OGUK

Building Back Better: The Business Case for Multi-Operator Well Campaigns in a Diverse Basin

Position Paper

April 2021

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1 Executive Summary

The Improving Partnerships Task Group was created in late 2019 as part of the Wells Task Force, under the North Sea Transition (NST) UK Forum, with the remit to help promote a number of multi-operator, multi-well campaigns to deliver value for UKCS operators and the supply chain.

The benefits achievable from long campaigns of activity are significant and include reducing the time and cost of well operations, overcoming the hurdle of rig mobilisation and demobilisation costs, and improving safety and environmental performance. Recent Oil and Gas Authority (OGA) modelling determined that the case for campaigning is compelling and the potential savings are significant, emphasising the need to ensure this way of working is adopted.

At the time of the group's formation the industry was making tentative steps towards recovery following the oil price crash of 2014-16. Well activity data and benchmarking show that multiple opportunities exist to materially improve well execution performance in the basin to minimise the inefficiencies created by seasonal and financial constraints from commodity price fluctuations.

Well activity on the UKCS is now at the lowest level since the UK industry began more than 45 years ago, as a result of the oil and gas price collapse and COVID-19. Securing investment remains challenging and, with continued low levels of activity anticipated, the industry must find ways to ensure the UKCS remains competitive in a global context.

The energy transition provides an opportunity for the UK energy supply chain to take a much more proactive role in developing new opportunities, building on its oil and gas experience, securing jobs, and driving economic growth for the UK. Appropriate expertise already exists within the UK's oil and gas supply chain and many of the required skills are readily transferrable to adjacent low-carbon sectors. The work of the Improving Partnerships Task Group helps to protect supply chain companies now, ensuring our existing industry has the skills, resources and competitiveness required to successfully transition to a net zero future.

There is a significant portfolio of well work to be executed on the UKCS if the right conditions can be created. A campaign approach to wells activities can help to create those conditions by delivering lower costs for operators and continuity for the supply chain, but urgent action is required to deliver activity as soon as possible. The current conditions and the two-year outlook suggest that a new approach to multi-operator, multi-well campaigns is appropriate and this time the barriers from previous attempts must be overcome. To succeed, operators and supply chain should aim for:

- Openness and transparency on work scopes & timing
- Willingness to incorporate standardisation
- Commitment to openness on commercial terms

This paper aims to demonstrate the business case for multi-operator, multi-well campaigns; to identify the barriers and potential solutions; and to develop next steps and a clear timeline for action.

2 Introduction

The benefits of long campaigns of activity on similar well operations are understood by the industry: crew continuity and repetition of operations produces a learning curve that reduces the time taken and cost per well, mobilisation and demobilisation costs are amortised over a longer duration, and safety and environmental performance is improved. However, there is a smaller count of operators with full campaign sequences and many UKCS operators have limited wells work scopes as they adjust Capex budgets in 2020.

For the supply chain, the costs of mobilising and maintaining rigs, equipment and personnel are prohibitive for short-term work scopes. However, idle periods erode economics. Continuity of work is the key to delivering profitability for the supply chain and can help retain personnel and equipment in the region.

In the current business environment industry should be collaborating more than ever to deliver long-term, continuous well work activity to the benefit of all parties. In 2019, responding to already low wells activity, degraded wells performance and fragmented wells initiatives, the NST UK Steering Group supported the creation of a new Wells Task Force to consolidate efforts across the well lifecycle, achieve stronger alignment with the OGA's Wells Strategy and Stewardship expectations and drive an increase in performance and activity. The Task Force focused on five key areas, one of these being improving partnerships. The Improving Partnerships Task Group came together with the specific remit to promote the benefits of multi-operator campaigns for drilling operations, well interventions and well decommissioning.

Since the Task Group was formed the industry outlook has been further damaged by the dual impacts of the oil price drop and the appearance of the COVID-19 pandemic in 2020. This adds further urgency to its activities.

The objective for the Improving Partnerships Task Group is to make the business case for multi-operator, multi-well campaigns and prepare a road map that will create shared value for UKCS operators and the supply chain. The execution of the proposed campaigns should start as soon as possible and could last several years. They should be used to demonstrate the benefits of this collaborative approach to well delivery.

The following requirements have been identified, many of which are addressed within this paper:

- Quantify the cost/value benefit of multi-operator campaigns
- Identify and address the barriers that have previously made it hard to adopt such a campaign approach on the UKCS
- Identify examples of success, good practice, and lessons from rig/vessel contracting and cascade to the wider industry
- Identify prospects that are available and ready to drill
- Identify candidate wells that are ready for decommissioning
- Identify two to three operators that have potential wells for a campaign approach

- Consider funding sources available to support the candidate wells and seek to identify fresh sources of funding looking at all commercial approaches to do so
- Complement ongoing industry recovery efforts
- Engage with the OGA (and OPRED) for support, reflecting licence obligations and decommissioning commitments
- Identify potential campaigns that can be immediately initiated

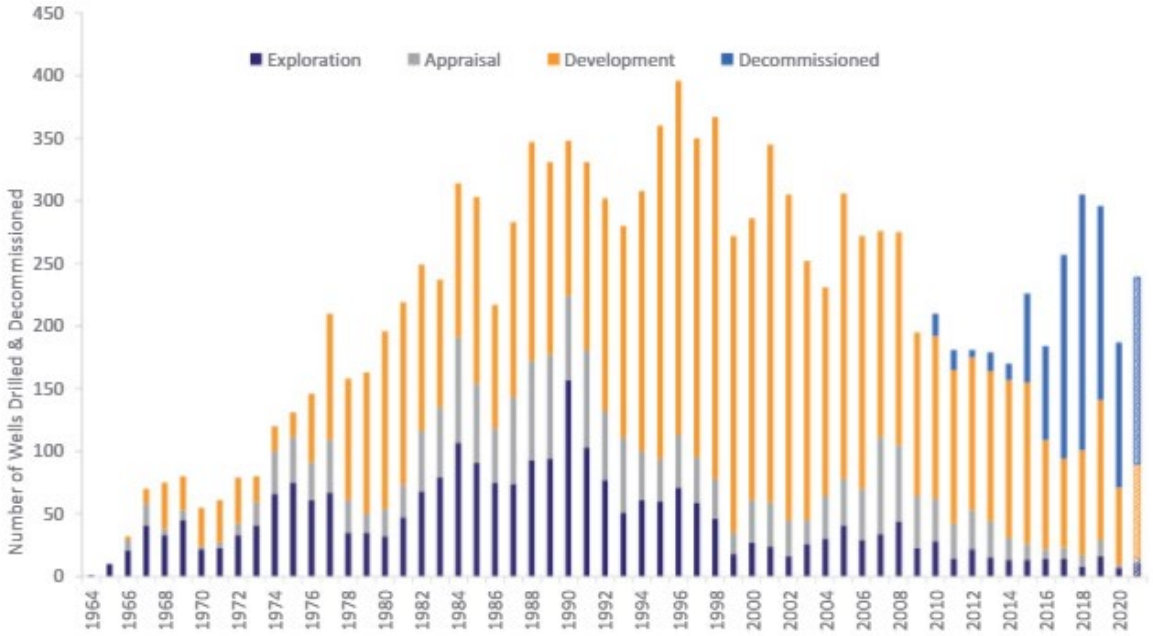
2.1 Indicative Operator Well Activities

Year	Exploration Wells to be Drilled	Appraisal Wells to be Drilled	Decommission Platform Wells	Decommission Subsea Wells	Decommission Suspended E&A Wells
2020	12	7	141	25	4
2021	33	15	83	47	14
2022	34	17	94	28	14
2023	30	9	151	42	9

Table 1 - Pre-COVID UKCS Wells Activity (Source: OGA)

Table 1 shows the exploration and appraisal wells and well decommissioning activity anticipated to be completed on the UKCS over the next four years. These estimates were compiled in early 2020, before COVID-19 and low commodity prices impacted the industry. The OGA UK Stewardship Survey (UKSS) data have been used. The exploration and appraisal drilling numbers only include firm plans, while the decommissioning numbers show operators' plans as of February 2020. Reliable data on development well plans is less readily available.

