

Late Life Management of Subsea Systems at Offshore Europe

Late Life and Decommissioning Zone in Hall 1 at Offshore Europe

P&J Live

AB21 9FX



10:00 Welcome and Introduction from Neil Gordon, CEO, Subsea UK



Neil Gordon
CEO
Subsea UK

Neil initially studied business in Aberdeen then trained as a commercial diver spending eight years carrying out numerous diving assignments in the UK and Norwegian waters involving new construction projects, pipeline surveys, welding and inspection. He has over 25 years' management experience in director and business development roles, combined with over 15 years in the subsea industry.

Prior to joining Subsea UK, he spent four years managing the National Hyperbaric Centre which included project-managing saturation diving operations and hyperbaric weld trials. He more recently developed the subsea safety training and consultancy aspect of the business, where he regularly lectured to subsea engineers and delivered a range of training courses both in the UK and overseas.

He has experience working in India, Middle-east, Africa and Brazil and has worked with the Oil and Gas Producers diving operations sub-committee on client representative training and competency for subsea projects. He was also an active member of the IMCA diving safety, medical, technical and training committee.

10:10 Energy storage for power to subsea control systems



Paul Slorach
Business Development
Manager
EC-OG

The EC-OG HALO energy storage system has been developed as an extension of the Subsea Power Hub, an autonomous power source for remote subsea control systems. HALO is especially suited to assets suffering from power delivery issues, either as a short-term power source during remedial operations, or as a long-term alternative to umbilical replacement or installation.

HALO is a standalone energy storage system. Adaptable for a range of applications and capable of delivering large energy capacities to the seabed, HALO can deliver sufficient electrical power capable of driving well operations without the need for a permanent power supply from topside or shore. Adopting a flexible approach to in-situ charging, HALO presents the operator with range of options for increasing the operating duration and reducing the remaining life cycle cost for late life assets.

Paul Slorach has been with EC-OG since the company was founded in 2013 and has been an integral part of the company's growth. As business development director, Paul leads EC-OG's client engagement activities, ensuring EC-OG's products and services are aligned with the needs of the industry.

Paul's background is as a mechanical engineer, with 15 years' experience in subsea engineering, mainly in design and delivery of subsea production systems and intervention equipment. At EC-OG, Paul previously worked as system engineer for the development of the Subsea Power Hub system, as well as lead engineer for number of other client projects and R&D work scopes.

10:25 The role of subsea LiDAR in field extension and decommissioning. Or Do you know EXACTLY what is there and how to reuse it.



Julian Rickards
*Business Development
Manager – EAME
3D at Depth*

This presentation will focus on the accomplishments and possibilities of a camera-less based optical measurement, subsea LiDAR.

Subsea LiDAR is used in greenfield and brownfield sites, particularly for gathering dimensional and situational data, and jumper or spool metrology, especially where complex routing paths around existing infrastructure are required.

With subsea LiDAR, beams are corrected for the effects of refraction using water parameter data, thus producing data of traceable measurement that is of the highest accuracy. Data is auditable and seamlessly interoperable with terrestrial LiDAR. These qualities are unique to LiDAR in subsea optical measurements.

Large free spans can, therefore, be measured from a single point, frequently used for metrologies and lifting equipment fabrication. Savings can be made during data acquisition, as the need to remove panelling is reduced or eliminated. The effective operating range of the LiDAR and single point of measurement makes measurement through a small aperture possible.

Julian Rickards is a Business Development Manager at 3D at Depth Ltd., overseeing Europe, Africa, and the Middle East regions. Julian has a career that spans over 20 years in the offshore oil and gas industry. After receiving an HND in Engineering, Julian started his career working at the headquarters of a leading subsea equipment manufacturer. He quickly progressed within the organization, going from testing and production engineering and in-house system testing to assisting in product design and manual writing. In addition, he holds 9 years' experience installing and servicing offshore, as well as, authoring and delivering training courses. Throughout his career, Julian has held Subsea Engineering and Project Management roles and more recently, roles in Application Engineering and Technical Sales, both in the UK and the USA.

Julian joined 3D at Depth in 2017 and is focused on developing core product derived services to help clients build, maintain, map and monitor underwater assets and environments.

