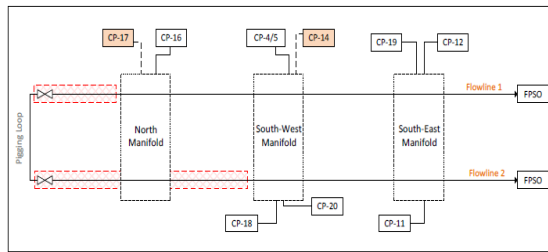




Infinity: Engineering
Client: Confidential E&P
Project: Field Development
Scope: Decommissioning Procedure Review and Process Support

Background

Confidential E&P approached Infinity to perform a full decommissioning procedure review providing process engineering and flow assurance support.



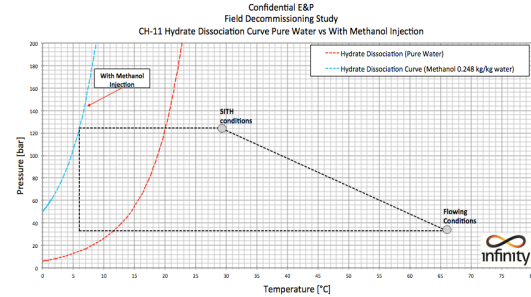
Challenge

Infinity’s main goals were to establish a set of procedures to ensure safe decommissioning of the system (9 production wells), provide hydrate dissociation curves and recommend methanol injection rates, determine pig velocities during the process and liquid surges expected at the FPSO. In addition to these, process support was to be provided in order to ensure that the procedures reflected best engineering practice.

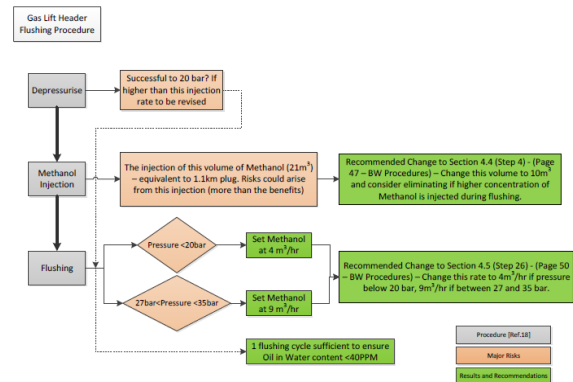
Solution

The procedures were reviewed and recommendations provided. Individual well procedures were provided together with the full revision of the decommissioning order for the wells, depending on the preservation targets and hydrate propensity envelopes.

A complete fluid characterisation exercise has allowed for the understanding of the overall system. This approach has provided significant cost savings to the decommissioning operations.



OLGA simulations with compositional tracking have been performed to confirm that the methanol and the condensate would be completely removed from the system after a specific injection time, reducing costs and waste of resources.



The hot dead oil displacement had been used as a mitigation method to prevent hydrates from forming in the line when the fluids in the system had not been inhibited. This was seen as a good technique in unplanned scenarios due to unexpected occurrences.

The procedures were modified to ensure that the fluids remaining in the flow line prior to decommissioning would be inhibited through the pre-injection of hydrates inhibitor. The dead oil displacement operation was therefore shown to be redundant. This significantly reduced the time for the decommissioning procedures to be implemented.

