

**Ministry of Oil & Gas**

Under the patronage of H.E. Dr. Mohammed Saif Al Rumhi, Minister of Oil & Gas

# Third International Digital Oilfield Conference

## Best Practice for Design and Implementation of DOF



**September 23-25, 2012**  
**Crowne Plaza Hotel, Muscat, Oman**

### Programmes & Registration

**IDOC 2012**  
International Digital Oilfield Conference

Hosted by



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# Third International Digital Oilfield Conference

## Best Practice for Design and Implementation of DOF

### OVERVIEW

Meeting production targets is a continuous challenge, and many components of a field operation have the capacity to significantly impact the economic success of an asset. Fast and easy access to reliable information is critical to enable engineers and management to make the right decisions at the right time to meet both operational and longer-term strategic objectives. This is the case whether onshore or offshore and in conventional or unconventional fields. IOCs and NOCs are therefore continuing to employ Digital Oil Field (DOF) policies in their green and brown field business planning.

At the end of 2011, one leading IOC estimated it had incrementally increased production levels by 78,000 net boe/d directly as a result of their DOF programme. Key features of their programme included reducing operational risk, automating routine tasks, optimising production, and continuously improving. Technologies that were implemented included real-time tools for monitoring facilities and predicting failure to enable proactive maintenance.

DOF exploitation is gaining significant interest in the Middle East and since the inaugural Conference of 2010 held in Abu Dhabi in association with ADNOC, it has always been the Advisory Committee's intention to organise future IDOC events in various DOF centres of interest around the Gulf. They are therefore delighted that IDOC 2012 will be held in Muscat where PDO is continuing to make considerable headway in the ongoing development of their Smart Field Programme which is key to the optimal management of their growing number of wells and equipment. By 2013, 21 of PDO's biggest fields which contribute 80% of their output will operate on Smart Field Technology principles.

Also Saudi Aramco have implemented this approach in integrating real time data in their upstream business processes. They have successfully demonstrated the enhanced value in these experiences from the methodology of integrating relevant technologies, people and processes. For example, in their Khurais Field, immediately adjacent to the world's largest oil field, Ghawar, Saudi Aramco can see field pressures changing using sensors in the wells and in turn monitor the connectivity in the field.

Within the UAE there are significant ongoing DOF programmes. Plans within ADCO and ADMA-OPCO are in place to operate Smart Field technology within a number of fields over the next three years.

KOC have a plan to identify, select and implement new technologies thus creating a total technology integration cycle with the main focus of this cycle to develop oilfields using smart field approaches. KOC have launched three major pilot projects that demonstrate the benefits of DOF.

Intelligent Reservoir Completion Technology has recently been successfully employed in Qatar's Al Shaheen Oilfield as they begin to herald in their DOF intentions and QP are using the latest smart technology to help improve recovery from three mature oilfields.

Thus it can be seen that great strides in DOF usage are taking place in this region.

PDO have very kindly offered to host IDOC 2012 and the Advisory Committee have created a conference programme that will focus on:

**WHY DO DOF** – This session will have an in-depth look at what the end-users feel the value creation is for DOF.

**INSTRUMENTATION & AUTOMATION** – Topics within this session include Unmanned Operations, Remote Monitoring, Closed Loops and Networks & Architecture.

**DATA MANAGEMENT & WORKFLOW AUTOMATION** – The intent of this session is to explore the current challenges, and educate and inform the attendees on solutions to the problems, both from a technology and a human factors / culture perspective.

**COMMUNICATIONS & COLLABORATION** – This session addresses the challenges of ensuring that information is communicated to the relevant staff so they can work together to reach the optimal decision.

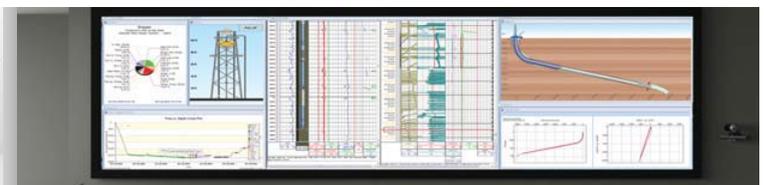
**SMART TECHNOLOGY** – This session will focus on smart technologies that are a key enabler to improve health and safety of our operations, and help to minimise the environmental impact of oil and gas production.

