

## BOSKALIS ENERGY SOLUTIONS

Boskalis is a leading global dredging and marine expert. With safety as our core value we provide innovative, sustainable and all-round solutions for our clients in the energy market. Realizing projects in remote locations with a heightened environmental focus is one of our specialties. Under the brands Boskalis, Dockwise, Fairmount, VBMS and Smit Lamnalco we offer more services than any other company in our industry, making us your next one-stop solution provider.

We support the development, construction, main¬tenance and decommissioning of oil and gas import and export facilities, fixed and floating exploration and drilling facilities, pipelines and cables, and offshore wind farms.

## **SCOPE OF WORK**

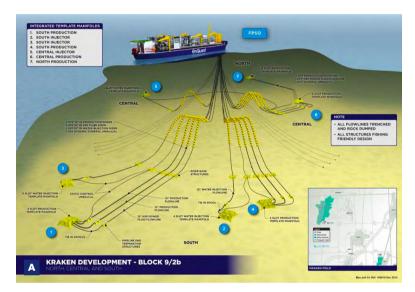
The Scope of Work included project management, engineering, mobilization, installation, calibration, maintenance, and demobilization of all equipment required for the FPSO STP (Subsea Turret Production) hook-up activities.

The STP, mooring system and risers were preinstalled, and needed to be hook-up to the FPSO once arrived in the field.

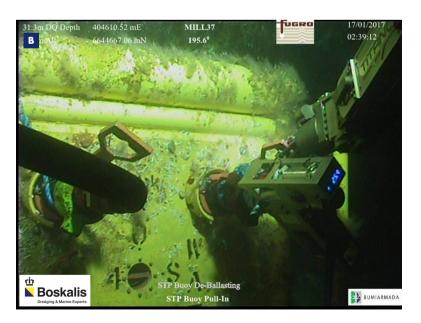
## PROJECT SHEET

KRAKEN FPSO STP HOOK-UP, UK

FEATURES	
Company	Enquest
Location	Block 9/2b, UK
Period	Q1 2017
Contractor	BumiArmada



- A Kraken Field
- **B** STP De-ballasting operation





## **KRAKEN STP HOOK-UP PROJECT**

The Kraken field is developed by Enquest Heather Ltd (and its partners), utilizing subsea wells tied back to a Floating Production, Storage, and Offloading (FPSO) facility. Armada Kraken was contracted by Client to provide and operate a FPSO for the Kraken field.

Boskalis scope of work was to hook-up the preinstalled STP buoy, and entailed: Project management, engineering, mobilization, installation, calibration, maintenance, and demobilization of all equipment required for the FPSO STP (Subsea Turret Production) hook-up activities.

The offshore works consisted of an as-found survey of the pre-installed STP system (including mooring lines, risers and umbilical) up to touch down point locations.

Marine growth cleaning on the STP buoy top, in particular on the pull-in funnel area for pull-in rigging operations later on.

Identify STP buoy idle depth at mooring lug location on all three clusters.

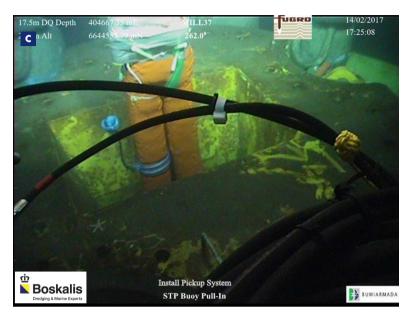
 ${\it Ballasting/deballasting\ of\ STP\ buoy}.$ 

STP hook-up rigging installation.

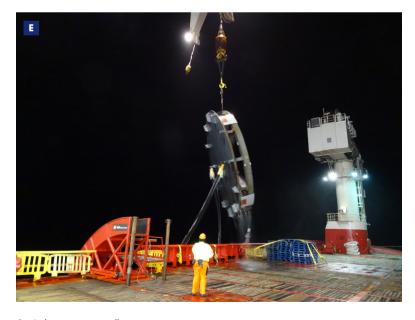
Once FPSO arrived at site, Boskalis scope entailed the Removal of the FPSO mating Cone Seal Plug. During FPSO STP hook-up, Boskalis was responsible for the subsea monitoring of the hook-up operations by means of WROV.

Upon completion, an as-build survey has been performed by Boskalis as well.

Boskalis chartered the CSV Boa Sub C outfitted with WROVs for works.







- C Pick-up rigging installation
- Kraken FPSO arrives in field
- E FPSO plug recovery on deck

Royal Boskalis Westminster N.V. PO Box 43 3350 AA Papendrecht The Netherlands

T +31 78 69 69 000 F +31 78 69 69 555

royal@boskalis.com www.boskalis.com