Figure 1: Drilling Activity – OGA Wells Data



Source: Ref.1 OGA / OGUK

Following the oil price decline in 2014-16, the impact of COVID-19 and low commodity price on well activity in 2020 has been pronounced. For example, of the seven appraisal wells anticipated in 2020, only one has been drilled, and of 12 exploration wells only four have been drilled (excluding sidetracks). Almost all the Mobile Offshore Drilling Units (MODU) based well decommissioning activity has been deferred. At mid-October 2020, 39 out of 76 (51%) of the North Sea mobile rig fleet is idle; of those, 25 (64%) are classed as stacked [Ref.2]. This lack of activity is having a severe impact on employment. Thousands of jobs have already been lost and OGUK estimates that up to 30,000 jobs could be lost on the UKCS over the next 12-18 months if activity does not recover. Predictions of continuing low commodity prices mean that recovery in activity may extend beyond 2021. This will have a severe impact on the future availability of rigs, equipment, and people in the UK sector, implying higher costs for well work in the future.

Several producing fields in the UKCS have announced Cessation of Production (CoP) (earlier than anticipated) in 2020. This implies more well decommissioning will be required in the short to medium term. Deferral of the current well decommissioning work scope, combined with an increasing future scope and a reduction in supply chain capacity, similarly implies higher costs for well decommissioning in the future. The practice of stimulating activity through collaboration not only brings efficiencies but also future-proofs the basin's capability and capacity for future well work.

2.2 The Case for Well Decommissioning Campaigns

Multi-well campaigns are beneficial for all well types. However, the Improving Partnerships Task Group recognised the case for prioritising well decommissioning activities initially for the following reasons:

Availability. Much of the work that was deferred earlier in 2020 was planned and ready for operations. It will be relatively easy to bring it forward.

Fewer constraints. It is easier to manage well decommissioning scheduling than with barrel-adding drilling and completion operations.

Certainty in decommissioning scope. Drilling activity is largely optional for operators, but after CoP, well decommissioning is unavoidable. It is also the largest activity area as shown in Table 1 and therefore the area with the most potential gains.

Supports OGA strategy. The OGA's 2016 Decommissioning Strategy [Ref. 3] and Decommissioning Delivery Programme [Ref. 4] emphasise three key priorities:

- Cost certainty and reduction
- Decommissioning delivery capability
- Decommissioning scope, guidance and stakeholder engagement

Element 5 "Well Plug and Abandon Optimisation Programme" of the Decommissioning Delivery Programme has the objective "to demonstrate the significant cost savings which can be achieved by collaborative working, the adoption of improved execution and contracting models and to stimulate work-sharing campaigns, taking advantage of the current low cost environment. Additional benefits include support for the UK supply chain and sharing experience of how to structure and manage such collaborative activities."

The work of the Improving Partnerships Task Group directly supports the objectives of the OGA Decommissioning Strategy.

Exporting capability. Further developing the UK's well decommissioning skills, capabilities, and expertise could lead to the UK exporting services to other areas of the North Sea and beyond.

2.3 Regulatory Support

The OGA, the Offshore Petroleum Regulator for the Environment and Decommissioning (OPRED), the Health and Safety Executive (HSE) and other regulators recognise the pressure the wells community is under.

The latest update of the OGA Strategy [Ref. 5] revised in Dec 2020, states persons must, in the exercise of their relevant activities, take the steps necessary to:

1. Secure that the maximum value of economically recoverable petroleum is recovered from the strata beneath relevant UK waters; and, in doing so,
2. Take appropriate steps to assist the Secretary of State in meeting the net zero target, including by reducing as far as reasonable in the circumstances greenhouse gas emissions from sources such as flaring and venting and power generation, and supporting carbon capture and storage projects.

OGA activity. As part of its efforts to support the industry's recovery, the OGA conducted modelling to assess the benefits of a campaign approach to well decommissioning. The OGA's modelling focused on two areas of well decommissioning activity [Ref.6].

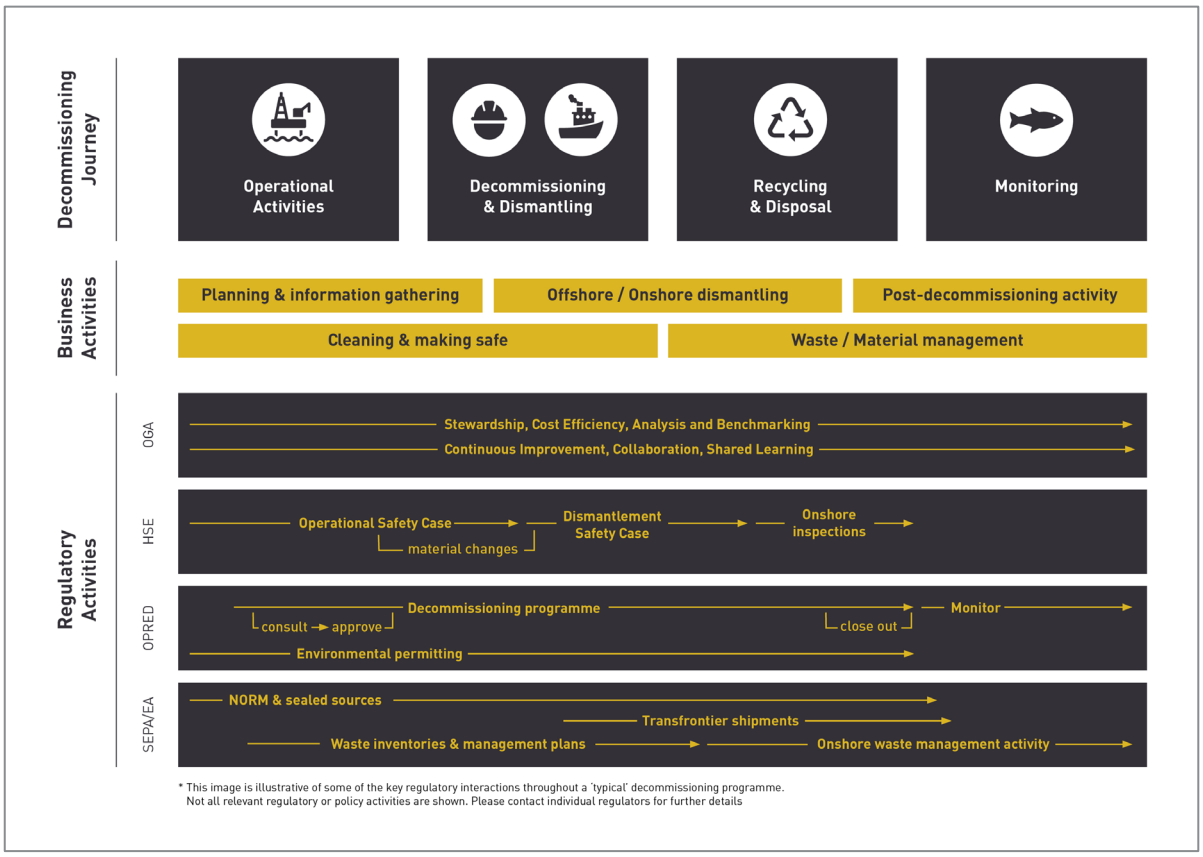
1. A pool of suspended subsea wells, some of which were understood to be decommissioning ready and others requiring some preparatory engineering work
2. A ready and growing pool of platform wells

The OGA's modelling determined that the case for campaigning is compelling and the potential savings are significant, emphasising the necessity of adopting this way of working. Access to this information can be obtained from the OGA website [Ref.6].

Regulatory compliance. The OGA's "Guidance for applications for suspension of inactive wells" [Ref. 7] sets out a 2-5 year timeframe for decommissioning suspended wells. The OGA will continue to proactively engage with licensees to ensure that robust plans are in place for those wells that fall within the scope of that guidance. Introduced by The Energy Act 2016 the OGA has powers, not yet used, to require collaboration between operators to reduce decommissioning costs.

Regulatory alignment. It is important to have clear alignment and understand the boundaries between each regulatory body. Misalignment between the regulators can cause operators to defer activity rather than negotiate conflicting regulatory requirements. The regulators involved in decommissioning have formed a Regulatory Forum, in part to "acknowledge and address situations where there are competing regulatory demands". It will be important to resolve such conflicts. Regulatory initiatives such as the Decommissioning Regulatory Hub [Ref. 8] are the first steps towards achieving this. The requirements of each regulator are shown in Figure 2 below.

Figure 2: High-Level Overview of the Regulatory Requirements of Each Regulator (DecomRegHub)



3 The Business Case for Multi-Operator Campaigns

3.1 Benefits of the Portfolio Approach

As described in the introduction, the benefits achievable from long campaigns of activity on similar well operations are understood by the industry – crew continuity and repetition of operations produce a learning curve that reduces the time taken and cost per well, mobilisation and demobilisation costs are amortised over a longer duration, and safety and environmental performance is improved.

