TRANSFORMATION –
TIME FOR DECISIVE ACTION

CONFERENCE PREVIEW

www.intelligentenergyevent.com
As companies have implemented intelligent energy initiatives in their organisations, they have transformed themselves along three maturity stages:

**Innovation:** Companies start small scale innovative implementations in an individual asset or region, usually driven by local leadership. In many cases, technology or service companies contribute to these specific successes. These initial successes catch the attention of senior management and companies get organised to move to the next stage. Often the leading asset or region continues to innovate with technology, process, people management and business models, and feeds experiences into the overall corporate programme.

**Adoption at Scale:** In this stage, companies formulate the corporate vision, align the initiatives with the business strategy and raise awareness about the programmes. Executive leadership and support play a huge role in committing the organisation to this transformative process. The proper organisation structure, change management and orchestration mechanisms, are put in place. Employees are trained and several large scale pilots are conducted to develop the standards and guidelines for companywide implementation. New internal and external business models are developed to support the implementations. The technology and service sector gains confidence in the business potential and begins to invest and proactively engage operators.

**Sustainability:** In this stage, companies create value at scale through wide implementation of their intelligent energy initiatives. Assets work in a highly integrated manner and intelligent energy practices become ‘business as usual’, delivering a new level of performance. Business models and organisation capabilities continually improve to deliver sustained value. Various companies, regions and industry segments are at different levels of maturity and are striving towards the sustainability stage of making intelligent energy ‘business as usual’.
On behalf of the Executive Committee, we are delighted to welcome you to the 4th SPE Intelligent Energy Conference.


Today, the energy industry faces one of the most dynamic environments in its history. At the conference in 2010, the industry backdrop was one of depressed commodity prices due to lower hydrocarbon demand and global recession. Now we are in the midst of another up cycle, albeit volatile, and are simultaneously wrestling with a changing geopolitical landscape and significant shifts in the regulatory environment.

We also are living through an era of unprecedented change in technology – especially in the areas of computing, telecommunications, information, and social media. These changes are profoundly affecting the choices of where and how we conduct business, and are allowing us to introduce business models and workflows that can reduce human involvement and accelerate automation of many critical activities.

While it is clear that our industry has started along a path of transformation, it is also clear that we do not yet share a common direction or charter. Operating and service companies developing the world’s resources today are all at very different stages of digital enablement. Many see digital enablement as an intrinsic part of their technological future, but still struggle to articulate the business benefits and make a case for investment and transformation.

In this environment, we have a unique window of opportunity to transform the way we conduct and represent our business – before public opinion or government regulations make those decisions for us.

The 2012 Intelligent Energy Conference will be an important event in this transformation, as we explore what the evolving digital hydrocarbon industry will look like and how we can accelerate the pace of implementation of intelligent solutions. To that end, we have designed the conference to bring early-career staff together with experienced professionals to encourage the debate between “digital natives” and “digital immigrants”. Fueling these discussions are thought-provoking keynote speakers who will emphasise the pace at which the world outside the hydrocarbon industry is changing.

During the conference, we will hear from groups within our own industry who hold the keys to accelerating implementation:

- CEOs and business leaders, who drive the pace of change today
- Early-career professionals, who will own intelligent energy solutions in the years to come
- Asset managers, who, in specific sessions, will highlight the business approach for making intelligent energy solutions work in a sustainable way

Also critical are those whose vision and ability to execute on their goals will make significant impacts on our success:

- CTOs and leading technologists, who will paint what the latest generation of intelligent energy solutions could look like
- NOCs, IOCs and service companies, who will share experiences, technologies and services through an extensive exhibition floor
- Technical presenters, whose papers will highlight examples of value delivery and new opportunities created by intelligent energy technologies

We believe that the collection of speakers, exhibits and papers, promises to deliver the best Intelligent Energy event yet. We look forward to making the most of this special opportunity to take decisive action for intelligent energy by meeting you in the stunning facilities in Utrecht in March.

Sincerely,

Derek Mathieson, President, Products and Technology, Baker Hughes

Edwin Verdonk, Vice President, Subsurface Expertise and Technology Deployment, Royal Dutch Shell

Conference Co-Chairmen
On behalf of the programme committee, it gives me great pleasure to invite you to the 4th International Intelligent Energy Conference, titled ‘Transformation – Time for Decisive Action’.

Our industry faces a number of on-going fundamental challenges. Firstly, the accelerating decline rate of existing reservoirs and the smaller size and complexity of newer ones require increased technology intensity and integration to enhance reservoir understanding, improve production management, and increase recovery. Secondly, operations are ever more challenging as we continue to move to deeper, harsher, or more remote locations. Thirdly, to address the demographic challenges in our industry, a large and more diverse number of employees will be hired into our industry and will need to be trained, deployed and supported.

The industry is constantly looking for means to improve drilling operations, enhance production management and recovery rates, mitigate risks, and improve safety, quality and efficiency. In addition, the industry needs to accelerate the development of people while leveraging knowledge and expertise across the breadth of oil and gas operations.

