

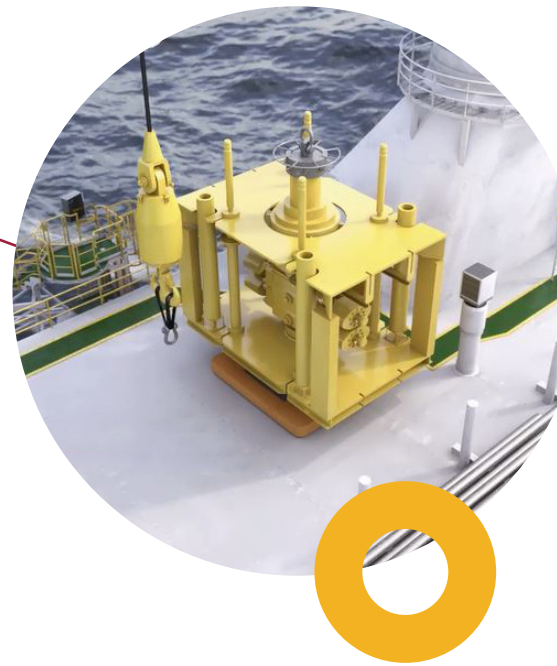
# ROAM

## Riserless Open-Water Abandonment Module

U.S. Patent 9,745,816



# The **Riserless Open-Water Abandonment Module (ROAM)** is the Subsea Services Alliance solution for environmentally friendly production tubing removal in open water.



When run as a complement to the Intervention Riser System (IRS) or Subsea Intervention Lubricator (SIL), ROAM enables the ability to capture contaminants or gas within the system and circulate them back to the safe handling systems on board the vessel. By doing such, high confidence is gained that nothing unwanted is released into the environment. The 18 3/4" Full Bore ID allows for the ability to pull tubing hangers through the ROAM to surface.

The ROAM has two barriers capable of shearing and sealing landing strings and production tubing that will pass through the system during recovery.



**Subsea  
Services  
Alliance**



## **Experience**

Designed with the benefit of 30 years of subsea intervention operational experience, and developed upon the learning from multiple dedicated intervention semi-subs and topsides designs.



## **Innovation**

First of its kind, patented technology designed to ensure no exposure of wellbore fluids to the environment when pulling upper completions or casing out of hole or performing various downhole operations while completely riserless.



## **Value**

Increased efficiency deploying ROAM compared to the traditional BOP and large bore equipment (18-3/4") while still retaining the ability to deploy larger ID tools for in well operations.

## TECHNICAL SPECIFICATIONS

### Main characteristics

|                   |  |
|-------------------|--|
| <b>Name</b>       | Riserless Open-Water Abandonment Module (ROAM)   |
| <b>Owner</b>      | Subsea Services Alliance including Helix Energy Solutions Group, Inc. and Schlumberger |
| <b>Year Built</b> | 2020   |

### Overview

ROAM operations are commenced following the isolation of the reservoir with at least two (2) tested barriers. The preceding lower abandonment will have been performed with an IRS or by other means.

Primary Uses:

