned below, either online at www.rai.nl/hotelservice or by completing the form at the back of this brochure.

## Hotel Options

| Hotel | Location | Standard room Single use | Standard room Double use | Breakfast p.p.p.n.* | City tax |
|---|---|---|---|---|---|
| **5 Star Hotels** | | | | | |
| | | € | € | € | |
| Renaissance | 1 | 195.00 | 195.00 | 22.00 | 5% |
| **4 Star Hotels** | | | | | |
| | | € | € | € | |
| Die Port van Cleve | 1 | 135.00 | 135.00 | 17.50 | 5% |
| Golden Tulip Inntel Amsterdam Centre | 1 | 135.00 | 135.00 | 17.50 | 5% |
| Sofitel Amsterdam | 1 | 160.00 | 160.00 | 22.00 | 5% |
| Swissotel | 1 | 155.00 | 155.00 | 17.50 | 5% |
| Victoria Hotel Amsterdam | 1 | 155.00 | 155.00 | 20.00 | 5% |
| **3 Star Hotels** | | | | | |
| | | € | € | € | |
| Amstel Botel | 1 | 98.00 | 98.00 | incl. | incl. |
| The Lloyd Hotel - 2 Star rooms | 2 | 120.00 | 120.00 | 12.50 | 5% |

**All quoted rates are per night and in Euro (€), including VAT**

## Footnotes

1 Hotel located in the city centre, close to Central Station

2 Hotel located in the city centre, direct connection to PTA

* per person per night

RAI HOTEL & TRAVEL SERVICE

In case the preferred hotel, category or room price is not listed, please contact RAI Hotel & Travel Service. Aside from the selected hotels RAI Hotel & Travel Service has contracts with more than 50 hotels in Amsterdam and can assist you in making reservations in other hotels as well.

The preferential room rates will only be applicable upon availability. If hotel reservations are required, please return the enclosed booking form or visit www.rai.nl/hotelservice to book online. To avoid disappointment, early booking is advised. All requests for extra booking and additional information can be directed to:

RAI Hotel Service, P.O. Box 77777, NL-1070 MS, Amsterdam, The Netherlands

Tel: +31 (0)20 549 1927 Fax: +31 (0)20 549 1946/47

Email: hotelservice@rai.nl Online booking form: www.rai.nl/hotelservice

**Please note RAI Hotel & Travel Service cannot be held responsible for any printing errors and/or omissions**

# RAI HOTEL & TRAVEL SERVICE
# HOTEL RESERVATION FORM

intelligent energy 2006
Oil & Gas Production in a Digital Age
11-13 April 2006 PTA, Amsterdam

**INTELLIGENT ENERGY**
**11 – 13 April 2006**

To make a reservation, complete this form and fax to +31 (0)20 549 1946 or e-mail to hotelservice@rai.nl .To make your reservation online please visit www.rai.nl/hotelservice.
For more information about the event please visit : www.ie2006.com

## Personal details

☐ Mr. ☐ Mrs. ☐ Ms. Title: .....

First name: .....

Last name: .....

Company: .....

Address: .....

Postcode: ..... City:.....

Country: .....

Telephone: ..... Fax: .....

E-mail: .....

## Hotel details (please select your hotel from the enclosed hotel list)

Preferred hotel choice: .....

Second hotel choice: .....

Arrival date: ..... Departure date: .....

Number of rooms: ☐ ..... Single ☐ ..... Double

Additional guest names: .....

Special requests: .....

## Terms and conditions

- Notification of cancellations and amendments should always be made to RAI HOTEL & TRAVEL SERVICE directly and can only be accepted in writing. Changes on reservations with arrival in the weekend or on Monday/Tuesday can only be processed if received before Friday 5 pm (CET). Cancellations will be charged with administration costs of EUR 15,00. For cancellations received within 48 hours prior to the arrival date and no shows, the hotel is entitled to charge the first night's room rate.
- On all our reservations the UVH (the Uniform Hotel Conditions) are applicable. These can be sent upon request. A different cancellation and deposit policy is applicable on room reservations (10 rooms or more). We will enclose these conditions with the confirmation.

## Credit card details

All hotel reservations need to be guaranteed by a valid credit card . Guests are responsible for payment of all charges at checkout.

☐ American Express ☐ Diners ☐ Euro/Master ☐ Visa

Credit card number: ..... Expiry date: ..... CVC*: .....

* last 3 digits on the back of the card. Only required for Euro/Master and Visa

I understand the terms and conditions stated above.

Name: ..... Date: ..... Signature of cardholder: .....

**RAI Hotel & Travel Service, P.O. Box 77777, 1070 MS Amsterdam, The Netherlands**
**Tel: +31 (0)20 549 1927 Fax: +31 (0)20 549 1946 E-mail: hotelservice@rai.nl**
**www.rai.nl/hotelservice**

intelligent energy 2006
Oil & Gas Production in a Digital Age
11-13 April 2006 PTA, Amsterdam

# Delegate registration form

**Registration deadline: 31 March 2006**

**Please register online at www.ie2006.com**

Alternatively, mail or fax this form to: Society of Petroleum Engineers, Third Floor, Portland House, 4 Great Portland Street, London W1W 8QJ, UK
Fax: +44 (0)20 7299 3309 Tel: +44 (0)20 7299 3300

For multiple registrations please photocopy this form.

First name: ..... Last / Family name: .....

Company: .....

Address: .....