At the 2006 conference, we looked at technologies and tools to enable intelligent integrated operations. In 2008 we focussed on the process, people and organisational aspects to accelerate implementation. In 2010, excellent examples of value creation from many companies were demonstrated and we better understood the challenges of moving to an ‘adoption at scale’ phase.

In 2012, we will look at the entire transformation cycle, set our vision to achieve the sustainability stage of making intelligent energy ‘business as usual’ in our industry, and understand the decisive actions required to get there.

The number and quality of papers submitted to the 2012 conference has been outstanding and the spread of authors and participating companies is impressive. To provide an additional forum for participants from operations, we have also introduced the concept of discussion sessions on day-2 of the program. In these sessions, we will have short paper presentations followed by a longer discussion with invited participants from field operations and management. We hope you will find these interactive sessions interesting.

Regards,

Sanjay Kanvinde, Global Real Time Manager, Schlumberger Programme Committee Chairperson
THE EXECUTIVE COMMITTEE

Conference Co-Chairperson: Derek Mathieson, Baker Hughes
Conference Co-Chairperson: Edwin Verdonk, Royal Dutch Shell
- Jan Bygdevoll, Norwegian Petroleum Directorate
- Remy Caulier, Halliburton
- Randy Clark, Energistics
- Leo de Best, Shell P&T – Expertise & Deployment
- Xavier Faugeras, Total
- Mike Hauser, Chevron
- David Humphrys, Woodside
- Judson Jacobs, IHS CERA
- Sanjay Kanvinde, Schlumberger
  (Programme Committee Chairperson)
- John Lammas, GE Oil & Gas
- Attilio Pisoni, Schlumberger
- Steve Roberts, BP
- Jon Starkebye, IBM

THE PROGRAMME COMMITTEE

Programme Committee Chairperson: Sanjay Kanvinde, Schlumberger
- Adrian Chapman, IBM
- Maria Claudia Borras, Baker Hughes
- Morten Dalsmo, ABB AS
- Jeff Dickens, BP
- Tofig Dhubaib, Saudi Aramco
- Tony Edwards, Stepchange Global
- Kevin Goy, Schlumberger
- Raphaele Henri-Bally, Total
- Adolfo Henriquez, Petoro AS
- Pieter Kapteijn, Maersk Oil and Gas
- Trond Lilleng, Statoil
- Mark Lochmann, Halliburton
- Mark Miller, Cisco Systems
- Johan Nell, Accenture Energy
- Bart Stafford, Wipro
- Frans van den Berg, Shell
- Amy Zeringue, Chevron Energy Technology Company
## SCHEDULE OF EVENTS – AT A GLANCE

### TUESDAY 27 MARCH 2012: DAY 1

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>0800-1730</td>
<td>Registration Open</td>
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<tr>
<td>0900-1800</td>
<td>Exhibition</td>
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<tr>
<td>0900-1015</td>
<td>Opening Scene-Setter Session</td>
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<td>1015-1045</td>
<td>Coffee and Knowledge Sharing ePoster Session 1</td>
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<tr>
<td>1045-1230</td>
<td>Plenary Session 1: Searching for Identity or Preparing to Meet the Grand Challenges?</td>
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<tr>
<td>1230-1400</td>
<td>Lunch and Knowledge Sharing ePoster Session 2</td>
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<tr>
<td>1400-1730</td>
<td>Technical Session 1</td>
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<td>Technical Session 4</td>
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<td>1530-1600</td>
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### WEDNESDAY 28 MARCH 2012: DAY 2

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<td>0830-1030</td>
<td>Open Discussion Session 1</td>
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<td>1030-1100</td>
<td>Coffee and Knowledge Sharing ePoster Session 4</td>
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<tr>
<td>1100-1245</td>
<td>Plenary Session 2: The Digital Engineer</td>
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<td>1245-1415</td>
<td>Lunch and Knowledge Sharing ePoster Session 5</td>
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<td>Coffee and Knowledge Sharing ePoster Session 6</td>
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<td>1615-1745</td>
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### THURSDAY 29 MARCH 2012: DAY 3

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<td>0900-1630</td>
<td>Exhibition</td>
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<td>Technical Session 11</td>
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<td>0830-1030</td>
<td>Technical Session 12</td>
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<td>1030-1100</td>
<td>Coffee Break and Knowledge Sharing ePoster Session 7</td>
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<td>1245-1345</td>
<td>Lunch and Knowledge Sharing ePoster Session 8</td>
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<td>1345-1545</td>
<td>Technical Session 18</td>
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<tr>
<td>1545-1615</td>
<td>Conference Wrap-Up Session</td>
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</table>
Intelligent energy has come through a somewhat tumultuous incubation phase over the last decade and is now embedded in many parts of our operations, in the way we conduct business and in the technology we use that supports many of our activities. There is a spectrum of maturity levels across our industry, from those still wrestling with adoption to others who are exploring true business innovation in this space. There are still very few standards which have emerged, the learning curve for adoption has not lessened, infrastructure and cultural inertia are still present while technology continues to race ahead.

