North Sea Case Study: Platform deployed 8” Tethered Isolation Plug Cuts Decommissioning Costs

Neil Mackay - Senior Business Development Manager

Presentation Summary

- Introduction
- Isolation Plugs
- Abandonment Plugs
- Pre-Mobilisation Testing
- Offshore Operation and Animation
- Project Summary

Introduction

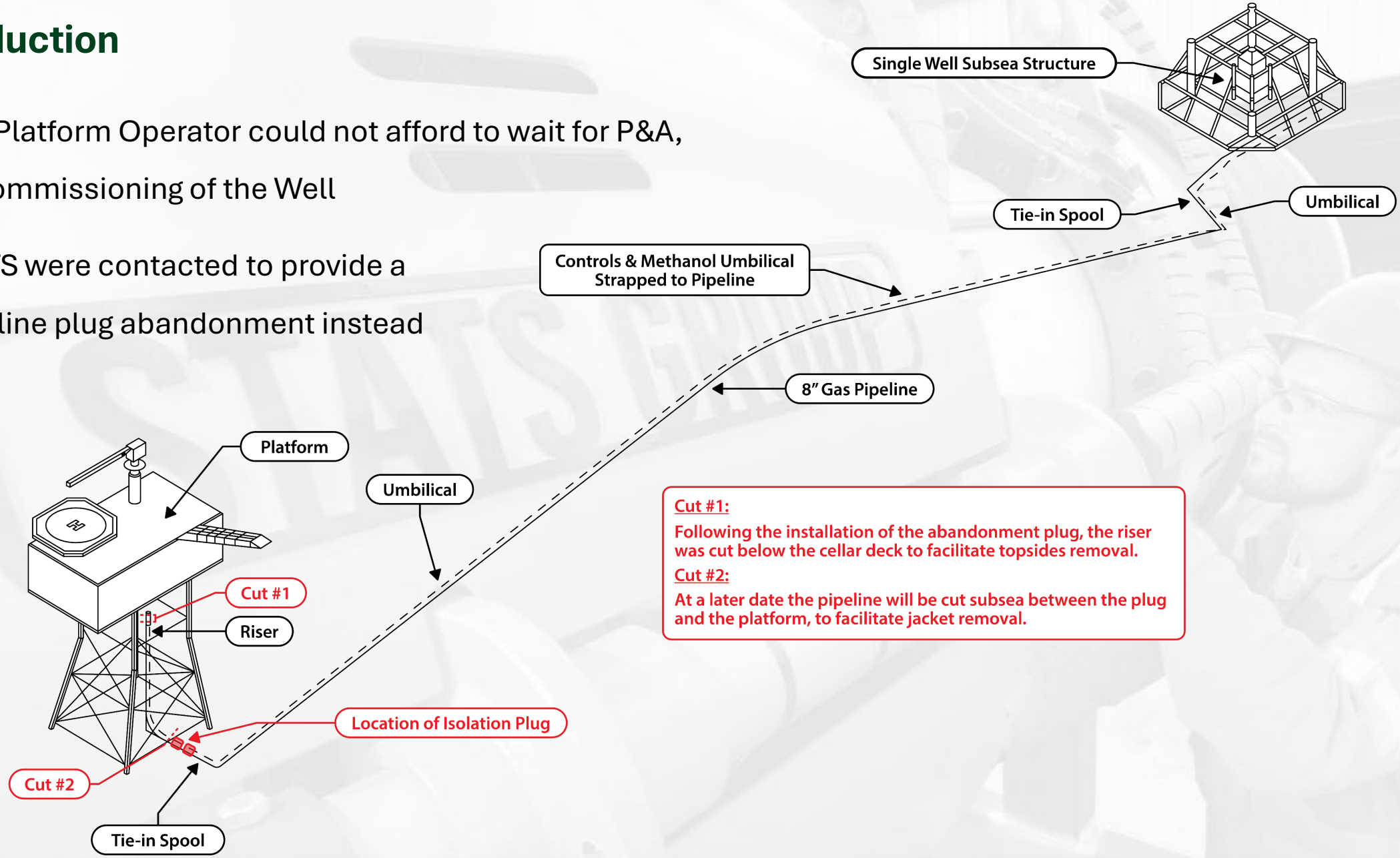
Introduction

- A southern North Sea Platform located approximately 40km east of the Easington Terminal in the Humber Estuary was one of four scheduled for decommissioning
- The platform received wet gas through a single 8” pipeline tied back to a single well, owned by another Operator, that was no longer viable and had been shut down
- The challenge was that the platform was due for decommissioning between 2022 and 2025, while the earliest planned decommissioning date for the well was Q3 2026.
- The pipeline therefore needed to be safely isolated from the well and its associated valves, which were known to be passing.

Southern North Sea Platform

Introduction

- The Platform Operator could not afford to wait for P&A, decommissioning of the Well
