



Oil & Gas
Authority

Wells Strategy



Date of publication: July 2019

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1. Foreword

The Oil and Gas Authority (OGA) was established to regulate, influence and promote the UK oil and gas industry, in order to maximise the economic recovery of the UK's oil and gas resources, in conjunction with other regulatory authorities, and has a range of powers to deliver this remit.

The development of a series of strategies and associated delivery programmes represents a key step in setting out how the OGA, government and industry should work together to Maximise Economic Recovery (MER) from the United Kingdom Continental Shelf (UKCS)

The Maximise Economic Recovery from UK Oil & Gas (MER UK) Strategy underpins the OGA remit and became a legal obligation on licensees in March 2016¹. It describes how MER should operate in practice, setting out a legally binding obligation on licensees and others to take the steps necessary to secure the maximum value of economically recoverable hydrocarbons.

The MER UK Strategy also sets out a range of supporting obligations and safeguards, as well as a number of required actions and behaviours.

The purpose of these strategies, developed in consultation with industry, is to promote a new way of working across the oil and gas lifecycle.

The strategies set the key direction and detail on the implementation of each strategy.

¹ Section 9A, Petroleum Act 1998 (as amended)

2. Executive summary

The OGA, working with industry, is committed to maximising the well value cycle on the UKCS (without detriment to safety or the environment) through effective regulation, promotion and by using its influence with licensees, the supply chain and relevant bodies. Maximising the well value cycle supports the MER UK Strategy and Vision 2035 to achieve £140bn additional gross revenue from UKCS oil and gas production.

The well value cycle is complex, typically requiring 45-50% of all CAPEX and ABEX spend and significant OPEX if production is to be maintained or optimised to increase reservoir recovery factors.

This Wells Strategy (the 'strategy') supports the MER UK Strategy and Vision 2035 through three complementary strategic themes:

- **Regulatory compliance** to MER UK, licence conditions and data reporting and retention obligations
- **Business processes to increase well activity** (well construction & intervention) to find and deliver the significant potential resources from the UKCS
- **Performance improvement** of all activities throughout the well value cycle, from design to well decommissioning, plug and abandonment (P&A) – to reduce costs and improve recovery

The strategy represents a step change in the way the well cycle will be managed by industry and stewarded by the OGA. It builds on work carried out by many industry groups. Successful implementation of the strategy is dependent on support from all parts of industry working together to develop work programmes, set challenging targets, share knowledge and track delivery.

3. Introduction

Over 7,800 wells have been drilled in the UKCS to date, delivering over 44 billion barrels of oil equivalent (boe) with a remaining potential of 10-20 billion boe.

