

Independence Hub

PROJECT OVERVIEW

Umbilical installation at the Independence Hub development, Gulf of Mexico



Installation of umbilicals, hardware and flying leads for the tieback of nine fields in development of the Independence Hub gas field, Mississippi Canyon Block 920, Gulf of Mexico.

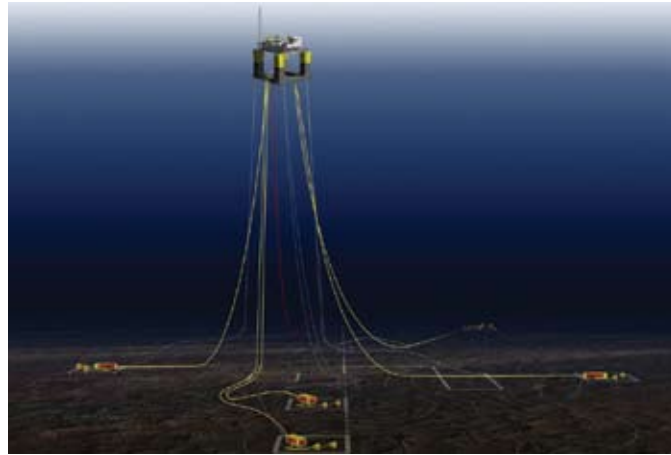
This was a record breaking project where Subsea 7 carried out the world's deepest installation of an umbilical and completed the world's first installation of a wellhead Christmas tree using a newly developed fibre rope deployment system.

Project included the following elements:

- 7 main umbilicals, 5 extension umbilicals, 3 infield umbilicals (190 km)
- 36 seabed structures
- 43 steel-tube and electrical flying leads
- 8 flowline jumpers
- World's deepest installation of a wellhead Christmas tree
- Newly developed fibre rope deployment system

LOCATION

The Independence Hub is located at Mississippi Canyon Block 920, Gulf of Mexico. Water depths range from 2387 m at San Jacinto to 2731 m at Cheyenne.



Independence Hub schematic

CLIENT

Anadarko, ENI and StatoilHydro

PROJECT DURATION

August 2006 - July 2007



Umbilical installation deployed by the Toisa Perseus

ASSETS

Vessel

Toisa Perseus

SCOPE OF WORK

The Subsea 7 scope of work on the ultra-deepwater Independence Hub gas field project for Anadarko, ENI and StatoilHydro concluded in July 2007.

During the project, Subsea 7 successfully carried out the world's deepest umbilical installation at almost 2,750 m and completed the world's first installation of a wellhead Christmas tree using an innovative fibre-rope deployment system installed on the Toisa Perseus.

The overall Subsea 7 scope of work on the project included the transportation, installation and testing of 15 umbilicals, totalling 190 km, 36 seabed structures, 43 steel-tube and electrical flying leads and 8 flowline jumpers, to tie back wells from 9 fields and extensions to the Independence Hub Floating Production Facility, located at Mississippi Canyon Block 920. It was Subsea 7's deepest field development project to date.

The company helped develop a fibre rope deployment system that assisted installations in water depths of 2731 m with the Toisa Perseus. The system has significant potential for deepwater installation operations when compared with steel wire.

While fibre rope maintains the same strength as steel, it has a specific gravity of 1.2 compared with 8 for steel. Its weight is close to zero in water, creating significant advantages when working in greater water depths.

At 3000 m, for a 125 t load, the submerged weight of steel wire represents 60% of the allowed hook load. The weight of fibre rope for an equivalent lift is only 1.6%. This gives fibre rope a broader appeal for use in deepwater operations because its capacity is wholly available for handling payloads. In addition, its low weight allows more accurate active heave compensation (up to 95%) to be achieved with higher speed and less power.

The project was completed safely with excellent operational performance, further enhancing Subsea 7's reputation in the region as the Subsea installation Partner of Choice.



The fibre rope deployment system assisted installation in water depths of 2731 m