RTI upstream

CASE STUDY

Safe, Fast, and Predictable: A New Standard for Offshore Decommissioning

THE CHALLENGE

Background: Decommissioning offshore platforms in the Gulf of America is a challenge for operators. Many of these aging shelf facilities were never designed with end-of-life planning in mind. As a result, they now sit in varying states of disrepair, with limited utilities and infrastructure to support safe and efficient removal. With some owner-operators falling into bankruptcy, the burden of decommissioning these facilities, often known as "boomerang platforms," falls back to the original owner. These assets offer no return on investment, yet demand significant capital outlay, creating a financial burden with little to no upside. The market itself has remained stagnant for decades, lacking innovation and differentiation, which further compounds the difficulty of finding **cost-effective and scalable solutions.**

Decommissioning efforts are often executed on a time-and-materials (T&M) basis, **exposing operators to unpredictable and potentially high costs.** Resources are stretched thin and managing effluent and environmental impact adds another layer of complexity. Most critically, **safety remains a high-risk factor throughout the process,** with deteriorating infrastructure and limited access increasing the likelihood of incidents.

Used Case: The selected pilot facility, a platform in the Vermillion block of the GOA, faced many of these challenges. However, in coordination with the decommissioning project management partner selected by the operator, **a trial encompassing three work packs (out of 58 total flushing work packs), comprised of two separators and two heat exchangers, was selected.** A direct comparison with traditional methods was completed to **strategically shift how these challenges are addressed to safely and efficiently retire obsolete assets.**

THE SOLUTION

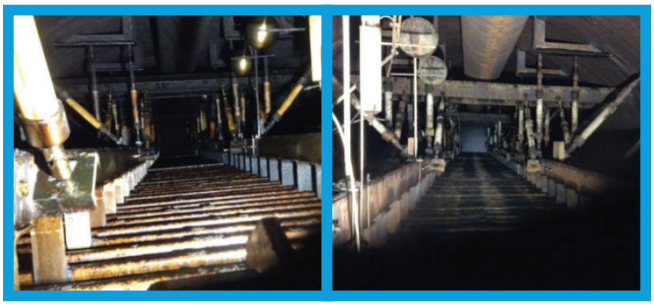
RTI Upstream has developed technology-driven solutions **which improve safety, efficiency, and cost predictability.** The process begins with advanced planning with our partners using platform documentation, laser scans, and/or 3D modeling, which enables detailed visualization and work pack development without the need for repeated offshore visits. This not only reduces exposure to hazardous environments but also streamlines logistics and enhances planning precision.

A key innovation in the execution phase is **RTI Upstream's vapor phase and rumble cleaning technologies,** which aims to achieve a target of zero lower explosive limit (LEL) and zero parts per million (ppm) of hydrogen sulfide (H_2S). **Steam and chemical treatment remove hydrocarbons and H_2S from fluid separation vessels and piping more efficiently than traditional flushing and removal methods. This drastically reduces flushing scope duration, minimizes the number of flanged connections and disconnections, eliminates the need for confined space entry, and introduces predictable commercial models that reduce cost variability.**

While vapor phase cleaning is common in other areas of the oil and gas industry, access to utilities such as power, potable water, and steam were limited at the Vermillion block pilot platform. To overcome this challenge, **RTI Upstream provided all necessary equipment and utilities, conducted valve functionality and integrity testing, and ensured safe operations through its team of industry-leading experts.**

Historical Method Water/N_2

Vapor Phase Cleaning



CONTACT

For more information, scan the QR code or visit RTIUpstream.com.

THE RESULTS

Although RTI Upstream is set up for 24-hour cleaning capabilities, the project team made the decision to limit scope to daytime only operations due to RTI finishing process connections ahead of schedule and offshore leadership wanting to be present for the cleaning operation. The team completed the flushing scope for the three work packs in three shifts, including process connections and demobilization time. Equipment offload was not included in this timeframe. All equipment was connected within two shifts with vapor phase cleaning completion over a 14-hour duration. Demobilization was completed the following day.

The results of this trial are summarized below:

- **Reduced duration to reach zero LEL and zero ppm H_2S** target versus planned duration of traditional work packs by four days
- **Verified** hydrocarbon and solids levels with borescope photos **before cleaning and after removal**
- **Eliminated confined space entries**
- Reported **zero injuries, accidents, or Loss of Primary Containment** (LOPC) incidents
- Executed ancillary cleans of two additional work packs on the Flare Header and Scrubber for additional savings not calculated in the direct comparison

It is estimated that RTI Upstream would have completed all 58 platform flushing work packs within 10 days. Compared to the actual completion time of traditional methods, **this would have led to a duration reduction of 30 days with a potential savings of $1.75 million.**

ZERO-ENTRY AND ZERO-INCIDENT RESULTS

- *No confined space entry required*
- *Reported zero injuries, accidents or Loss of Primary Containment (LOPC) incidents*

EFFICIENT FLUSHING EXECUTION

- *Flushing activities completed in less than 50% of the planned duration*
- *Zero LEL and zero ppm H_2S achieved*

OPERATIONAL AND FINANCIAL IMPACT

- *50% reduction in flanged connections and disconnections required*
- *More than $280,000 saved on three work packs completed*

Traditional Method (Flushing) IP Header

RTI Method (Vapor Phase) LP Header

LP Separator

Test Separator

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