



Decommissioning and Restoration – Fostering Excellence through Regulations, Innovation, and Sustainable Practices

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The Development of a Rigless EPSm Framework to Decommission Mature Phase III Well Stock in Australia

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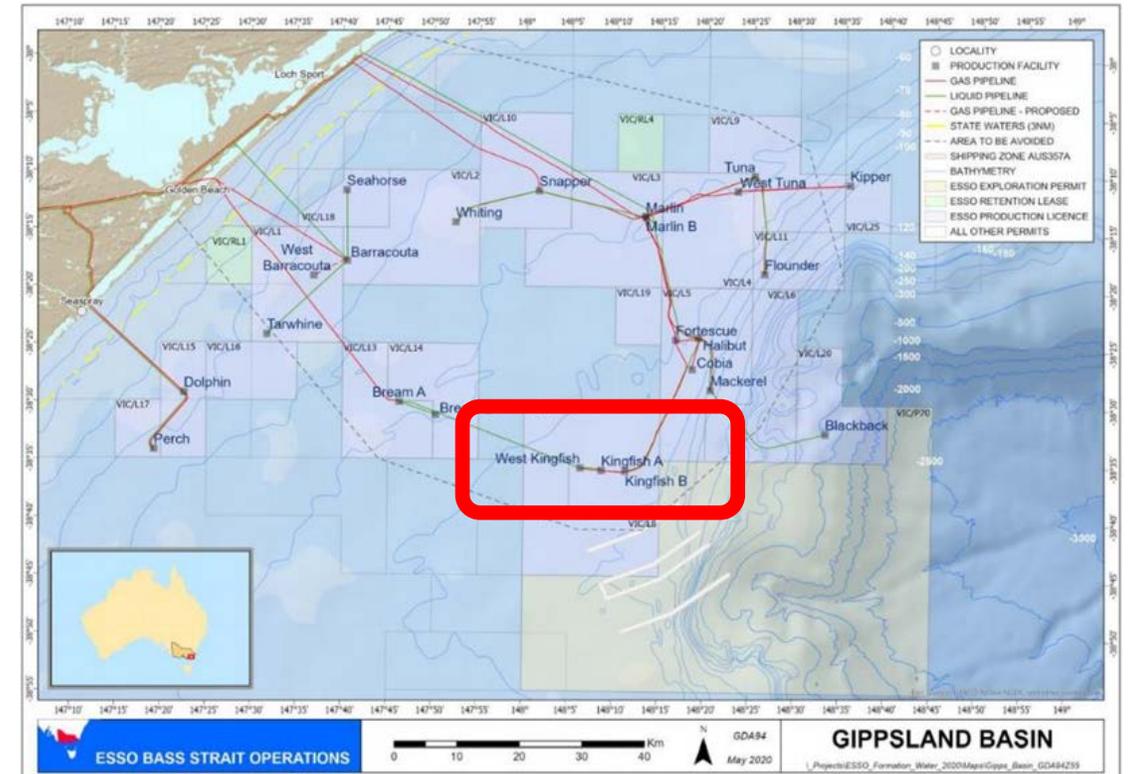


Agenda

1. Case Study – Project Background
2. Project Execution – Developing the Framework
3. Plan for Success – Developing the Sustainability Plan
4. Building the Project Scope
5. Realising SIMOPS in a Rigless Framework
6. The Learning Curve
7. Project Challenges
8. The Learnings – Mature Well Stock – Phase 3 Well P&A

Project Background

- Australia – Offshore Victoria – Bass Strait – Gippsland Basin
- Platform Wells Decom
- Harsh Environment
- 44 years old - structural impairment
 - 21 wells – Phase 3 well decommissioning:
 - Phase 1 and 2 previously undertaken



Project Objectives - Sustainability

- **Sustainability:**
 - Change the norm / change the strategy / change the approach!
 - Meet and exceed high bio cultural and environmental regulations
 - By developing a sustainable **Rigless Solution**
 - Remove dependency on drilling rigs
 - Reduces environmental and climate impacts / footprints
 - Develop a multi skilled crew
 - Maintain sustainable smaller crew levels





Project Execution

- **Strategy to Execute**
 - Development of an **Execution Framework**
 - Full front-end engineering inserted in client office.
- **Contracting Structure - Turnkey**
 - Create a “Value Chain”
 - Planning started 2 years in advance
 - Integrated into the operators wells team early
 - SIMOPS opportunity to be realized
 - Multi Skilling opportunity generated

