

Experience

Rapid Response – Environmental Support

Sulmara's USV supports fuel removal operation

Location: Off the coast of Taiwan

SULMARA

DFO
東方風能科技股份有限公司
DONG FANG OFFSHORE

Challenge

In October 2024, the heavy transport vessel Yu Zhou Qi Hang lost power during a typhoon off the coast of Taiwan, running aground with 245t of heavy fuel oil and 37t of light fuel oil on board.

While all 17 crew members were safely rescued, poor weather conditions and unknown seabed hazards in shallow waters complicated the safe removal of the fuel from the wreck. The Taiwan Environmental Protection Department faced an urgent challenge in ensuring the fuel was extracted safely to prevent further environmental impact.

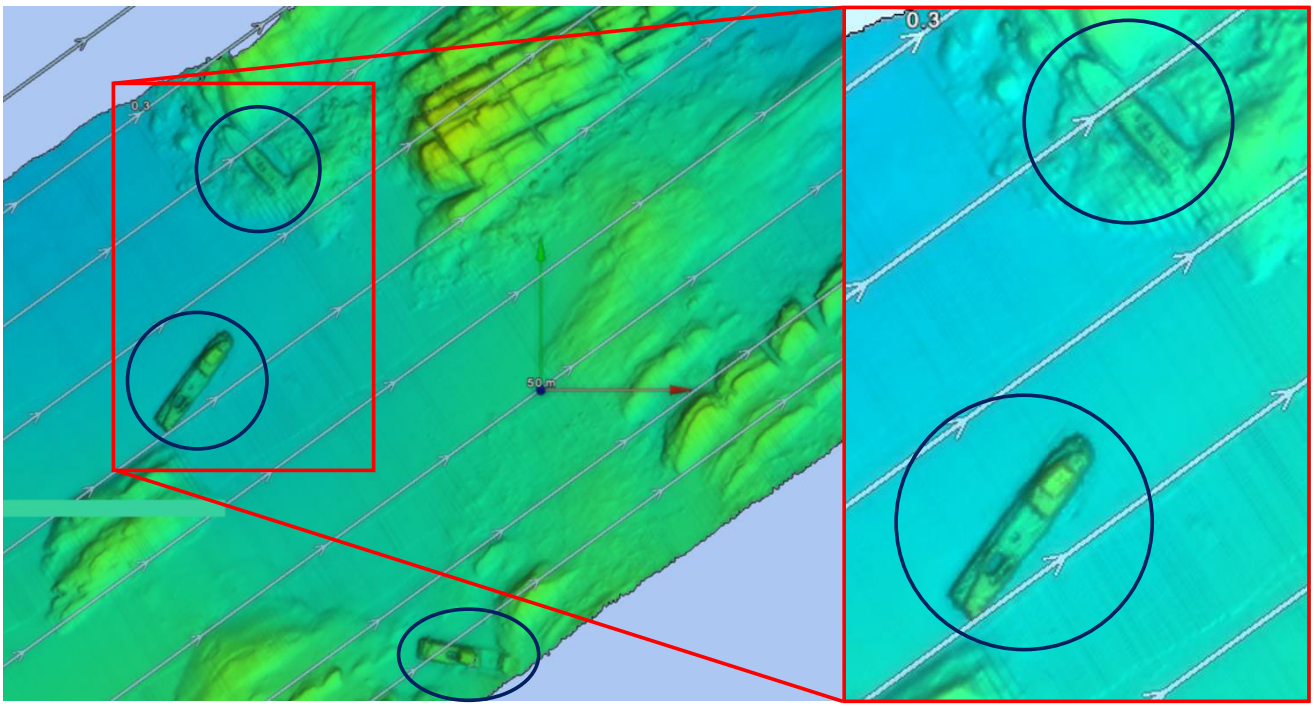


Solution

To support the critical fuel removal operation from the Yu Zhou Qi Hang, Taiwanese marine contractor Dong Fang Offshore was contracted to deploy the Orient Constructor, a vessel designed to lift salvage equipment and pumps onto the wreck.

However, the operation presented high risks, as manoeuvring the Orient Constructor close to the grounded vessel in adverse weather was complicated by limited information on the subsea hazards below the keel.

To mitigate the risk of damage to the Orient Constructor and ensure safe navigation in the shallow waters, Dong Fang Offshore turned to Sulmara for a seabed survey. Sulmara quickly mobilised its WAM-V 16 Unmanned Surface Vessel (USV) within 24 hours, gathering critical bathymetric data from the wreck site and providing survey and positioning services about the Orient Constructor.



Delivery

Sulmara's WAM-V 16 USV was swiftly mobilised and equipped with a Multibeam Echo Sounder (MBES) to map the seabed. Despite challenging weather conditions, the USV successfully gathered the critical bathymetric data, allowing the salvage operations to proceed. After two days, the WAM-V 16 was safely demobilised, having completed its mission.

Additionally, Sulmara deployed survey personnel aboard the Orient Constructor to offer high-accuracy positioning and seabed monitoring as the vessel operated in the waters near the wreck site.

Resilience

The operation faced significant challenges due to poor weather conditions and limited data on subsea hazards, making it difficult to manoeuvre the Orient Constructor safely in shallow waters.

Sulmara's quick deployment and use of unmanned systems ensured the safe collection of seabed data, minimising risks to both the vessel and personnel. The flexibility and resilience of the team allowed the project to progress despite the challenging conditions.

Impact

Sulmara's quick response allowed Dong Fang Offshore to complete the salvage operations within a week of arriving on-site. The high-quality seabed bathymetry data collected by the USV enabled the team to navigate safely and efficiently, ensuring a successful fuel removal operation.

