



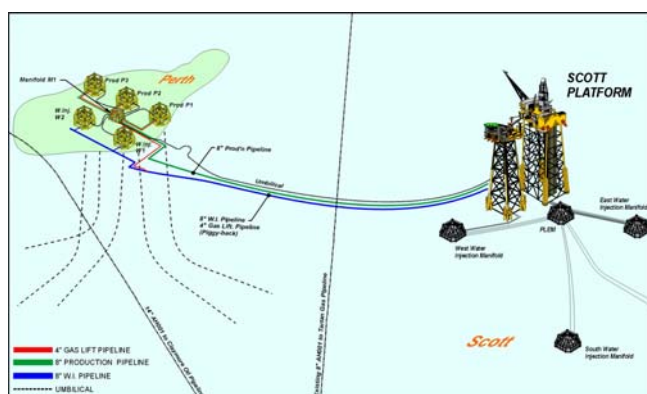
PERTH FIELD DEVELOPMENT PROJECT

The Perth Field is situated in United Kingdom Continental Shelf (UKCS) Block 15/21b in the northern North Sea. The licence for exploration of Block 15/21b was granted to Amerada Hess Ltd (AHL) in 1987, and the Perth Field was discovered in 1991. Although follow-up appraisal was carried out, development of the field was shown to be sub-economic utilising standard technological and commercial approaches.

In 1999, AHL decided to carry out a further evaluation of the potential for developing Perth. It was determined that a traditional development solution was unlikely to produce a viable project and so a fundamentally different approach was adopted. A Perth Project Team, consisting of selected offshore contractors was formed with cross-discipline input from AHL. ERT was responsible for providing all environmental support to this project team. This innovative approach to contracting arrangements and risk-sharing provided the best opportunity to identify a solution to allow Perth to be developed.

THE CHALLENGE

The Perth Field lies in United Kingdom Continental Shelf (UKCS) Block 15/21b in the northern North Sea. The project involves a sub-sea tie-back to the AHL Scott platform approximately 11 km to the southeast.



Perth is a sour field with a high sulphur content, primarily in the form of hydrogen sulphide H₂S and high levels of CO₂ (up to 40%). Since H₂S gas is very poisonous, levels of the produced fluids needed to be reduced considerably for health and safety reasons on the production platform and to meet the oil and gas specifications for the export pipeline.

THE EIA PROCESS

ERT conducted the environmental assessment for the Perth Development in line with AHL's environmental management system. Some key elements of the environmental assessment process are outlined below.

Scoping and consultation

Scoping activities were conducted early in the process and involved informal consultation with key stakeholders to establish the potential key issues, and the identification of available information sources and information gaps. Formal consultation takes place following submission of the environmental statement.

Commissioning specialist studies

Specialist studies were commissioned where there was insufficient information on which to assess the environmental impacts of the project. These included atmospheric emissions modelling for well testing, marine dispersion modelling for liquid discharges and toxicity testing of chemical scavenging by-products.

Identification and assessment of potential environmental effects

ERT organised an environmental screening workshop and the ENVID (environmental issues identification) workshop attended by key members of the project team. These workshops were carried out to screen the project for potential environmental interactions, to identify key issues for further consideration and to establish project goals.

Participation in screening and option selection process

The Perth project underwent a screening process to identify those aspects of the proposed development with potential environmental effects. Consideration of the environmental implications of the project has been an integral part of design activities at all stages from the pre-Front End Engineering Design (FEED) through to project sanction. The results of this process together with the (informal) consultation process provided a list of concerns that were considered further in the environmental assessment process.

DIRECT BENEFIT FOR THE CLIENT

By involving ERT at the early stages of the project, the key environmental issues were identified early on in the project so that mitigation measures could be implemented during the final design stage.

ADDITIONAL ENVIRONMENTAL SUPPORT

Other involvement of ERT in the Perth development project consisted of the production of an oil spill contingency plan, and an Environmental Management Plan.