CLAXTON DECOMMISSIONING OVERVIEW

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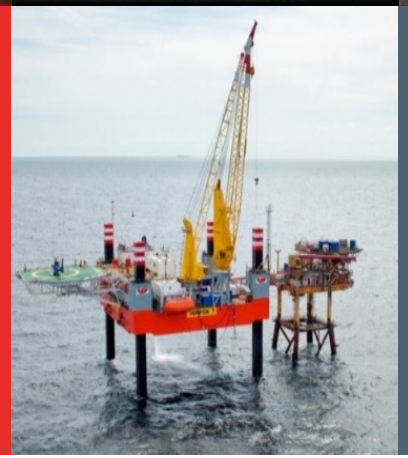
WHO ARE CLAXTON?

30+
years of Global decommissioning experience

Over
150
Suspended wells abandoned

EXTENSIVE
Drilling and Decom riser rental fleet

Over
700
Multi-string wells abrasively severed globally



Claxton performed the **WORLD'S FIRST** rigless platform well abandonment

300+ employees
6 global locations
supported by global Engineering
1 TEAM

26 years experience of **multi–operator** P&A campaigns

WELL ABANDONMENT CHALLENGES

WELL ABANDONMENT CHALLENGES

Main challenges:

- Platforms
  - Aging assets
  - Small in size
  - Often suffering from integrity issues
- Subsea well stock
  - Numerous operators with small well count
  - Disproportionate rig costs
  - Unknown condition of wells
  - Well and cement integrity issues
- Increasing rig utilisation and rig rates

WELL BARRIERS AND SEVERANCE

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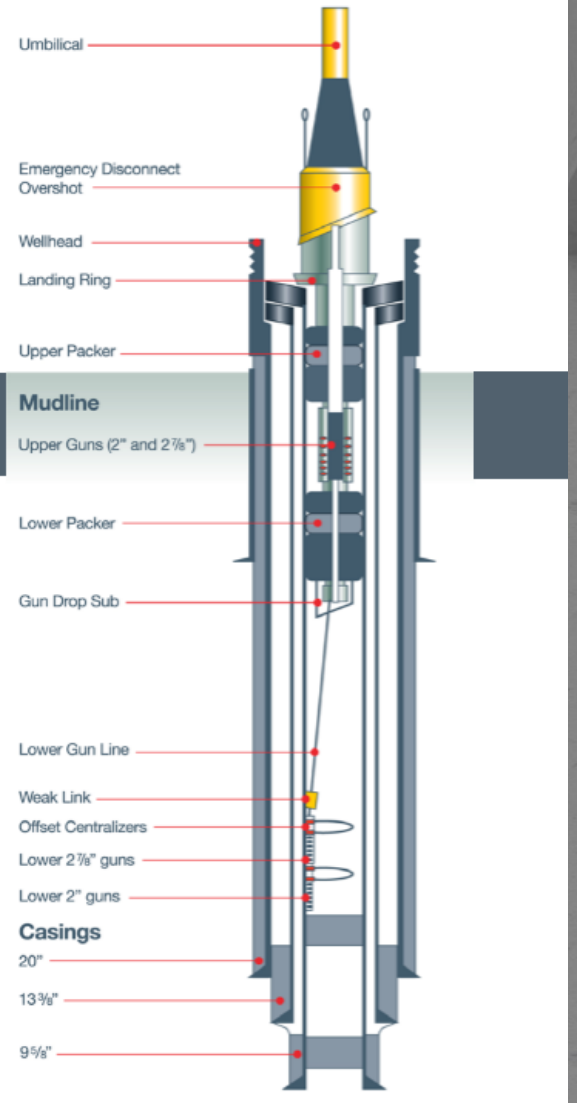
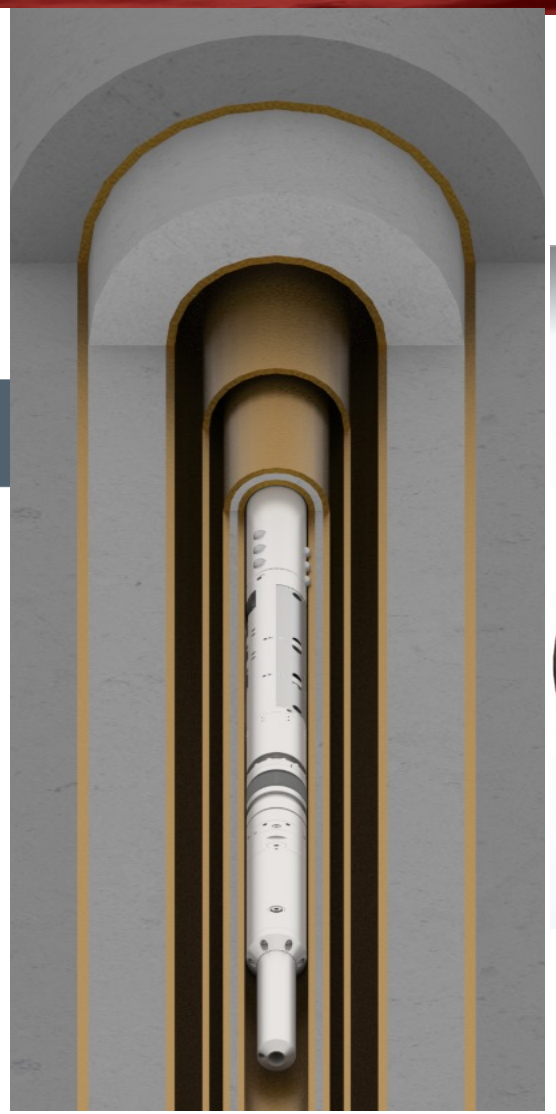
SWAT TOOL