Contracting Structure

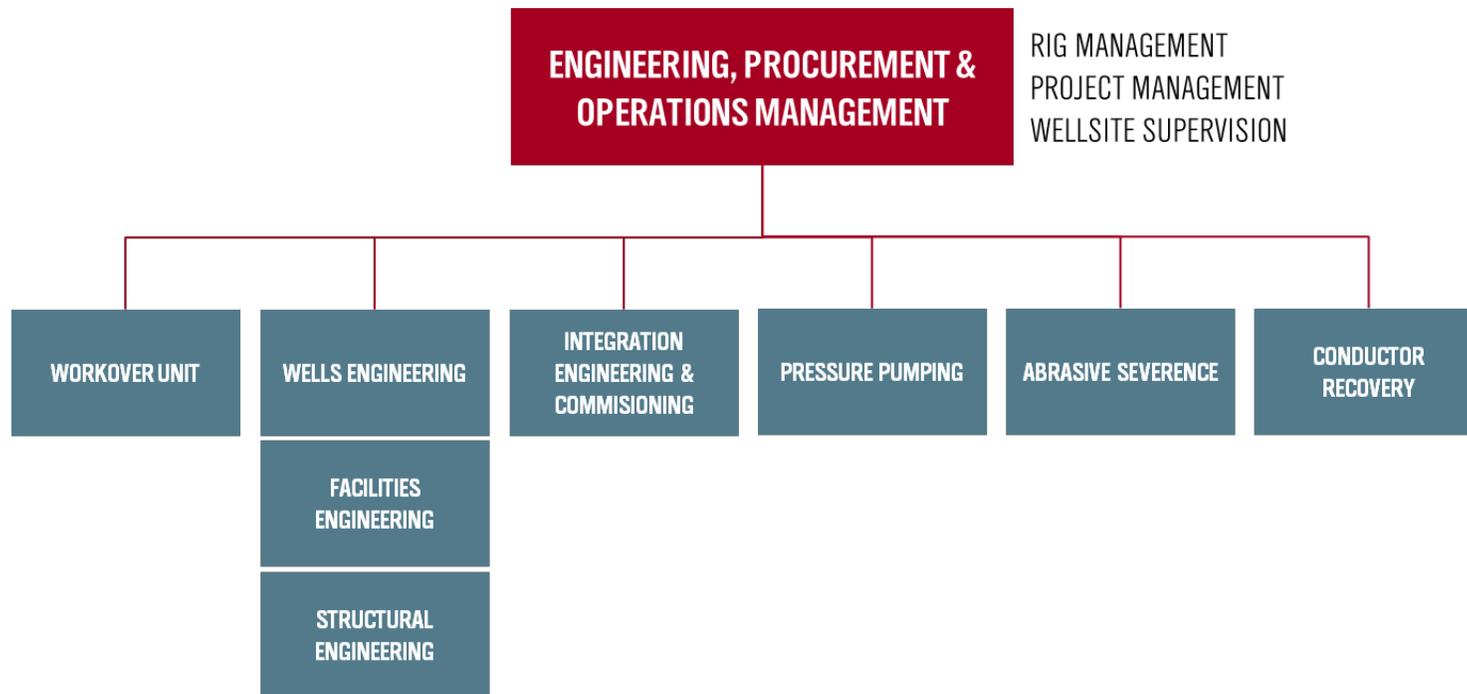
- ✓ **Engineer**
Fully Resolved Basis of Designs / Identify Technologies
Technical Requirements / Techniques / Supply Chain
- ✓ **Procure**
Driven Strongly by Engineering
Technology / Personnel / Commercial Structures Sought
- ✓ **Service Management**
Effectively Deliver the plan at the wellsite
Integrating Operations / Coordinate
Same Team That Engineered and Guided Procured
Manage Service Delivery at Wellsite
End to End Continuity