Many believe we are at an inflection point in the cycle today where decisions need to be taken on what defines the identity of intelligent energy, what catalysts may propel this to a much wider scale adoption and whether we have reached a plateau or the beginning of a much broader journey. In this panel session we will explore the challenges of entering into the adoption cycle while technology continues to diversify, examine what the decision landscape across the sector looks like today and debate what grand challenges for our industry may yet be addressed with this technology.

Speakers:

Facilitator:

Judy Murray,
Editor, Harts Magazine

Gerald Schotman,
CTO, Shell

Satish Pai,
Executive Vice President, Operations, Schlumberger

Dr Nabeel I Afaleg,
Saudi Aramco Manager, Southern Area Reservoir Management

The scene-setting session gives both live and online audiences the opportunity to help shape the future of the digital oilfield by identifying and characterising the tipping point – the decisive action – that will push the industry ahead in its digital transformation.

Using a variety of digital tools and in-person engagements, we’ll examine the following key issues:

- How do we exploit masses of data and computing power to make better decisions with fewer engineers?
- What knowledge can we share to jointly create a smart energy supply chain?
- How do we meet the expectations of the iPhone and YouTube generation?
- How can we better educate the public about our industry?
As we move into the second decade of intelligent energy, it has become obvious the competencies required need to be the technical and IT mix we might call a "digital engineer". As we change the way we operate our business and as the knowledge base continues to shrink across the upstream, a new breed of engineer will need to emerge to meet the challenges ahead. We’ll discuss some of the challenges and mitigations, such as restrictions of today’s processes and mindsets, understanding what is truly possible, designing and developing new methods of enhanced decision-making, automating workflows, and then demonstrating value from integrating those workflows.

We’ll have a few viewpoints offered addressing our needs going forward, then conduct an open panel discussion with Q&A.

**Expectations for Next Generation of Decision Making:**
- Two teams working as one” between field and office
- Network with other locations and organisations to access true experts
- Increase scope and degree of processes managed
- Automatic solution generation based on historic experience
- Rapid-response think tanks to respond to new situations
- Ability to model effect of decisions
- Re-invention of competencies, roles and positions

**What skills do we need to respond to the challenges? ("Digital Engineer")**

Future solutions will require us to change the way we use and relate to information and technology:
- Integrated reservoir and surface facility optimisation
- Real-time data queries for applicable lessons learned
- Smart monitoring and predictive analysis
- Virtual, collaborative communities of expertise for decision making
- Highly mobile access to information
- Simplified, standardised, integrated and highly automated workflows and petrotechnical work environments
- Common data architecture
INTELLIGENT ENERGY IN THE ASSETS:
WHAT’S WORKING FOR YOU TODAY AND WHAT DO YOU NEED TOMORROW?

Business leaders have very practical reasons for deploying intelligent energy concepts and technologies in their oil and gas assets – to address specific operational issues and to capture identified opportunities. This plenary session brings together a panel of senior operations executives to discuss the intelligent energy successes they have achieved (e.g., increased production, improved safety performance, reduced manning), challenges they have encountered, and future needs they foresee based on both broad industry trends and asset-specific factors. Panelists will highlight existing practices that they view to be unsustainable, and how intelligent energy concepts can help either to maintain performance levels in the face of significant operational pressures or to develop resources that would otherwise be technically or economically unfeasible.

Speakers:

Brage Sandstad,
Operations Director,
ConocoPhillips

Jonathan Lewis,
Senior Vice President,
Europe and Sub-Saharan Africa Region,
Halliburton

Steve Cassidy,
Manager, Applied Reservoir Management,
Chevron

Bahjat M. Zayed,
Manager, Southern Area Production Engineering Dept, Saudi Aramco

PLENARY SESSION 3 – THURSDAY 29 MARCH 2012, 1100–1245 HOURS  
ROOM: POLAR

OPEN DISCUSSION SESSIONS

We have a special program on the second day of the conference. Open discussion sessions, where asset managers, operations managers and business leaders who are accountable for delivering on intelligent energy projects will be able to interact via:

- Short focused presentations from selected senior practitioners
- Facilitated discussions with experienced asset and operations managers.
- Q&A and open discussions
- Topics include: Real-Time Operations Centres for Drilling, Evolution of Operations, Maintenance and Facilities Management and Intelligent Energy Programme Design - From Vision to Implementation

WEDNESDAY 28 MARCH 2012, 0830–1030 AND 1415–1745 HOURS  
ROOM: PRINS CLAUS
## TECHNICAL SESSION 1: CREATING VALUE AT SCALE – EXPERIENCES AND FUTURE DIRECTIONS
Tuesday, 27 March, 14:00 to 17:30, Polar Room

