

INTEGRATED OPERATIONS AND THE DIGITAL OILFIELD

Roadmap to Improved Safety and Production
Perth, Western Australia, 21st – 23rd January 2014

Feedback from previous attendees at this course:

"10/10" "Excellent" "A Revelation" "Enthralling"

Feedback for trainers knowledge and experience 93/100

Attendees from the course held in Malaysia, 2013

Some Previous Attendees have included:

Shell, Petronas, Hess, PTT, Baker Hughes, Murphy Oil and more...

Global Lead for Integrated Operations, Consulting Head of Discipline, Country IM&IT Manager, Reservoir Engineer, Senior Systems Engineer...

"Over four days and with a combination of quiet assurance, excellent process and persuasive energy, the two-man Integrated Energy team facilitated complete internal stakeholder alignment on a complex, multi-country exploration drilling campaign. The entire team benefited greatly from their Project Management experience and adept people skills. I wouldn't hesitate to recommend David and his team in any such role again; I will be rolling the process out internally as a template for future Exploration Drill Planning projects."

Central Asia Exploration Manager

Capitalise on expert knowledge to gain maximum value on these vital issues:

GAIN INSIGHTS into best practice in integrated operations and the digital oilfield
LEARN how to determine the most valuable digital oilfield capabilities for your operation
EXPLORE the enhanced production and cost efficiencies achieved by pioneers in the digital oilfield
DISCOVER the safety and environmental advantages and attraction for people
BALANCE key efforts in people, process, technology and working environment for success
INSTILL change - How to engage and communicate with reservoir, drilling, operations stakeholders plus facilities & IT
IMPLEMENT practical guidance in processes and workflows, standards and IT architecture, organizational design
ESTABLISH effective design guidelines for physical working environment, control and collaboration technology
DEVELOP a balanced, staged approach for your own operational scenarios
JOIN an established alumni of past course participants for ongoing sharing and support

Integrated Energy training courses are thoroughly researched and carefully structured based on industry experience to provide practical and exclusive training applicable to your organisation. Some of the benefits include:

- Strictly limited numbers. Thorough and customised programmes to address current industry needs.
- Illustrations of real life case studies with comprehensive course documentation



Course Facilitator:

David Cavanagh
Managing Director
Integrated Energy

- Chairman at SPE Intelligent Energy Conference, Dubai, 2013 for sessions including Operations and Control, Optimising Well Production and Continuous Improvement.
- Intelligent Energy programme committee member, 2013.
- Member of SPE, Engineers Australia and PMI
- Australian Gas Technology Innovation award, 2012.

FREE TAKEAWAY!

A practical resource of theory, case study and templates to enable you to structure your integrated operations / digital oilfield project the right way and accelerate delivery.

Course Run By:

 **integrated energy**
www.integratedenergy.com.au

AGENDA

Workshop Overview

This workshop on integrated operations and the digital oilfield will convey the key learning from more than a decade of experience of the digital oilfield around the world, and provide attendees with a practical actionable framework and skillset they can take back to their own companies. Using a combination of theory, and first hand case studies from companies such as Shell, Statoil, Saudi Aramco and BP, participants will be armed to tackle a range of scenarios applicable to their operations, with live feedback and coaching. These will cover all aspects of the oil and gas value stream from geoscience, drilling, production together with HSE and logistics. The implications for greenfields and brownfields facilities design will be addressed. A lively knowledge sharing approach will be used to allow maximum value for all participants.

Day 1 – Introduction to Integrated Operations and the Digital Oilfield

Session 1 – The Foundation of Integrated Operations and Digital Oilfield

- Introductions and needs of delegates
- Definitions, Principles and Evolution of Integrated Operations and the Digital Oilfield

Session 2 – Early Progress of Integrated Operations and Digital Oilfield

- Pioneering experience in Norway (BP, Conoco Phillips, Statoil)
- Collaboration Exercise

Session 3 – The Impact of Integrated Operations and Digital Oilfield

- HSE – Remote Drilling in Indonesia (BP)
- Rapid growth – Azerbaijan (BP)
- Petroleum Engineering – Brunei (Shell)