Plan for Success

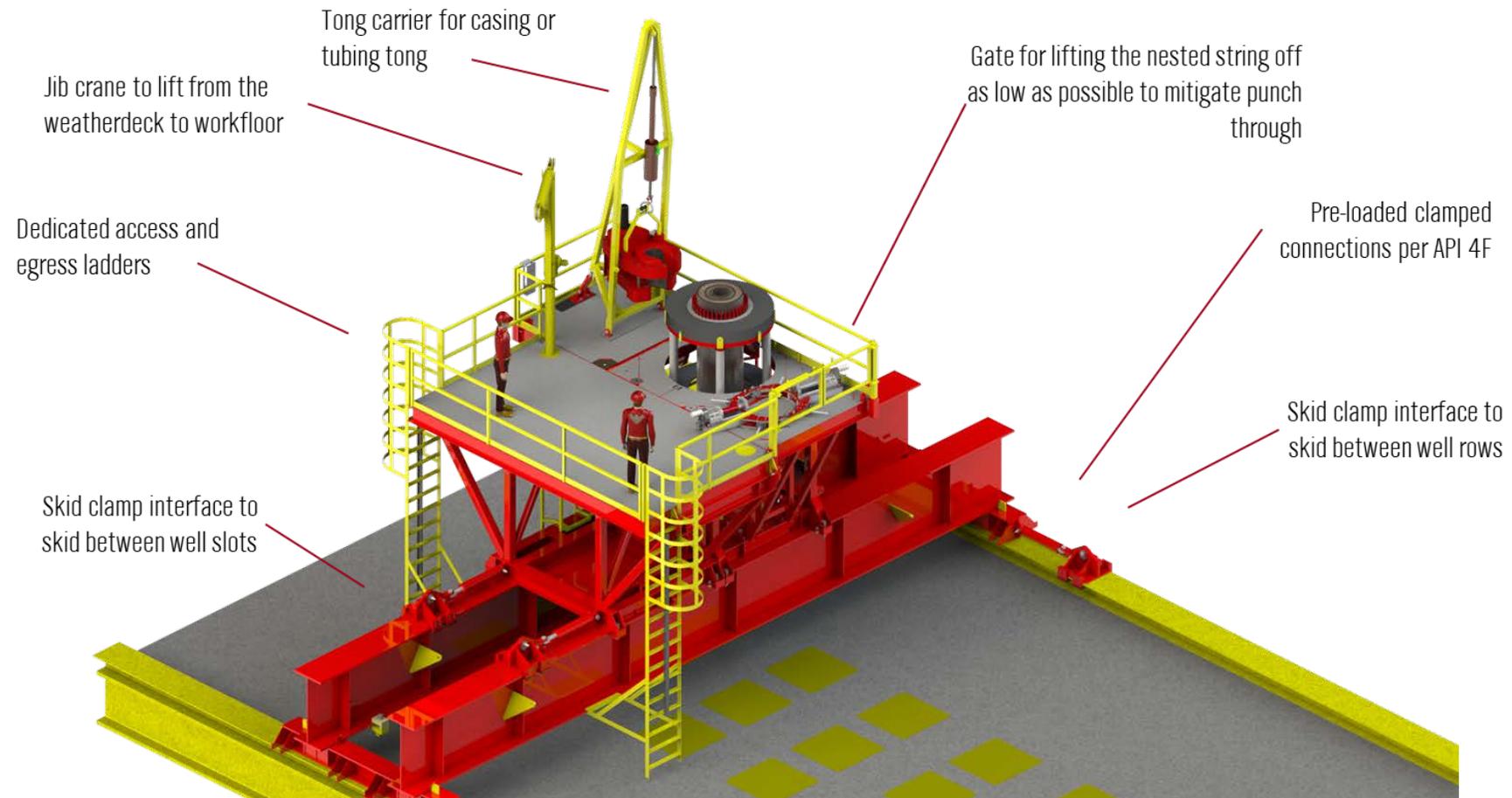
- Regulator Engagement – Stringent bio culture and environmental regulations applied:
 - Regional and governmental engagement
 - Regional First – high profile
- Approval process and Governance – Closely follow platform and operator safety cases.
 - 3rd Party Validations:
 - Structure
 - Decks
 - Conductor Jacking Unit
- Safely Engineered / Safely Commissioned / Executed SIMOPS first in country with zero incidents

The Scope



- Rigless framework developed for impaired asset abandonment
- Engineered Execution Approach with Regulatory & Environment Consultation
- Engineering and Project Execution Team – Inserted In Operators Office
- Phased Operations Approach

Sustainability – The Unit – Doing what an MODU Can Do!