**Session Chairpersons:**
Adolfo Henriquez, Adolfo Henriquez Consulting
Sanjay Kanvinde, Schlumberger

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<tr>
<th>Time</th>
<th>Paper Code</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>15:00</td>
<td>SPE-150407</td>
<td>Shell’s Smart Fields - Sustaining and Accelerating Benefits from Intelligent Fields</td>
<td>L. De Best and F.G. Van Den Berg, Shell</td>
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<td>15:30</td>
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<td>Coffee Break</td>
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<tr>
<td>16:00</td>
<td>SPE-150173</td>
<td>Choices, Changes and Challenges: Lessons for the Future Development of the Digital Oilfield</td>
<td>J. Dickens and D. Feineman, BP</td>
</tr>
<tr>
<td>16:30</td>
<td>SPE-150116</td>
<td>Maximising the Value of Intelligent Field: Experience and Prospective</td>
<td>A.H. Althuthali and F.A. Al-Ajmi, Saudi Aramco</td>
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<tr>
<td>17:00</td>
<td>SPE-150099</td>
<td>Evolution and Adoption of a Corporate Strategy for Digital Oilfield Products and Services Within a Service Company</td>
<td>B.E. Haapanen and S.T. Denney, Baker Hughes</td>
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## TECHNICAL SESSION 2: IMPROVING DRILLING PERFORMANCE – 1
Tuesday, 27 March, 14:00 to 17:30, Irene Room

**Session Chairpersons:**
Pieter Kapteijn, Maersk Oil & Gas
Kevin Goy, Schlumberger

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<tr>
<td>14:00</td>
<td>SPE-150208</td>
<td>The Critical Role of Digital Data in a Physics-Based Drilling Performance Workflow</td>
<td>F.E. Dupriest, P.E. Pastusek and M. Prim, ExxonMobil</td>
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<tr>
<td>14:30</td>
<td>SPE-150306</td>
<td>The Overlooked Drilling Hazard: Decision Making From Bad Data</td>
<td>R. Nybø and T. Korsvold, SINTEF; M. Choate, Shell; M.C. Herbert, ConocoPhillips; J. Petersen and J. Freyen, SINTEF; G.W. Halsey, Halsey Consulting</td>
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<tr>
<td>15:00</td>
<td>SPE-149766</td>
<td>Automation in Wellbore Stability Workflows</td>
<td>S. Wessling, A. Bartetzko, J. Pei and T. Dahl, Baker Hughes</td>
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<tr>
<td>16:00</td>
<td>SPE-150114</td>
<td>Implementing New Technology Securing Availability and Quality Real-Time Drilling Data Onshore</td>
<td>T. Halland, D. Solnørdal, L. Hoff and S. Steinsbø Lie, Statoil</td>
</tr>
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## TECHNICAL SESSION 3: CASE STUDIES: DELIVERING A SUSTAINABLE IMPACT ON PRODUCTION
Tuesday, 27 March, 14:00 to 17:30, Spark Room

**Session Chairpersons:**
Mark J. Lochmann, Landmark Graphics Corporation

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<th>Time</th>
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<tbody>
<tr>
<td>14:00</td>
<td>SPE-149612</td>
<td>An Independent Survey of the Uptake of Intelligent Fields: Global Numbers, Facts, Trends</td>
<td>A.P. Leemhuis, J. Veltin and C. Widdershoven, TNO</td>
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<tr>
<td>14:30</td>
<td>SPE-150371</td>
<td>Moving Towards Sustainability: A 5 Year Production Engineering Experience with I-Field</td>
<td>A.A. Dashash and R.M. Al-Zahrani, Saudi Aramco</td>
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<td>15:30</td>
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<tr>
<td>16:00</td>
<td>SPE-150455</td>
<td>Enabling Agile andResponsive Workflow Automation – A Hydraulic Fracture Design Case Study</td>
<td>M.A. Strobel, C. Peres, M. Szatny and G.A. Carvajal, Halliburton</td>
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<tr>
<td>16:30</td>
<td>SPE-149999</td>
<td>Sustaining a Dynamic Revolution: How BP is Growing the Value Delivered From Transient Flow Modelling and Control</td>
<td>P.J. Calvert and P. Griffith, BP</td>
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## TECHNICAL SESSION 4: DEVELOPMENTS IN IT CAPABILITIES
Tuesday, 27 March, 14:00 to 17:30, Prins Claus Room

**Session Chairpersons:**
Mark A Miller, Cisco Systems,
Adrian Chapman, IBM

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<tr>
<td>14:00</td>
<td>SPE-150066</td>
<td>Intelligent Field Infrastructure Adoption: Approach and Best Practices</td>
<td>S.M. Almadi and T. Dhubaib, Saudi Aramco</td>
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<td>14:30</td>
<td>SPE-150220</td>
<td>Leveraging Technology and Support Infrastructure and Experience in Upstream Digital Technology Application</td>
<td>K.E. Killian, C.G. Jones and J.B. Nye, ExxonMobil</td>
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<tr>
<td>15:00</td>
<td>SPE-150284</td>
<td>Transforming Remote Mountain Well Sites into Starbucks</td>
<td>D.A. Barker, Marathon Oil; M.A. Miller, Cisco</td>
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### Technical Session 5: Production Surveillance