**CHANGE MANAGEMENT** – Effective Change Management is at the very core of any successful implementation of DOF projects or programmes, and presentations will highlight this.

**THE FUTURE OF DOF** – This panel session will indicate how DOF initiatives can have positive influences across organisational boundaries of the business and how to improve DOF co-existence with other programmes and initiatives that may be running in parallel and will converge together to benefit all.

### ADVISORY COMMITTEE

Khamis Al Busaidi	PDO
Salim Al Busaidi	PDO
Matthew Kirkman	ADMA-OPCO
Simon Jakeman	ADCO
Klaus Muller	Shell
Dan McLean	Weatherford
Paul Carthy	Halliburton
Mark Deutekom	Wipro
Jay Manouchehri	Honeywell
Andrew Dennant	Emerson
Zaid Al Siyabi	Ministry of Oil & Gas, Oman
Rolf van Kleef	QP
Mustafa Ramadan	Microsoft
Ali Jama	Schlumberger
Tony Edwards	StepChange Global
Matt Regan	Kongsberg
Abid Alshamat	Kongsberg
Sajid Qayyum	SPT
Ruslan Timoshenko	Lukoil
Mohamed Al Mughairi	Daleel Petroleum



# PRE-CONFERENCE WORKSHOP – Understanding ICT Issues for DOF Optimisation

## Workshop Moderator:

Mohamed Al Mughairi, Daleel Petroleum

### INTRODUCTION

While striving to realise the proposed value of DOF, the continual development and deployment of new technologies will place an enormous burden on IT to facilitate the rapid and real time introduction of its model while maintaining a cost effective and agile position. In order to do this, an integrated and holistic approach to Asset Management must be based on a platform that facilitates common data, standards and processes and real time information flows.

Alongside this, networks and telecommunications, particularly wireless scenarios that bring about fast data and data exchange, must reliably facilitate the conversion of data into information. Here comprehensive integration is required to get to right time information and enable meaningful collaboration and the vital human factor when incorporating new technologies and new software. Whereas video communications between corporate and field locations serve as a key money saver, if the data is not processed properly or computer overload occurs, the opposite effect can occur.

**Information and Communications Technology (ICT)** is at the heart of successful DOF implementation. With most fields there are many datasets and each member of an asset team needs easy access to this data in real time to contribute to an overall strategy to improve and increase field production.

Combining the different data streams and allowing operators to access it on a single platform is the current next step in streamlining the E&P sector at a time when staff shortages contribute to the lack of critical skills deficit in the sector.

Thus a united communications infrastructure for the entire enterprise delivers several potential benefits and improved processes. By having a single network and embracing industry data-exchange standards, O&G companies can ensure that the right data is delivered to the right individual at the right time, enabling better-informed decisions. Individuals located either in the field or onshore will be able to access the corporate network via mobile devices, with access to the same information and resources as they would have in their corporate office.

A major impediment to DOF has been a concern about the security of highly confidential data streams in a shared network. A unique approach is to drive security into the fundamental level of the network in order to manage and aggregate traffic, secure data and allow for faster response to threats in real time, which is crucial in the E&P sector.



### WORKSHOP PROGRAMME

Hence a series of practical presentations and subsequent debate will serve to guide participants on the following critical aspects in bringing about a successful DOF policy:

- **COMMUNICATIONS: FORMAT, INFRASTRUCTURE AND APPLICATIONS**
- **ICT NEEDED TO FACILITATE INTEGRATED OPERATIONS**
- **ADOPTION OF NEW WORKING PRACTICES AND COLLABORATION TOOLS**
- **DATA MANAGEMENT IN REAL TIME AND THE HUMAN FACTOR**
- **ICT GOVERNANCE AND CONTROL FOR DATA MANAGEMENT**
- **DATA STORAGE AND ITS OPTIMUM LOCATION**
- **OPTIMISING DOF SECURITY**

Presentations to illustrate these areas of concern and to generate the discussion will be forthcoming from:

- **PDO**
- **ADCO**
- **Emerson**
- **PA Consulting**
- **Ministry of Oil & Gas**
- **Redline Communications**
- **and CISCO, among others.**



### WORKSHOP PROCEDURES

This workshop will follow similar formats elsewhere with selected presentations that will be followed by open discussion and the workshop will be closed to the media.