For the supply chain, the costs of mobilising and maintaining rigs, equipment and personnel are prohibitive for short-term work scopes (see Section 3.2 below). However, idle periods erode economics. Continuity of work is the key requirement to deliver profitability for the supply chain and will facilitate the retention of personnel and equipment in the region.

Aggregating similar work scopes from several operators into a continuous campaign can deliver the efficiency benefits that would otherwise be lacking if each operator executed their work in isolation. The supply chain will benefit from more increased project visibility, an ability to drive schedules, better utilisation of assets, and improved continuity of work. A significant amount of work which each operator carries out can also be removed, for example repeat audits and inspections, service company equipment change outs, etc.

For the UK, the benefits will be:

- Delivering high-cost activities for less
- Maintaining and attracting high-skilled jobs
- Developing exportable expertise
- Reducing emissions and improving safety performance

Appendix A and B show some examples of successful campaign approaches in the UK and Far East. Appendix C illustrates possible campaigns that could be constructed around the potential UKCS work scope.

Whilst the benefits of campaign approaches to well work are understood, this has not translated into multi-operator, multi-well campaigns becoming common practice in the UK. The Improving Partnerships Task Group has previously identified the main barriers to this way of working. These and the potential solutions are discussed in Section 4. The UKCS now has a larger number of operators but few of these have full campaign sequences - multi-operator campaigns offer a more sustainable way to do business in this mature diverse basin where short, fragmented work scopes challenge the economics of single operator campaigns.

3.2 Cost-Benefit Analysis

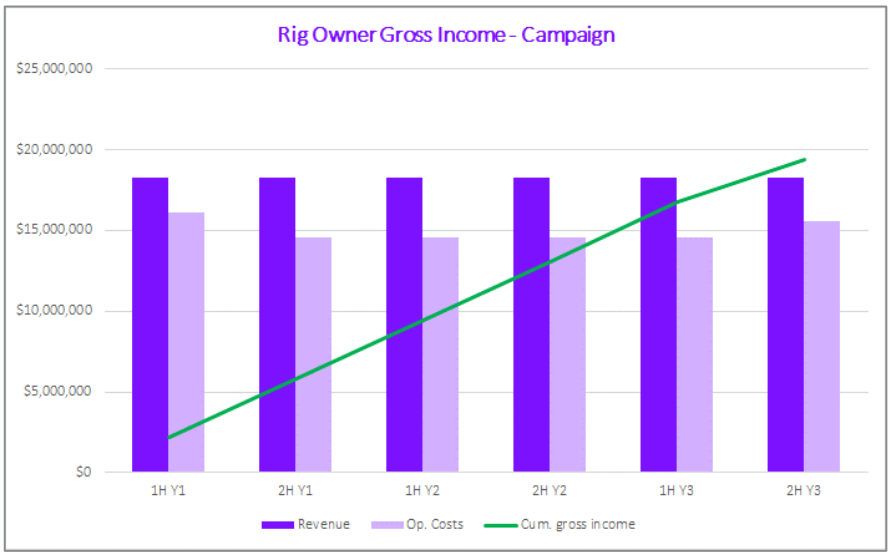
See Appendix D for the assumptions used in this section. This is a simple, illustrative analysis to demonstrate the potential gains from a campaign approach; a more sophisticated analysis is beyond the scope of this paper.

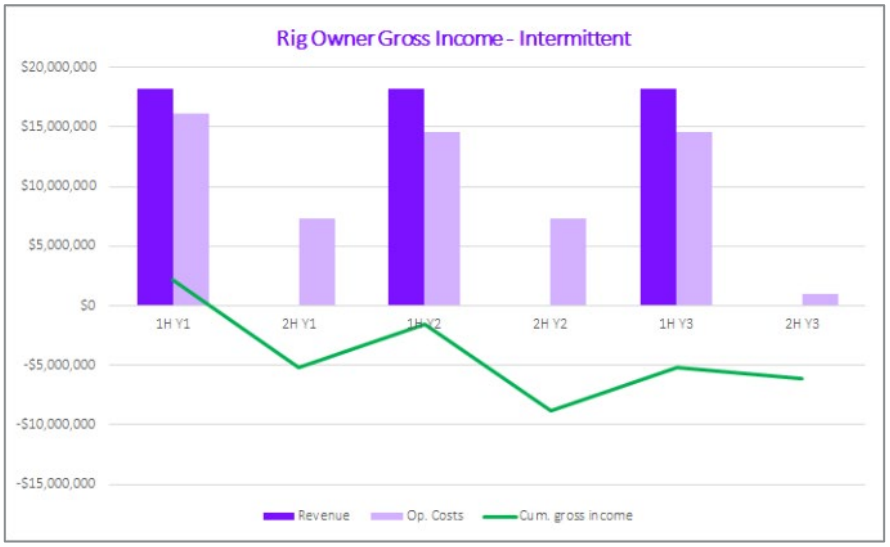
Assuming an operator has two 50-day wells to offer to a six-well campaign of similar wells, then the anticipated saving to the operator compared to drilling their wells as a standalone project is 8% simply from spreading the mobilisation and demobilisation costs across the campaign.

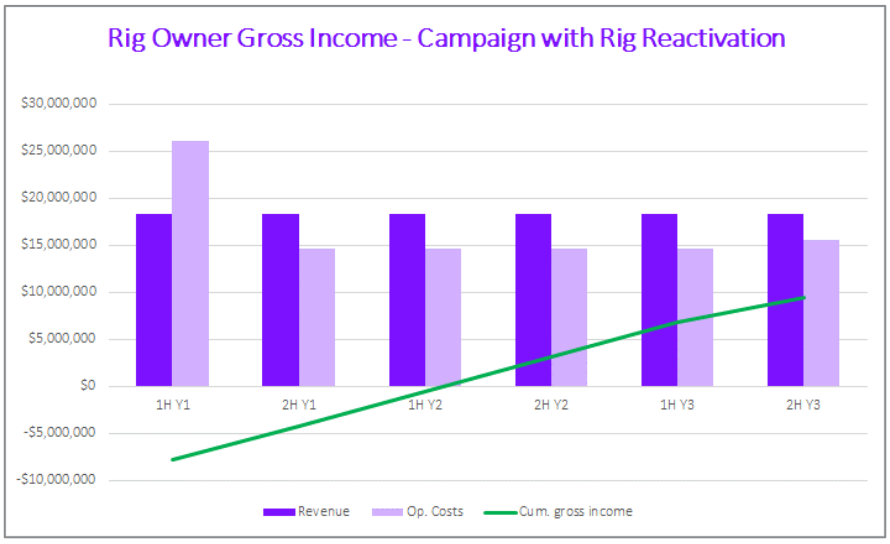
If a modest learning curve assumption of 2% per well is included, then by the end of the six-well campaign, the costs are 16% lower than if they had been drilled as a standalone project. Indeed, a standalone approach may suffer from a reverse learning curve – due to the unfamiliarity of crews with the equipment they are operating.

For rig owners, some typical examples of gross income vs. costs are shown in Figures 3, 4 and 5. The intermittent case is based on working six months per year.

