

Shallow Water Gas Development

Deliverables

- Concept design
- Subsea tie-back
- Process design
- Specification of all equipment items
- Vendor selection
- Detailed design
- Commissioning
- Concept screening
- Front end engineering design
- HAZOP
- Operating procedures
- Ongoing technical support



Background

The Galata Field is situated in the Bulgarian sector of the Black Sea. The field has been developed through an unmanned platform carrying two wells, flowing gas through a 14" sealine to the shore, where the gas is conditioned at the onshore processing plant. The conditioned gas is then transported 60 km through a land line to a metering station before joining the Bulargaz gas distribution ring-main.

Concept

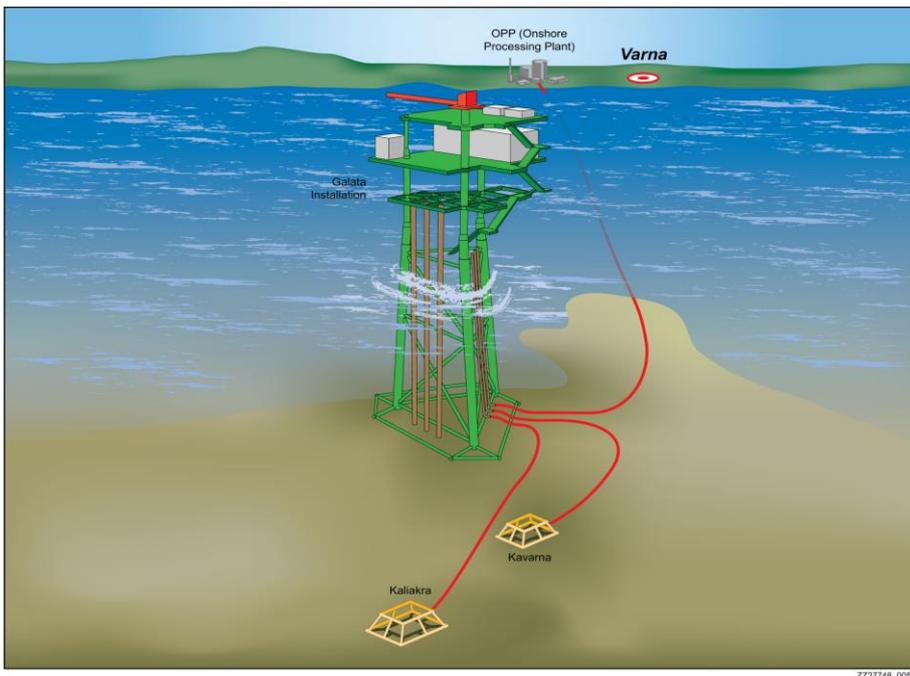
Optimus were first involved in the project in 2001 when we performed a review of a conceptual design for the field infrastructure, then in 2002 we carried out a front end engineering design for the onshore processing plant. In 2003, Optimus carried out a design review and attended HAZOPs.

Project Delivery

In 2004 Optimus were engaged as part of the Melrose team involved in the final stages of construction and the commissioning of the onshore facilities. This involved pre-commissioning checks to ensure that all systems were complete, both mechanically and E&I, prior to commissioning. The plant start up was carried out under Optimus supervision following procedures written by Optimus.

The project was carried through from concept to close out.





Subsea Tie-backs

In 2009 Melrose resources discovered two fields in the proximity of the Galata platform with proved reserves of 57Bcf for Kaliakra and 24Bcf for Kavarna. The challenge was to develop small / medium sized developments and keep the project economics sound. Early on it was identified that laying two subsea umbilicals was not an option as the costs would prove prohibitive to the project economics.

From Concept to Close-out

The Optimus innovative solution delivered a concept that provided the client full well control and hydrate management without the need for a costly umbilical. Optimus did the detailed design for and carried out the modifications to the platform. The modifications allowed the new tie-backs, hydrate management system and well control systems to integrate with the current platform and onshore processing plant control systems. Pipeline design was carried out by the installation contractor with supervision by Optimus. Optimus also provided the cost and progress reporting against the schedule as a part of our project services capability. For the pipeline survey, installation and commissioning of the tie-backs Optimus provided engineering and client representative support to complete the project loop from concept to close out.



Project Successes

Optimus have been retained since 1st gas to provide ongoing technical support to the Melrose operations team.

Optimus developed a concept that entirely met the client's specifications. The removal of a costly umbilical from the project CAPEX ensured the project economics were viable. Since commissioning the fields have been producing around 46 MMscf/d. The solutions Optimus developed are transferable to the North Sea or other areas where project costs tend to make developments of this size un-economic.