The Services – The Scope

- Using AWJC – Ideal for Batch Cutting Operations
- Safely hoist, remove and lay down conductor - Batch

Project Solutions

Rigless Jacking Unit

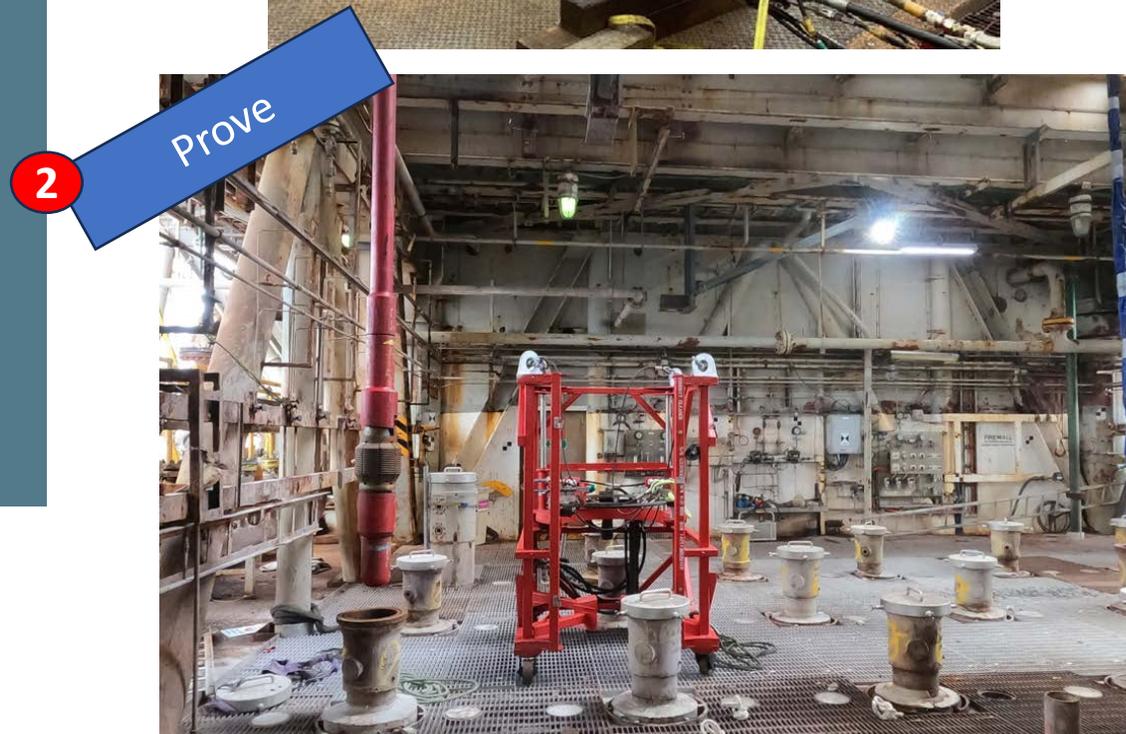
Integrated Well Decommissioning Team

Multi-skilled Offshore Crew executing:

- Project management
- Wells engineering
- Structural engineering
- Facility engineering
- Wellsite management
- Rigless pulling unit
- AWJC - Abrasive well severance services -
- Pumping services
- Fishing services
- Conductor jetting services
- Tubular running services
- Conductor recovery services