**Wednesday, 28 March, 08:30 to 10:30, Polar Room**

**Session Chairpersons:**
- Frans Van Den Berg, Shell
- Raphaelle Henri-Bally, Total

**08:30 SPE-150395**
**Real Time Surveillance for Big Gas Producers: Tangguh Field Experience**
E. Apolianti, O. Ichwan, E. Ksatrianto, F.J. Silitonga, Y. Isawan, D. Feineman, BP

**09:00 SPE-149641**
**Enhancing Production, Reservoir Monitoring, and Joint Venture Development Decisions with a Production Data Center Solution**
A. Sorber, Schlumberger; M. Allen and W. Ajouhaar, Tullow Oil

**09:30 SPE-150061**
**Pre-Salt Production Surveillance – The First Journey Across Processes in Santos Basin**

**10:00 SPE-150071**
**The Future of Surveillance**
M.J. Lochmann, Landmark Graphics

### Technical Session 6: Greenfield Projects

**Wednesday, 28 March, 08:30 to 10:30, Irene Room**

**Session Chairpersons:**
- Trond Lileng, Statoil

**08:30 SPE-150243**
**The Value of Smarter Oil and Gas Fields**
L.S. Edison and I. Bychkova, IBM

**09:00 SPE-150192**
**Seria North Flank: Development and Management of a Smart Field**
I.H. Yong, BSP

**09:30 SPE-150160**
**Skarv and Valhall Re-development: A Journey to the Second Generation of Digital Oilfields**
E. Larsen and P.J. Hocking, BP

**10:30 SPE-148861**
**Decision Support in Long Term Planning of Petroleum Production Fields**
V. Gunnerud, E. Erlingsen, T. Strat and B. Nygreen, NTNU; M. Dueñas Diez, Repsol

### Technical Session 7: Approaches to Metering & Measurements

**Wednesday, 28 March, 08:30 to 10:30, Spark Room**

**Session Chairpersons:**
- Tofig A. Al-Dhubaib, Saudi Aramco
- Maria Claudia Borras, Baker Hughes

**08:30 SPE-150131**
**Innovative Intelligent Technologies Used for Production Optimisation and Infrastructure Integrity Surveillance**
A. Albert and M.S. Rossi, Schlumberger

### Technical Session 8: Case Studies: Production Optimisation at Scale

**Wednesday, 28 March, 14:15 to 17:45, Polar Room**

**Session Chairpersons:**
- Frans Van Den Berg, Shell
- Jim Brink, Chevron

**14:15 SPE-149668**
**Chevron’s Digital Oilfields Solutions and Base Business Processes Maximise Value at McElroy Field, West Texas**
W. Taylor, Chevron

**14:45 SPE-149758**
**Digital Oilfield Implementation in High Pressure High Temperature Sour Gas Environment: Kuwait Oil Company Challenges & Guidelines**
J. Bonilla, Schlumberger; B. Al Qaoud, A.K. Al-Jasmi and Q. Dashii, KOC; Z. Ali, Schlumberger

**15:15 SPE-150127**
**Real-time Optimisation of a Maturing Gas Asset with Production Constraints**
R.V. Linden, TNO

**15:45**
**Coffee Break**

**16:15 SPE-148817**
**Optimisation of Beam Pump Wells Utilising Variable Speed Drives and Remote Monitoring Software**
T. Radzevicius and F.W. Clarke, Santos

**16:45 SPE-150079**
**Managing Fields Using Intelligent Surveillance, Production Optimisation and Collaboration**
F.G. Van Den Berg, Shell; A.F. Mabian, Salym Petroleum; R. Knappe, E. Van Donkelaar and F. Fertaaan, Shell; R.L. Lameda, SAIC

**17:15 SPE-150369**
**Production Gain and Optimisation Through the Implementation of the Highest Smart Completion in Saudi Aramco, Case Study**
F.M. Al-Dossary, R.S. Al-Anazi, H. Qahtani, K. Mei and A.A. Balto, Saudi Aramco
TECHNICAL SESSION 9: DATA STANDARDS – NEW DEVELOPMENTS AND IMPLEMENTATIONS
Wednesday, 28 March, 14:15 to 17:45, Irene Room

Session Chairpersons:
Raphaele Henri-Bally, Total
Mark A Miller, Cisco Systems

14:15 SPE-150382
A WITSML Enabled Workflow for Integrating Offset Well Drilling Risks and Events into Well Planning and Execution
N.R. Deeks, Y.I. Arevalo and A.J. Fernandes, Schlumberger

14:45 SPE-150278
WITSML: Laying the Foundation for Increasing Efficiency of Intelligent Wellsite Communications

15:15 SPE-150057
Integrating WITSML, PRODML & RESQML for Cross-domain Workflows
W. McKenzie, Chevron; J. Rainaud, IFP; L. Deny, Paradigm

15:45 Coffee Break

16:15 SPE-149959
A Data Architecture Foundation for the Digital Oil Field
R. Cramer and J. Krebbers, Shell; P. Duncan, MicroSeismic; E. Van Oort, A.P. Lanson and R. Baird, Shell

