

SWRP - Plans & Progress: International intervention capabilities to subsea well control incidents

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Implementation of GIRG*

Prevention

Better capabilities and practice in well engineering design and well operations management

Prevention

OGP's
Wells Expert Committee

Intervention

Improved capping response in the event of an incident and to study further the need for – and feasibility of – global containment solutions

Intervention

Subsea Well Response Project



Response

Effective and fit-for-purpose oil spill response preparedness and capability

Oil Spill Response

Joint Industry Project

Governments, regulators, NOIAs, OSROs and industry initiatives

Subsea Well Response Project

- Nine leading oil and gas companies working and delivering together
- Not-for-profit joint initiative
- Working to enhance the industry's capabilities to respond to a serious subsea well control incident
- Focused on international response capabilities
- Formed on the recommendation of OGP's Global Industry Response Group (GIRG) as part of a wider industry initiative to close the gaps identified by Macondo and Montara

SWRP's guiding principles:

1. Prevention is paramount
2. Working together with wider offshore industry and regulators
3. Enhancing industry response capabilities
4. Rapid reaction on an international scale

SWRP's objectives

Design a capping toolbox with a range of equipment to allow wells to be shut in

Design additional hardware for the subsea injection of dispersant

Assess deployment options

Further assess the need for and feasibility of global containment solutions



International response

Faster reaction

**Reduced
environmental impact**

Definition of capping and containment

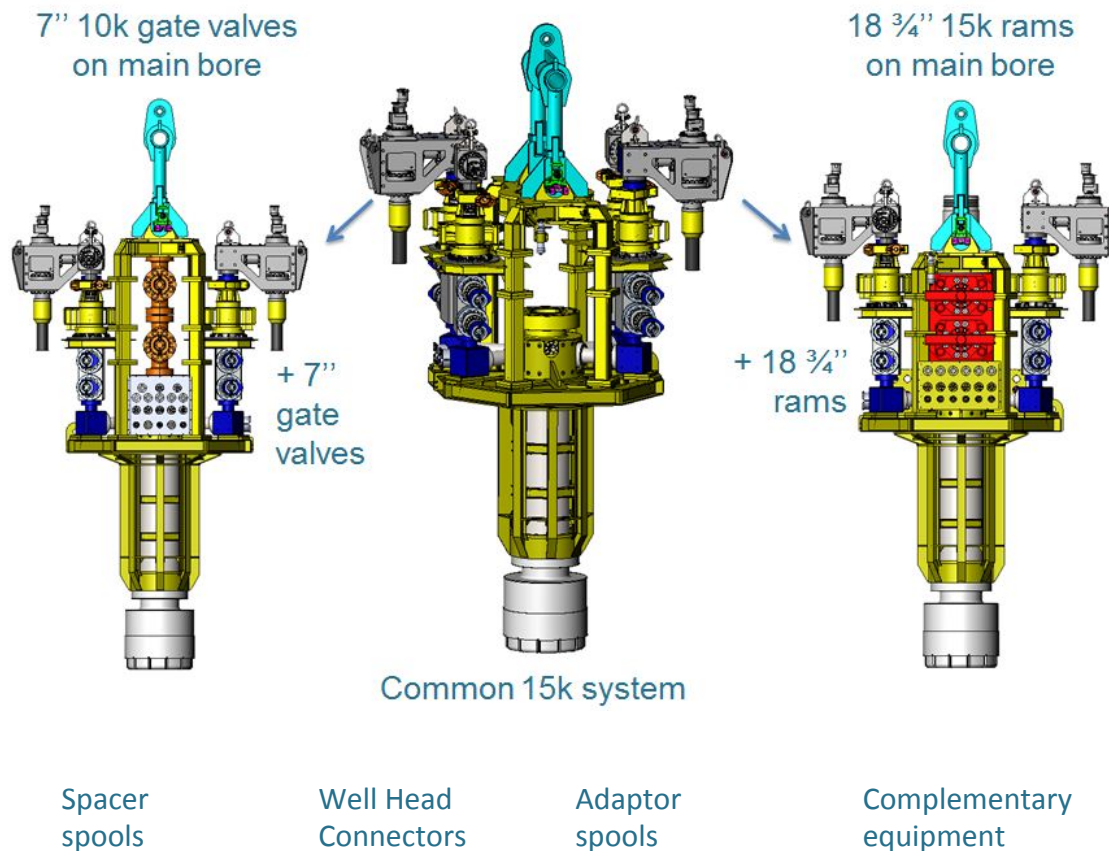
Capping is the act of putting a device on a well with an uncontrolled flow of hydrocarbons. The device has the capacity to close in the well, if the cap itself and the equipment downhole in the wellbore have integrity to withstand the resulting shut-in pressures. The cap would typically be placed on the existing wellhead, subsea Blowout Preventer (BOP) or Lower Marine Riser Package (LMRP) through which the well is blowing out. The capping device could also have the ability to connect with or include a diverter spool that would enable containment of liquid hydrocarbons if there were an inability to shut in the well, such as with concern about downhole integrity.

