

Contract: **Schiehallion FPSO Installation**

Client: **BP**

Location: **West of Shetland, UK**



Challenge

The Atlantic frontier is one of the world's harshest environments. BP pioneered oil and gas exploration and production in this area with the Foinaven and Schiehallion fields in the '90s.

At the time the Atlantic frontier programme was the deepest field development in Europe.

BP asked GL Noble Denton to develop the technologies required to enable it to successfully execute many aspects of the life-cycle of this field, from design, engineering and installation, to modifications and repairs.

Expertise provided

GL Noble Denton undertook station-keeping acceptance criteria development and validation through integrated evaluation of mooring and riser systems:

- Assess candidate design codes to identify and select applicable station-keeping acceptance criteria
- Develop methods for evaluating safety levels implied by these codes
- Secure industry and regulatory approval for the design.

Appointed marine warranty surveyors:

- Identify temporary metocean conditions and limitations for operations
- Review installation and hook-up engineering
- Assess minimum moorings required
- Attend and approve marine operations.

Supported BP on assessment of shuttle tanker operations integrity:

- Address risks associated with shuttle tanker approach, connection and disconnection
- Evaluate shuttle tanker DP systems integrity
- Develop risk mitigation procedures to assist BP to secure regulatory approval.

Appointed Marine Warranty Surveyors for assessment and approval of the installation of additional living quarters and water injection package:

- Evaluate feasibility of offshore lift and installation on the FSO
- Attend offshore to approve operations.

Outcome and benefit

GL Noble Denton was able to develop rational, risk-assessed solutions for what was then a pioneering venture using FPSOs in one of the world's harshest environments.

As marine warranty surveyors GL Noble Denton was able to act on BP's behalf to ensure that all contractors completed the installation and hook-up operations without incidents.

During the operational phase the combination of GL Noble Denton's engineering and marine expertise was brought to bear on new and challenging requirements for production enhancement and offloading integrity.