WELLS
TASK
FORCE

Well Delivery Group

Decommissioning Group

Good Practice Guide to
Platform Wells Decommissioning (P&A)

May 2025

1. EXECUTIVE SUMMARY

This document outlines key insights from an experienced group of practitioners who participated in a cross-industry workshop focused on improving the efficiency, safety, and cost-effectiveness of platform well plug and abandonment (P&A) operations. It emphasizes the importance of early strategic planning, robust data gathering, and cross-disciplinary alignment with corporate decommissioning goals. Operators are encouraged to define risk strategies, assess rig reactivation versus alternative solutions, and engage the supply chain early. The report highlights the need for dedicated data mining, especially for legacy wells, and stresses that cold-stacked rig reactivation is rarely successful. It advocates for the adoption of emerging technologies, though uptake remains slow, and calls for collaboration among operators and regulators to support innovation. Personnel retention, safety adaptation, and multiskilling are also addressed as production phases out. Operational efficiency can be improved through preparatory work, SIMOPS coordination, and flexible scheduling. Commercially, simplified contracts and open-book models are recommended, with early involvement of legal and procurement teams. The report concludes with observations on the conservative approach to technology, regulatory challenges, and the potential for multi-operator collaboration to reduce risk and cost in the declining North Sea basin.

2. INTRODUCTION

The Wells Task Force is an industry task force, supported by the NSTA, looking at the Wells value chain to integrate, streamline and add value to the well delivery, management and removal process. The Well Delivery Group and the Decommissioning Group are two of the three groups currently operating under the Wells Taskforce, both of which aim to promote good practice in well delivery and decommissioning across the UK industry.

The Offshore Energies UK Right Scoping Guidelines were produced by the Work Group in 2018. Since then, Well Operators, regulators and other stakeholders have collaborated in many workshops to review each other's well design challenges and to select the optimal design for those wells. In Q1 2025, the Well Delivery Group in collaboration with the Well Decommissioning Steering Group agreed to use the right scoping approach to investigate Platform Well P&A Best Practices.

A cross-industry workshop was held with representatives from Well Operators, Regulators, industry groups and the service sector. Three different operator case studies were presented discussing lessons learned from P&A campaigns both completed and in planning phases. Following a review of the case studies, the group was split to discuss key themes: P&A Strategy and Planning, Rig Reactivation and Alternatives, Contracting Options and Commercial. The aim of this brief document is to record good practices identified by the discussion groups, based on learnings from industry. It is not a formal guideline or comprehensive guide to P&A activities. A number of observations relating to improved operational efficiency during P&A were identified which have been included in this report for completeness.

3. P&A STRATEGY

Platform Priorities	• A clear P&A strategy is required from upper management as a platform transitions out of production mode to P&A mode. • Establishing the business value drivers for the P&A activities within the broader context of platform decommissioning is an essential early task because it determines the approach to rig selection. • Create a vision of a multi-year work scope defining SIMOPS, CoP, and operational priorities (production, OPEX, ABEX), driven by value drivers. • Define a clear position on production efficiency versus optimal P&A sequence and operations. There will usually be a trade-off between extending production and completing P&A activities at minimum cost.
Well Information & Data Gathering	• A subsurface isolation strategy is required, driven by robust well information and an analysis of possible zones of flow potential. • A specific data gathering activity as 'Pre-Phase' is a critical first step. Annulus monitoring, data interrogation and analysis are important to identify/discount zones of flow potential. • Accept that you may have to shut-in/intervene on wells to gather data/understand problems which may introduce cost and impact production. • Integrate routine well intervention activities into P&A planning as an opportunity to gather downhole data and investigate potential issues.
Supply Chain & Procurement	• Evaluate and engage the supply chain early to address capacity and efficiency. • Clearly defined requirements for the drilling or other unit are essential to feed into procurement, maintenance and operational plans. The drilling unit requirements need to be based on the assessment of the well stock condition which in turn is informed by data gathering. • Supply chain capability needs to be thought through because there may be efficiencies by asking service providers to work in a different way and the capacity of the service sector may be insufficient to meet industry needs. Early dialogue and potential collaboration are important. • Procurement lead times can be long and some specialist equipment like modular rigs and heavy lift options require long-term planning. • If the activity on the platform is only decommissioning (no production), consider outsourcing to the contractor community. A mind-set change may be required to relinquish control to a contractor Duty Holder during decommissioning.
Execution Framework	• Decide what state of readiness the organization wants to commence P&A work. P&A plans typically move forward and backward in the schedule in response to external influences such as hydrocarbon sales prices, regulatory changes and corporate objectives. • Preliminary work can reduce uncertainty and reduce cost, but it may impact on other priority platform operations. The 'Plug and Lubricate' approach, as an early operational phase to isolate the reservoir, has proved successful with a number of operators. • Application of new technology to remove complexity and open up P&A options may be a strategic decision which requires additional time to have the technology ready for the planned P&A campaigns. • Define your risk strategy. Do you want to plan for efficient abandonment of the worst well or plan for the majority of easier, less risky, less costly