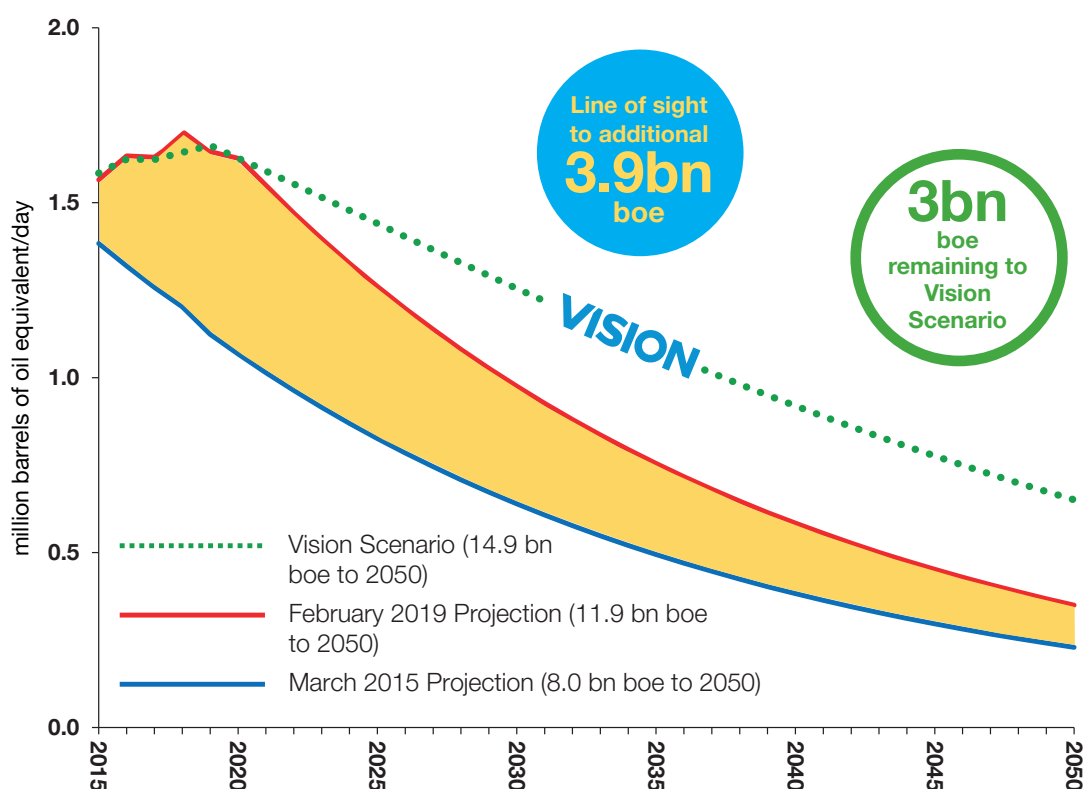
In November 2018, the OGA published for the first time a [Wells Insights Report](#) with the following key findings:

- Drilling activity is on the decline
- No improvement in drilling performance in the last 10 years
- Huge value from existing wells
- 30% of active wells are shut-in
- Surveillance and intervention rates are too low
- Over 200 open water suspended Exploration & Appraisal wells (ave. age 27 years)
- Over 150 wells per year expected to be Plugged & Abandoned (fully decommissioned) (P&A)

In order to realise the significant remaining potential of the UKCS, the wells community will have to reduce well construction costs, increase recovery from wells and minimise well decommissioning (P&A) costs at the same time as protecting those reservoirs with potential future use.

Increased new well activity and improved well management are vital components to realising Vision 2035, delivering an additional 7bnboe compared with the 2015 projection (figure1)

Fig 1: Vision 2035



To achieve this target the following need to be considered:

Value

A value approach (balance of cost versus recovery) to well design will lead to a greater number of opportunities to produce remaining reserves and resources. This will improve the economics of potential new developments and infill wells, enabling project sanctions and the extension of field life and ultimate economic recovery.

Well construction

By improving construction performance, and by developing and utilising appropriate technology it is likely that the recovery from individual wells will increase thus reducing the estimated 2000-3000 new wells required to achieve MER UK.

Intervention

Restoring production from shut-in wells and reducing well losses could lead to additional production equivalent to a large new field, improve the economics of mature fields and potentially extend field life. The Wells Insight Report showed that 30% of the active well stock was shut-in, reservoir recovery factors were stagnant and 33 million boe production was not achieved due to well losses. The application of EOR techniques offers significant potential to improve recovery factors.

Well plug and abandonment

Eventually all wells on the UKCS will be taken out of service (P&A'd) which is a vast opportunity for the supply chain but a significant cost to the industry and government. The P&A sector has demonstrated performance improvements through the adoption of improved working practices and alternative business models whilst developing and trialling new technology and sharing knowledge as described in the [Decommissioning Cost Report](#)

Technology

The development and utilisation of appropriate technology has the potential to reduce costs across the well lifecycle, increase recovery factors and anchor a high value supply chain in the UKCS. Initiatives such as the Oil & Gas Technology Centre provide support to Operators and the Supply Chain.