Town / City: ..... Country: .....

Tel: ..... Fax: .....

E-mail: ..... SPE Membership Number: .....

**REGISTRATION FEE:**

| Please (✓) appropriate box | Registration Type | Date(s) of Attendance (11, 12, 13 April) | Fee (GBP£) | VAT (@ 19%) | Total Payable (GBP£) |
|---|---|---|---|---|---|
| ☐ | SPE Member | Not applicable | 350 | 66.50 | 416.50 |
| ☐ | Non Member | Not applicable | 410 | 77.90 | 487.90 |
| ☐ | Speaker / Chairman / Committee | Not applicable | 320 | 60.80 | 380.80 |
| ☐ | One Day Rate (Member) Please indicate date(s) of attendance: | | 120 | 22.80 | 142.80 |
| ☐ | One Day Rate (Non-member) Please indicate date(s) of attendance: | | 150 | 28.50 | 178.50 |
| ☐ | Exhibition Only | Free of Charge | | | |

A full registration includes all conference sessions, one set of CD ROM Conference Proceedings, luncheon tickets for Tuesday, Wednesday and Thursday; and a Reception ticket for the evening of Tuesday 11 April.

**PAYMENT DETAILS:** Please tick (✓) appropriate box Payment must be made in GB Pound Sterling (£).

**CREDIT CARD PAYMENT** – Type of credit card

☐ MasterCard ☐ Visa ☐ American Express ☐ Diners

Card number: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry date:..... Start Date(Diners only):.....

Signature:.....Security Code ☐☐☐☐
(last 3 or 4 digits found on signature strip of the card)

Important note: to confirm your registration please sign this form.

**CHEQUE OR BANK TRANSFER**

☐ Cheque enclosed, payable to **Society of Petroleum Engineers Ventures**

☐ Bank transfer payment. Barclays Bank, 50 Pall Mall, London SW1A 1QA, UK

Account Name: SPE Ventures a / c no: 10359483; Sort Code: 20-67-59; IBAN: GB10 BARC 2067 5910 3594 83; SWIFTBIC : BARCGB22 Reference: please quote invoice reference and name of delegate

**Please complete this form and return to SPE Office in London - Fax: +44 (0)20 7299 3309**

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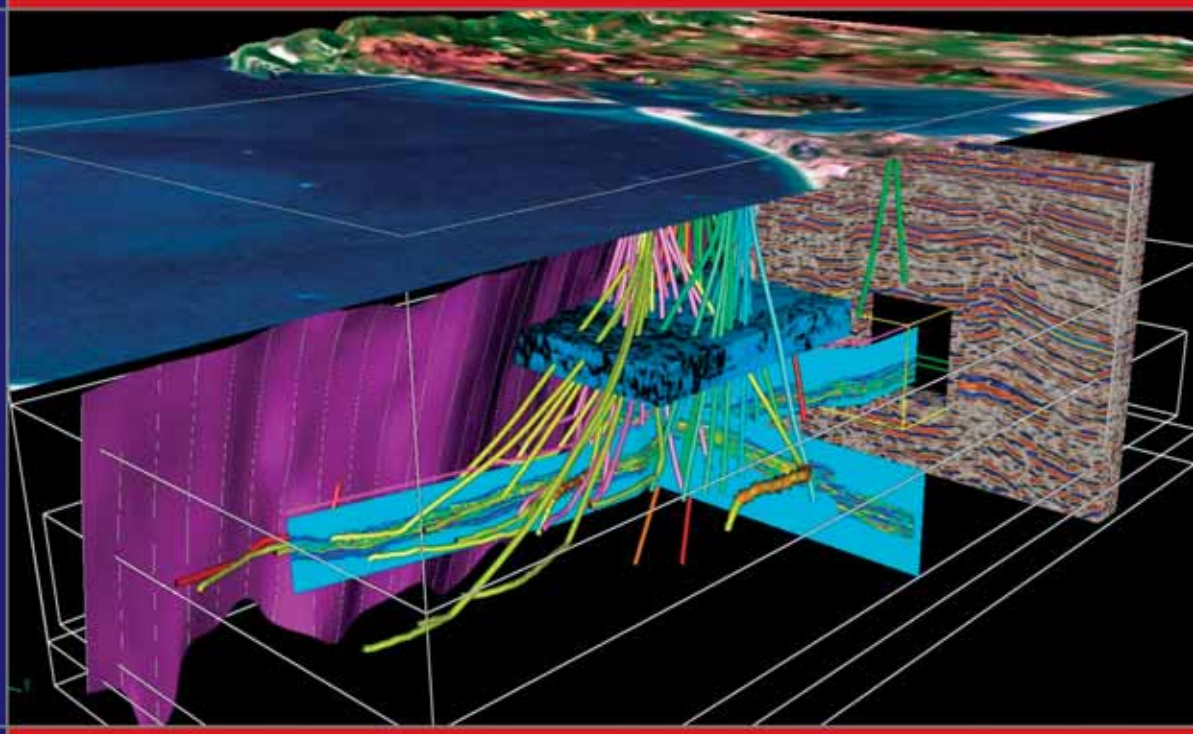


**FOR MORE INFORMATION CONTACT:**

Conference:
**Society of Petroleum Engineers (SPE)**
T: +44 (0)20 7299 3300
F: +44 (0)20 7299 3309
E: lotten@spe.org

Exhibition and Sponsorship:
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F: +44 (0)20 8439 8897
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