- Workshop Proceedings will not be published.
- New ideas, and interesting projects are sought.
- Note-taking by delegates is encouraged. However, to ensure free and open discussions, no formal records will be kept.
- The Organisers will prepare a full report containing the highlights of the Workshop discussions to be sent to all delegates after the event.
- All delegates will receive an attendance certificate confirming their participation at the Workshop.

# IDOC 2012 CONFERENCE PROGRAMME

**Sunday, September 23**

**18.00** Pre Conference Registration

**WELCOME RECEPTION**

Sponsored by:



**Monday, September 24**

**07.00** Registration

**08.00 OFFICIAL OPENING OF IDOC 2012 CONFERENCE  
Ministry of Oil & Gas, Oman**



**Session A –  
WHY DO 'DOF'**

This session provides an in-depth look at what the end-users feel the value creation is for DOF. Questions that will be addressed are: How are DOF programs initiated, funded, and executed within an organisation? How are the results of any DOF measured within an E&P organisation? How many DOF projects have resulted in the initial justification benefits being achieved and sustained? What business motivations are behind DOF implementations? What prevents organisations from embracing DOF? What are the challenges to overcome from the implementation of DOF?

Chair: **Dan McLean, Weatherford, UAE**

**08.20 THE DIGITAL OIL FIELD – A MUST FOR OUR  
LICENSE TO OPERATE**

**Klaus Muller, Shell, Oman**

**WHERE PDO IS HEADING WITH ITS AMBITIOUS  
SMART FIELDS PROGRAM**

**Khamis Al Busaidi, PDO, Oman**

**09.30** Refreshments & Exhibition

**10.00 INTEGRATED OPERATIONS IN STATOIL – BUSINESS  
MOTIVATION AND BENEFITS**

**Trond Lilleng, Statoil, Norway**

**THE FUTURE CONCEPTS IN THE DIGITAL OIL FIELD**

**Pieter Kapteijn, Maersk Oil, Denmark**

**SPEAKERS PANEL – Session A**

**Session B –  
INSTRUMENTATION & AUTOMATION**

This session will explore problems that operators face that can be solved using automation. These problems will not just be transactional in nature but also extend into the ways that technology can enhance ease of use and enable collaboration. Topics within this session include unmanned operations, closed loops and networks & architecture. The speakers will explore the characteristics of successful automation projects that enabled facilities to be de-manned. These typically include the ability for the automation equipment to detect and diagnose an error in real time, before sending the diagnosis to a collaboration centre where it can be investigated and evaluated.

Chair: **Andrew Dennant, Emerson, UAE**

**11.30 CROSS-INDUSTRY PERSPECTIVES ON REMOTE  
MONITORING, OPERATION, CONTROL AND  
COLLABORATION**

**Sujatha Kumar, Honeywell Process Solutions, USA**

**HOW SMART WIRELESS CENTRES CAN  
REVOLUTIONISE O&G REMOTE MONITORING**

**Salim Al Hinai, PDO, Oman**

**INTELLIGENT DEVICES AND DECISION MAKING**

**Andrew Dennant**

**SPEAKERS PANEL – Session B**

**13.00** Luncheon

Sponsored by: **HALLIBURTON**



## Monday, September 24

### Session C – DATA MANAGEMENT & WORKFLOW AUTOMATION

The intent of this session is to explore the current challenges, and educate and inform the attendees on solutions to the problems, both from a technology, and a human factors / cultural perspective. The session will do this exploring the impact of the Digital Oilfield on both well data and facility data, and the associated workflows which in some cases are now being digitally orchestrated, and the visualisation of that data as Management Information.