4. Focus areas

4.1 OGA wells ambition

One of the OGA's role is support industry efforts to achieve MER UK Strategy. The MER UK Strategy's Central Obligation² is to maximise economic recovery in the UKCS, supported by cost efficiency, collaboration and timely delivery.

The OGA's ambition, with respect to offshore wells can be described as follows:

1. To increase the value of new wells and existing wellstock thus enabling the economic delivery of incremental projects and the deferment of Cessation of Production on existing fields
2. That Well Decommissioning (P&A) costs decrease in line with industry targets whilst protecting reservoirs with potential future use.

The following three areas of focus (underpinned by the sharing of information) are intended to deliver the OGA's Wells Strategy.

4.2 Focus Area 1 – Regulatory compliance

Regulatory compliance includes compliance with licence obligations, with the following activities supporting delivery of the Wells Strategy:

- Clarity of existing regulatory requirements from OGA
 - Summary of regulations published on website
 - Share widely with industry via presentation, meetings etc. to improve awareness
- Compliance from Industry
 - Improve processes for regulatory interactions e.g. reporting and Stewardship survey
 - Ongoing checks through WONS applications & notifications
 - Review meetings with Operators (including benchmarking)

4.3 Focus Area 2 – Business processes to increase well activity

Business decisions to invest in high cost well activity are generally made at board or senior management level but require high quality, cross-discipline inputs to allow effective assessments to be made. Lower cost well activities, such as surveillance, are usually made at a local or mid-management level.

- The OGA works with industry to stimulate well activity through focus on integrated business processes and decision making.
- Business processes should support maximising the value from wells. This requires a multi-disciplinary approach and the inputs provided by the Wells Function (in relation to risk, costs, technology utilisation and alternative business models) are critical to implementation following the decision-making process.
- The wells function contributes to the decision-making process:
 - Wells are a key requirement in investment decisions e.g. FDPs, annual budgets and decommissioning planning
 - Wells work in multi-disciplinary teams to maximise value on a per activity basis
- The OGA will work with industry to understand how decisions are made, and the inputs considered, in relation to enabling:
 - Exploration & appraisal drilling
 - New projects drilling
 - Infill drilling
 - In-well surveillance (data gathering) on existing wells
 - Well work to safeguard, restore and optimise production
 - Well P&A
- The OGA will work with operators and the supply chain to improve collaboration e.g. to encourage rig sharing where barriers exist to increasing well activity

4.4 Focus Area 3 – Well activity performance

As set out in the Well Insights Report well activity performance is not improving. Enhanced delivery in this area will feed into the business processes that enable an increase in well activity.

- Well construction performance
 - Performance will be tracked by the OGA using the data provided in the Stewardship Survey and reported back to industry in the Annual Wells Insights Report. Focus will be on performance enhancements and OGA will provide specific insights on cost and Non-Productive Time (NPT). These KPIs will be used to open a dialogue with industry (recognising other metrics need to be considered) to enhance performance
 - The OGA will carry out and share with Industry a well construction “Lessons Learned” study covering a selection of wells to highlight further potential improvement areas for industry to action
 - OGA may engage with industry on topics where data illustrates specific areas for performance enhancements (e.g. SNS Tight gas well reviews)
- Well decommissioning (P&A) performance
 - OGA has published [guidance](#) on when it will consent to wells being suspended
 - OGA will encourage a campaign approach to well decommissioning (P&A) as a way of significantly reducing costs,
 - OGA will promote its “[Lessons Learned Online Tool](#)” available via its website to share good practice
 - OGA will track and publish [well decommissioning \(P&A\) estimates](#) and actual costs as a benchmark to measure and improve performance
 - OGA will work with industry to ensure that well decommissioning (P&A) practices sufficiently protect reservoirs with identified potential future (e.g. carbon capture and storage)
 - OGA may engage with industry on topics where data illustrates specific areas for performance enhancements
- Management of Existing wellstock (to increase recovery)
 - OGA will collect and share data on the wells issues affecting production, and agree with industry targets for the reduction of losses and the number of long-term shut-in and temporary plugged wells.
 - OGA will support industry to utilise appropriate technology and take advantage of alternative business models to increase both in-well surveillance (data gathering) and well intervention activity that safeguards, restores and optimises production.
 - OGA may engage with industry on topics where data illustrates specific areas for performance enhancements