Figure 3: Typical Rig Owner Gross Income in Different Scenarios

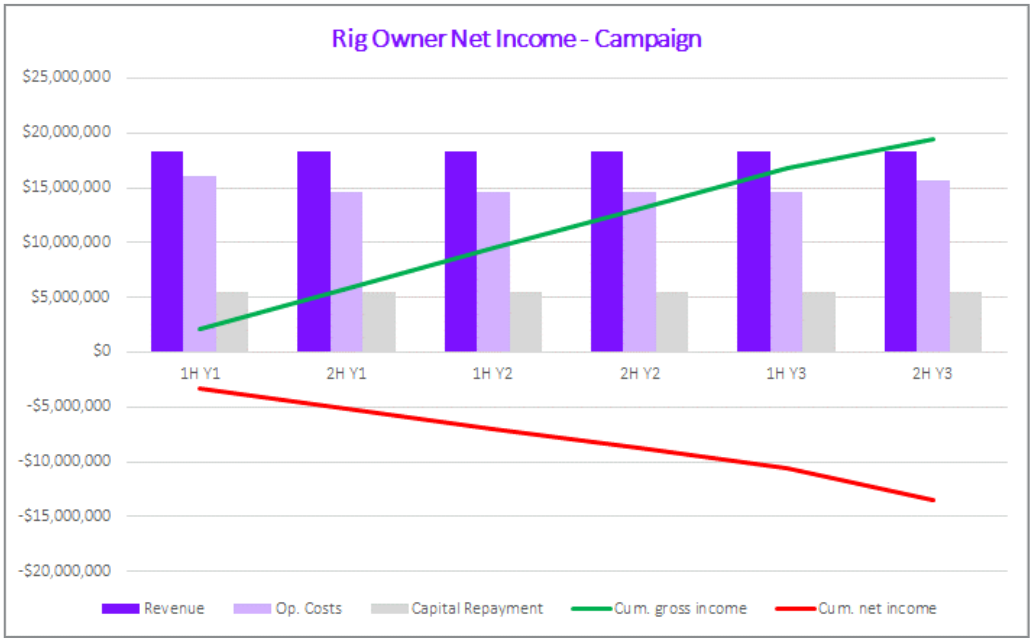


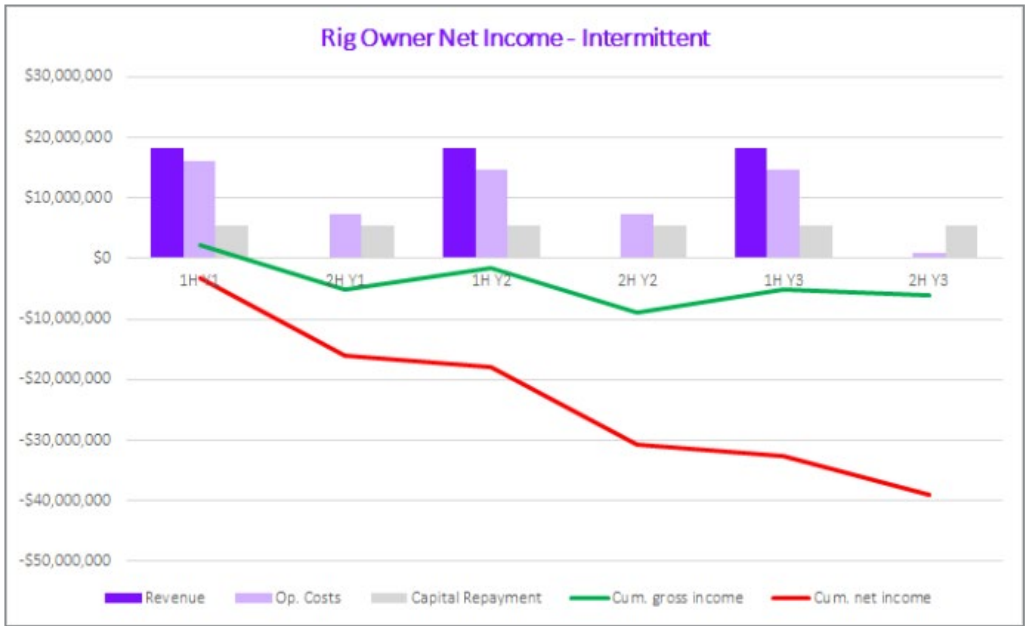




The charts above do not take any account of a corporate requirement to repay the capital cost of the rig, which is unrealistic. Figure 4 below illustrates the potential impact of this. Even with a continuous work programme, with the rig rates and costs used in this illustration, the impact on the notional rig owner is severe. An intermittent workload only exacerbates the problem.

Figure 4: Impact of Capital Repayment Costs on Typical Rig Owner Net Income in Different Scenarios





On these assumptions a campaign requires 125 days of work simply to recover the rig owner's typical crew ramp up and ramp down costs.

Frequent periods of inactivity destroy net income, even if rig operating costs can be substantially reduced during the idle periods. It is clearly not sustainable to spend large sums reactivating stacked rigs for anything less than a substantial scope of work; collaboration between operators to create a campaign of activity offers a solution to overcome this.

3.3 Energy Transition: future resources & skills

The UK Government's net zero aspirations include the extensive use of carbon capture and storage (CCS), and its target is to have 10 million tonnes capacity by 2030. The majority of this is anticipated to be stored in offshore reservoirs, accessed by wells. The skills, expertise, technology and assets needed for transportation and storage of carbon can be delivered through the expertise and experience of our existing supply chain companies here in the UK. Retention of drilling rigs, equipment, skills, knowledge, and competence in the region ensures we are positioned to transition resources capabilities and infrastructure to accelerate CCUS deployment.

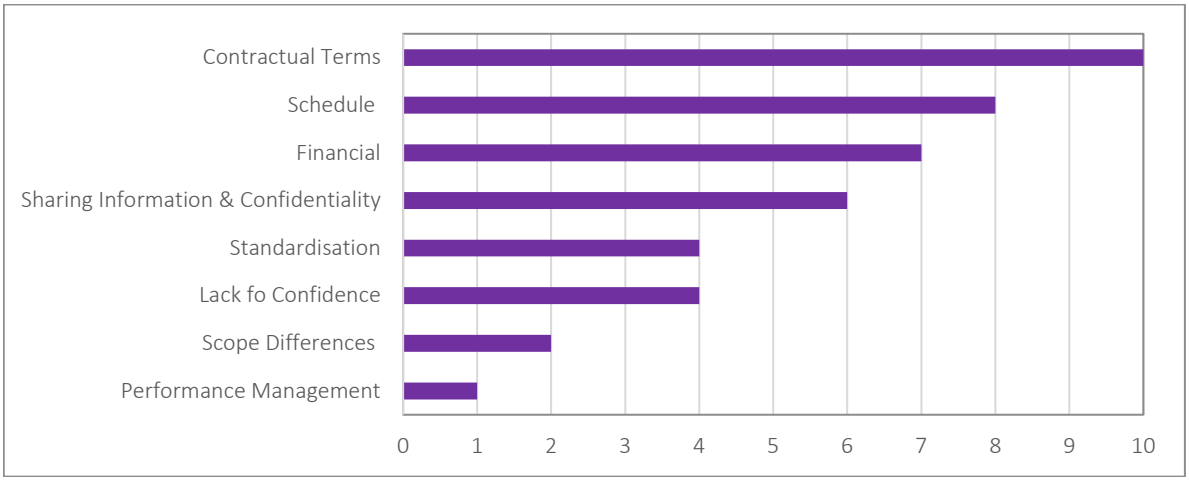
4 Overcoming the Barriers to Multi-Operator Campaigns

There have been many industry initiatives in the past aimed at driving a multi-operator campaign approach; these have only had minimal or short-term success in the UKCS. However, the current business environment means that there is more appetite and urgency than before to enable a campaign approach. Learning from past attempts, it is important to understand the barriers that impact a campaign approach and the mitigations that can be put in place. The Improving Partnerships Task Group identified, categorised, and ranked 23 main barriers and highlighted 42 mitigation measures. The full list is shown in Appendix E. The primary categories were contractual terms, schedule, financial, and sharing information and confidentiality. The mitigations identified by the Task Group, by category, are shown in Figure 5 below.

This section describes practices to overcome the most significant barriers to multi-operator campaigns. Adoption of these practices should assist operators in participating in multi-operator campaigns.

A current successful example of working together in a multi-operator campaign in the UKCS is the DSVi Diving Services Frame Agreement [Ref. 9] subsea inspection, repair and maintenance arrangement, using a Diving Support Vessel (DSV). This has been in place for many years, and sees multiple operators pool their work and prioritise the schedule. The vessel schedule is fixed far enough in advance to allow the required engineering work to take place, with break-in arrangements to allow for urgent and emergency work. Common aspects of the campaign such as mobilisation, transit, weather, and demobilisation are shared between the participants. One operator acts as focal point for communications, but each operator has their own contract with the vessel provider.

Figure 5: Number of Mitigations Identified by Category



4.1 Senior Management Support

Senior management support for multi-operator campaigns is vital. Multi-operator campaigns are not easy to implement and require significant collaboration – without senior management support the barriers can be insurmountable. The path of least resistance for some operator personnel may be to carry out their individual projects as before, but this damages the economics and supply chain capability

as discussed earlier. To ensure the benefits of a multi-operator campaign are realised for all parties it is vital to have the active and visible support of senior management across all stakeholders.

Senior management should:

- drive the expectation that a campaign approach will take place
- ensure alignment across the organisation
- empower key departments to find solutions to this way of working
- overcome internal obstacles, whether real or perceived, if they do arise
- set personnel objectives that support this goal
- ensure sufficient time and resources are available
- ensure that the budget process is aligned with the required campaign commitments
- support the decisions made

4.2 Primary Barriers

The Task Group identified the primary barriers as contractual terms, schedule, financial, and sharing information and confidentiality. Of these, schedule is the most significant barrier.