	wells and tackle the difficult ones later? • It is useful to define the planning and delivery process for P&A as it may cross boundaries between the typical wells approach and the approach taken by projects. Whatever process is established, the advice is to start early.

4. PLANNING

Data Mining and Analysis	• Data mining is essential to inform detailed strategy and planning. The amount of work involved in data mining is usually underestimated but it is important that the well integrity assessments are robust and thorough to minimize uncertainties and risks in the future. Sidetrack assessments are typically time consuming compared to 'the current well' which is relatively easy! Ensure legacy wells are included in the process to avoid surprises later on. • Information about the status of well architecture and the condition of the wells is required. • It is worthwhile getting specific budget approval for the data mining and analysis work. It may be worth establishing a distinct project 'Pre-Phase' for data mining. More information provides less uncertainty and a more reliable equipment specification. • The availability of good well data with a full well integrity history is essential. Increase the normal well integrity work scope to better understand zones of flow potential and barrier integrity. Also consider inspection and verification tools such as tracers, plug setting and through tubing logging (emerging technology) to build knowledge of P&A requirements and well specific issues in the integrity team. • Data mining is not limited to well data but also when thinking about rig reactivation it is necessary to consider the collection and analysis of platform, structural data and changes over the years such as 'upgrades'. • Remember that operator/ownership changes are likely to make data mining more difficult which adds cost and time to the process. • Where the data mining and analysis requirements are extensive, efficient methodologies to define and categorise the well characteristics need to be developed. There is divided opinion whether AI is a useful tool for this task.
Subsurface Isolation Strategy	• Based on the analysis of the well data (subsurface basis of design, MSAD, Zones of flow potential) a thorough definition of the barrier requirements and the associated capability of the rig needs to be developed. • Consider a campaign to sample annulus fluids and monitor wells in detail to better understand them. • A focused activity to identify what elements can be reasonably removed from the P&A scope will potentially reduce the cost and complexity of the rig requirements. Reduce scope where the risk profile allows. Don't be driven by dogma, or personal experiences or historic failures. • Define clear responsibility for well integrity and flow zones during the P&A prework and planning processes.
Project Planning	• Feedback from all those with recent P&A campaign experience is ***Start Early***. It may be necessary for some organisations in the early stages to manage a Corporate 'lack of commitment' while the organization adjusts to this new work scope. It is important to convince management that

