



## Petrofac Don SW and West Don Project: Delivery Management

The Don Southwest and West Don development is located in 170m water depth, 150km North East of the Shetland Islands in the North Sea. The fields were exploited as a subsea development and are being produced through a Floating Production Facility, (FPF), the Northern Producer, which has been operated by Petrofac for over 10 years and was previously employed on the Galley field. First oil is scheduled for early 2009.

MCS Kenny were responsible for the design of the entire riser system including the management delivery of 7 flexible risers, 4 umbilicals and associated ancillary equipment including the diverless bend stiffener connection systems. MCS Kenny also carried out the detailed design of the complete riser system which connects to the Northern Producer FPF to the seabed via a 200 Te MWA.

One of the challenges of the project was to design; in a short period of time, a riser configuration that can withstand the field environmental conditions. A lazy-S wave configuration has been selected for the riser system as being the most suitable solution for the riser development.

The delivery of the flexible risers and dynamic umbilical was a critical project activity as the installation phase was 10 months after project award. Close interface and management of the ancillary equipment suppliers by MCS Kenny was important to ensure the components were designed correctly and delivered within a tight schedule.



## Scope of Delivery

- Responsible for the complete riser system
- Detailed Design of riser system
- **Delivery Management of the following:**
  - 4 off 7.2" flexible risers
  - 3 off 3" flexible risers
  - 1 off dynamic umbilical
  - 3 off static umbilical's
  - Dynamic bend stiffeners
  - 8 Bend stiffener connection systems
  - Buoyancy modules
  - Bend restrictors / stopper clamp assemblies
- **Additional Project Services:**
  - Draughting services
  - Riser installation analysis
  - Offshore technical support
  - Trial fit-up of equipment on Northern Producer
  - Preparation of safety case supporting documentation
  - Technical interface with installation contractor

## Benefits

- Development of an optimised riser configuration
- Reduced quantity of interfaces as MCS provides the design and delivery capability
- Riser design outputs fed directly into riser and ancillary equipment suppliers
- Provision of detailed specifications and design premise ensures that the project specific requirements are communicated effectively to the riser system suppliers
- Delivery management of the flexible risers and umbilical's ensures that the detailed design and manufacture of the products is in accordance with the relevant codes, specifications and procedures and that the products are tested and delivered on time for the installation
- Interface management of the flexible risers and umbilical's ensures that all of the equipment is designed to the same data and that the connecting systems can be installed effectively and efficiently.