4.2.1 Project Schedules

Aligning project schedules between different operators can be difficult. Operators have different critical paths, different approval timelines, and different project delivery drivers. For a well campaign to be successful, participating operators should agree a schedule that will align with their project goals, with as much flexibility as possible. The campaign project management company can manage this process with a thorough understanding of each operators' goals.

Well decommissioning is proposed as the first focus area for a campaign because it is likely to have fewer constraints than drilling operations, as there are fewer competing drivers for first production. The standard UKCS operating model has the supply chain working to the operator's requests. It is also proposed that a supply chain led approach is supported, where the supply chain and operators will work together, with the supply chain empowered to drive the schedule to maximise efficiency and value. The supply chain members are experts at managing schedules with tool and personnel usage. Skills honed during the previous oil price crash in 2014-15 mean that efficiency is currently high.

Mitigations to ensure project schedules can be aligned are listed below.

1. Priority. Operators should be transparent about their project goals and drivers. In certain circumstances some wells may have an operational requirement for priority attention, such as more serious well integrity issues. The contract should have a mechanism for defining such wells and any commercial impact on displaced activity. Defining an urgent well should be mutually agreed and so is not only at the discretion of the nominating operator. Priorities are likely to be impacted by some of the following:
   - Licence commitment dates
   - Avoiding subsea completion activity over the winter

- Avoiding frequent rig moves over the winter
- Well integrity issues

2. Execution windows. With priorities agreed, the management of the schedule should be within the mandate of the campaign project management company. Operators should agree broad execution windows. If execution windows are set too narrowly then commercial terms are likely to be more onerous as this reduces execution flexibility. As part of the final contract there may be some form of remedy or discount for operators if critical work is conducted outside the agreed window.
3. Flexibility. Securing flexibility from operators requires clarity on how the costs (or benefits) are shared by all in the campaign. Operators are encouraged to offer well stock to the campaign up to 3 years ahead of nominal plan time. At the longest planning horizon there should be no penalty to remove committed well stock. Operators should ensure that their budget cycles are aligned with their campaign commitments such that work is internally sanctioned in good time. Withdrawal of well work from a campaign with less than one year's notice should incur contractual penalties. The campaign should aim to have several "ready to go" projects to fill gaps at late notice if necessary. Key messages and the mindset of flexibility should be raised during the initial workshops. A high degree of flexibility is more likely with well decommissioning.
4. Standby. If the campaign does not have sufficient work for a continuous annual programme, then any standby time should be accounted for by the campaign project management company, with cost sharing model including terms and conditions agreed in advance. Any waiting on weather charges should be shared up to the point of campaign suspension.

4.2.2 Contractual Terms

Collaboration between operators quite often fails during discussions regarding the terms and conditions for contracts. Assets are different in many ways including location, age, integrity, data quality, well type, scope, seabed type, etc. Operators' requirements regarding liabilities, indemnities and insurance are also different. These differences often make it difficult to reach agreement on contractual items such as unplanned schedule delays or waiting on weather.

Competition Law concerns must also be borne in mind. There is no objection in principle to joint procurement, but the UK prohibits agreements, arrangements and concerted business practices which appreciably prevent, restrict, or distort competition.

Mitigations for reaching contractual agreement and adhering to UK competition law are listed below.

1. Model Contract. Create an unpriced model contract template for use by the campaign participants. Individual operators should finalise commercial terms and a bespoke schedule of prices with the campaign project management company, and a confidential bilateral contract between operators and the campaign project management company should be signed. No pricing information should be shared between operators.

   The model contract should have a standard regime regarding liabilities, indemnities, and insurance requirements. It should be part of the bilateral negotiations between the operators and the campaign project management company to agree any amendments to these terms and what, if any, commercial implications this has.

2. **Participation is voluntary**. The campaign governance should clearly state that participation is voluntary and there is no exclusivity. Any operator can offer appropriate scope for the campaign and this should be accepted once the model contract terms are negotiated and concluded. Early commitment is required to facilitate scheduling and planning (see also point 3 of the preceding section).
3. **Waiting on weather agreement**. Operators should develop a waiting on weather agreement as part of the campaign contract. For example an agreement could be, "At the end of each calendar year, the amount of time spent waiting on weather throughout the year shall be calculated and shall be apportioned between each operator in proportion to the number of days they have used the services in that year." The contract could also be set up to cater for different rates seasonally i.e. lower rates for winter operations.
4. **Project mediator**. An agreed mediator should be employed to settle any contractual disputes either between operators involved in the campaign and the campaign project management company.

4.2.3 Access to Finance

Operators are reducing and delaying activities and spend to mitigate the low commodity price and maintain positive cash flow. Access to finance will also be constrained as investors review the market outlook and await commodity price recovery. The levels of debt financing and liquidity available to companies are also becoming increasingly limited.

4.2.4 Sharing Information and Confidentiality

Some elements of an operator's scope may be sensitive and there may be a reluctance to share this data with other operators involved in the campaign.

Mitigations to ensure project schedules can be aligned whilst enabling sensitive information to be shared are listed below.

1. **Supply chain experience**. The service sector and project management companies work with different operators and confidential information all the time. There is no need for one operator to be party to another operator's confidential information via the supply chain. There are existing and adequate controls in place.
2. **Steering committee**. In complex situations with multiple operators it may be necessary to establish a steering committee for the campaign. The remit should be agreed by all participants. There should be fewer issues for a decommissioning campaign.

4.3 Secondary Barriers

The group identified standardisation, scope differences and performance management as potential secondary barriers. While mitigating these barriers would be beneficial, they are not seen as showstoppers.

4.3.1 Standardisation

Many operators have their own internal standards and good practice guidelines, over and above industry standards. In multi-operator campaigns, clarity on the standards to be used is essential and alignment between operators is preferable, where possible.

Mitigations to this barrier are listed below.

1. Well design and operations standards. Unless the campaign project management company is appointed as the well operator for the entire campaign it is likely to be difficult to align the various operators to a set of common standards. UK regulations are goal setting; a large global operator with corporate wells standards issued by an HQ in another country is unlikely to align with a small independent UK operator. However, agreement should be sought in the first instance. Where there are differences it should be made clear which standards are to be used on the different wells. The supply chain is familiar with this way of working.
2. Rig intake assurance. Most operators have their own rig acceptance and audit requirements prior to the commencement of operations, but they are largely similar. The campaign project management company should develop a rig intake assurance plan that is agreeable to all operators.
3. Standardise well / well decommissioning design. There may be opportunities to standardise well designs across operators to reduce the requirement for specialist capital items, tools, equipment, and fluids. Refer to the OGUK Guidelines for the Right-Scoping of Wells [Ref. 10] which help well-operators develop the minimum required scope for their well designs, based on benchmarking, target setting and an integrated multi-disciplinary team approach.
4. Safety Standards. The campaign project management company should develop an audit, inspection and incident reporting process that will be common across the campaign. The installation duty holder's safety practices and behavioural safety programme should be used and supported.

4.3.2 Scope Differences

Differing well types and locations will require different rigs and equipment. Scope differences can lead to a lack of alignment when planning a multi-operator campaign.

Mitigations to this barrier are listed below.

1. Logistics. The campaign should be set up to offer a full service including marine and air services. There may be an opt out for marine and air services if an operator is proposing a long campaign and has a more efficient delivery model using its own contracted resources. This should be negotiated on bespoke terms.
2. Different work scope. Campaigns should be organised with wells of similar scope where possible, to maximise continuity, efficiency, and learning. For example, subsea completions in one campaign, decommissioning of suspended E&A wells in another.
3. Rig type and equipment. Further segmentation can be based on the required rig type and geographical area. For example, heavy duty or standard jack-up, crane capacity and subsea tree handling capability etc.

4.3.3 Performance Management

Participating in a multi-operator, multi-well campaign requires working together to manage performance issues. Reaching agreement between operators may be difficult.

Mitigations to ensure collective agreement for performance management are listed below.

1. Key Performance Indicators (KPIs). High-level KPIs should be set up to monitor the performance of the campaign project management company and key service providers. The KPIs should be simple, easy to measure and limited in number. Incentives should be provided if KPIs are met and penalties for when they are not. KPIs should be agreed by all the operators and service providers included in the campaign.
2. Withdrawal of scope under certain circumstances. If the performance of the campaign project management company falls below reasonable standards for a sustained period then, giving sufficient notice, operators may be allowed to withdraw scope with no commercial penalty.
3. Ability to change contractors and service companies. Clauses for performance management could be inserted into the contract to allow changes to underperforming contractors and service companies.
4. Ability to remove operators from the campaign. The contract should include a clause to allow the removal of an operator from a campaign if it fails to fulfil its obligations with respect to regulatory consents and notifications, timely provision of information, or payment.