WELL ABANDONMENT OPPORTUNITIES

WELL P&A OPPORTUNITIES

- **Why use a rig?.... Reduced risk**
  - Fluid management
  - Section milling
  - Pulling capacity
  - Running/recovering pipe
- **Mitigations**
  - Coil, BOP c/w BOP work deck, fluid tanks
  - Perf & wash, chemical cutters
  - JULB crane
  - JULB crane and recovery deck

Using technology to minimise the use of the high cost assets

- Lightweight, nimble, field proven technology that facilitates lower cost asset usage
- Improving the viability of short term decom projects
- Well suited to the campaign approach
- Risk based contracting models

- **Proven fit for purpose solution at reduced cost**

CASE STUDY: PLATFORM WELL ABANDONMENT FROM JULB

SCALE OF A JULB VERSUS SMALL PLATFORM

CHALLENGE: REDUCTION IN RIG UTILISATION TO LOWER ABANDONMENT COST - PLATFORM

Platform Solution

JULB acting as the mothership working in tandem with field proven tech to mimic the rig

Outline Equipment

- Coil Tubing – (3P)
- BOP Work Platform
- Light Weight Recovery Deck (LWRD)
- Proving string, Drill, Pin and Section tooling on LWRD
- Platform SWAT
- Abrasive severance
- Tubing and conductor laydown systems

Benefit

- Lower cost asset
- Self propelled – reduction in mobilisation charges
- Campaigning – multi operator contracting model
- Large crane capacity
- Offers required POB and Deck space

PROJECT EXAMPLE: HORN AND WREN

- **Main Equipment**
  - Seajacks Kraken JULB
  - Claxton abrasive cutting package
  - Light weight recovery deck (70523)
  - Tubing laydown frame
  - Conductor Laydown system

- **Main Workscope**
  - Tubing recovery – no BOP required
  - Abrasive severance
  - Cut proving
  - Multi-string recovery

HORNE AND WREN – TUBING RECOVERY

LWRD incorporating hydraulic jacking system and false rotary is located over the platform well slot

