

FEASIBILITY AND CONCEPT SELECT STUDIES MULTIPLE OFFSHORE FIELDS Mediterranean Sea

ICON Engineering was engaged by a European energy company to conduct Feasibility and Concept Selection Studies for multiple oil and gas fields in the Mediterranean Sea.

Project Overview

Multiple oil and gas fields had been discovered in the permit areas, and there were additional leads and prospects that needed to be evaluated in proposed development plans.

The fields were of varying size in terms of hydrocarbon reserves and located a in excess of 50km from shore and from other offshore infrastructure in adjacent blocks.

The ICON scope of work comprised the following:

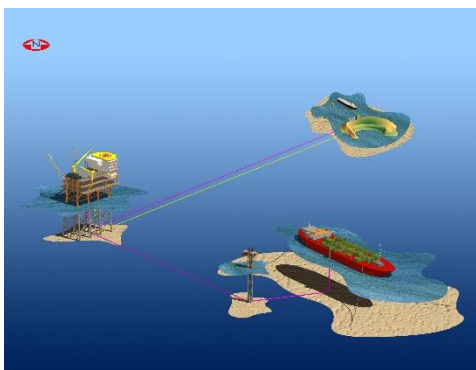
Basis of Design

Working closely with the client's subsurface and wells teams, a Basis of Design (BOD) was developed for the fields.

The key outputs of the BOD were the production profiles of the various fields (P10/P50/P90).

Feasibility Study

The initial task was to confirm the economic feasibility of the potential development. For this work a sound, proven development scheme was evaluated for the fields. The robust economic results from this work demonstrated that the fields should be further evaluated and that the project should proceed to the next phase.



Concept Select Study – Identification of Options

In this stage all practical, proven development options were identified for the field's development by ICON and the client. The development options considered a variety of development schemes including field development elements such as:

- FPSOs;
- Platforms;
- FSOs;
- Pipelines;



- Subsea systems; and
- MOPUs

Concept Select Study - Evaluation of Options

Following identification of the available options, each was technically defined to the necessary extent to be able to adequately quantify the options. This technical definition was performed using ICON resources, in consultation with the client, and using third party specialists as needed.

Thereafter the relative merits of the various options were evaluated by ICON and the client using ranking criteria including:

- Costs - capex and opex, and phasing;
- Technical and environmental risk;
- Market availability of hardware (e.g. FPSO/MOPU);
- Economic - NPV, IRR etc;
- Produced reserves and field life;
- Flexibility to add extra fields; and
- Schedule to first oil.

At conclusion of the Evaluation of Options phase, all development options were compared.

Field Development Planning - Future

A forward work programme was developed for the client - in essence a comprehensive road map - to get to the FID gate stage for the development. This work programme included actions for all relevant parts of the development including subsurface, wells, facilities, operations and maintenance, local content, site surveys etc.

Field Data

Water depths 100 to 120m