

Case History

Kizomba Mooring Line Studies











Project Description

The Kizomba A FPSO Deepwater Production Facility is located in 1,200m water depth off the coast of Angola. The FPSO is spreadmoored with 15 mooring lines connected to suction piles with an offloading CALM buoy.

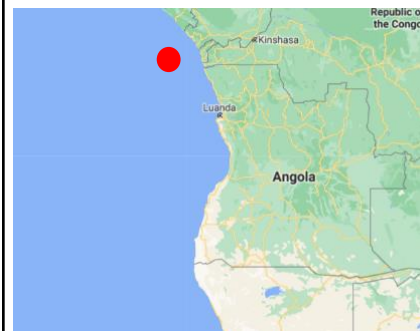
Sealand provided support to this project by determining the readiness of ExxonMobil to respond to a mooring line incident involving either the Kizomba A FPSO or CALM buoy, with specific reference to the enabling assets, equipment and engineering requirements should a mooring line failure occur.

Services Provided

-  **Package Management**
-  **Business Assurance**
-  **Carbon Management**
-  **Energy Transition**
-  **Engineering Design & Analysis**
-  **Marshalling, Transport, Installation & Field Support**
-  **Floating systems, Towing, Mooring & Hook-up**
-  **Visualisation and Digitalisation**

Key Facts

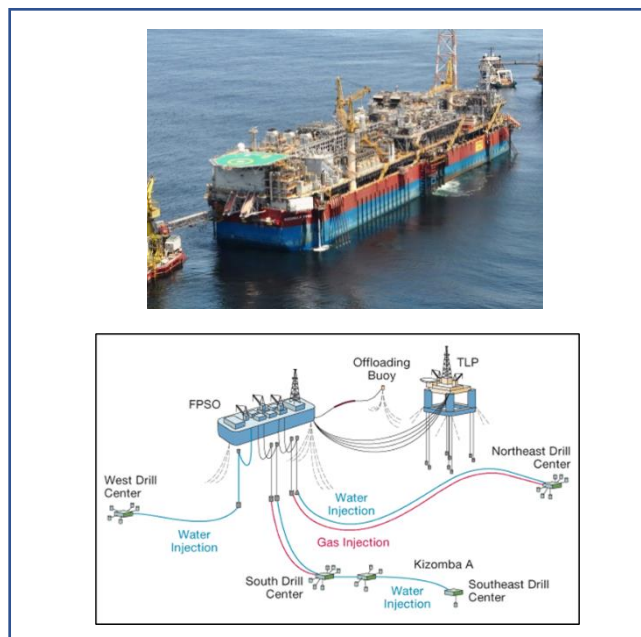
- Client:** MSS/Exon Mobil
- Location:** Angola
- Water Depth:** 1000m
- Dates:** Q2, 2021
- Project Reference:** P0488



Our Scope

The following work was completed for both the FPSO and CALM buoy:

- Identify credible mooring line failure scenarios.
- Develop Method statements for mooring line replacements developed.
- Prepare Procurement plans based on spares requirements, lead time and availability in-country.
- Develop Mooring line failure response roadmaps.
- Identification of readiness based on 90/180/365 days from mooring line failure.
- Geotechnical review of conditions at site and effect on changeout / installation of new mooring line using suction pile.
- Orcaflex analysis of methodology for changeout.
- Plan and coordinate a Bowtie assessment on the credible

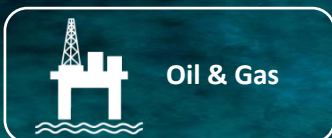


Deliverables

- Spares, Logistics, Storage & Marshalling Philosophy
- Constructability Review Workshop
- Structural & Analysis Basis of Design
- Bow Tie Event Tree
- Readiness Response Plan
- Procurement Plan
- Risk Register



Renewables



Oil & Gas



Ocean Systems



Pathway to Net Zero