Chair: **Matthew Kirkman, ADMA-OPCO, UAE**

#### 14.30 LIFE CYCLE SIMULATION – FROM CONCEPT TO COMMISSIONING... AND BEYOND

**Shane McArdle, Kongsberg, Norway**

#### TOWARDS AN AUTOMATED AND STREAMLINED WELL TEST VALIDATION & WELL PERFORMANCE REVIEW

**Salim Al Busaidi, PDO, Oman**

15.40 Refreshments & Exhibition

#### 16.10 INTERACTIVE DIGITAL OILFIELD USER EXPERIENCE USING MICROSOFT'S SHAREPOINT PORTAL SERVER

**Mustafa Ramadan, Microsoft, UAE**

#### STRUCTURED DATA MANAGEMENT CHALLENGES FOR O & G OPERATIONS

**Hammad Mohamed, Schlumberger, UAE**

#### SPEAKERS PANEL – Session C

17.45 End of Day 1

#### 19.30 GALA DINNER

Sponsored by:



## Tuesday, September 25

### Session D – COMMUNICATIONS & COLLABORATION

A 'Digital Oil Field' requires seamless communications and collaboration between disciplines and across locations. This session will address the design aspects and technology developments which are now affecting our ability to share and collaborate. It will focus on real examples from the Region and illustrate the factors which can influence office layout and the improvements in collaboration and visualisation technologies which have resulted in greater acceptance from end-user communities. For many companies collaborative working has now moved beyond the 'nice-to-have' phase and forms a critical part of their mode of operation. Teams now admit that they suffer if there's a systems failure! Unfortunately the wider sharing of information can increase the exposure to cyber-attacks. The session will highlight these security challenges and provide steers on managing the threats.

Chair: **Simon Jakeman, ADCO, UAE**

#### 08.00 THE DESIGN ASPECTS OF COLLABORATIVE WORKING?

**Bahir Al-Azawi, ADCO, UAE**

#### BUILDING COLLABORATIVE WORK ENVIRONMENTS IN THE O&G INDUSTRY

**Eyad Alquadi, CISCO, UAE**

09.10 Refreshments & Exhibition

#### 09.35 VISUAL COLLABORATION – THE CONVERGENCE OF TECHNOLOGIES IN OIL & GAS

**Gilbert Soufan, Cyviz, UAE**

#### APPLICATION OF TECHNOLOGY IN A FULLY INTEGRATED DIGITAL OILFIELD INFRASTRUCTURE: KOC'S INTEGRATED DIGITAL FIELDS BURGAN PILOT PROJECT

**David Joy, Weatherford, USA**

#### ADDRESSING THE CYBER SECURITY CHALLENGES OF DIGITAL OIL FIELDS

**Justin Lowe, PA Consulting, UK**

#### SPEAKERS PANEL – Session D



**Tuesday, September 25**

**Session E – SMART TECHNOLOGY FOR IMPROVED HSE**

Technologies, like the mobile worker, which is an extension of the CWE right into the field, provide advanced communication, and continuously monitor people's well being which is particularly important in hostile environments like sour hydrocarbon operations. Other technologies like Gas Breakthrough Control not only enable operators to increase production, but drastically reduce flaring and compressor maintenance, resulting in a reduced CO2 footprint, lower OPEX and a reduced exposure to site and road traffic accidents. Advances in leak detection play an important role in improving asset integrity and environmental management in both on and offshore production operations.

Chair: **Clement Edwards, Shell, Oman**

**11.45 THE MISSING LINK – HOW THE SMART MOBILE WORKER CONCEPT BRIDGES THE LAST GAP AND EXTENDS THE COLLABORATIVE WORKING ENVIRONMENT RIGHT TO THE COAL FACE**

**Basil Elzein, Shell, UAE**

**PDO'S SOLUTION TO THE CONTROL OF UNSTABLE GOGD WELLS**

**A Senior Representative, PDO, Oman**

**EXTENDED USE OF DYNAMIC PROCESS SIMULATION IN OIL PRODUCTION**

**Shane McArdle**

**SPEAKERS PANEL – Session E**

**13.15 Luncheon**



Conference Proceedings sponsored by **Honeywell**

**Session F – CHANGE MANAGEMENT**

Effective Change Management (CM) is at the very core of any successful implementation of DOF programmes. Presentations will focus on the following topics: Building strong business cases, monitoring assumptions, risks, and cultural issues affecting the implementation of DOF projects; Effective marketing and communication to all involved stakeholders with the reason for change, the benefits of successful implementation and the details of change; The delivery of integrated training for all DOF components (people, technology, processes).

