Tampen Link
Hot Tap Project

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Pipeline Repair System
Contents

_I  What is hot-tap?

_II Tampen Link

_III Hot-tap animation for next hot-tap project

_IV Future hot-tap technology
What is Hot-Tap?

Connecting a branch pipe to a mother pipe whilst maintaining production in the mother pipe
What is Hot-Tap?
New pipeline, “Tampen Link” Statfjord – Flags, 23 km, 32”
Tampen Link History

- August 2007, the Tampen Link Hot-tap operation was aborted due to the diver operated Hot-tap tool failing. The Tampen Link project was “put on hold”.

- February 2008, the Tampen Link project called for mobilisation of the PRS Remote Hot-tap tool.

- The scope was to mobilise the never used PRS hot-tap prototype in six months.
Tampen Link Hot-tap

- To save time offshore, divers were used for:
  - Observations
  - Seabed preparations
  - Small tasks (e.g. valve operations)

- Some technical problems offshore resulted in jo-jo lifting of system

- **Hot Tap completed 20. August 2008 without problems**
PRS hot-tap machine

Categories of CONTINGENCY:

- Base case according to operation procedure
- Alternative lines for power and communications using ROV
- Override functions for ROV directly on cylinders (hydraulic hot stabs)
- Emergency Disconnect and Recover System (using e.g. hydraulic accumulators)
- All barriers rated for 12 month service
Tampen Link Hot-Tap As-built...
Future hot-taps:
Ormen Lange Hot Tap, May 2009

Project data:

- Two hot-taps at Ormen Lange field
- 850 msw
- 100% remote operation
- Minus 5° Celsius outside pipe
- Plus 78° Celsius inside pipe
- Subsea trial is planned for in February 2009 in Sognefjorden, 940msw
Future hot-taps:
Ormen Lange Hot Tap, May 2009
Future hot-taps: Retrofit Tee installation