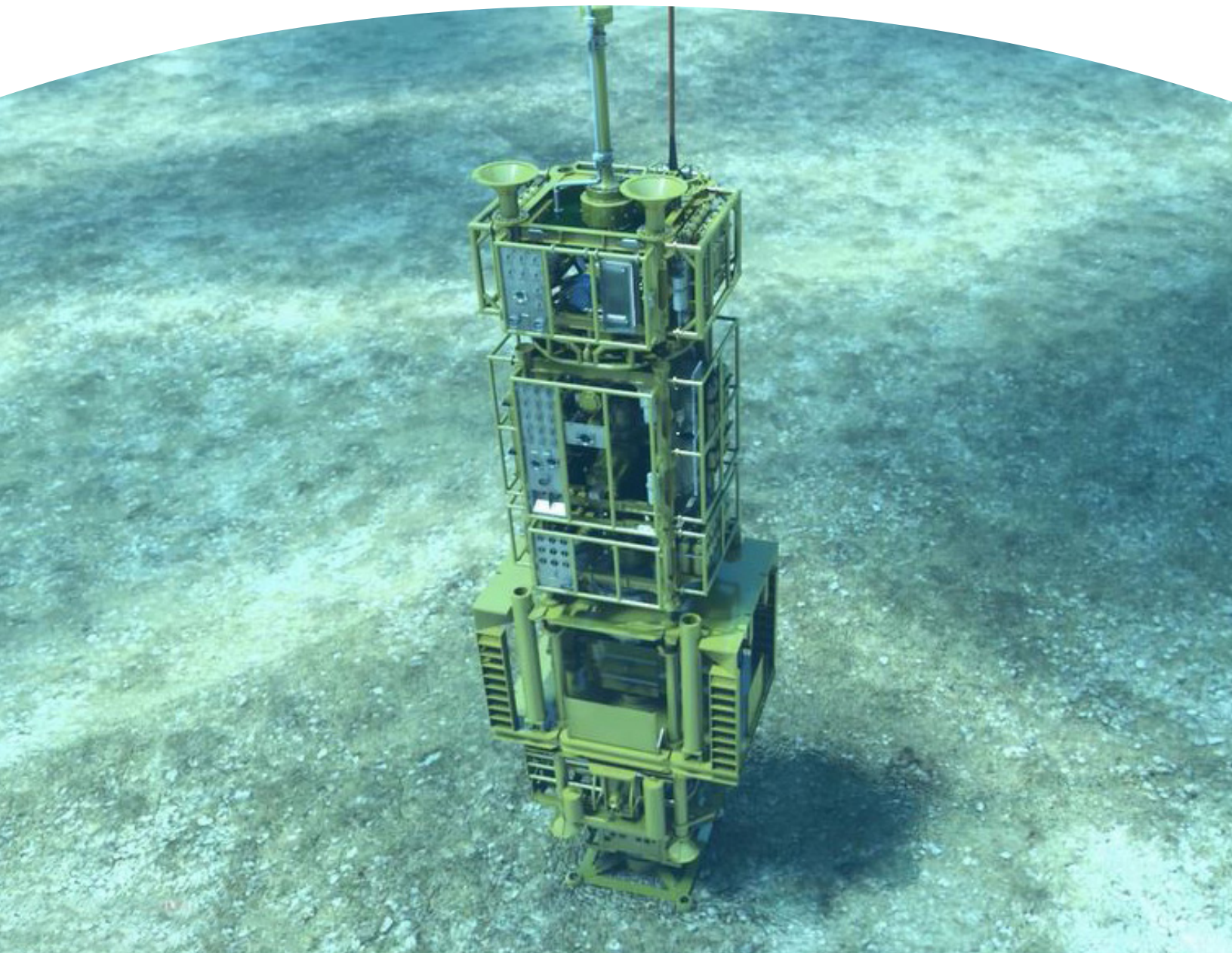
- To act as a barrier to the environment while displacing or washing contaminants from casing surfaces and annular regions;
- To provide the ability to perform pressure tests and in-flow tests;
- To act as well isolation device in the event of DP incident