16:45 SPE-149619
Saudi Aramco Intelligent Field Data Exchange Experience Using PRODML: Case Study
R.S. Suhaibani, N. Nasser and H. Muhawis, Saudi Aramco

17:15 SPE-150426
Interoperability: A Paradigm Change
J. Favilla and R. Montgomery, IBM

TECHNICAL SESSION 10: PEOPLE & PROCESS
Wednesday, 28 March, 14:15 to 17:45, Spark Room

Session Chairpersons:
Johan Nell, Accenture
Morten Dalsmo, ABB

14:15 SPE-150070
Transformation and Change in Oil and Gas Production
S. Sama Rubio, Halliburton; M.J. Lochmann, Landmark Graphics; L.E. Denver, Knowledge Reservoir

14:45 SPE-150233
Challenges in Managing People to Implement an Integrated Operations System: A Petrobras Case Study in an Operational Unit of Exploration and Production
C.A. Siqueira, V. Cunha, V. Cunha, R.B. Meneghelli, F.A. Barreto, E. Sesma and R.C. Simes, Petrobras

15:15 SPE-149940
The Missing Pieces of the Intelligent Energy Puzzle – The People Effect
J. Nell, Accenture

15:45 Coffee Break

OPEN DISCUSSION SESSION 2: APPLICATIONS IN OPERATIONS, MAINTENANCE AND FACILITIES MANAGEMENT
Wednesday, 28 March, 14:15 to 15:45, Pins Claus Room

Session Chairpersons:
Tony Edwards, Stepchange

SPE-150150
Automation of Safety Valve Travel Timing and Equipment Running Hours Tracking Delivers Business Value in the Caspian

SPE-150428
Managing Operational Events in Real-time: From Smart to Smarter
F. Khan, B. Testard, J. Boero-Rollo and E. Verbrugge, Total

SPE-150149
The Combination of Dynamic and Static Technical-Workflow Automation Provides Added Operational Value
M. Szatny, Halliburton; A. Van Der Velden, Dassault Systemes

SPE-150239
Real Time Expert Search and Collaboration in Plant / Field Operations
A. Acharya, I. Bychkova, S.K. Iyer and S. Karnati, IBM

OPEN DISCUSSION SESSION 3: PROGRAMME DESIGN – FROM VISION TO IMPLEMENTATION
Wednesday, 28 March, 16:15 to 17:45, Pins Claus Room

Session Chairpersons:
Adolfo Henriquez, Adolfo Henriquez Consulting
R. Scot Buell, Base Business Manager, Southern Africa Strategic Business Unit, Chevron

SPE-149799
The Benefits of Implementing DOF on an Enterprise Scale
B. Stafford, Wipro; D. Di Renzo, Eni

SPE-149957
A Measure of the Digital Oil Field Status – Is it the Beginning of the End, or the End of the Beginning?
R. Cramer, Shell; K. Mueller, PDO; R. Tulalian and D. Gobel, Shell

SPE-150219
A Perspective for a National Oil Company to Transition from Traditional Organisational Management to a Digital Culture
I. Ershaghi, USC; A. Al-Abbassi, KOC

TECHNICAL CONFERENCE PROGRAMME

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TECHNICAL SESSION 11: NEW SENSORS AND MEASUREMENTS
Thursday, 29 March, 08:30 to 10:30, Polar Room

Session Chairpersons:
Jeff Dickens, BP Exploration
Kevin Goy, Schlumberger

08:30 SPE-150203
Optical Fibers: The Neurons for Future Intelligent Wells
J.V. Koelman and J.L. Lopez, Shell

09:00 SPE-149602
Distributed Acoustic Sensing – A New Way of Listening to Your Well/Reservoir
K. Johannessen, Statoil; M. Farhadiroushan, Silixa; B.K. Drakeley, Weatherford

09:30 SPE-150215
Continuous Monitoring of Thermal EOR at Schoonebeek for Intelligent Reservoir Management
J.C. Hornman, J. Van Popta, C. Didraga and J.L. Lopez, Shell; H. Dijkerman, NAM

10:00 SPE-150130
Deployment of a Pre-packaged Holistic Workflow for Waterflood Management and Pattern Optimisation
R.W. Holy and A. Howell, Schlumberger

TECHNICAL SESSION 12: IMPROVING DRILLING PERFORMANCE – 2
Thursday, 29 March, 08:30 to 10:30, Irene Room

Session Chairpersons:
Amy Zeringue, Chevron
Trond Lilleng, Statoil

08:30 SPE-150439
Real Time Integrated Fluids Monitoring and Analysis
T. Stock and T.H. Fossdal, M-I SwACO

09:00 SPE-150434
Real-time “Listening to an Intelligent Well” While Drilling
J. Crenshaw and D.M. Hannegan, Weatherford

09:30 SPE-149801
Real-time Drilling Parameter Optimisation System Increases ROP by Predicting/Managing Bit Wear
Y.K. Gidh, H. Ibrahim and A. Purwanto, Schlumberger

10:00 SPE-150370
Getting the Most Out of Networked Drillstrings
R. Nyba and J. Petersen, SINTEF; T.A. Jackson, NOV

TECHNICAL SESSION 13: LEARNING FROM OTHER INDUSTRIES
Thursday, 29 March, 08:30 to 10:30, Spark Room

Session Chairpersons:
Morten Dalsmo, ABB
Tony Edwards, Stepchange

08:30 SPE-150241
Modular Procedure Automation Innovation for Upstream Processes
S. Lazok and M.J. Wilkins, Yokogawa Corp.