10:40 Smart Subsea Technologies – 3D Real Time Data Acquisitions of Anomalies Buried Beneath the Seabed



Moya Cahill
*CEO & Co-founder
PanGeo Subsea Inc*

This presentation will focus on the true 3D real time data acquisition and interpretation of anomalies (man-made and natural) buried beneath the seabed. PanGeo's SBI™ technology delivers high resolution, true 3D volumetric acoustic imaging solutions to mitigate risk in offshore installations. PanGeo offers the following sub-seabed solutions to clients:

- accurate positioning and continuous visualization of cables and pipelines during depth of burial surveys;

- identification of buried anomalies threatening integrity of pipe/cable in parallel with depth of burial survey;
- true 3D volumetric imaging and accurate positioning of buried infrastructure for efficient site decommissioning;
- true 3D volumetric imaging and accurate positioning of buried Unexploded Ordnances (UXO) including non-ferrous UXO; and
- true 3D volumetric imaging of buried geohazards (boulders) enabling de-risking and micro-siting of offshore wind farms piles.

Moya is a Professional Engineer holding a Bachelor of Engineering in Naval Architecture & Marine Engineering from Memorial University of Newfoundland. Starting her career in the Norwegian Oil and Gas Sector some 30 years ago, Moya returned to Canada in the early '90's and established her own engineering and project management company in support of the offshore industry on Canada's East Coast. She built on her client's successes and opened project offices in Nova Scotia and the Middle East.

In 2006, Moya co-founded PanGeo Subsea Inc. a technology service provider of acoustic 3D SAS sub-bottom imaging technology. Moya's most recent focus has been in the development of PanGeo's SBI SeaKite™: a multi-sensor robotic towed platform delivering more cost-effective survey solutions to the offshore wind farms in Europe, US and Asia.

Moya has been honored to be a recipient of the "Canadian Women Entrepreneur of the Year Award" as well as the prestigious "Canada's Top 40 Under 40". She was also honored to receive from the Newfoundland Oil and Gas Association their "Outstanding Contribution Award" which recognized her for outstanding and lasting contribution to the establishment and growth of the oil and gas industry in Newfoundland & Labrador.

10:55 Late life and the supply chain: Technology, TOTEX and Tiebacks



Romain Chambault
 Director Europe –
 Oilfield Equipment
 BHGE

With the OGA predicting 2 billion boe additional production in the UKCS to 2020, extraction from marginal pools and late-life management has been brought into sharp focus.

The challenge for the supply chain is to provide solutions that access fields and extend the life cost effectively, and in a manner that enhances recovery time. There has been much talk about potential solutions, but what do standardisation and optimisation of operations really mean in practice? Several areas of operations have fallen under scrutiny with that in mind.

Tie-back developments have become the go-to solution for operators looking to maintain the short to medium-term production outlook, providing a quicker return-to-investment when compared to larger stand-alone developments. But what do the tie-backs of the future look like and how can the industry make them nimble, fit for purpose whilst remaining economically viable.

Technology development also remains key to unlocking late-life reserves while collaboration is essential to driving down project costs. Only then can new product designs be optimised to ensure they are economically viable. Data and digitalisation, the new kids on the block, now have to be factored in as part of the optimisation of the process of unlocking maximum value from these older fields. But how?

As the supply-chain strives to provide more value to its customers, how is BHGE approaching the above challenges? Partnerships, new commercial models and a drive for sustained production have become the areas of focus. And how a new approach can influence up to 80% of project cost drivers.

Romain Chambault is European Director for Baker Hughes, a GE company's (BHGE) Oilfield Equipment business and is based in Aberdeen, UK.

Romain leads the Sales, Commercial and Services teams in Europe working as part of the regional leadership team to develop and drive cohesively the regional growth strategy for BHGE.

Prior to his current position, Romain was Director of Services & Fulfilment for BHGE's Subsea Drilling Systems business in Houston, Texas, where he led the successful implementation of the first Contractual Services Agreement (CSA) models in deepwater drilling, as well as supporting clients in improving their performance and safety through innovative commercial and operational models.