In the rare event that intervention in the well or capping cannot shut-in a well, **a containment system could be used to bring leaking oil from a subsea wellhead in a controlled way to the surface for storage and disposal.**

From OGP's GIRG report, May 2011

Capping proposal

Objective: Design a capping toolbox with a range of equipment to allow wells to be shut-in



Key features:

- Designed to shut-in a flowing well
- Suitable for high pressure wells
- Equipment in multiple locations to provide rapid international response
- Internationally available by air and marine
- Relies on proven technology

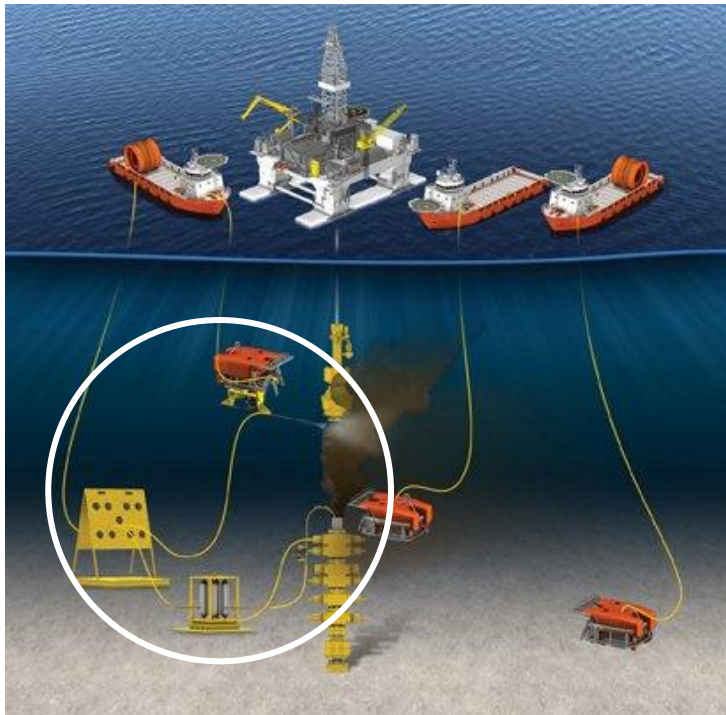
Next steps:

- Finalise deployment structure for worldwide pan-industry access and response
- Target time for first delivery is Q4 2012 / Q1 2013

Proposed dispersant system

Objective: Design a dispersant toolbox that enables safe installation of a capping system

Cutting, grappling and dragging tools
to gain access to BOP



Flying leads, manifold, application wands
etc. to initiate dispersant

Key features:

- Subsea dispersant reduces environmental impact
- Subsea dispersant ensures safe surface working conditions above the well
- SWRP is collaborating with Oil Spill Response Joint Industry Project (JIP) on stock management

