KING OF THE REEFS – THE ENHANCEMENT & RETENTION OF REPURPOSED ASSET TO CREATE PRODUCTIVE MARINE ECOSYSTEMS

Tim Grose & James Florisson - Recfishwest

King Reef became Australia's first integrated artificial reef in 2018 repurposing steel structures donated by BHP from the Griffin Field augmented with purpose-built concrete reef modules. The reef was a result of a five-year community vision, which was expanded due to the formation of a consortium including the state government, academia, petroleum industry, engineers and Recfishwest. King Reef experienced rapid colonisation post deployment, exceeding the abundance, species diversity and biomass of fishes observed at natural reef and sand habitats in the Exmouth Gulf, in fact over 100 species of fish were observed through community monitoring in the first four years. As expected, (but not scientifically proven until now) the repurposed steel structures had the highest mean fish abundance, species diversity and biomass of all the reef structures.

The reef is now championed by the local recreational fishing community, supported by funded reef monitoring and citizen science projects from BHP and now Woodside Energy and is a pioneer of successful marine habitat enhancement utilising repurposed assets from the Petroleum Industry. Since King Reef's success, Recfishwest and partners have been leading the way in exploring how the recreational fishing community (as WA's largest aquatic user group) can enjoy, champion and advocate for the creation, enhancement and retention of more integrated reefs, especially amongst WA's offshore oil and gas landscape. This is not just an engineer's world anymore, the fishing community arguably get more excitement from subsea structures than anyone else on the planet/subsea environment.

ROV BASED WELLHEAD ANNULAR ABANDONMENT

Iain Wylie - Oceaneering

Developed and manufactured in Perth for export, a Vessel-based Remotely Operated Vehicle (ROV) methodology and suite of equipment was created to gain access to the multiple annular spaces of subsea wellheads for testing and remediation prior to wellhead severance. Conventionally, annular abandonment is conducted by rigs through the wellhead connector using a snubbing unit and perforation equipment to get cement into the annular spaces. Alternatively, saturation divers have used manual multi-string hot tapping units for the same task. Our method was four times faster than a jack-up rig, and an order of magnitude less expensive than a saturation diving campaign without the risk of divers in the water. This presentation will review the objectives, development of the methodology, the equipment and summarize the offshore campaign.

RETIRING THEVENARD ISLANDS OFFSHORE PLATFORMS

Grant Brunsdon – Chevron

Given aging assets and increased focus on decommissioning in the local O&G industry it is important to learn from challenges faced by the early decommissioning projects.

The Thevenard Island (TVI) facilities, off the coast of Onslow, consisted of an oil and gas processing plant, accommodation and wells on Thevenard Island with nine offshore wellhead platforms, associated subsea pipelines and a tanker loading area. The asset ceased operations in 2014 and has been on a pathway to decommissioning across all facets (wells, onshore plant, offshore platforms and subsea pipelines) since.

The project has completed various Regulatory approvals, cessation of production cleaning, onshore well P&A, offshore well P&A, Onshore facilities decommissioning and island remediation. Current activities include planning for platform removals, planning for pipeline retirement and island landform rehabilitation. There have been many challenges along the journey this is an opportunity to share and discuss some of the experiences.

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