



**TECHNOLOGY-ENABLED COST REDUCTION STRATEGIES FOR  
OFFSHORE OIL AND GAS PRODUCTION  
A 3-DAY SEMINAR**

**ARROWVILLE ENERGY LIMITED  
IN COLLABORATION WITH  
THE UNIVERSITY OF ABERDEEN**



**ROYAL GARDEN HOTEL, KENSINGTON. LONDON**

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**JULY 27 – JULY 29, 2020**



ARROWVILLE ENERGY LIMITED commenced its operations in 2013. Its areas of operation are in the supply of Personal Protective Equipment (PPE) and in training in Health, Safety and Environment (HSE) for the oil and gas sector. Both these areas are of topical importance, as indicated in the provisions of the Petroleum Drilling and Production Regulation, the Mineral Oils Safety Regulations and the International Regulations on Safety and Environmental Protection which are now being especially enforced.

#### **OUR MISSION**

The mission of ARROWVILLE ENERGY LIMITED is to promote the development of oil and gas exploration and production and to ensure the safety and environmental protection of the universe.

#### **CONTACT US**

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## TRAINING SEMINAR OBJECTIVE

This three-day seminar will present delegates with insights into enhanced technology for increasing oil and gas production and reducing facility CAPEX and OPEX without compromising HSE standards. The objective of the seminar is to indicate technologies for safe and high-performance cost reductions in deep offshore petroleum exploration and production operations. The workshop will present approaches and strategies required for enhancing petroleum exploration and production operations whilst reducing time and costs. It will describe the general offshore oil and gas industry activities and highlight innovative technologies associated with operations involved in each segment. Furthermore, delegates will gain an awareness of the limits of applicable technologies whilst appreciating the strength of the engineering protocols adopted through interactive case study deep-dives.

## DESCRIPTION

The current downturn in the oil and gas industry is putting pressure on all stakeholders globally to reduce CAPEX and OPEX: to reduce staff and to take other cost-reduction measures. In addition, existing oil fields are maturing fast and the task of discovering new hydrocarbon reserves is becoming more challenging. These factors should inspire offshore operators and service companies to invest in cutting-edge technologies capable of enhancing operational performance in exploration and production. Currently, most companies have not yet dealt with cost overrun, project delay issues and improvement potentials. The industry is still lagging behind in the deployment of



available new technologies. Technological advances will provide opportunities for enhanced will provide opportunities for improving offshore exploration and production activities.

In this seminar, discussions will focus on how a variety of technological trends and drivers from outside the energy industry, such as in the Computing, Medical, Satellite and Defence sectors, are being adopted in the oil and gas industry. This will include artificial intelligence, big data and analytics, digital oilfields, secure cloud computing, seismic imaging, pore-to-reservoir scale characterization, enhanced / improved oil recovery, robotic drilling, smart completion, simulation, heavy oil in situ recovery and gas conversion, i.e. “gas-to-fuels” technology in small gas fields. Emphasis will be laid on how implementation of digital devices, databases and sensors can be used to predict equipment breakdowns before they actually occur. The limitation of the current calendar-based maintenance scheduling in remote and deep offshore field operations will be highlighted and the manner in which the adoption of new digital technologies can provide a low-cost solution to these problems will be indicated.

## FOR WHOM

This seminar is designed for senior engineers and executives in the oil and gas industry.



## SEMINAR OUTLINE

### DAY 1: Application of intelligence systems, robotics and automation in offshore production operations

Icebreaker: Why does the oil industry need to embrace intelligence and automation systems?

Application of robotics and automation systems in deep offshore operations

Development of digital oilfields: challenges and opportunities

Application of artificial intelligence in screening for enhanced/ improved oil recovery

Workshop: Will robots transform the industry or replace human operations?

Application of big data analytics in achieving low costs and improving oilfield and plant performance

Secure cloud computing for **increased productivity and revenue**

Robotic drilling, smart completion and well simulation

Workshop: Increasing awareness of the benefits of the adoption of digital technology in offshore operations

Summary and close (Day 1)

### DAY 2: Enhanced technology for cost reduction in early to mid-life field development

Icebreaker – How difficult is it for the petroleum industry to embrace new technology?

Enhanced technology for offshore oil and gas field development: case studies

Geophysical exploration and seismic imaging

Application of CT-scanning and imaging in rock morphological characterisation



Workshop

New techniques in reservoir simulation and flow dynamics

New techniques in enhanced / improved oil recovery

Design and deployment of artificial lift technologies in offshore production operations

Workshop

Summary and close (Day 2)

### **DAY 3: Application of digital devices, databases and sensors for predicting equipment breakdowns**

Icebreaker: The Tennis Ball Challenge? – Effective Team Working

Technology trends in offshore production optimisation and facilities development

Offshore equipment design, assembly, standardisation and integrity management

Databases, sensors and metering devices for offshore fluid allocation and production optimisation

Workshop

Efficient management of subsea inspection, repair and maintenance (IRM)

Operational excellence: improved efficiency, reliability and profitability

Innovation in oil and gas mobility, wearables, logistics, safety and supply chain optimisation

Workshop

Summary and close (Day 3)

THERE WILL BE 3 TEA AND COFFEE BREAKS AND A 3-COURSE BUFFET LUNCH DAILY.