SABRE on JULB. Umbilical passed over a sheave suspended via the JULB crane

HORNE AND WREN – WELL SEVERANCE & RECOVERY

Jacking system applies a max of 200Te tension to prove the cut

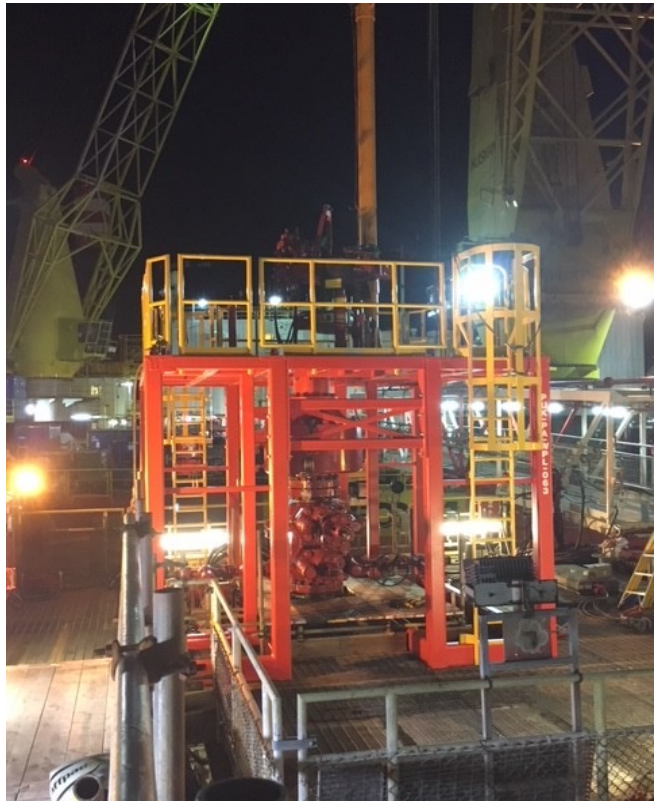
Tubing recovered using the main vessel crane. LWRD forms a false rotary. Once set in slips the tubing is cut via an electric tubing bandsaw

PROJECT EXAMPLE: TYNE AND GUINEVERE

- **Main Equipment used:**
  - Seafox 1 JULB
  - SABRE 3 abrasive suite
  - Light weight recovery deck (71783)
  - Tubing laydown frame
  - Conductor Laydown system

- **Main Workscope**
  - Tubing recovery – BOP required
  - Abrasive severance
  - Cut proving
  - Multi-string recovery

