10:00
Introductions and Welcome

10:10 – 10:30
Subsea Storage Overview, Economic Challenge and Meeting Objective

Peter is currently the Subsea Systems Manager for the Chevron Energy Technology Company located in the Chevron’s new Aberdeen Technology Unit. In this role he has responsibilities for teams based in Aberdeen, Houston and Perth supporting the growth of subsea production across the company.

Peter is a graduate of both local institutions of higher education within original BSc from the University of Aberdeen and a Postgraduate Degree from Robert Gordon’s University.

After graduation he worked for a number of small engineering companies before joining Texaco as a subsea engineer approximately 20 years ago. Since then he has worked in a variety of subsea, drilling and completion roles in Aberdeen and Houston. Spending several years as the Engineering Manager for Chevron Upstream Europe prior to moving to help establish the Technology Unit.

10:30 – 10:45
Format of the day

Gordon has been working in the subsea sector since 1994 initially offshore on diving vessels and more recently in an engineering capacity.

Gordon has a first class degree in Mechanical Engineering, PhD and MBA from the Robert Gordon University.

In a work capacity after returning from offshore roles he has spent 10 years with IMES group and 10 years with Subsea 7. In both organisations he has been in some way or form involved with the development and commercialisation of value adding technology.

Presently he is the Project Director of the National Subsea Research Initiative (NSRI).

10:45
Coffee
11:00-11:30
Recap of Technology Issues as Arising from The Hackathon -

- Gas Disposal / Emissions/ Re-Use
- Fluid Co-Mingling
- Differential Pressure
- Low Energy Fields or Difficult Fluids

Graham has over 20 years’ experience in the upstream oil and gas industry, working with a variety of Operators, Contractors and SME consultancies.

Graham has worked predominantly in the UK, with international assignments in France and Brazil, initially in the arena of subsea construction projects. Over time this has broadened into a variety of managerial positions covering roles including project development, project execution, finance and business development.

Graham joined EnQuest in 2010 and has filled a number of positions, his current role is Subsea Operations and Projects Manager which requires an all-round technical, operational and commercial experience to meet the responsibilities associated with delivering the define and execute phase for EnQuest Projects and maintaining safe reliable production from EnQuest subsea assets.

Graham is qualified with a first class degree in Civil Engineering and an MBA.

11:30-11:50
An Introduction to The Flow Assurance Challenges Associated with Subsea Storage

Steve will start the session by considering the flow assurance challenges associated with conventional rigid subsea tank solutions. One of the major issues with rigid tanks is how to minimise the pressure differential across the tank wall. This is usually done by introducing ballast water into the tank, forming a layer beneath the stored oil, but many of the flow assurance challenges come from the introduction of the ballast water.

Steve is the Technical Director at Abercus, a consultancy founded in Aberdeen that specialises in advanced engineering simulation – computational fluid dynamics (CFD), finite element analysis (FEA), bespoke software and teaching/training – and its application in the energy sector.

Abercus has worked on a wide range of subsea flow assurance projects from around the globe, considering issues associated with thermal management (cool down/hydrate avoidance, insulation design, Joule Thomson cooling), solids handling and multiphase flows (sand management, pigging, corrosion and erosion), and subsea storage (simulation of the removal of attic oil from the subsea storage tanks at Brent Delta).

Prior to joining Abercus, Steve led the CFD activities for Ivar Iversen at Prospect Flow Solutions in Aberdeen.
11:50 – 12:10
Flow Assurance – What is the State of the Art with Subsea Storage?

Adam will subsequently discuss the challenges associated with the Kongsberg Subsea Storage Unit, which is one approach that avoids having to introduce ballast water.

Adam works as manager for Kongsberg Oil & Gas Technologies subsea storage products. He holds a Master of Science from the Royal Institute of Technology (Stockholm Sweden) in vehicle engineering with an specialisation in gas flows for heavy duty engines. Adam joined Kongsberg’s subsea storage team in 2012 as an structural engineer, focusing on structural integrity and installation methods. Lately he has been working with technical development of the Kongsberg subsea storage unit typically, qualification of the flexible bag, solving BS&W problems and thermal challenges.

12:10 – 12:30
Fabrication and Installation Considerations for Subsea Hydrocarbon Storage

This session shall provide an overview of the options and challenges that an installation contractor might encounter in relation to subsea storage tanks. The presentation will step through the fabrication, transportation, installation and commissioning aspects, providing detail on the challenges associated with each area and giving insight gained from experience in the hook up and commissioning of a subsea storage tank.

David holds a Master’s degree in Mechanical Engineering and is a Fellow of the IMechE. David has enjoyed a varied and international career in subsea engineering, undertaking numerous assignments in the fields of hydrocarbon and alternative energies including the development and implementation of several emerging technologies.

12:30
Lunch
13:30 – 14:30
Workshop – Having Understood the Challenge and the Precedence – What’s the Way Forward?

Tables of Delegates Split up to Debate and Determine Technology Gaps with regards to Subsea Storage, Under the Themes;

- Concept Selection
- Construction
- Operation

14:30
Coffee + Networking

Delegates can move to a second table theme at half time

15:30 – 16:00
Meetings Wrap Up and Next Steps

Peter Blake
NSRI Chairman
Subsea UK Networking Event (Milton Keynes)
11 May 2016 - Milton Keynes
Networking event and opportunity to visit Fugro Intersite, Litre Meter or Astrimar. Dinner included.

NSRI: Facilities Showcase
17 May 2016 - Village Hotel Club Aberdeen
A number of test facilities exist across the UK both in the private and public sector. These include hyperbaric chambers, underwater facilities through to university labs complete with material and fluid testing / in service simulation facilities. A number of organisations will present their capabilities.

Subsea UK's Parliamentary Reception and Dinner
15 Jun 2016
Networking event bringing together companies and their representative MPs

NSRI: Expert Skills Showcase to Support Small Pools
22 Jun 2016 - Village Hotel Club Aberdeen
There are pockets of excellence in the research community of UK universities. This event will bring together a number of the universities who are active in the subsea space.

Golf Day
19 Aug 2016 - Peterculter Golf Course, Peterculter
Network with peers and enjoy some friendly competition to win the Subsea UK Challenge Cup.

NSRI: Developer's Day & Technology Showcase
15 Sep 2016 - Village Hotel Club Aberdeen
A selection of presentations which inform the community about some of the resources available to support R&D in the morning, and 10 minute elevator pitches from the developer community to an invited audience of Operators, Tier 1 contractors and vendors in the afternoon.

Subsea South-East Networking Event
22 Sep 2016 - Bleeding Heart Restaurants, London, EC1N 8SJ
Collaboration and driving efficiencies through new technology are critical if the sector is to thrive against the challenges of a low commodity price. Oil and gas is the largest market for subsea companies and the sector must rise to the challenge of developing new solutions that will increase production and recovery of hydrocarbon reserves at lower cost. This event is an important step in helping organisations in the south-east to come together and work towards a common goal. Anyone with an interest in the subsea industry is welcome to attend.

Underwater Vehicles Conference
27 Sep 2016 - Aberdeen Exhibition and Conference Centre, Aberdeen
Subsea UK's annual Underwater Vehicles Conference will return to the AECC in September this year.