The Scope

- ✓ Cut
- ✓ Prove
- ✓ Recover
- ✓ Bore and Pin
- ✓ Saw
- ✓ Wash
- ✓ Lay Down



The Scope

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4

Bore and Pin



6

Wash



5

Saw

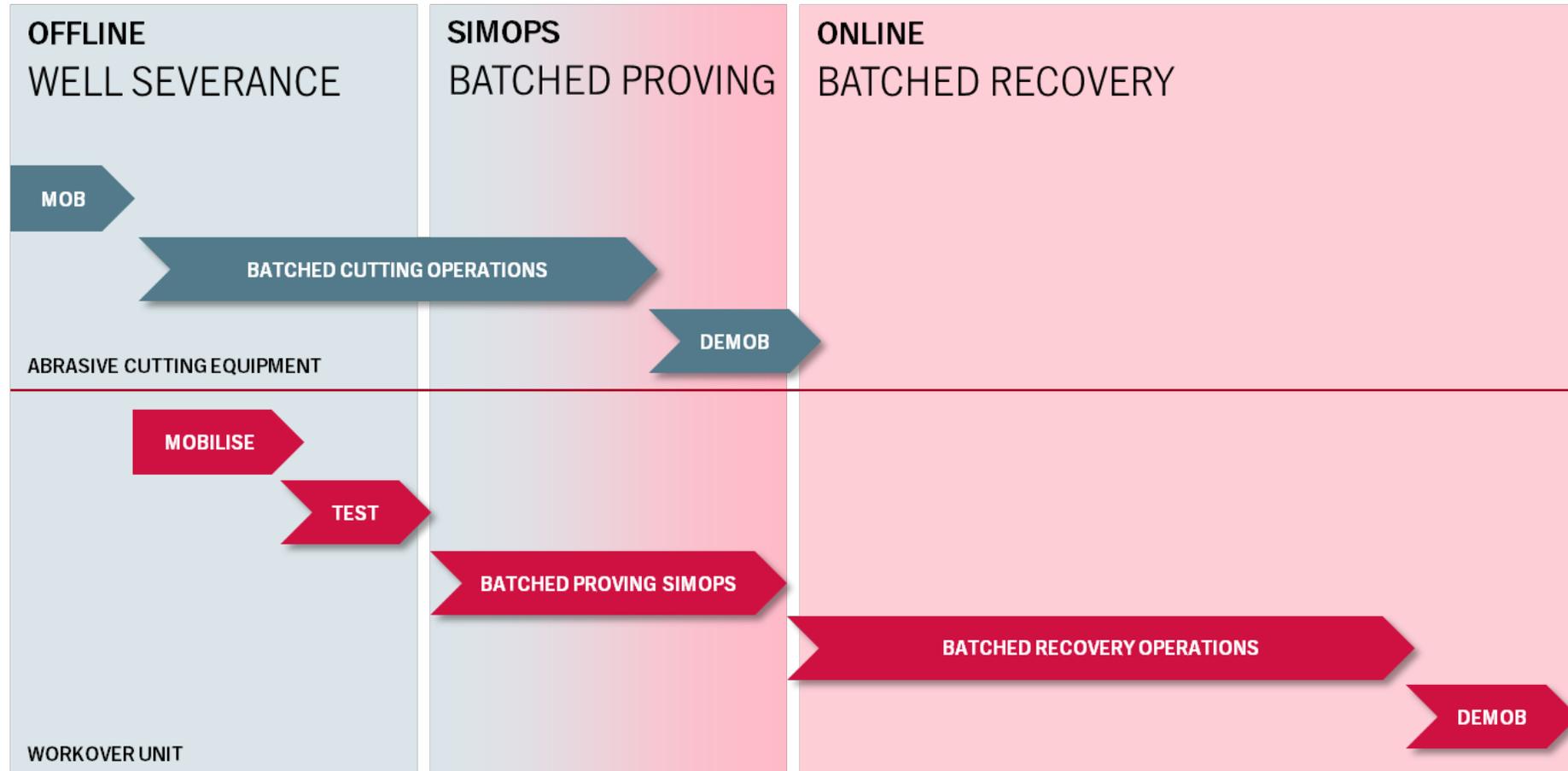


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Lay Down

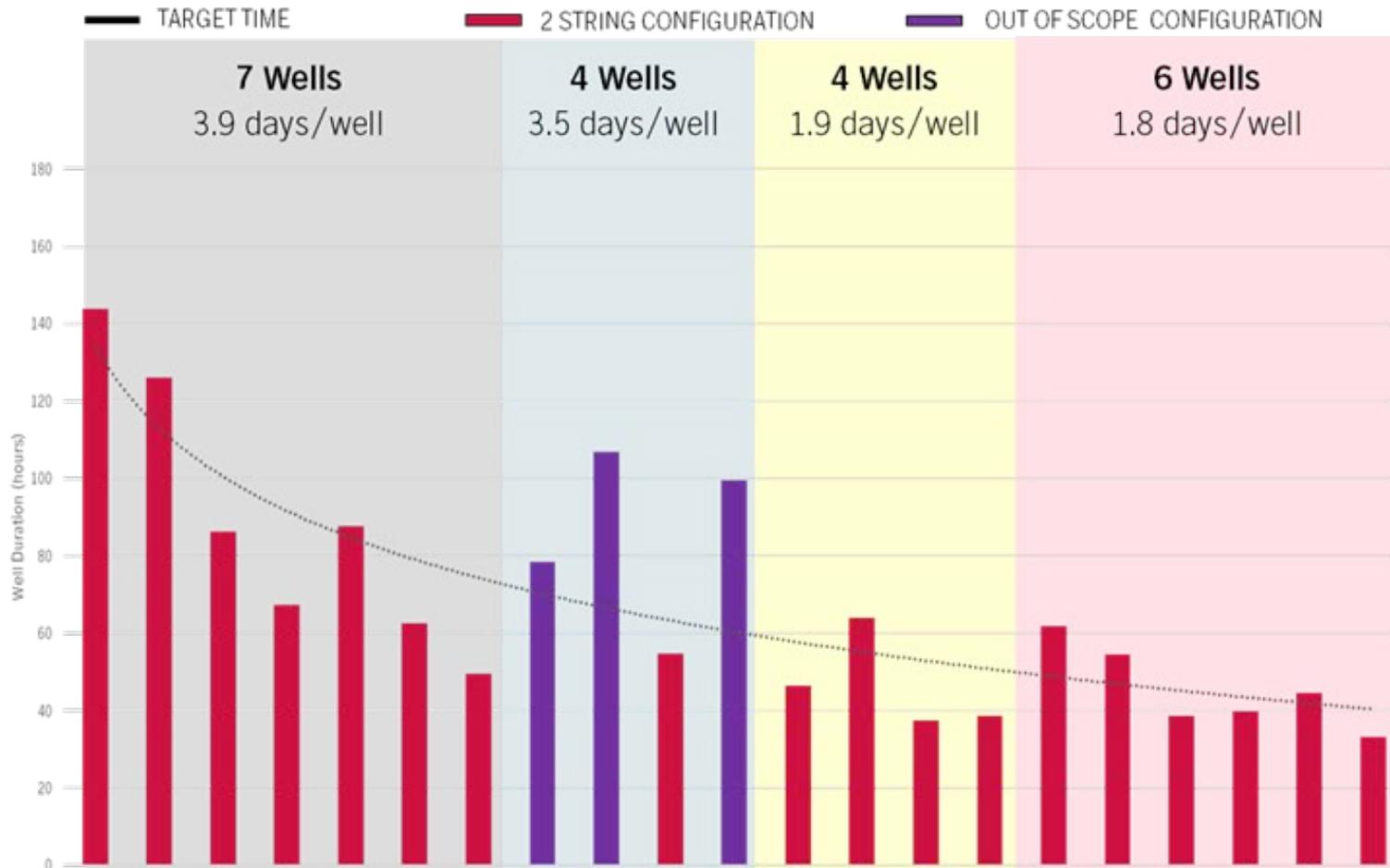


SIMOPS and Optimisation – Execution Framework



- 21 Wells
- 3,394 Operating Hours
- 0 QHSE Incidents
- 99.1% Productive Time
- Multi-Skilled Decom Crew
- 7 Service Lines
- 1st In country project developed with regulatory approvals

Learning Curve Breakoff



- Breakoff significantly higher – COVID
 - Use of local crews only
- 3 Wells – **Purple** – Wells Out of Scope
 - Found irregular wellheads
 - Additional casing – Client unaware!
- Strong Learning Curve Performance:
 - Core Crew / Multi skilled
 - 21 wells – 3400 operating hours
 - 99% Productive Time



Why do I need to Recover a Wellslot if the well is isolated?