5. Implementing the strategy

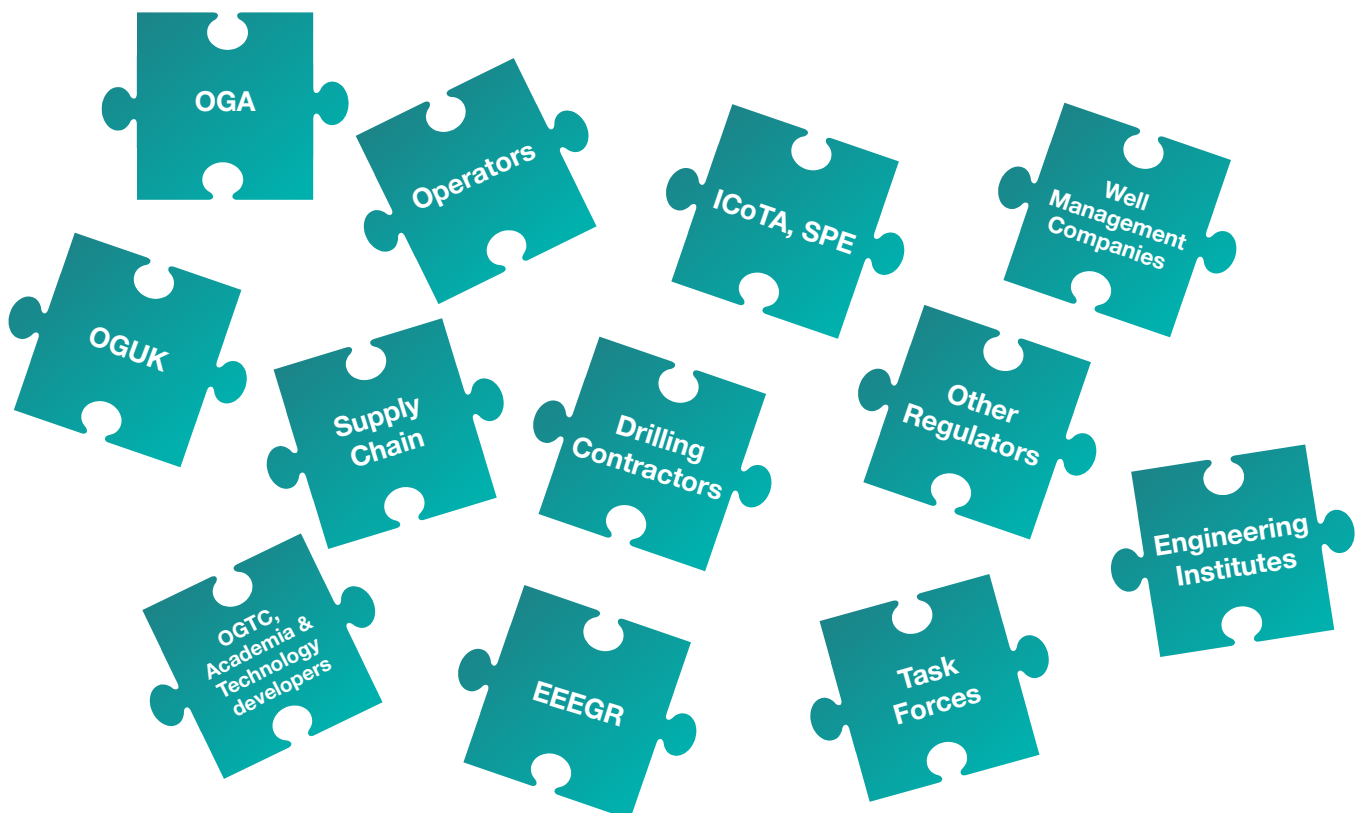
5.1 Introduction

The Wells Strategy will be delivered through collaboration between the OGA and industry. The wells landscape is widespread and global in nature (fig 2) and numerous forums, workgroups, organisations and networks deal with wells issues covering the wells life cycle. E.g. Competitive Well Delivery Workgroup, Stewardship Taskforce workgroups, Oil & Gas Technology Centre (OGTC), Intervention and Coiled Tubing Association (ICoTA), Energy Institute (EI) and Institute of Materials, Mineral and Mining (IOM3).

The OGA will work with all these entities to agree workscopes and deliverables, support technically and by providing anonymised data for analysis.

The OGA has a unique role through the Annual Stewardship Survey data to understand and benchmark wells issues and to highlight areas for continuous improvement and supporting MER.

Fig 2: Complex landscape



5.2 Delivery

Stewardship Expectation: OGA will use its [stewardship process](#) to implement this strategy. A wells stewardship expectation will be published to define the OGA expectations in relation to the well value cycle.

Stewardship survey: The stewardship survey will continue to be used to collect data which will be analysed and shared with industry.

Stewardship Process: Tier reviews with operators will be undertaken to facilitate the dissemination of specific benchmark data and discussion on activity levels and performance.

Wells targets and KPIs: It is expected joint industry targets will be agreed. KPIs will be defined and set in a number of areas jointly with industry and OGA will support industry to deliver these targets.

Regulatory Compliance: This will be implemented as described in section 4.2.

5.2.1 Sharing of information

- OGA publishes a [Wells Report](#) annually to share wells related data and insights
- OGA will track and publish industry progress against agreed targets.
- The OGA will collect and disseminate data relating to the strategy focus areas
- The OGA will engage directly with Licensees through Stewardship reviews
- OGA will support industry efforts to share knowledge.