Session 4 – Large Scale implementations of Through to the State of the Art

- Multi-Asset support – Gulf of Mexico (Shell)
- Large scale remote mining – Australia (Rio)
- Large scale remote integrated operations – Australia
- Floating LNG Applications – Australia / Asia

Day 2 – Explore Integrated Operations and Digital Oilfield Framework

Session 1 – Discover Integrated Operations and Digital Oilfield Framework; and People and Organization elements

- Overall Programme Framework
 - ✓ Elements and Staging
 - ✓ Business Case and Governance
 - ✓ How to avoid common roadblocks and misconceptions

- People and Organization
 - ✓ Cultural and behavioural models which allow the best way of working
 - ✓ Organizational design options to make integrated operations effective
 - ✓ Practical change approaches to make it really happen

Session 2 - Business Process Innovation for Integrated Operations and Digital Oilfield

- Integrating business process design over varying timescales
- Example real time and right time enabled workflows
- Decision making in integrated operations

Session 3 - Physical Environment for Integrated Operations and Digital Oilfield

- Identifying and designing for key interactions
- Ergonomic design principles and their application for integrated operations and digital oilfield
- Design for Offshore facilities, fixed and floating, Onshore facilities, Central Operations Centres
- New build vs retrofit, location selection principles

Session 4 – Technology of Integrated Operations and Digital Oilfield

- Collaboration and Control technology
- Real time control – local, remote, centralized and integrated models
- Collaboration options with field technology, augmented and mobile systems
- Fixed and mobile Audio, video, RFID
- Interaction of control and collaboration environments
- Real time and right time information systems and standards
- Applications of WITSML, PRODML with standard based architectures
- Telecommunication needs and fibre

Session 5 – Preparation for Exercise in Integrated Operations and Digital Oilfield

- Framing the current situation
- Setting the task for the syndicates and identifying the possible operational scenarios
- Select scenarios to be used (brownfields/new projects, oil/gas, onshore/offshore fixed/floating, remote)
- Allocate delegates to syndicates and syndicates to scenarios

Day 3 – Syndicates at Work

Session 1 & 2 – Hands-On Application of Integrated Operations and Digital Oilfield

Syndicate Work Sessions

- Syndicate work on their selected scenario within their cross-disciplined teams

Syndicate apply their learning on a focused work related digital oilfield opportunity

Session 3 – Syndicate Sharing of Integrated Operations and Digital Oilfield

Syndicate presentations

- Each syndicate shares the result of their work to their peers, with instructor and peer feedback
- This will be a presentation in the format of their choice illustrating how they would structure the design and implementation of their digital oilfield opportunity
- Questions will be asked by delegates and instructor to enhance understanding
- Optional field visit

Session 4 – Summary & Wrap up

Conclusions

- Summary
- Requests and Offers
- Question and Answer
- Actions to take away
- Feedback
- Close

Program Schedule

08:30	Registration
09:00	Morning Session Begins
10:40 - 11:00	Refreshments & Networking
12:45	Luncheon
14:00	Afternoon Session begins
15:30 - 15:50	Refreshments & Networking
17:00	Course Ends

PRE-COURSE QUESTIONNAIRE

To ensure that you gain maximum value from this course, a detailed questionnaire will be forwarded to you upon registration to establish your exact training needs and issues of concern. Your completed questionnaire will be analysed by the course trainer prior to the event and addressed during the event. You will receive a comprehensive set of course documentation to enable you to digest the subject matter in your own time.

IN-HOUSE TRAINING

Cost effective In-house courses, tailored to your organisation's needs, can be arranged at your preferred location and time. If you would like to discuss further, please contact us to arrange a convenient date.

OIL AND GAS INTRODUCTION AND PROJECT MANAGEMENT COURSES

Optionally, a one day course can be included prior to the Integrated Operations and Digital Oilfield course to give participants crossing over from other disciplines an introduction to the oil and gas industry to provide a stronger foundation for Integrated Operations understanding.

A half day Project Management for Oil and Gas course can also be added to the proceedings for interested participants. Please contact us for more details.