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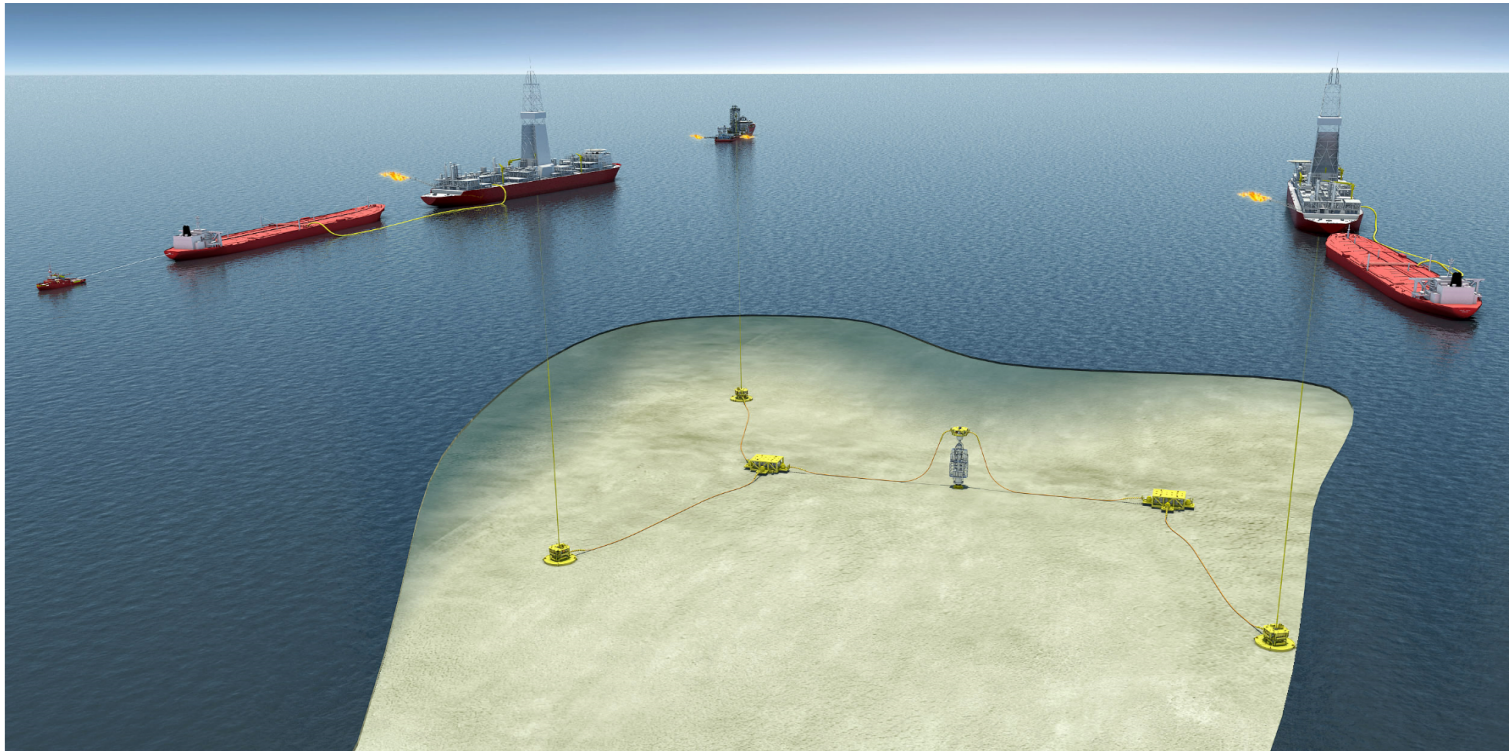
Operational readiness

- Operational readiness will enhance incident response capabilities
- Important activities include:
 - Define Scope of Service
 - Define and execute Simops studies
 - Complete studies on personnel competence, training and exercises
 - Develop deployment management system
 - Prepare deployment organisation(s) for handover

Containment capability

Objective: Further assess the need for and feasibility of global containment solutions

- Containment concept identified and deemed technically feasible based on available vessels (Vessels of Opportunity)
- Further work to define current regional containment capability



Proposed way forward

- Construct four capping stacks
- Construct rapid-deployment dispersant hardware
- Improve operational readiness and logistics
- Pursue deployment methods for capping/dispersant hardware
- Undertake further studies on containment capability

Updates will be available at

www.subseawellresponse.com

Thank You for Your Attention