- STATS were contacted to provide a pipeline plug abandonment instead



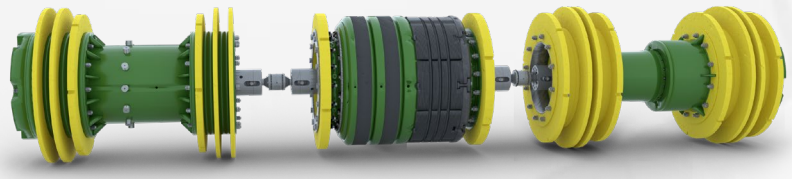
Cut #1:
Following the installation of the abandonment plug, the riser was cut below the cellar deck to facilitate topsides removal.

Cut #2:
At a later date the pipeline will be cut subsea between the plug and the platform, to facilitate jacket removal.

Isolation Plugs

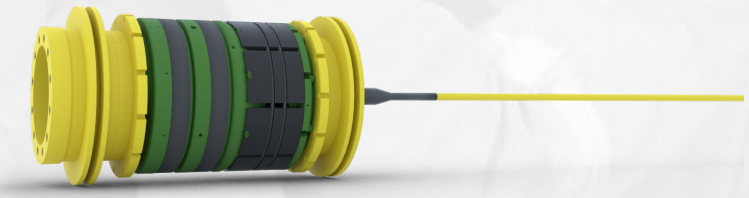
Isolation Plugs

Tool		Size Range	Description	Main Pros	Main Cons
Remote Tecno Plug		10” to 56”	Pigged to the isolation location, plug line.	230 bar rated, range >2000km. 1.5D bend capable. Standard pigging – increased safety	Additional cost vs. tethered plugs.
Tethered Tecno Plug	Stem Bar	2” to 56”	Pushed to the isolation location	Short for tight space applications, cost effective.	Straight deployments only, ca. 15-20m.
	Umbilical	8” to 56”	Pigged (pumped) to the isolation location		Limited bend capability. Umbilical limited to 60 bar. Deployment ca. >100m.



Remote Tecno Plug

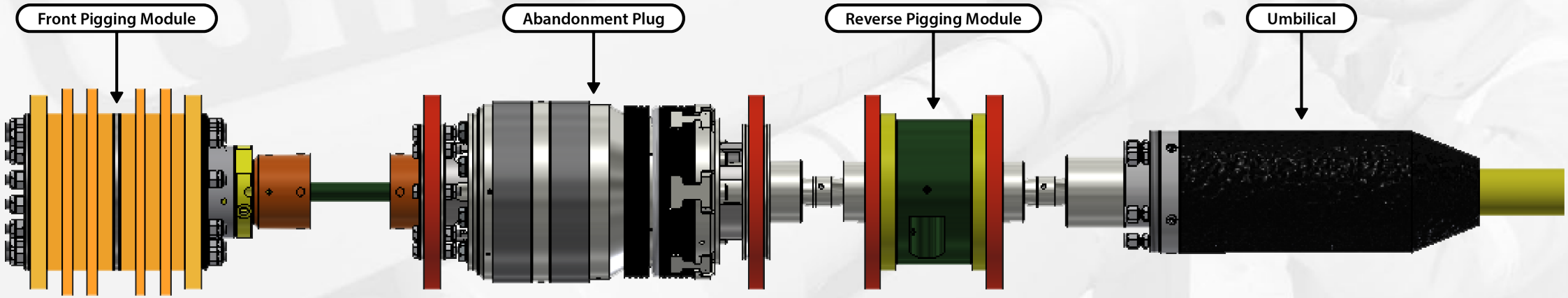
Tethered Tecno Plug (Stem Bar)