09:00 SPE-150152
Intelligent Energy and Other Industries – Lessons Learned
M.J. Lochmann, Landmark Graphics; M. Stratham, Aspen Technology

09:30 SPE-150431
A Stack and Capabilities Approach to Investigate Integrated Operations across Different Industrial Sectors – O&G Industry versus Aviation, Military and Medicine
S. Larsen, NTNU; A.N. Nystad, RC Gruppen; V. Gunnerud, NTNU; K. Bjørkevoll, SINTEF; A.K. Gibson, PDD

TECHNICAL SESSION 14: HEALTH, SAFETY AND ENVIRONMENT
Thursday, 29 March, 08:30 to 10:30, Prins Claus Room

Session Chairpersons:
Maria Borras, Baker Hughes
Bart Stafford, Wipro

08:30 SPE-150433
Realising the Full Potential of the Safety Case through Use of the Latest Information Technology
D. Botwinick and J. Goddard, ERM

09:00 SPE-150108
Using Digital Oilfield Principles to Enhance Safety
S. Heckbert and M. Quick, Chevron

09:30 SPE-150054
Integrated Environmental Monitoring in Daily Operations
V. Hepsoe, M. Late, G. Gramvik, S. Johnsen and I. Nilssen, Statoil

10:00 SPE-150380
Virtual Worlds-based Immersive Training Simulators for Accelerating Safe Operation Start-up
M.H. De Buyl and F. Lagae, VRcontext

TECHNICAL SESSION 15: SMART WELLS
Thursday, 29 March, 13:45 to 15:45, Polar Room

Session Chairpersons:
Pieter Kapteijn, Maersk Oil

13:45 SPE-150408
Evaluating the Performance of Intelligent Completions
V. Yadav, RGCE

14:15 SPE-150199
Review, Analysis and Comparison of Intelligent Well Downhole Monitoring Systems
K.M. Muradov, Heriot-Watt U.; M.P. Da Silva Jr, Petrobras; D.R. Davies, Heriot-Watt U.

14:45 SPE-148823
Intelligent Optimisation Strategy Using Smart Completions for Managing Multiple Reservoir Pressures in One Offshore Platform
Y.A. Wang, P. Warren and H. Mana, Saudi Aramco

15:30 SPE-150096
Closed-looped Feedback Control for Production Optimisation of Intelligent Wells and Uncertainty
F.A. Dilib and M.D. Jackson, Imperial College

TECHNICAL SESSION 16: PREDICTIVE ANALYTICS & ARTIFICIAL INTELLIGENCE
Thursday, 29 March, 13:45 to 15:45, Irene Room

Session Chairpersons:
Tofig Al-Dhubaib, Saudi Aramco
Jeff Dickens, BP Exploration

13:45 SPE-150234
Predictive Asset Management
I. Bychkova and E. Kingsley, IBM

14:15 SPE-150285
Decision Support and Workflow Automation for the Development and Management of Hydrocarbon Assets Using Multi-Agent Systems
A. El-Bakry, M.L. Crawford, B. Holloway, C. Knight, H.L. Morehead and M.C. Romer, ExxonMobil
14:45 SPE-149594 Production Monitoring Using Artificial Intelligence
G.J. Olivares Velazquez, Pemex; E.R. Gimenez and C.J. Escalona Quintero, Schlumberger

15:15 SPE-150389 Efficient Real-time Reservoir Management: Model Identification Using Neural Networks
S. Purwar, Halliburton; A. Awasthi, BHP Billiton; S. Sankaran, Halliburton

TECHNICAL SESSION 17: COLLABORATION
Thursday, 29 March, 13:45 to 15:45, Spark Room

Session Chairpersons:
Mark J. Lochmann, Landmark Graphics
Amy Zeringue, Chevron

13:45 SPE-150440 A Journey towards a Fully Collaborative Organisation
A.R. Edwards, Stepchange; A. South, S. Benn and S.J. Carnell, Santos

14:15 SPE-150016 Collaboration as a Cornerstone of Intelligent Energy: How Collaboration is Fundamental to Accelerate and Support IE Success
H. Gilman and M. Kuhn, SAIC

14:45 SPE-150142 Innovative Work Scheme: Real Time Collaboration During Well Test Operations

15:15 SPE-150112 4 Years of Eye-to-Eye Connectivity – the Success of Azerbaijan’s Advanced Collaboration
O. Ibrahimzade, D. Overton and K. Moore-Cernoch, BP

TECHNICAL SESSION 18: CHANGE MANAGEMENT
Thursday, 29 March, 13:45 to 15:45, Prins Claus Room