	spending money now saves cost and time in the future. • Operators have reported that starting downhole isolation early and combining with safety critical interventions or other wells work is an advantage. It's also recommended to work hard on the schedule to avoid stop-start activities and align dates with the rest of decommissioning work scope. • In order to optimize the schedule of activities in line with the corporate decommissioning drivers, it is worthwhile classifying the difficulty of wells and understanding redundant wells relative to wells which continue to add value until CoP. • A robust schedule is an essential component for a successful P&A campaign but because there are always uncertainties, flexibility is vital. Build in flexibility to the schedule and clearly identify and understand contingencies. In order to handle unforeseen changes, it is suggested that operators should have 7-8 months work ready-to-go on the shelf to give the flexibility required. • Be aware of the minimum practical production rates (topside process stability) when planning the schedule and sequence of P&A relative to production decline and CoP. • Be aware that availability of equipment, spares and competent people is limited and may be unavailable. The project needs to consider the likely availability of major temporary equipment such as a modular rig or HWU over 5-15 year period.
Governance and Stakeholder Engagement	• There are multiple regulators involved with P&A projects (HSE, NSTA, DESNZ and others). Experience is that early regulator engagement is valuable. • Unless already in place, a well P&A policy may be required and probably an updated well control manual for P&A work. • Case studies from other operators can provide valuable insight to potential pitfalls and opportunities. • The P&A project may be new to the organization and it is important to keep the senior management team appraised and supportive of the ongoing activity. Find a way of reporting the level of preparedness and make sure they acknowledge that there will still be huge uncertainties. Help them understand the benefits and limitations of compromises in strategy, well uncertainties and equipment selection. • The team need to establish clear ownership of the drilling package and clarity of who is responsible for the rig removal or rig reactivation project. It is likely the drilling team will be responsible for alternative rig solutions and associated equipment. • Some wells may be impacted by future plans for CCUS. Early confirmation from the regulator and subsequent dialogue with a future CCUS licensee will help to create an effective plan.
Technology	• Look at new technology early so that there is time for qualification, validation of the technology application for the planned well abandonment campaign building. You may need to commit up front to tools which you hope will improve performance. This may involve supporting new market entrants or allowing them to piggy-back on established suppliers. But new technology always needs a good contingency plan. • There are emerging new barrier materials and a different approach to barriers which may be shorter/multiple rather than continuous/long.

	Consider efficient/new technologies that require fewer runs/handling or those which may improve well access or reduce the amount of tubing to be pulled or prepare the well more efficiently for P&A. • To make the introduction of new technology easier, it is worth collaborating with other operators to share experiences and perhaps costs and striving for a standardized approach with the regulators. It may be necessary to demonstrate that new technology is suitable and sufficient for the intended purpose. Remember that the NZTC is working for the industry to make new technology available. Supporting new technology trials may lead to cost reductions.

5. RIG REACTIVATION

Technical Condition & Assessment	• Operators need to develop a platform drilling rig's hot stack/cold stack/smart stack/mothballing strategy before the end of drilling operations, well ahead of P&A activities. The choice of rig maintenance or mothball & reactivate depends on drilling and production requirements going forward. It may be useful to consider Smart Stack hybrid options where part of the rig is maintained (e.g. utilities or derrick) while other parts are allowed to fall into disrepair. And similarly, partial rig reactivation may be a good solution. POB is always a factor in these assessments. *Anecdotally, cold stack and reactivation is never successful!* • The existing rig will probably be over specified for the work but will have the advantage of standard equipment, familiarity and known safety systems. It will most likely be able to reach all the slots unless later modifications have changed that, and it may provide better opportunities for SIMOPS than a large alternative rig solution. • It is important to survey the rig to understand its condition and current capability and uncertainties. Remember to include structural steel, hoisting capability, crane capacity, high pressure pipework and skidding systems. Carry out a reactivation study early to determine whether warm stack or cold stack is the best option. • A thorough review of all elements of the rig package is required to determine the most effective way to re-establish functionality. For essential equipment, consider purchase versus rental options as repair may be difficult/expensive/unsuccessful/unreliable. A decision will be required about whether to use non-OEM or OEM parts and services. • Consider whether milling will be a requirement as it may influence drilling unit choice. Aim to 'engineer-out' the requirement for section milling. • Identify utilities requirements/availability and other platform interfaces as well as how they will they work. Accurately defining the requirements and minimizing the scope where possible can have a huge impact on rig requirements and whether the original or alternative rig is used.
Cost & Scheule Considerations	• Reactivation of the existing rig is complex and there are many interrelated issues such as cost, schedule, impact of CoP date, uncertainty and availability of parts and competent people. • The time and cost for reactivation of an existing rig compared to a modular rig or HWU very much depends on the condition of existing rig. Old equipment may be impossible to reactivate, so you should be prepared for challenges.