Recovering Conductor – Project Challenges



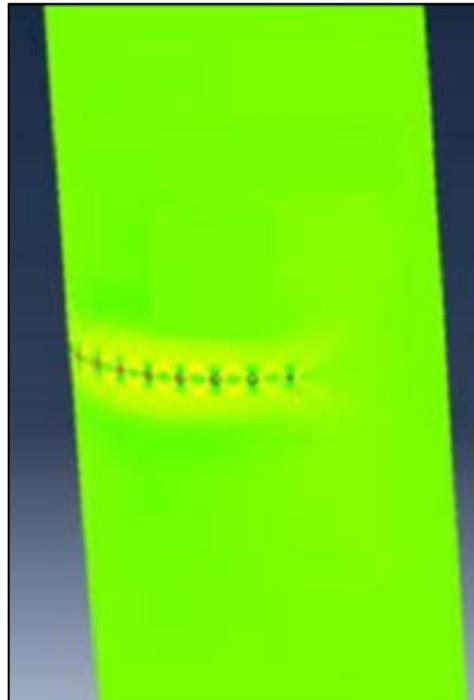
De-Risk Conductor Recovery Issues

FAILURE

Material loss in prevailing wave direction

RESULT

Pinhole corrosion through surface wall

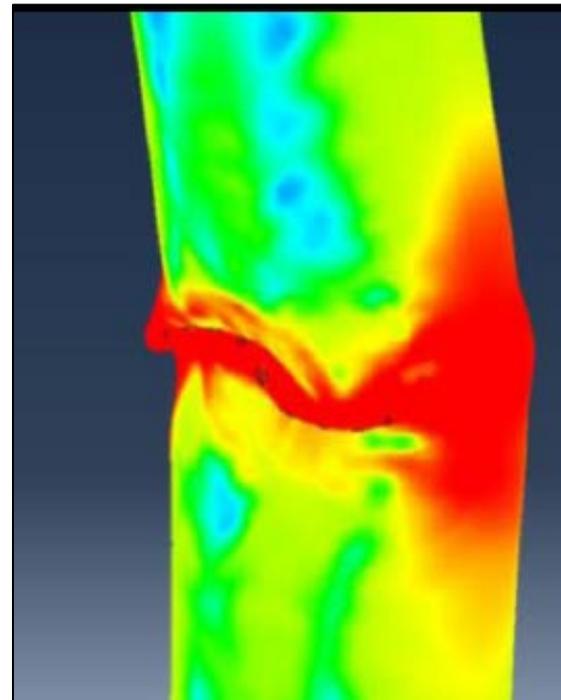


FAILURE

Buckling (collapse) of conductor

RESULT

Compressive collapse and material failure



FAILURE

Circumferential failure of the conductor and extensive localized material loss

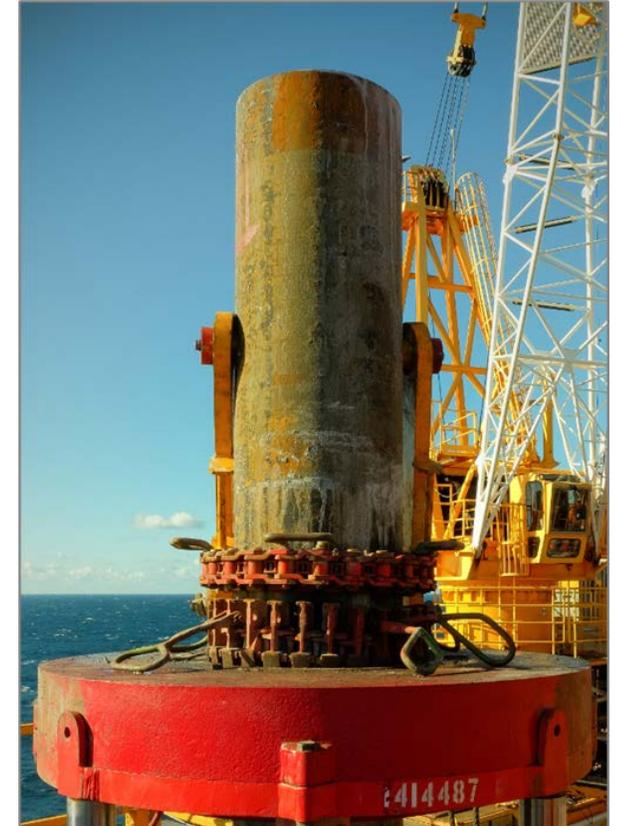
RESULT

Upper section of conductor is unconstrained. Lower section is subject to accelerated material loss at the splash zone



Learnings

- De-risk conductor recovery – Not at structural decom phase
- Planning – Essential
 - Up front preparations / crew / platform etc
- Regulator Engagement
- Embedding the planning & executions teams in the client office:
 - Project Management
 - Well Engineering / Structural Engineering / Facility Engineering
- Use of a full multi skilled offshore crew – improved performance



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Questions