Tethered Tecno Plug (Umbilical)

Abandonment Plugs

- Tethered or Remote Controlled
- The parameters of this scope (8”, low pressure, minimal bends) were perfectly suited for a tethered tool
- A mechanical lock provides permanent isolation to maintain sealing after hydraulic disconnection



8” Tethered Abandonment Plug

Pre-Mobilisation Testing

Pre-Mobilisation Testing

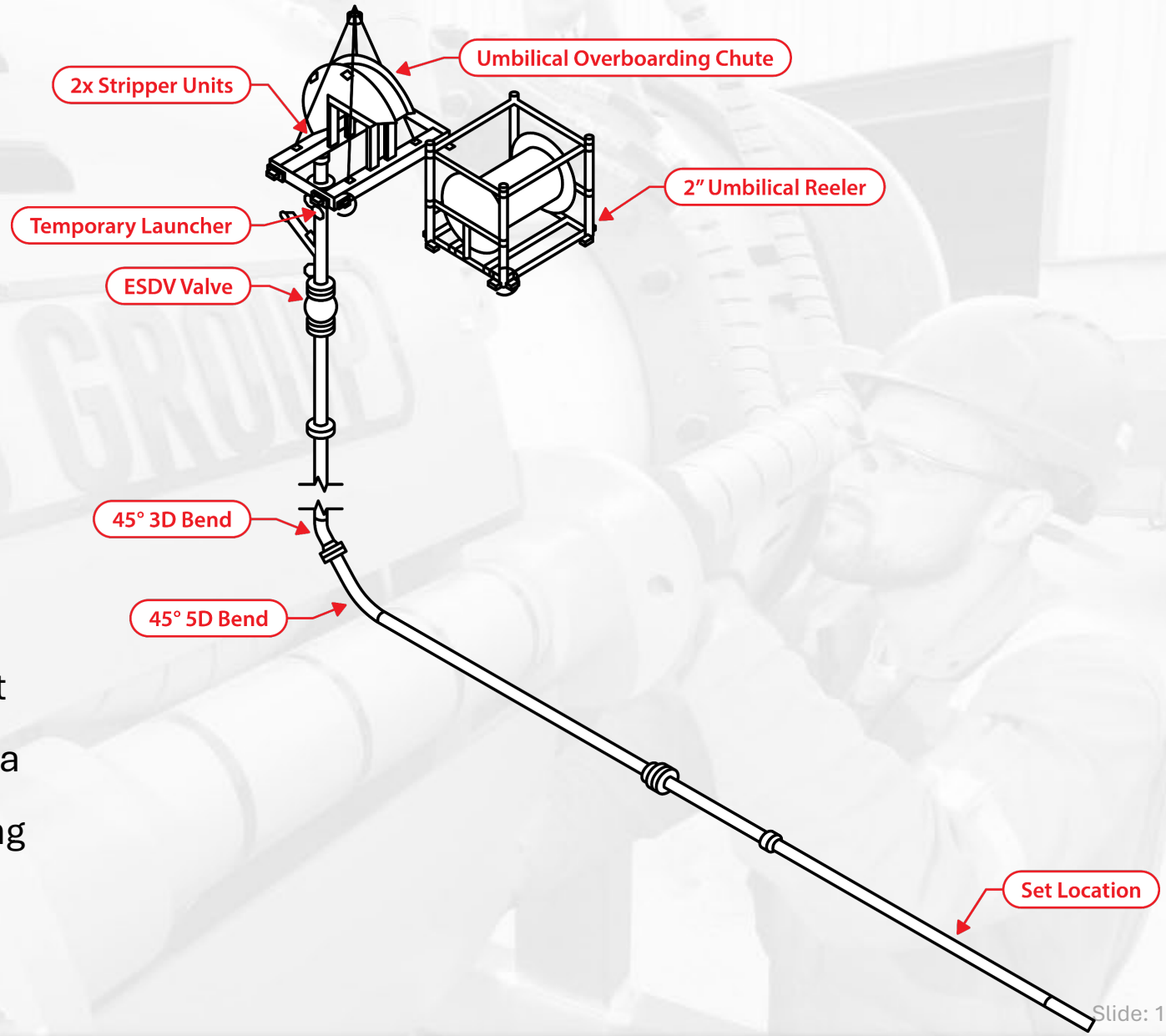
- Purpose of the Factory Acceptance Testing was to test the plug to project parameters (as standard) but also to confirm;
  - Piggability
  - Differential pressure to drive the plug
  - Mechanical Recovery was possible using the reeler
  - Suitability of substitute water based hydraulic fluid