	• Rig reactivation may cost an order of magnitude more than expected, so effective cost estimating, monitoring and control mechanisms need to be put in place. • Reactivation of an old rig is a significant project and it is important to engage fully with the platform management, communicate the work scope to all stakeholders and define which team is responsible for the work (e.g. drilling, projects or maintenance). • There is a strong possibility of cost overruns on any rig refurbishment project. Some suggestions exist that cold stacked rig reactivation could cost as much as £60 million.
Personnel & Safety Considerations	• It is useful to develop a risk register including obsolescence, structural and electrical. Tap into human experience while it is available. • Because the equipment is old, it may be difficult to find experienced personnel who can maintain and operate it and may require a longer crew training/familiarization period. • Older rigs may have more safety risks such as manual handling and more work in the red zone. The crew may be larger than an alternative rig and require more bed space.

6. RIG ALTERNATIVES

Rig Alternatives & Capabilities	• Alternatives to the existing installed platform rig include Hydraulic Workover Units, Snubbing Units, Modular Rigs and various hybrid solutions which allow sufficient levels of hoisting, rotating and pumping. Ensure the correct, competent people are involved in the decision-making process. • Alternative drilling units may offer more innovative solutions as they can be specified specifically for the job which may not require heavy rig work e.g. through tubing opportunities. • A jackup rig has excess capability in terms of hoisting, rotating and pumping but may have limited reach and be unable to cover all the required slots. It also may clash with seabed infrastructure. • A rigless P&A campaign, using a range of specific services may be the cheapest option if rig reactivation is difficult or may be part of a pre-work/offline campaign that adds value. • Conductors may push the limits of what a temporary rig can do, and their recovery method/strategy need to be thought through e.g. clamps, guides, tiebacks. It may be possible to include conductor removal in the jacket removal scope of work.
Project Management & Integration	• Whichever alternative rig solution is selected, the team need to manage platform interfaces, platform pre-work/modifications, POB, logistics, supply chain, internal management and regulators in good time so that there are no hold ups. • The number of jackups in the North Sea has declined and availability may not be good without long term planning. • Consider the footprint of temporary equipment on the platform and its ability to reach all slots and assess the capacity of the platform to accommodate additional heavy equipment, remembering that it may be downrated. • Full engagement of the platform Operations team is essential to ensure installation and operation of equipment can be achieved with correct

	permits and tie-ins. This may require top-down leadership from asset managers and above. • A robust and flexible schedule with contingency is critical and the team should thoroughly assess the risks in the schedule in order to manage uncertainties.
Safety & Execution Risk	• If using alternative rig solutions, note that different equipment handling requirements have different risk profiles both for personnel and potential equipment damage. • Identify safety issues with the introduction of new P&A work scope and equipment to steady state platform production operations. • With a significant installation of an alternative drilling unit such as a modular rig, expect to have numerous efficiency upgrades aimed at improving safety and performance as work proceeds. • A special focused group will probably install a modular rig more efficiently. Note that a modular rig is a material change to the safety case. • Annular remediation requirements should be identified during the data mining and well analysis so that they can be built into the work scope. However, if the requirement arises unexpectedly, a contingency plan needs to be in place to carry out this work.

7. COMMERCIAL, CONTRACTING AND LEGAL

General	• Include commercial, legal, supply chain and procurement people in the early stage brainstorming and planning meetings. Involve contractors and service companies early. Decide what is outsourced early. • Understand the new risk environment technically and commercially prior to contracting. Ensure there are clear liabilities and indemnities particularly if outsourcing. • Look for human and corporate behaviors which drive best in class safety/quality/innovation/performance while avoiding adversarial and negative behaviors.
Collaboration & Multi-Operator Campaigns	• A collaborative approach with the supply chain may yield benefits where resources are limited and long-term planning is required to ensure that the services will be available when required. • Shared offshore campaigns between operators can improve performance and save money but the supply chain and legal challenges can be significant. An alternative is an informal flexibility to accommodate each other's needs, but it requires excellent relationships between all parties. Collaboration requires good engagement from upper management level. Wells teams tend to be very delivery focused. Examples of collaborative cost savings are: shared marine insurance, rig acceptance for multi-operator campaign with one mobilisation and one demobilization. • As the volume of work in the region slowly declines, providers leave the basin and availability of services decreases, operators need supply chain availability before committing and suppliers need operator demand before making equipment available. So early and honest dialogue with the supply chain is important in order to secure the required equipment at the right time. • It's worth investing some time to determine how operators make contracts more attractive for the smaller service companies who may be able to efficiently service the industry as service provision in the basin

