

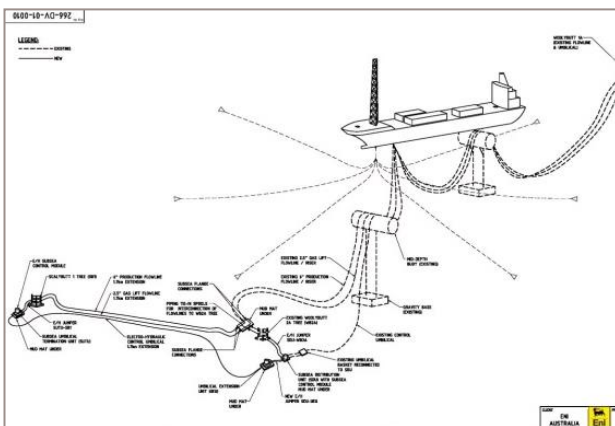
ENI AUSTRALIA LIMITED WOOLYBUTT FIELD DEVELOPMENT Scalybutt - 1 Tieback Project, North West Shelf

ENI Australia Limited (ENI) Scalybutt development is a single well tied back to the host FPSO 'Four Vanguard' via existing infrastructure on the Woollybutt oil field located off the Northwest coast of Australia in 100m of water.



ICON Engineering was contracted by ENI to undertake the Project Management and Design Engineering for the Scalybutt Tie back Project.

The development plan comprised the tie-back of Scalybutt 1 (SB1) well to the existing Woollybutt 2A (WB2A) production and gas lift flowlines and control umbilical. A subsea manifold was designed and installed adjacent to the WB2A well to facilitate commingling of the product and to distribute the lift gas. As the existing well was controlled by direct hydraulics the manifold also incorporated an Electro/Hydraulic/Chemical distribution system to allow upgrade to a new multiplexed EH control system.



Key features of the project included:

- Specific Project management activities including managerial and engineering support direct to ENI (Australia) in the development of the ENI lease and the realisation of the project.
- Fast track schedule with challenging targets. The subsea manifold was designed, fabricated and delivered within 6 months.

- Significant in house engineering including design, procurement and fabrication of subsea permanent items.
- Utilisation of existing flowlines and umbilicals from the existing well to the FPSO for the tieback of the proposed and future wells
- Development of the seabed infrastructure to facilitate the co-mingling and future well integration.
- Upgrading from direct hydraulic control to an 'entry level' multiplexed EH system.
- Integration of the Subsea Process Control System on the FPSO with the existing "Woollybutt" process control system.



Project Management

ICON was awarded the contract for services very late in the ENI schedule for completion of the tieback and required ICON's ability to provide rapid response. Orders for major items including flowlines and umbilicals were awarded very soon after ICON began on the project following up with development of the subsea control options. Activities included management of interfaces and change, coordination of deliveries and management of third party verification and validation activities.

Engineering

ICON was responsible for the development of the final concept and detailed design of the seabed infrastructure and control requirements.

Procurement

ICON sourced, procured and managed the logistics and fabrication of permanent items for the project.

Integration Testing

ICON developed and performed detailed system integration testing to prove the system and make ready for handover for installation.