Synchronous Deck Raising Solution

The topside’s air gap is a critical design parameter for an offshore platform. Few platforms are designed to survive wave loading in the deck. The recent experiences in the Gulf of Mexico have demonstrated that design requirements can change over time. Additionally, seabed settlement due to reservoir consolidation can result in a reduction in current air gap to such an extent that the original design requirements are not met.

In 2006 Versabar developed and implemented a new deck raising solution which was used to raise the topsides of two drilling and production facilities in the Gulf of Mexico by 14 feet. The pictures below show one of the platforms in the before and after raising conditions.

The Versabar solution introduced the use of sleeves which completely encapsulate the legs during the raising process. This offers the following benefits:

• Provides high lateral stability during raising

• The sleeves form the leg extensions (reduces exposure)

• Provides a mechanical storm-safe pin-off connection
In 2010 an operator in SE Asia approached Versabar to investigate the options for raising the topsides and flare structures simultaneously for a complete field. Versabar extended their proprietary technology to allow the field to be raised in a two-step process. The considerable loss of air gap due to seabed subsidence and very short leg length below the cellar deck precluded a single stage raising operation.

The solution was extensively tested and verified at the Versabar facility in Houston prior to mobilizing the equipment and support personnel to the field.

In 2013 the field was successfully raised by 13 feet using the two-stage process as designed. Raising operations were completed in under 8 hours. Versabar can offer raising solutions for platforms over 20,000 tons in weight and for any general configuration or arrangement.
Platform Subsidence Remediation • Increased Air Gap

Engineered Lift Solutions • Complete System Integration Testing