	declines. It may be worth allowing new entrants and SMEs to piggyback on existing vendor contracts. • Securing P&A of wells for perpetuity introduces a difficult-to-manage risk for the supply chain.
Contracting Models & Commercial Innovation	• With the P&A focus which is technically distinct and, in some respects, simpler than drilling operations, there is an argument for simplification of contractual relationships and minimization of third parties. • Potential benefits can be gained from an effective risk/reward model, but work is required to define the right model for P&A as the drivers are likely to be different from drilling activities. It's important to define the scope well and to understand the variables and both technical and commercial KPIs. • Many contracts are overly complex and convoluted for the P&A work scope. Complex legal agreements are rarely used when the practical solution is often just to change out the service provider in the event of poor delivery. Lump sum approaches are probably not suitable for P&A work. An open book arrangement with pain/gain may be better but requires a new type of contract.

8. OPERATIONAL CONSIDERATIONS

Equipment and Resources	• SIMOPS can be difficult when there are multiple/competing goals such as production, intervention, P&A. Understand SIMOPS constraints and recognize that POB can be challenging but multiskilling can relieve pressure on beds. • Try to use an equipment database to find/offer obsolete equipment. It may be required or beneficial to share equipment with other operators. • Have a plan for fluid flushing and disposal either in a well or elsewhere (expensive) which ties in with SIMOPS and production operations. Note that there are risks with leaving the disposal well until last if there is a chance of reduced injectivity or plugging. Identification of one or more disposal wells early will help manage the uncertainty. • The magnitude of decommissioning projects varies widely, and a hybrid approach may need to be worked out. For example, good experience has been had on smaller installations with limited bed space by having a combined campaign with the platform decommissioning team and collaborating to find efficiencies in both operations. Plan to manage bed space on the rig to have both teams working at the same time. When there is a SIMOPS clash, work a period of 'Decom/Wells Primacy' where the Decom teamwork during the day and the wells teamwork during the night.
Personnel & Competence	• It may be a challenge to retain the required P&A skills as the end of field life approaches. Maintaining specific expertise for old rig equipment is important and may become impossible in the future. Encourage trainees because they may help bridge the skills gap as the older generation leave the industry. • Crew sharing and multiskilling for P&A activities may involve different skills from drilling and be worth exploring. • It is likely that maintaining good safety performance will require additional or different focus as the work scope changes, opportunities decrease, people leave the industry and the demographics of the workforce change. • Plan how to manage morale as production ends.

General	• Safety should be the first priority. Efficiency comes gradually, so it is important to manage management expectations and obtain support for time/cost estimates and contingency from management, stakeholders, partners etc. • An efficient P&A campaign requires development of P&A specific policies and procedures e.g. well control. This may require a lot of work. • Preparatory work should have its own cost centre. Prework is great if it works and can reduce POB and cost but might increase immediate costs if problems are identified. Offline plug and lubricate operations can give a physical demonstration of cost saving. Offline work has the potential to reduce operational uncertainty and fix future problems at a modest cost. Careful planning ensures that the optimum data can be extracted from the well without requiring a second visit later.

9. OPPORTUNITIES AND CHALLENGES

- Technology is not being taken up even after proof of concept. Attitudes to new technology remain conservative.
- Do the guidelines on new technology qualification need updating?
- Are there regulatory barriers to the use of cement alternatives?
- Could we establish a multi operator collaboration agreement for the service community?
- Is there a good model to allow collaborative operators to share risk?

10. CONTRIBUTORS

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