Session Chairpersons:
Adrian Chapman, IBM
Johan Nell, Accenture

13:45 SPE-150235 Smart Oil and the Extended Enterprise
I. Bychkova and P. Forbes, IBM

14:15 SPE-150095 Transforming IT to Sustain and Support Real-time Operations Globally
M. Cavalcanti, R. Harris, J. Patterson and S. Lehn herr, Schlumberger

14:45 SPE-150453 Building Capacity for Innovation – A Drilling Contractors Approach to Continuous Change Management
M. Eike, KOMS

15:15 SPE-150409 Breaking the Technology Focus, Realising the True Value of Real-time
A.W. Gag, K. Gray and M.I. Anderson, Schlumberger; A. Lebdiri, Sonatrach
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<td>Are We Poor at Explaining Things?</td>
<td>K. Jeffery, Digital Energy Journal</td>
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<td>Protection of Petroleum Industry from Hackers by Monitoring and Controlling SCADA System</td>
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<td>Upstream Situational Awareness – Comprehensive Events Based Surveillance Solution</td>
<td>R.A. Archer, M. LeBlanc, J.O. Reed and J. Reichardt, Knowledge Reservoir</td>
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<td>Optimising the ROI of Digital Technologies in Production Operations</td>
<td>A. Prakash and A. Bansal, Infosys</td>
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<td>Integrating Mathematical Optimisation and Decision Making in Intelligent Fields</td>
<td>D. Echeverria-Ciaurri, A. Conn and U.T. Mello, IBM; J.E. Onwunalu, BP</td>
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<td>Oilfield Data Mining Workflows for Robust Reservoir Characterisation</td>
<td>K.R. Holdaway, SAS Institute</td>
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<td>Lessons and Insights from Unexpected Places</td>
<td>J. Davidson, Halliburton; M.J. Lochmann, Landmark Graphics</td>
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<td>Improving Oil and Gas Installation Safety through Visualisation of Risk Factors</td>
<td>A. Braseth and S. Sarshar, IFE</td>
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<td>SPE-150013</td>
<td>Cableless Technologies: Optimisation of Obtaining Reservoir Pressure and Temperature in Real Time Fashion Articulates Real-time Monitoring</td>
<td>K.S. Al-Yateem, E.S. Azizi, K.I. Omairen and N.A. Amri, Saudi Aramco</td>
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<td>SPE-150053</td>
<td>Reducing Production Losses from Rotating Equipment Using a Standardised Approach Across Multiple Assets</td>
<td>G.J. Hickey, P.J. Hocking, B.R. Gamblin and B. Grange, BP</td>
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<td>Real-time Drilling Engineering: Hydraulics and T&amp;D Modelling for Predictive Interpretation While Drilling</td>
<td>R.J. Borjas, Schlumberger</td>
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<td>Real-time Prediction and Avoidance of Pack-offs and Other Off-bottom Events While Drilling</td>
<td>R.W. Brooks, N. Zhao, A. Mahoney and J.G. Wilson, PPCL</td>
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<td>Controlling Sand using Downhole Monitoring in an Aging Field</td>
<td>J. Thilagalingam, N. Md Sharif and M.B. Jadjid, Petronas</td>
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<td>Temperature Transient Analysis in a Horizontal, Multi-zone, Intelligent Well</td>
<td>K.M. Muradov and D.R. Davies, Heriot-Watt U.</td>
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<td>Connecting a Global Digital Oilfield Community through a Collaboration Platform</td>
<td>S. Coppock, SAIC; A.O. Simonato, Chevron</td>
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<td>Methodology for Overcoming Bottlenecks Leading to a Successful implementation of a Collaborative Working Environment</td>
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**EVENT INFORMATION**

**TRAVEL INFORMATION**

**BY AIR**

You can reach Utrecht from Amsterdam Schiphol Airport by car or public transport in less than 30 minutes. Schiphol Airport is one of the world’s biggest airports and offers passengers a high standard of service.

**BY TRAIN**

It is very convenient to get to Utrecht by using the international train network. The Jaarbeurs Centre is a 10 minute walk from the Central Station. Utrecht has regular daily international trains from Brussels (2.5 hrs), Cologne (2.5 hrs), Paris (4 hrs) and other cities.

**BY CAR**

If visitors prefer to drive, the A2, A12, A27 and A28 all lead to Utrecht. It is very easy to get onto these highways from almost all European cities. The Jaarbeurs Centre has parking for 6500.

**CONFERENCE HOTELS & VISAS**

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<th>Hotel</th>
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<td>Grand Hotel Karel V *****</td>
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[Map of Utrecht and surrounding areas]
Admission to the exhibition is FREE for all visitors and delegates

The SPE Intelligent Energy Exhibition is taking place alongside the Conference. The Exhibition has already attracted 44 companies including IOC’s NOC’s, service companies, contractors and suppliers from associated industries specialising in delivering solutions to the industry.

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Exhibition
Free of charge to attend for visitors

CONFERENCE

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