Chair: **Khamis Al Busaidi, PDO**

**14.30 CREATING DYNAMIC TEAMS IN A CHANGE ENVIRONMENT**

**Richard Stace, Wipro, UAE**

**HOW PDO IS ADDRESSING THE CULTURAL CHALLENGES OF THE DIGITAL OILFIELD CHANGE IMPERATIVE**

**Jasim Al Ajmi, PDO, Oman**

**16.00 Refreshments & Exhibition**

**Session G – PANEL SESSION – THE FUTURE OF DOF IN O&G**

The intent is to discuss and demonstrate how DOF initiatives can have positive influences across organisational boundaries of the business. The main themes of the session will be: How to improve DOF co-existence with other programmes and initiatives that may be running in parallel and at some stage will converge and dovetail together; Today's challenges, gaps, inefficiencies and obstacles to a successful Digital Oilfield programme have both technical and cultural aspects and what lies around the corner in the ongoing developments for DOF.

Chair: **Tony Milan, Wipro, USA**

**16.25 DOF IN THE FUTURE**

**Tony Edwards, StepChange Global, UK**

Panelists:

**Pieter Kapteijn,**

**Bart Stafford, Wipro USA**

**Trude Sundset, Statoil, Norway**

**plus other invited participants**

**17.45 CONFERENCE CONCLUDES**

# BUSINESS DEVELOPMENT

The attendees are drawn from senior technical management, engineers and engineering staff. This event is focused on the benefits and implementation of DOF in the Middle East. Given recent developments, the Organisers are expecting an attendance figure to reflect these DOF programmes and have made plans to cater for some 200 delegates worldwide.

## SPONSORSHIP

### Key benefits for Sponsors of IDOC 2012

- Given the support and patronage of the Minister of Oil & Gas, exclusive access to the key decision makers who significantly influence your organisation's future development.
- Prestigious positioning as a leader in the Middle East alongside some of the most influential companies in the world making this event a unique opportunity to showcase your expertise.
- Media coverage to maximise your company's exposure to all parties interested in DOF before, during and after IDOC 2012 through the ongoing various electronic and published media outlets.

## NETWORKING OPPORTUNITIES

### Welcome Reception September 23 18.00

This is the perfect opportunity to meet your hosts and fellow delegates plus special guests in an informal setting. All conference participants and partners are invited to attend.

This informal Reception, sponsored by Weatherford, provides an ideal chance to compare notes on DOF experiences and expectations and a useful opportunity to interact with speakers and fellow delegates.

### Gala Dinner September 24 19.30

This special event, hosted by Shell, offers superb networking opportunities and a unique chance to foster new business relationships. Enjoy the fine food and impressive backdrop at the exclusive Conference Dinner.

**Refreshments** will be taken in the Exhibition Area which provides E&P personnel, vendors, consultants and all participants with the opportunity to maximise their business interests.



## ORGANISERS

Neha Malhotra  
IDOC 2012 Secretariat  
Dome Exhibitions  
PO Box 52641  
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Website: [www.idoc-oman.com](http://www.idoc-oman.com)



## WHO WILL BE ATTENDING IDOC 2012

Those interested in

- real-time reservoir management
- intelligent wells
- real time production optimisation
- collaboration centres
- integrated SCADA
- IT infrastructure
- work process design
- automation and project management
- field strategic planning
- data management, mining and visualisation

## EXHIBITION

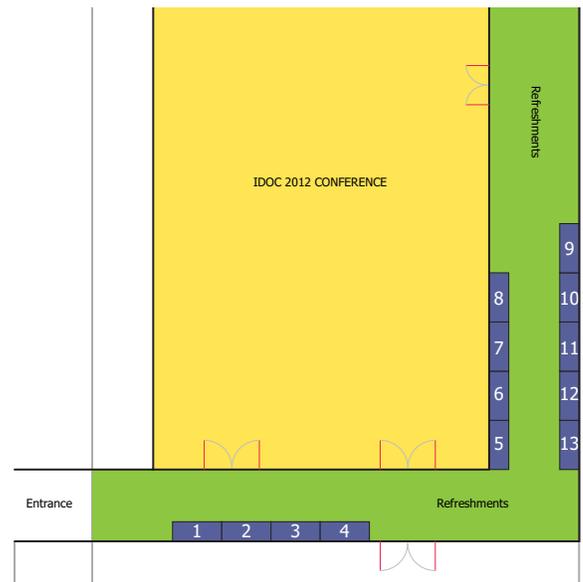
Concurrently with the IDOC 2012 Conference there will be an exhibition of equipment and services focusing on the themes of the event. Available exhibition sites are limited and please contact the IDOC 2012 Secretariat for current stand availability.

