



Case Study

Operations and Engineering Support

Oceaneering International Inc. – Ocean Legend Facility

K2 Technology Pty Ltd was contracted by Oceaneering International Inc. (OII) to provide Operations and Engineering support to the Ocean Legend facility from 2001 up until the facility was decommissioned in 2011.

The Legendre Field is located in Permit Area WA-1-P, 100km Northwest of Dampier, Western Australia. The field was operated by Apache Energy Ltd (AEL) on behalf of the joint venture comprising AEL and Santos.

The primary production facility was the Ocean Legend Mobile Offshore Production Unit (MOPU), which consisted of a wellhead, process and accommodation facilities.

The Ocean Legend MOPU was leased from OII which provided daily operation support for the facility.

AEL determined the end of economic field life for the Legendre Field as January 2011, when the field comprising the MOPU and other subsea infrastructure was decommissioned

Inspections of the hull and spaces during Annual Hull Survey 3, cleaning and inspections of all the product tanks led to the conclusion that in-situ repairs to clear outstanding class recommendations and any future recommendations resulted from other inspections were not practical.

It was then conservatively estimated, in early 2010, that the scope for the 8 tanks (with current class recommendations - open), excluding the ongoing assessment of the remaining 22 tanks, would require over 12 months of repair work in-situ on the basis of the 14 bed spaces available for the repair team. It was proposed that all tanks be fully assessed for seaworthiness, temporary repairs were engineered and performed to enable the Ocean Legend to be jacked down, floated and wet towed to Dampier and transferred onto a heavy lift vessel.

Temporary repairs were completed, and within each void space the cut out section of deck plating was made water tight in accordance with ABS repair guidelines and to the satisfaction of the attending surveyor.

K2 provided services in the form of:

- Engineering assistance;
- CMMS management and optimisation;
- Shutdown planning and management; and
- Decommissioning management and assistance.