5 Proposed Timeline for Action

The Position Paper lays out phase 1 of the development of a campaign of work, the key item of delivery is willing industry engagement. N.B. Phases 2 to 4 will be further reviewed with the Wells Task Force, following industry engagement at the Q2 2021 launch workshop.

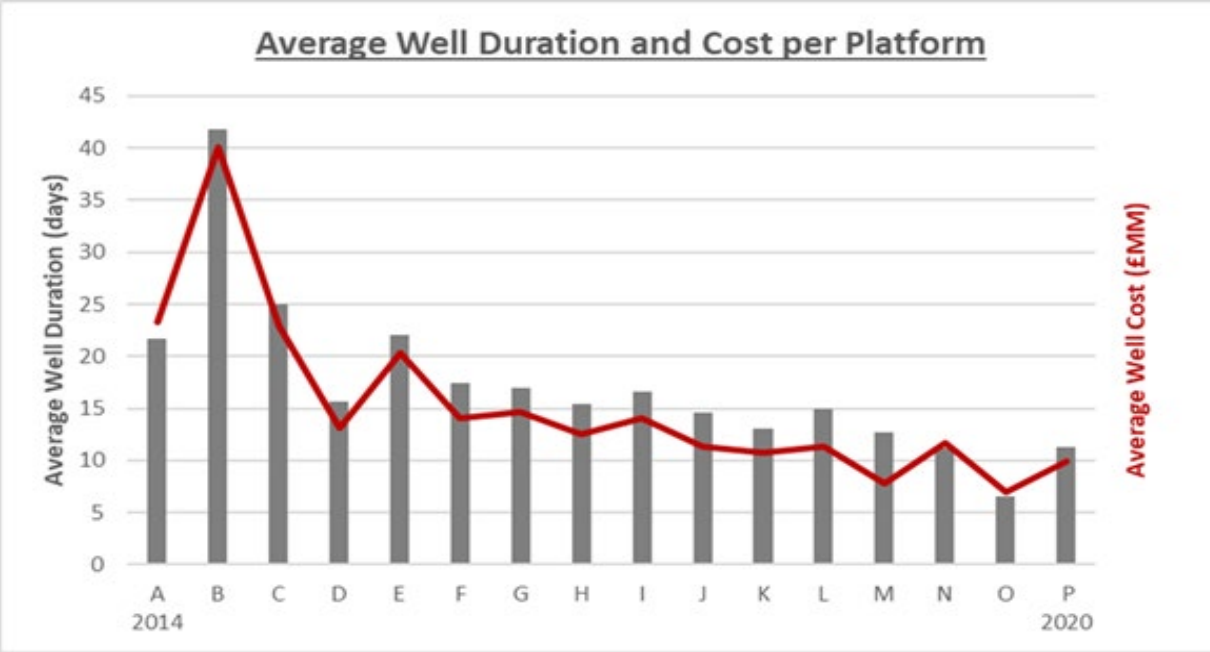
Phase	Indicative Dates	Description
Phase 1 Endorse and publicise Position Paper	Nov 2020 - Mar 2021	• Endorsement of this paper by OGUK, Wells Task Force and MER Steering Group • OGUK well campaign workshop • Solicit interested operators for formation of consortia aligned to activity mix, project urgency, region or other Consortia selection will be based upon backlog of P&A wells catalogue, OGA consultation and reviews with operators • Outline Potential Activity Tables
Phase 2 Draft industry co-operation models	*Q2 2021	• Create unpriced P&A model contract • Create P&A operations steering group template • Create unpriced development well model contract • Create development well operations steering group template
Phase 3 Rig and services consortium forming Service sector lead	*Q3 2021	• Rig and service companies form natural consortia: – Agreements to work together to offer integrated delivery models – Could be unincorporated, or alliance with lead contractor, or campaign project management company lead
Phase 3 Synthesis of potential campaigns operator sector lead		• Under appropriate anti-trust guidance operators to discuss potential programmes • Potential campaign programme to agree a 'lead operator' who will manage consortium on behalf of potential members
Phase 4 Alignment of operator work with consortia	*Q4 onwards	• Operators discuss multi-year potential work programmes with consortium • Agreed weather/utilisation sharing across all contracted campaigns • Allocation of work subject to finalising confidential commercial terms in contract form • Rates and performance terms depend on scope/risk/complexity • Yearly scope removal exit fees agreed • Common insurance requirements, aligned liabilities and indemnities provisions • Dissolution terms agreed if insufficient long-term scope

Appendices

A UKCS Case Study

Figure 6 below shows data from a UKCS platform well decommissioning campaign conducted across multiple fields by ConocoPhillips (now Harbour). The operator executed well decommissioning operations with dedicated teams, using dedicated assets and a standardised approach across multiple platforms within their southern North Sea portfolio. The chart shows the continually reducing average time and cost per well per platform over time. This clearly demonstrates the learning and efficiency gains as projects progress using a campaign approach. This project saw the average cost per well reduce by over 40% from the start of the project to the end, and a 35% reduction in the time to decommission a well.

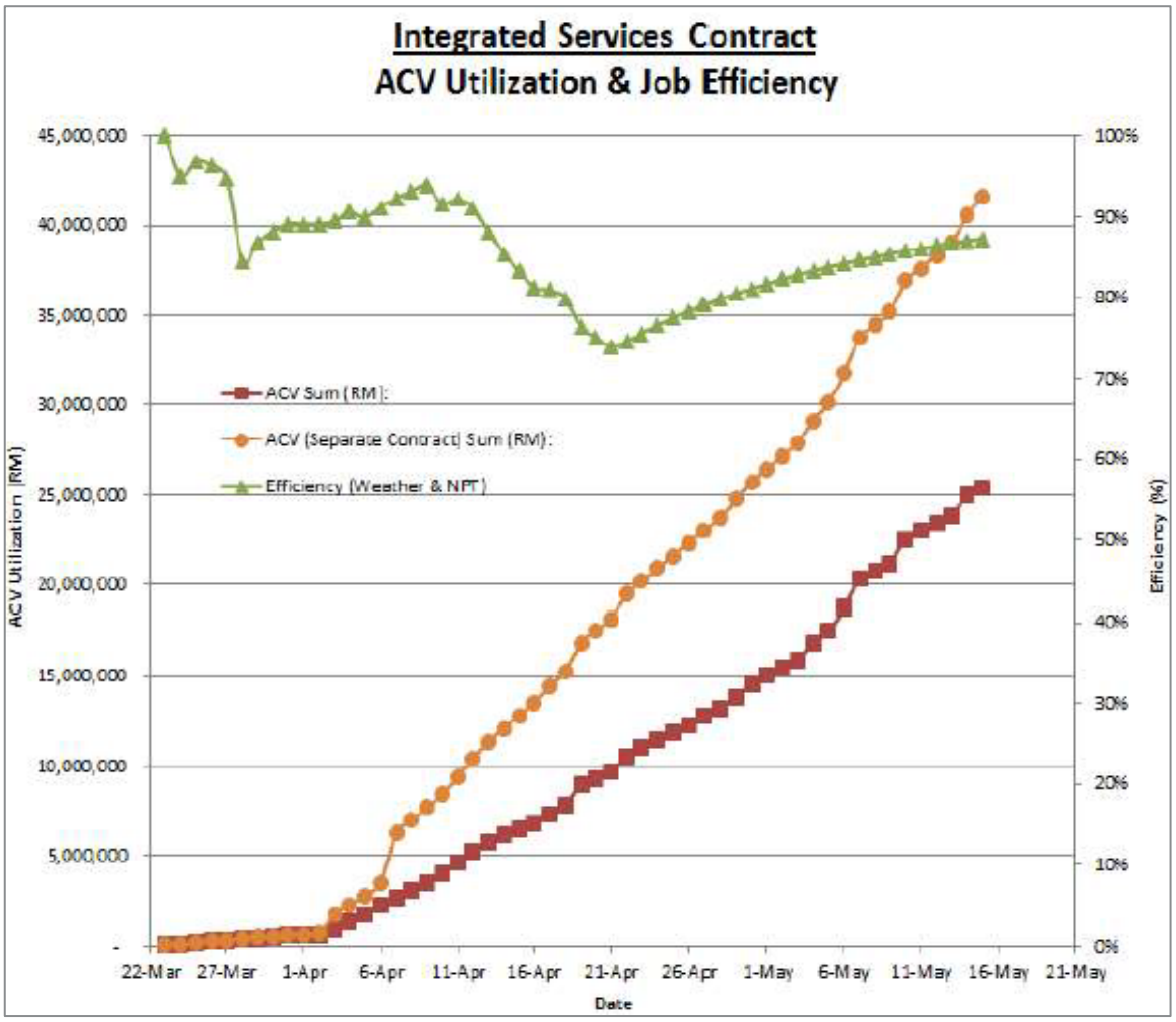
Figure 6: Harbour UKCS Example of Campaign Learning and Efficiency Gains



B Global Well Intervention Campaign Case Study

Figure 7 shows data from the Far East where intervention activities were compiled into a multi-operator, multi-well campaign led by a national oil company. As the chart shows this project delivered a 40% saving over conventional contracting models, shown by the difference between the red and orange lines, and had an average efficiency of 89%, the average of the green line.