TYNE AND GUINEVERE – BOP SCOPE



Claxton supplied BOP and frame for tubing recovery

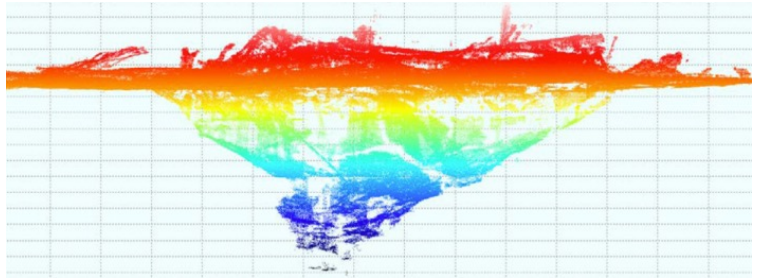
TYNE AND GUINEVERE - RECOVERY

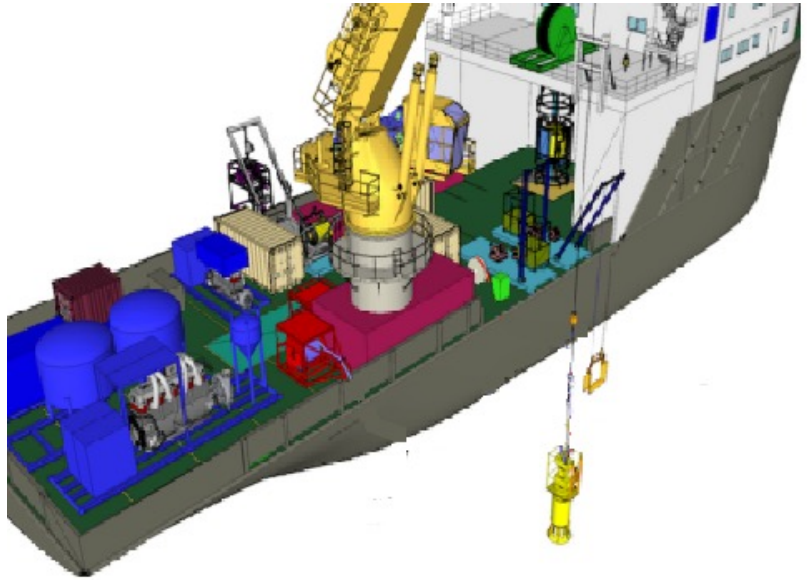
- Recovery operations conducted similar to Horne and Wren
  - 200Te tension to be applied to the well
  - Moveable false rotary – capture multiple wells without repositioning of LWRD
  - Power tongs – suspended from Davit crane.
  - LWRD Utility cranes to allow efficient bandsaw and DDU operation.

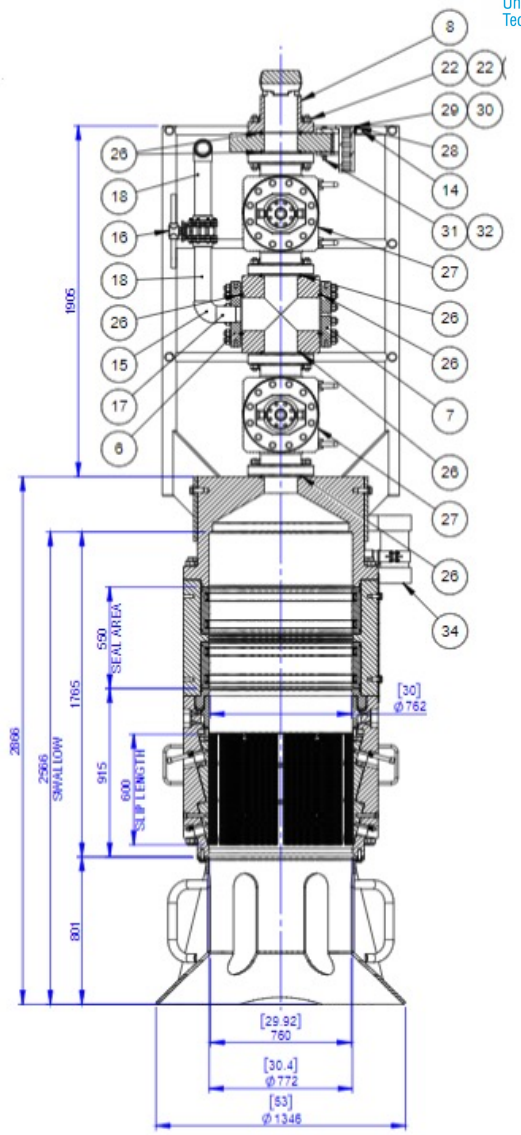
CASE STUDY: UNPLANNED WELL CAPPING

PROJECT EXAMPLE: UNPLANNED WELL CAPPING

- **Product: ROV Operated Subsea Overshot with ROV Cement Stab and Contingency Resin Injection**
  - Situation – 2 x 30” Redundant gas wells parted below mud line allowing gas to make a crater in the seabed.
  - Design Considerations –
    - Preparation of existing conductor (state, size, condition of conductor)
    - Ability to retain well pressure over design life
    - Ability to pump cement downhole
    - Strength of conductor
    - Interface with ROV tools