Pre-mobilisation, Pigging Factory Acceptance Test

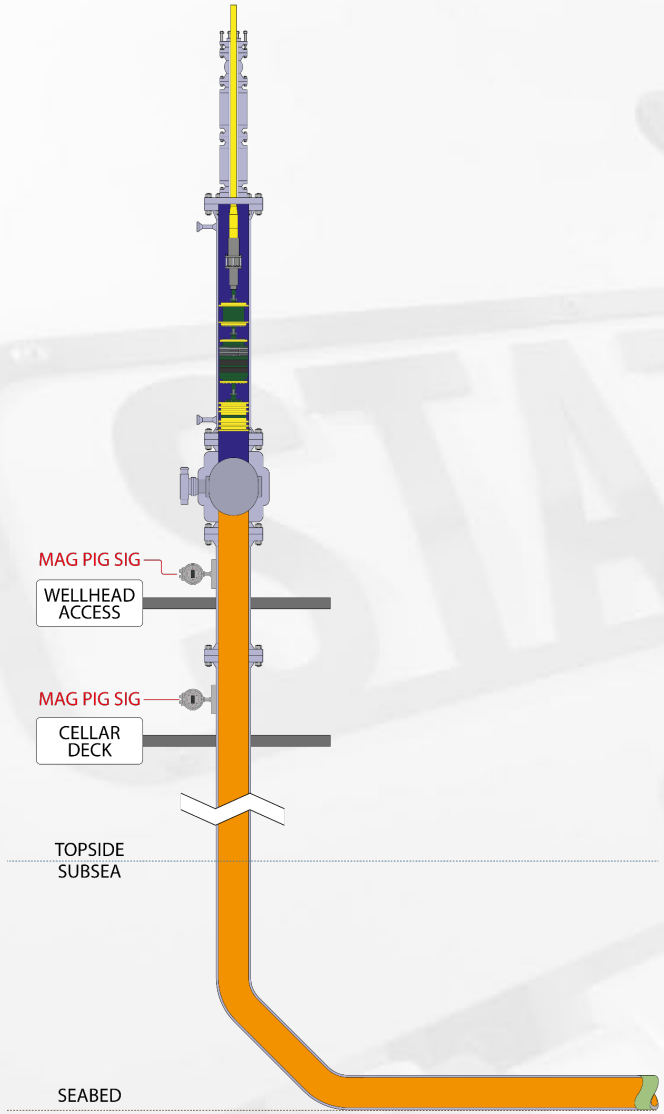
Offshore Operation

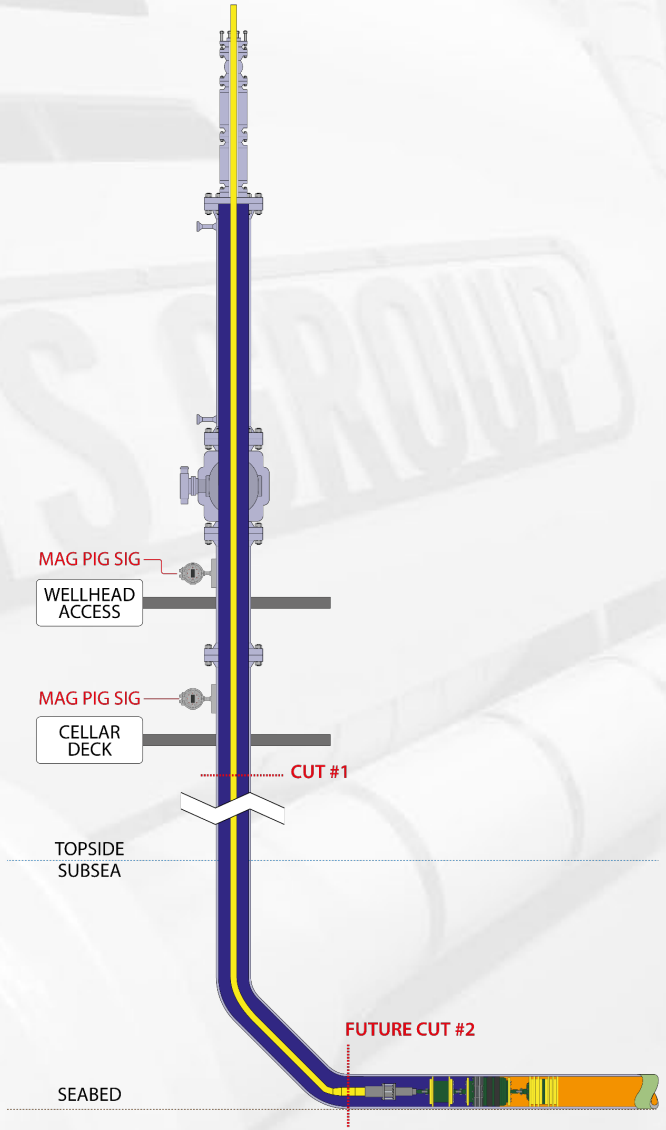
Offshore Operation

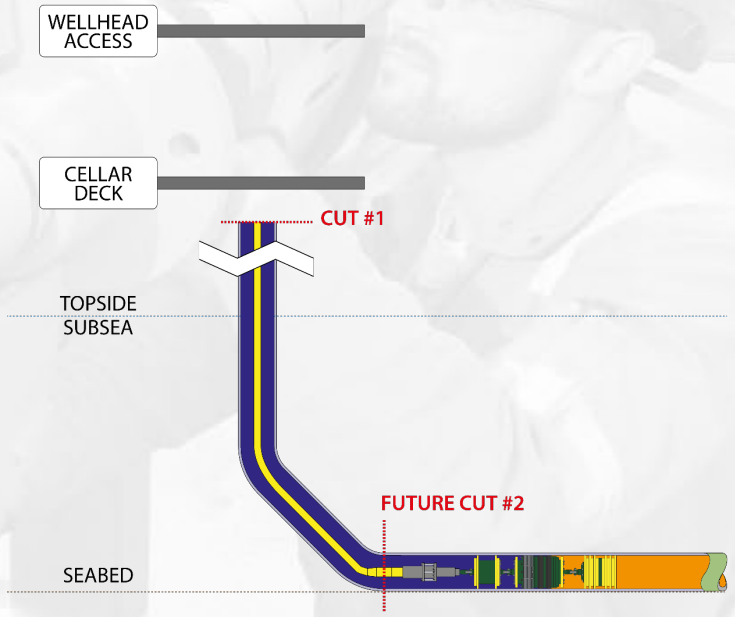
- The pipeline was pre flushed 3x pipeline volume prior to STATS arrival offshore
- Space was tight, but sufficient for the topside spread
- Third party pigging contractor pumped the plug ~80m to the set location subsea, at ~1m/min, pigging dP 4-5bar
- The plug was hydraulically and mechanically set from topside via its control umbilical, achieving a leak-tight seal on the first attempt and preventing fugitive well discharges subsea via the pipeline