Figure 7: Example of Small-Scale Intervention Campaign Savings Against Plan



C Worked Examples

C.1 Exploration, Appraisal, and Development Wells and Well Decommissioning Opportunities

There are many opportunities for operators to combine scopes. By analysing industry data shown in Table 1 and from other sources, the following are examples of the campaigns that could be constructed. These are purely for illustrative purposes.

C.2 Exploration, Appraisal and Development Drilling

Figure 8: Potential Jack-Up Drilling Projects Allocated to Multiple Rigs

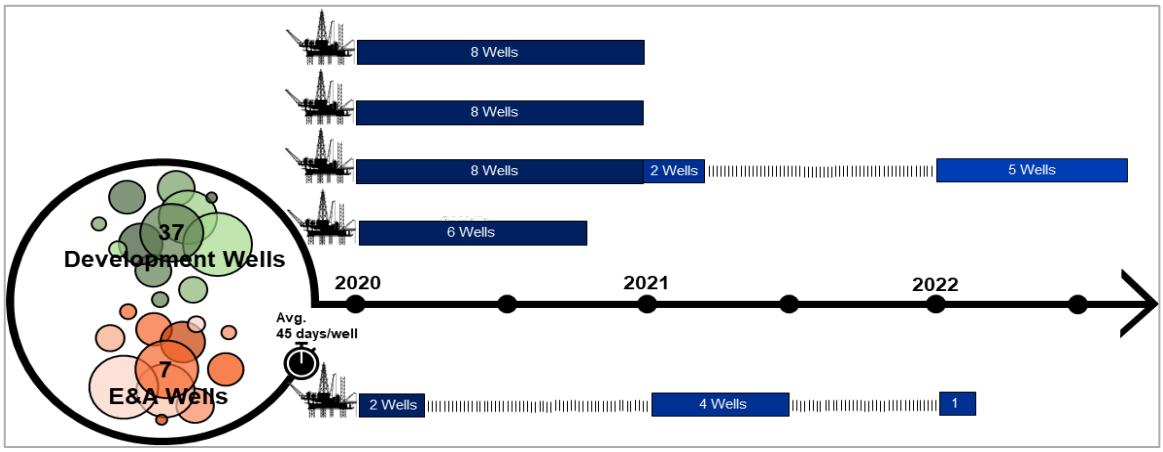
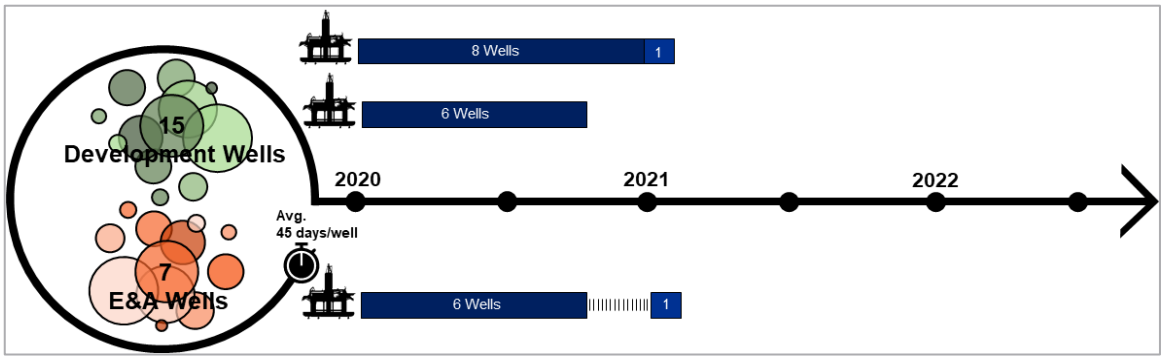


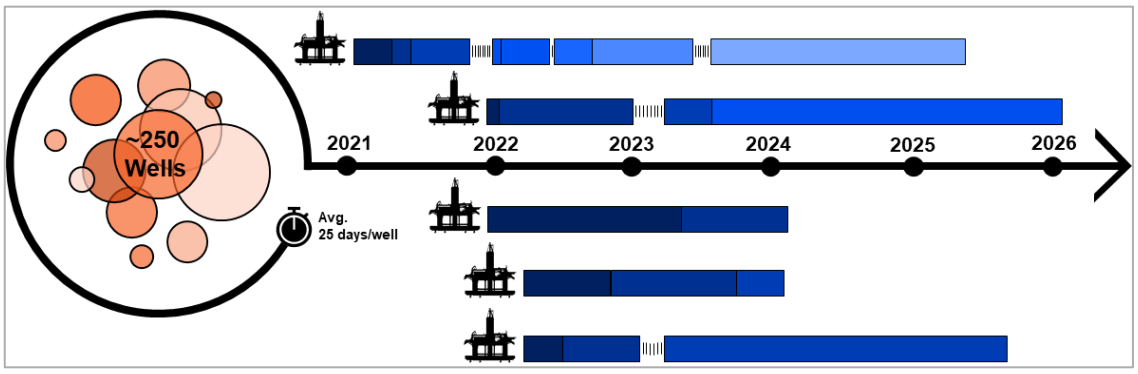
Figure 9: Potential Semi-Submersible Drilling Projects Allocated to Multiple Rigs



This totals 66 wells, as anticipated for 2020-2022; over 3000 days of work for mobile drilling units.

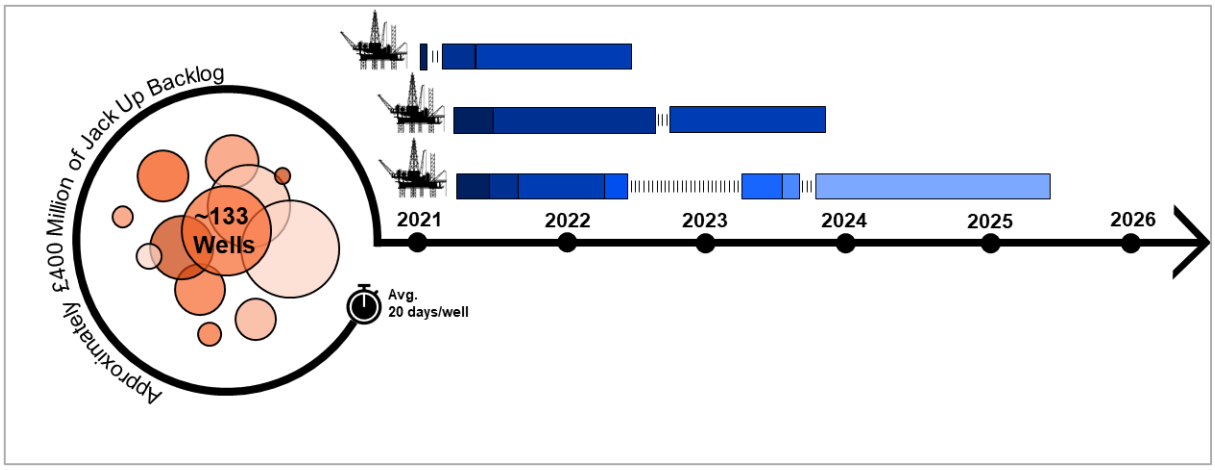
C.3 Well Decommissioning

Figure 10: Potential Subsea Well Decommissioning Projects Allocated to Multiple Semi-Submersible Rigs



This totals 250 wells anticipated to be decommissioned between 2020 and 2026. Assuming an average of 25 days per subsea well using a semi-submersible, this amounts to around 17 rig-years of work not including interruptions, non-productive time, weather or rig moves, and a potential spend of ~£1.5 bn.