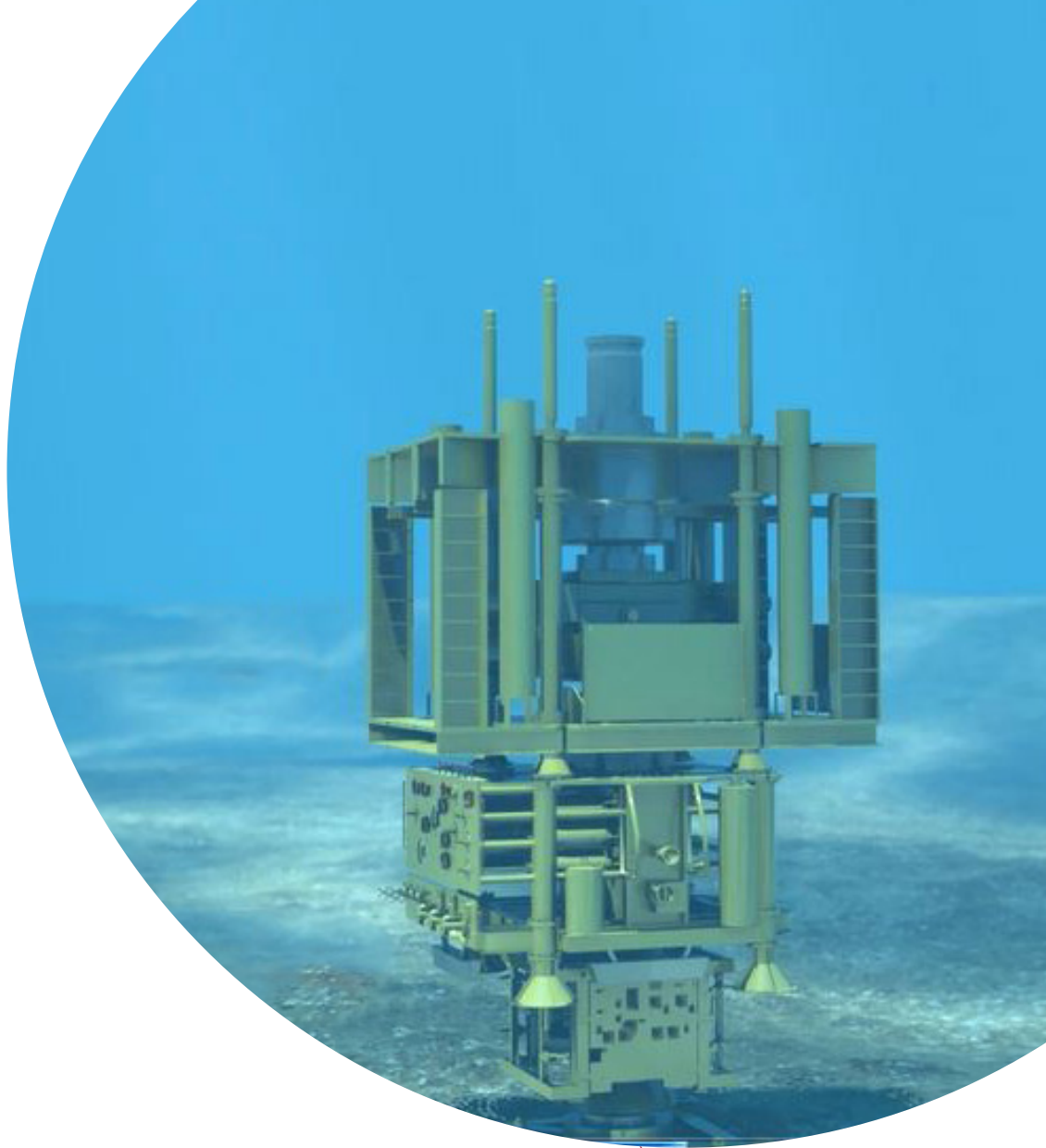
### ROAM Specifications

|  |   |
|--|---|
| <b>Operations</b>                            | Barrier to environment during upper abandonment operations; e.g., while setting packers, perforating casing, setting cement plugs |
| <b>Design Certification</b>                  | System and component level independent review (Lloyds)  |
| <b>Compatibility</b>                         | Horizontal and Vertical Trees and Wellheads   |
| <b>Nominal Bore Size</b>                     | 18-3/4" Production Bore (18.720" drift)<br>3-1/16" Circulating Bore   |
| <b>Pressure Rating</b>                       | 10,000 psi  |
| <b>Hydraulic Operating Pressure</b>          | 5,000 psi   |
| <b>Water Depth</b>                           | Up to 3000m   |
| <b>Design Life</b>                           | 20 years  |
| <b>Temperature Range (Wetted components)</b> | 32°F to 180°F   |
| <b>Material Class</b>                        | DD minimum (NACE MR0175)  |

### ROAM Specifications - BOPs

|   |   |
|---|---|
| <b>18-3/4" 10K Cameron TL Double BOP</b>  |   |
| <b>Operators</b>                          | Shear bonnets with Tandem Boosters and integral sequencing valves (both cavities) |
| <b>Rams</b>                               | Double 'V' Shear (DVS) rams (both cavities)                                       |
| <b>Accessibility</b>                      | Side Ram removal with hydraulically operated bonnets                              |
| <b>Locking Device</b>                     | Cameron RamLocks (both cavities)  |
| <b>Max Shear Pressure</b>                 | 2,800 psi   |
| <b>Side Outlets</b>                       | 4x 3-1/16" 10K BX-154 API Studded, 625 inlaid                                     |
| <b>18-3/4" 10K Cameron DL Annular BOP</b> |   |
| <b>Accessibility</b>                      | Quick-release top for efficient packer changeout with no loose parts              |
| <b>Packer Operating Pressure</b>          | 1500 psi  |
| <b>Side Outlet</b>                        | 1x 3-1/16" 10K BX-154 API Studded, 625 inlaid                                     |





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