Offshore Operation







Project Summary

Summary

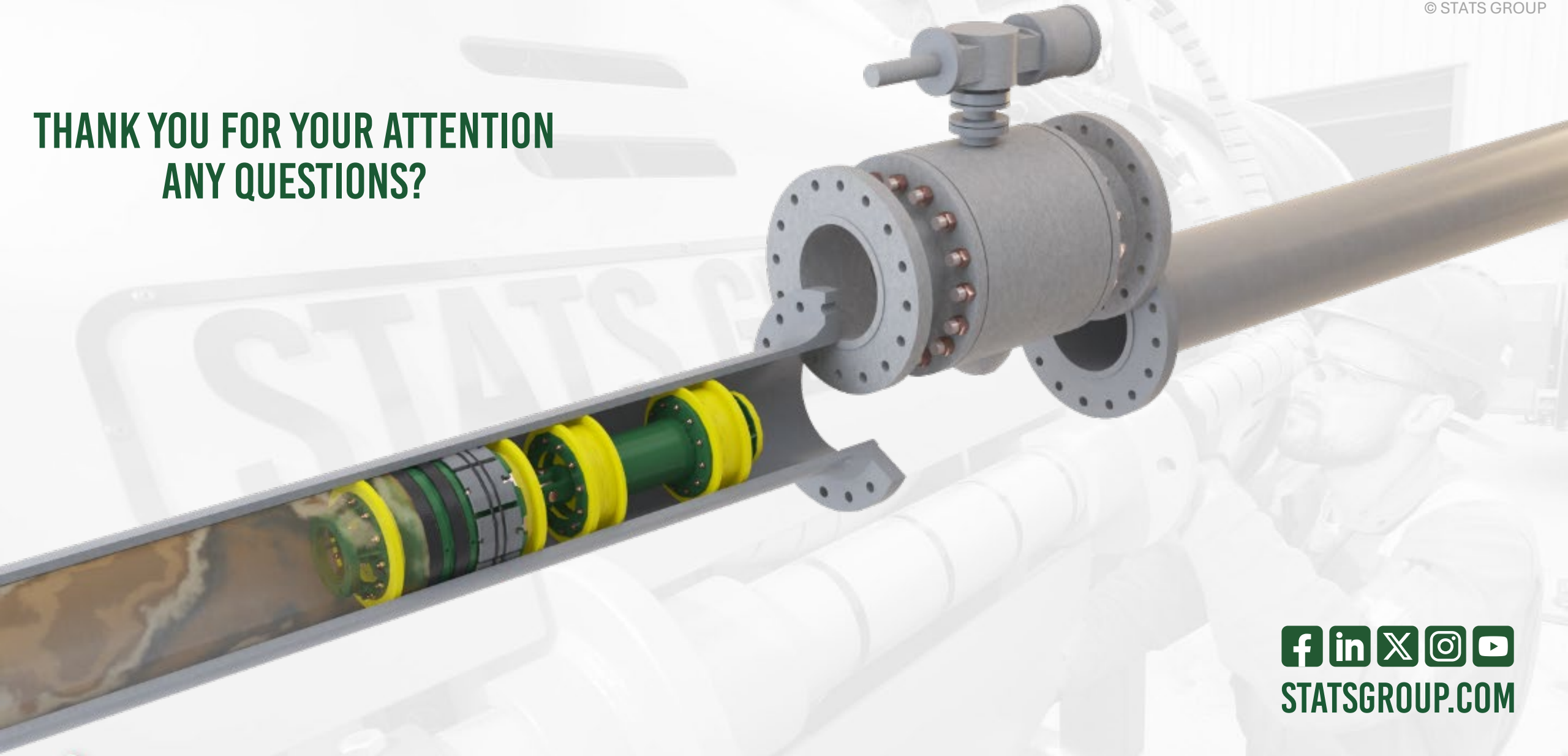
Abandonment Plug

- First Deployment of an 8” tethered abandonment isolation plug to a subsea isolation point (~80m)
- Used a water based hydraulic fluid, rated safe for subsea discharge
- Verified leak tight dual seal isolation

Project

- Enabled independent platform and field decommissioning ahead of connected assets, reducing inter operator dependency
- Avoided vessel intervention, lowering overall project cost and complexity
- Eliminated ongoing maintenance and integrity costs for the idle platform
- Isolation completed September 2022. Topsides removed May 2023. Jacket removal ongoing Q4 2025

THANK YOU FOR YOUR ATTENTION
ANY QUESTIONS?



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