Figure 11: Potential Jack-Up Well Decommissioning Projects Allocated to Multiple Rigs



The equivalent data for well decommissioning requiring a jack-up rig is less readily available. However, industry sources indicate up to 130 wells at 20 days per well. This amounts to around 7 rig-years of work not including interruptions, non-productive time, weather, or rig moves, and a potential total spend of ~£0.4 bn.

These illustrations clearly demonstrate that well campaigns are viable in all areas, from exploration to decommissioning, but decommissioning presents the most obvious initial campaign opportunity, for the reasons described in section 2.2.

D Cost Assumptions

These costs are assumed purely to illustrate the rig owner income charts in section 3.2.

- Assumptions for operator well cost comparison
  - Well duration - 50 days
  - Number of wells - 2
  - Daily rig rate - $100,000
  - Daily spread cost - $150,000
  - Mob cost - $2,500,000
  - Demob cost - $1,000,000
  - Learning curve - 2% per well
- Assumptions for rig owner income
  - Daily rig rate - $100,000
  - Daily rig Opex - $60,000
  - Daily shore-based costs - $10,000
  - Daily capital costs $10,000
  - Total daily operating cost - $80,000
  - Ramp up cost for crew - $1,500,000
  - Ramp down cost for crew - $1,000,000
  - Reactivation from stacked - $10,000,000
  - Daily asset repayment capital - $30,000
  - Opex reduction during periods of layup = 50%

E Barriers

Barriers to Multi-Operator Campaigns				1 = low 5 = high	1 = difficult 5 = easy	1 = long 5 = short	
#	Concerned Party	Barrier to Success	Potential Mitigations	Level of Impact	Ease of Implementation	Time to implement	
1	Operator	- Perceived lack of flexibility in timeline for operators (Schedule risk)	- Priority list agreed upfront by collaborating operators	5	1	3	15
			- Set of rules for operators. Eg. Gaps in schedule to be filled funded by operators deviating from plan; penalties for delay to start or deferred scopes.	5	1	4	20
			- Govt. incentive for abandonments as a schedule filler.	4	3	2	24
			- Standardised contract terms (ref. Wellsafe example)	4	2	2	16
2	Operator	- Funding for work	- Govt. incentive for abandonments / general work. Eg. Deferred payments, interventions pay for P&A	4	3	2	24
3	Operator	- Prioritization of wells / operators (Intervention / Development / P&A)	- Priority list agreed upfront by collaborating operators	5	1	3	15
			- Set of rules for operators. Eg. Gaps in schedule to be filled funded by operators deviating from plan; penalties for delay to start or deferred scopes.	5	1	4	20
4	Operator	- Seasonal preferences for operators	- Sharing of WoW risk and knock on effects for collaborating Operators	4	3	3	36
			- Agreed mediator to settle conflicts in scheduling	4	2	3	24
			- Different rates seasonally	4	2	3	24
5	Operator	- Sharing programmes and subsurface prognosis - Antitrust and confidentiality issues	- Strict standards on what can be shared and clear guidance on management of commerical sensitve information.	4	4	2	32
			- Governance structures could have bespoke commercial terms/rates based on their programme term/risk and delivery window flexibility.	4	4	2	32
6	Operator	- Sharing best practices between operators. Issues with competitive advantage and knowledge leakage	- Revert to industry standards.	2	2	2	8
			- Joint operating agreement required to standardize method of operations	5	2	3	30
			- Flip standards between operators. (dependent on which operators considered)	3	2	3	18
			- Maintain same rig team between operators (Co men / service Companies)	5	2	3	30
7	Operator / Rig Contractor	- Difficulty to capture multi-operator campaign cost benefits in operator annual Capex budget process.	- Incentives to operators for gaps in schedule to be filled, penalties for delay to start or deferred scopes. (Eg. Government intervention to smooth out peaks and troughs in demand for P&A scopes)	5	2	4	40
			- Longer term collaborative contracts require termination fees. Collaborating operators will need to agree on exit terms. eg. - Incentive scheme based on 3 year cycle - - Three years there is a large delivery window [9months] and some exit costs if programme removed, - Two years out, smaller delivery window [6months] and higher exit costs, and - One year out there is a fixed delivery window [3months] and material cancellation charges.	5	1	3	15
			- Set of rules for operators. Eg. Gaps in schedule to be filled funded by operators deviating from plan; penalties for delay to start or deferred scopes.	5	1	4	20
			- Gap fillers ready to go to fill if neccesary	5	1	3	15
8	Operator / Rig Contractor	- Contractual - Termination clauses / terms / payments.	- Longer term collaborative contracts require termination fees. Collaborating operators will need to agree on exit terms. (2+ years of work discussed)	5	1	3	15
			- Flexible contracting model to allow longer scopes. (including continuous review of bonuses / minimum base cost cover model)	5	3	3	45
			- Generating sufficient backlog of wells	5	1	3	15
9	Operator / Rig Contractor	- Responsibility for liability when idle due to scope change from an operator	- Incentives to operators for gaps in schedule to be filled, penalties for delay to start or deferred scopes.	5	2	4	40

Barriers to Multi-Operator Campaigns				1 = low 5 = high	1 = difficult 5 = easy	1 = long 5 = short	
#	Concerned Party	Barrier to Success	Potential Mitigations	Level of Impact	Ease of Implementation	Time to implement	
10	Operator	- Operator service company preferences / existing agreements	- Potential for multiple strings to allow competition and multiple rig contractors / service companies - eg. 2 dev, 2 P&A	5	4	2	40
11	Operator	- Operator performance management for rig / service company alliance if not to standard	- Contractual clauses for performance management issues. Flexibility to allow changes to contractors	4	3	2	24
			- Incentives for operational collaboration for performance between rig contractors / service co's, in addition to the commercial agreements.	3	3	2	18
12	Rig Contractor / Service Company	- Tendering process for shared services with Drillers and Service companies	- Tendering process for contractors / service companies can remain separate	2	4	3	24
			- Remove tender process. Direct commercial negotiations	4	3	3	36
14	Operator / Rig Contractor	- Scope differences across operators (Dev. vs P&A, HPHT) and Rig operational limits	- Segment basins by operable rig class. (HD-UHE, HE etc.)	4	3	3	36
			- Further segmentation based on specific equipment requirements - penalizes operators for deviating from standard.	3	3	4	36
			- Opportunities to standardize well design across operators to reduce requirement for specialist capital items, tools, equipment and fluids.	4	2	3	24
17	Operator / Rig Contractor	- Rig intake formalities	- Standardized pre-start up audits to be streamlined and minimal, with collective acceptance from all operator parties. Shared intake between operators	4	2	4	32
18	Operator	- Operator specific operational requirements / upgrades / standards	- Standards should revert to industry defined best practices.	3	2	2	12
			- JV style commitments to shared expectations.	4	3	2	24
19	Operator	- Lack of confidence in full value chain benefits from operators. Convincing operators of commercial value	- White paper outcome of workgroup	4	4	4	64
			- Case studies (historical and future outlook potential)	4	4	4	64
20	Operator	- Operators wish to source supply chain commitments prior to FID, and commit to contracts at FID	- Operators commit to rigs on a rig portfolio basis, contingent on achieving FID by a certain date, with rig contractors having sufficient time to re-market rigs if released. A sufficiently long time is required from FID to commencement window such that rig contractor can effectively market rigs on a continuous basis if FIDs do not occur.	5	3	3	45
21	Service Company	- Contract switching costs for service companies is relatively low. Issue to maintain service companies in partnership as idle time has less impact to bottom line	- Incentives required for long term collaboration for service companies, subject to performance	4	3	3	36
23	Service Company	- Service contractor choice of rig for long term commitment can have material commercial impact	- Consortium model	4	2	3	24
			- Lead contractor model	4	3	3	36

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#	Reference to
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6	OGA Plugged & Suspended wells pool https://app.powerbi.com/view?r=eyJrIjoiZTU3MmFmMDktMDI0Ni00MzllLTg1MTQtMDQxZmQzNWUxZTc5IiwidCI6ImU2ODFjNTlkLTg2OGUtNDg4Ny04MGZhLWNlMzZmMWYyMWIwZiJ9&pageName=ReportSection
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10	OGUK Guidelines for the Right-Scoping of Wells, Issue 1, February 2019 https://oilandgasuk.co.uk/guidelines/?product-page=5

oilandgasuk.co.uk/guidelines

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