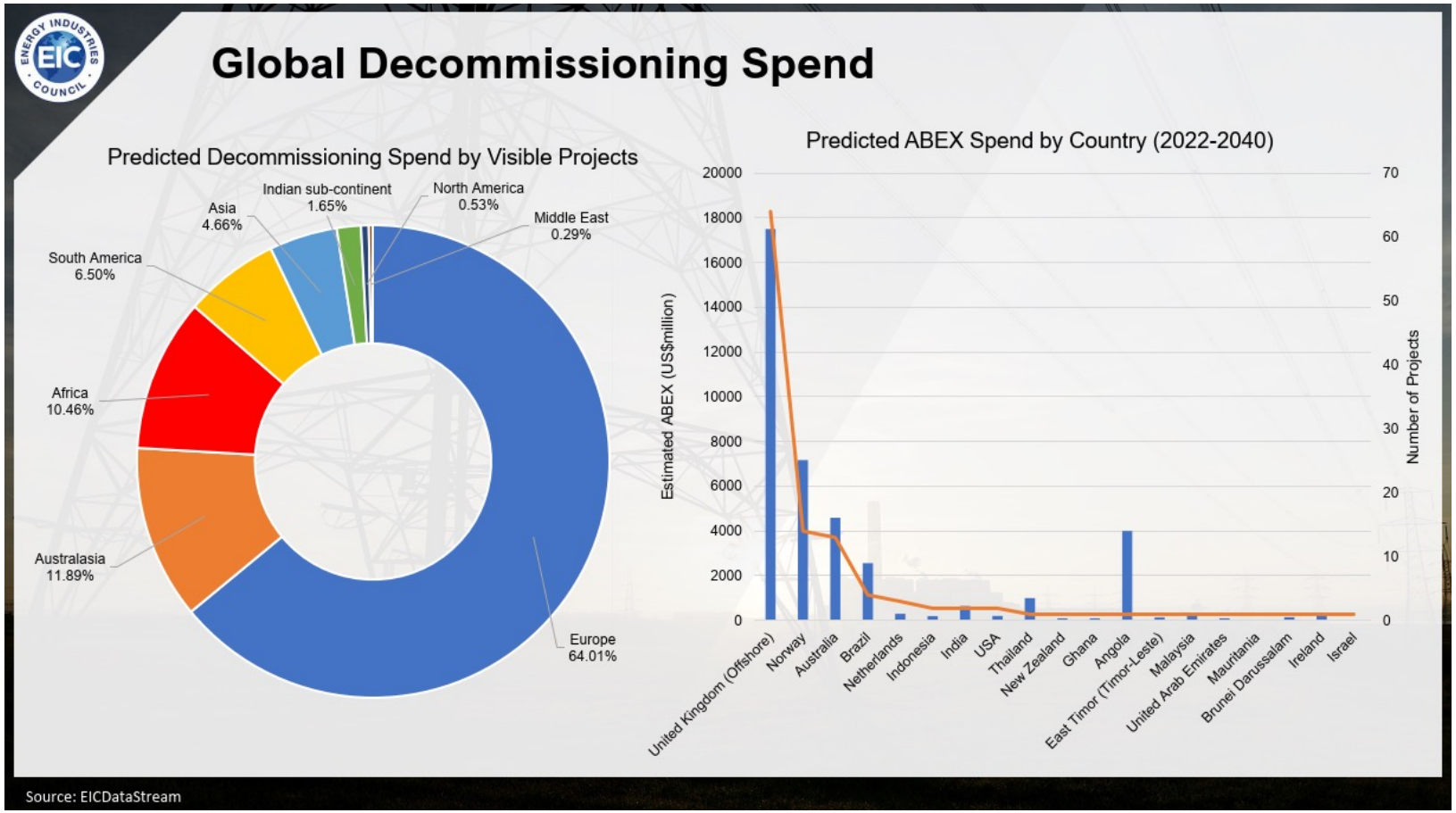


FUTURE FOCUS

FUTURE FOCUS – LEARNING FROM MATURE MARKETS

Using technology to drive a ‘fit for purpose’ solution.

- Evaluate well stock age and status
- Early engagement with local supply chain
- Supply chain led planning initiatives
- Consider campaign approach, increasing viability of smaller projects
- Re-evaluate how contracts come to market
- Continue to share lessons learnt



THANK YOU

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