Romain has more than 18 years' experience with BHGE, across various roles of increasing responsibility in quality, operations, finance, business development and commercial operations, across several different business units and geographies.

11:10 Subsea tie-in and pipeline reconfiguration in the North Sea without depressurising the entire system



Ron James
Sales Director
STATS Group

Two offshore platforms in the North Sea are being negatively affected by seabed subsidence. To enable economic production of the fields' tail end production profile, infrastructure redevelopment is required. While the platforms are being redeveloped the production pipelines will be disconnected from the platforms. The redevelopment work scopes are expected to take up to two years. To assist efficient reconnection of the 26" and 22" production pipelines to the platforms Subsea Isolation Valve Skids were installed.

The strategic use of a piggable pipeline isolation tool and hot tapping equipment facilitated the subsea pipeline reconfiguration. The reconfiguration was done without depressurising the entire 100km long 26" gas export pipeline, that normally operates at 85bar. The use of a remote-controlled isolation tool that provided a fully proved double block and monitored isolation; enhanced safety, reduced the project execution time and led to cost savings.

Ron James is the Sales Director at STATS Group where he leads the global sales team through their 6 regional offices around the world. Ron brings with him a vast experience having worked for over 30 years in the oil and gas industry.

After serving an apprenticeship Ron spent 7 years in a drawing office before moving into technical sales. Prior to joining STATS Group in 2014, Ron spent 11 years with GE Oil and Gas PII Pipeline inspection as Regional Sales Manager for Europe and Africa.

11:25 The subsea well access toolkit



Donald Horsfall
Subsea Sales Manager
Expro

With 6,826 active subsea wells globally, averaging 11 years old, they require to be monitored and maintained to the relevant standards until safely decommissioned.

Optimising the recoverable hydrocarbons from this subsea well stock is recognised as a target to bring incremental production to the energy sector. A subsea well intervention strategy is critical to maximizing late life production in mature oil and gas fields.

Typically there are three recognised methods for subsea well access:

1. Subsea Test Tree Assembly (SSTTA), deployed with the rig marine riser and safety system
2. Subsea Intervention Riser system (IRS)
3. Riserless Well Intervention (RWI) system

The choice of intervention will balance efficiency against capability and a variety of factors should be considered allowing the operator to select the right system.

The latest developments and new technologies will be presented showcasing the cost efficiencies that make late life subsea well access more commercially attractive.

Donald graduated from the Robert Gordon University in Aberdeen in 2006 with a BA in Management. He joined Expro in 2007 as a field technician in the Well Test product line and developed his experience across a range of operational positions within the company. Moving from offshore to onshore, Donald held several supervisory roles before progressing to management roles within the Well Test, Wireless Well Solutions and Subsea product lines. As Global Sales Manager, Donald is currently responsible for the delivery of Expro's wireless CaTSTM technology and Subsea Safety Systems. His focus is on how technology development within the service sector can bring value and efficiencies to the oil & gas industry.

11:40 Sustaining subsea Controls through their twilight years



Jeremy Edwards
*Business Development
Manager*
Viper Innovations Ltd

The presentation will describe how new technology is enabling a fully integrated approach to managing the integrity of subsea production assets, and how this can add value for an oil and gas operator in reducing unplanned production outages, minimising the cost of reactive repair interventions, and extending the operational life of the asset. With specific reference to subsea control systems the presentation will explore how a risk-based approach to managing asset integrity can be combined with the use of adaptive analytic software models, web-based visualisation of current and historical faults, and state of the art monitoring equipment to help the asset manager make informed decisions on spares inventory, planned maintenance schedules, subsea intervention, and the engineering of the most appropriate repair solutions.

Jeremy has been a subsea controls engineer for 25 years and has spent most of that time supporting operators of subsea fields around the world to sustain and enhance the life span of systems that are critical to the production of oil & gas from the seabed. He joined Viper Innovations 12 years ago and has been responsible for building the company's Subsea Asset Integrity Management capability; bringing a fresh approach and new technologies to bear on the problem of how to keep mission-critical systems, that are installed in harsh and inaccessible locations, working better and longer.

11:55 Q&A and Summing Up