The cost of exhibiting is US\$4,500 (AED16,515) which includes:

- Fully constructed 'shell scheme' stand of 3 sq.m (3m x 1m)
- One table, two chairs
- Company name on fascia
- 3 spot lights
- One 13 amp power socket

Please note that exhibitors wishing to attend the Workshop and/or Conference must register as a delegate.

### IDOC 2012 Exhibition Floor Plan



TO REGISTER, VISIT [WWW.IDOC-OMAN.COM](http://WWW.IDOC-OMAN.COM)

## VENUE

IDOC 2012 will be held at the Crowne Plaza Hotel, Muscat.

The dazzling white Crowne Plaza Muscat is located in an exclusive cliff-top residential area overlooking the Gulf of Oman, with a terrace and pool and its own private beach. You'll be greeted by a doorman in traditional Omani dress and across the marble Lobby floor, friendly Front Desk staff are ready to check you in. Have a drink and bite to eat in the English-style atmosphere of Dukes Bar, or enjoy authentic Italian and Iranian cuisine in the restaurants.

Most of Crowne Plaza Muscat's guests arrive from Muscat International Airport, a 20 minute taxi ride away. The main business and ministerial districts are 10 minutes away, and when you decide to take in some local colour you'll find that Muttrah, with its Souk, forts and dazzling Corniche, is just a 15 minute drive.

## ACCOMMODATION

The registration fee for the event does not include accommodation and delegates are responsible for making their own arrangements for accommodation.

Special arrangements have been made with the Crowne Plaza Muscat for delegates requiring accommodation.



**Crowne Plaza Hotel**  
P.O. Box 1455  
Ruwi 112  
Muscat  
Oman

T: +968 24 660660  
F: +968 24 660600



## REGISTRATION

### REGISTRATION FEES

Workshop:	US\$785 (AED2,880)
IDOC 2012 Conference:	US\$1,435 (AED5,270)

Each fee includes luncheons, refreshments and a set of Proceedings where relevant. The Conference fee includes the Welcome Reception and the Gala Dinner.

### HOW TO PAY

Payment can be made, either:

- **by making your cheque, in AED only**, payable to: Dome Exhibitions and forwarding the cheque to Dome Exhibitions  
PO Box 52641, Abu Dhabi, UAE
- **by bank transfer in AED or US\$ only** to:  
Dome Exhibitions A/C no. 329666020002  
ADCB – Abu Dhabi SWIFT Code ADCB AEAA  
Copies of bank transfer documents should be faxed to the Organisers at +971 2 672 1217 and all bank transfer charges will be the responsibility of the delegate's organisation.

### HOW TO REGISTER

- Tel: +971 2 674 4040 to reserve places
- Fax: +971 2 672 1217 to reserve places
- Email: [neha@domeexhibitions.com](mailto:neha@domeexhibitions.com) to reserve places
- Register online: **visit [www.idoc-oman.com](http://www.idoc-oman.com)**
- Complete and mail registrations to:  
IDOC 2012 Secretariat  
Dome Exhibitions  
PO Box 52641, Abu Dhabi, UAE

### PAYMENT OF FEES

All delegates will receive an official attendance invoice together with their joining instructions but their participation is not confirmed until payment has been received. The Organisers will not permit delegates to enter if fees are not paid before the event.

### CANCELLATIONS

All cancellations must be received in writing. Cancellations received before September 12, 2012 are subject to a service charge of US\$350 (AED1,285). The Organisers reserve the right to retain the whole fee if cancellation is received after that date. Delegates may be substituted at any time.

### Please register me to attend:

<input type="checkbox"/>	Pre-Conference Workshop – Understanding ICT Issues for DOF Optimisation	September 23	US\$785 (AED2,880)
<input type="checkbox"/>	Third International Digital Oilfield Conference	September 24-25	US\$1,435 (AED5,270)

Title ..... First Name ..... Family Name .....

Position ..... Organisation .....

Address ..... Country .....

Telephone ..... Mobile ..... Email .....