## **SPEAKERS**

### **Professor Max Rowe PhD MBA BSc(Hons) ARCS CEng FIET MInstPMIoD**

Originally a hydrodynamicist, Max has had a varied career covering many aspects of oil & gas operations with a major international operator. He has held senior positions in technology deployment, asset management, corporate strategy, commercial management, and quality management. He has also held academic positions at the University of Cambridge, the University of Oxford and the University of Southampton. He holds an honorary chair at the University of Aberdeen, where he teaches regularly. He now works predominantly as a consultant with a client base which includes major operators, technology developers and governments. He also holds positions as: a director of LUX Assure (a chemical services company), a director of Selkie Solutions (a consultancy company), and a partner in Glenshore (boutique investment advisors).

### **Eur Ing Dr Lateef Akanji (DIC, FHEA, CEng, MEI Chartered Petroleum Engineer)**

Currently a senior lecturer in petroleum engineering at the School of Engineering, University of Aberdeen, UK, Lateef has a wide range of experience in the industry and academia. He obtained his PhD in petroleum engineering at Imperial College London. From 2000-2001 he was a trainee drilling and operations engineer at Pan Ocean Oil Corporation, Nigeria. From 2002-2005, he was reservoir simulation consultant at Shell Petroleum Development Company of Nigeria. In 2008, he was a visiting lecturer, reservoir engineering, University of Leoben, Austria. From 2011-2012, he was assistant professor of petroleum engineering, King Saud University, Riyadh, Saudi Arabia. From 2012-2014, he was lecturer and Head of Petroleum Technology Research Group at the University of Salford Manchester, UK. He is a fellow of Higher Education Academy (FHEA), a chartered engineer (CEng) and chartered petroleum engineer. He is a member of the Energy Institute and a member of the Society of Petroleum Engineers. He has published many articles in international journals.



### **Dr Andrew Starkey**

Currently a lecturer in the School of Engineering at the University of Aberdeen, Andy has over 20 years' experience in Artificial Intelligence. He is currently supervising 5 PhD students involved in work related to automated data analysis using AI techniques or autonomous learning. He was previously involved in research work with AI techniques resulting in commercial licenses which won a number of industry awards. He is CEO of a spinout company from the University that specialises in automated data analysis using AI technology. He has recently won research funding for projects with Halliburton and WFS in the area of the application of AI technologies in the oil & gas sector.

### **Wallace George Robertson**

Wallace is currently a freelance QHSE consultant. He has had over 38 years' experience in offshore diving support, construction, semi-submersible vessels and fixed platforms. Working in hostile and sometimes unsavoury locations, he gained an appreciation of the human skills and courage required to operate equipment and systems in the potentially hazardous environment of the sea surface and underwater. He was the Vice President QHSE at Helix Energy Solutions Group between 2011 and 2016. He was the Global QHSE Manager at Helix Energy Solutions (Well Intervention Group) between 2008 and 2011 and Manager at Helix Energy Solutions (Well Intervention Group) 2002 – 2008. Between 1994 and 2002 he was the Safety Superintendent at Technip and between 1982 and 1994 he was a Diving Systems Supervisor, Life Support Supervisor and Gas Analyst.

### **Rosalind Rowe MPhil BSc(Hons) CEng FIET MInstMC**

Rosalind trained as a control engineer at the University of Reading and University of Cambridge. She started her career with a major nationalised utility company and then spent most of her subsequent career with a major multinational operator holding technical and leadership positions covering metering, subsea inspection, repair and maintenance, and integrity management. Rosalind regularly teaches postgraduate students at the University of Aberdeen. She is also a director of Selkie Solutions.





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FEES: £4,000 (Four Thousand Pounds Sterling) + 20% U.K. VAT

### METHODS OF PAYMENT

BANK TRANSFER :

Account Name : ARROWVILLE ENERGY LIMITED  
Sterling Domiciliary Account No: 0013865062  
Bank Name: GUARANTY TRUST BANK PLC, LAGOS, NIGERIA

CHEQUES:

Cheques should be made payable to ARROWVILLE ENERGY LIMITED and paid into the domiciliary account of ARROWVILLE ENERGY LIMITED (Details above).

### TERMS AND CONDITIONS OF BOOKING AND PAYMENT OF FEES

PAYMENT AND BOOKING SHOULD BE RECEIVED **ON OR BEFORE JUNE 5, 2020**. FULL PAYMENT MUST BE RECEIVED FOR ENTRANCE TO BE GUARANTEED. SHOULD A DELEGATE BE UNABLE TO ATTEND, A SUBSTITUTE DELEGATE IS WELCOME. CANCELLATIONS MUST BE RECEIVED IN WRITING NOT LESS THAN FOURTEEN (14) DAYS PRIOR TO THE EVENT. THE FEES DO NOT INCLUDE ACCOMMODATION AND TRAVEL COSTS; THESE ARE THE RESPONSIBILITY OF THE DELEGATE. IT MAY BE NECESSARY, FOR REASONS BEYOND THE CONTROL OF THE ORGANISERS, TO ALTER THE DATE OR VENUE OF THE SEMINAR. THE COMPANY WILL NOT ACCEPT LIABILITY FOR ANY TRANSPORT DISRUPTION OR INDIVIDUAL TRANSPORT DELAYS. **THERE IS A REDUCTION OF 5% IN FEES FOR THOSE WHO REGISTER AND PAY FEES FOR AT LEAST 5 PARTICIPANTS BY APRIL 24, 2020. THERE IS A 10% REDUCTION IN FEES FOR ORGANIZATIONS WHICH REGISTER AND PAY FEES FOR 10 PARTICIPANTS OR MORE BY MAY 15, 2020.**