- The OGA has set up the [National Data Repository](#) to ensure that industry, academia and the wider public have ready access to timely and transparent data

5.3 Further OGA Support

The success of this strategy is dependent on a number of existing OGA sector strategies and initiatives as well as industry led initiatives. The primary interfaces are noted below:

1. **Asset Stewardship Strategy:** the OGA's stewardship expectations combined with the annual receipt of activity survey data from all UKCS operators provides the basis for the OGA's ability to interrogate wells and opportunities related data across the UKCS.
2. **Technology Strategy:** the OGA's technology strategy provides an overall framework for the development and deployment of technology in support of the OGA's priorities.
3. **Decommissioning Strategy:** the OGA's decommissioning strategy describes our role and expectations, providing clear direction to achieve three priorities; cost certainty and cost reduction, supply chain capability and capacity and scope, guidance and stakeholder management
4. **Supply Chain Strategy:** the OGA's supply chain strategy has three objectives; maximise the economic potential from the UKCS, anchor the service sector in the UK and double the accessible international market share.
5. **Information Management Strategy:** the OGA's information management strategy provides a framework for a new approach, which will enable the OGA and industry to improve information quality, coherence, consistency, transparency and help to unlock significant UKCS potential across the whole oil and gas lifecycle.
6. **Exploration Strategy:** the OGA is committed to maximising the economic recovery of hydrocarbons from the UKCS through safe and cost-effective exploration and appraisal (E&A) activities

6. Acknowledgements

Many organisations and individuals have supported the creation of this strategy by providing valuable suggestions and comments.

- A workshop, attended by 30 industry representatives, was held to seek input into the strategy.
- 12 companies provided detailed feedback on a draft version
- A follow up session, facilitated by O&G UK, was held with 5 companies.



Oil & Gas Authority

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