BOOKING DETAILS AND PRICING

Course	Price
3 Day Course (Integrated Operations and The Digital Oilfield)	\$3,000*
Optional 1 Day Introduction to Oil and Gas Course	+ \$1,000*
Optional 0.5 Day Project Management for Oil and Gas Course	+ \$500*

Confirm and pay 30 days or more in advance and receive 10% off. In-house courses can be delivered at 25% off (minimum 6 participants). *GST is additional. Price is in Australian Dollars. Refreshments and lunch included.

Payment methods accepted include credit card, cheque and bank transfer.

For all booking queries please contact us.
Email: courses@integratedenergy.com.au
Phone: +61 (0)432 201 446

To book and pay online, visit <http://goo.gl/bkDGlz> or scan the QR Code below.



ABOUT YOUR COURSE FACILITATOR

David Cavanagh is a recognized subject matter expert in integrated operations. He brings twenty years of resources and energy experience, in Australia, UK, Azerbaijan, Indonesia, PNG, Norway, USA, Africa, and Middle East. His background includes lead roles in mechanical, construction, planning and systems engineering, management systems for HSE and QA. This is combined with experience in medicine, psychology and emergency services.

He has particular expertise in integrated operations for Mining and Energy, and a proven track record in consulting assessments which have identified many billions of dollars of savings for his clients around the world. His client list includes Woodside, Santos, BP (UK, Indonesia, Azerbaijan, and Angola), Shell International, Exxon, Newcrest and Rio. He is the author of several publications in the area including SPE papers and a book for Shell. David recently contributed to a major study of the implications for workforce needs and development due to increased automation and integrated operations for mining and energy. He is an invited conference committee member for global, international and national conferences in the area of integrated operations.

David founded Integrated Energy Pty Ltd to enable safer, more valuable operations and projects, which are better for the people working on them and the environment around us. Integrated Energy do this by providing a better way of working which considers people, process, organization, technology and the physical working environment, and together with partners in the Integrated Energy Alliance have delivered more than 50 such projects around the world. Integrated Energy was recently selected for a national innovation award for their work in resources and energy.

Some organizations that have benefited from David's expertise include:

- Shell
- Woodside
- Santos
- Petronas
- BP
- Exxon
- Baker Hughes
- PTT
- ADCO
- Rio Tinto
- GDF Suez Bonaparte
- Newcrest Mining
- Calibre Global

WHO SHOULD ATTEND

Chief Operations Officer (COO), General Manager, Head of Department, Directors, Advisors, Senior Manager, Manager, Senior Engineers, Engineers, Supervisors, Superintendents and people with responsibility in the following functional areas:

- ✓ Production
- ✓ Production Optimization
- ✓ Production Technology
- ✓ Production Data Management
- ✓ Reservoir
- ✓ Geoscience
- ✓ Petroleum Engineering
- ✓ Integrated Operations
- ✓ Digital Oilfield/ Smart Field/ Intelligent Oilfield/ Intelligent Energy/ i-Field/ e-Field/ Fields of Future
- ✓ Subsurface
- ✓ Automated Control System/ Process Control/ Automation
- ✓ Well Engineering
- ✓ Drilling
- ✓ Organisational Design
- ✓ Behavioural and Cultural Change

WHY YOU SHOULD ATTEND

An integrated operations or digital oilfield project typically requires innovation across a range of traditionally distinct disciplines, which in the right combination, is proven to deliver strong benefits to safety, production, cost efficiency, resource recovery, and attractiveness to people.

This course, based on many case studies experienced first-hand, with a range of major clients, provides an engaging, impartial and practical approach, which aims to leave the course participants confident and competent in key areas of digital oilfield and integrated operations expertise. They will leave the course ready to shape or contribute to their companies' digital oilfield programs, and as informed buyers of digital oilfield or integrated operations related services.

Their enhanced skills will enable accelerated progress to delivery, recognising that the journey is different for every company, and through the benefit of experience, avoid common mistakes and misconceptions.

Contact Us

Email: courses@integratedenergy.com.au

Phone: +61 (0)432 201 446