TIPPING POINT FOR DECOMMISSIONING

Catherine MacFarlane
Managing Editor

Rebecca Gorring
Catherine MacFarlane
Mirzi Moralde
Contributing Editors

Jane Steele
Data Analysis

David Adams
Desk Editor
## Contents

**Tipping point for decommissioning** |

**Market Spotlight – Middle East** |

**Discoveries**
- Significant recent discoveries

**Early Planning and Development Scenarios**

**New Tenders and Awarded Contracts**
- Significant recent requirements
- Recently awarded significant contracts

**Construction Vessels**
- Selection of vessels to be delivered in the next six months
- Sale and Purchase last six months

**Floating Platforms**
- Under construction FPSOs to be delivered in next 12 months
- Worldwide Support Vessel Utilisation by Region
- Calendar of Industry Events
Tipping point for decommissioning

Catherine MacFarlane

Fifty years ago, the first hydrocarbon discovery was made in the UK sector of the North Sea, with the West Sole gas find. Just two years later the field came onstream, and today it continues to produce. The discovery heralded the start of the oil and gas industry in Northwest Europe, with huge, game-changing finds such as the Forties, Brent and Piper fields swiftly following in the 1970s.

Developing these fields over 40 years ago presented tremendous technological challenges and, at the time, little or no thought was given to how they would eventually be decommissioned. While many older fields have continued to produce long after their original lifespan, the United Kingdom, according to the Oil and Gas Authority (OGA), is now on the brink of abandoning more wells than it drills. The industry, it seems, is at a tipping point where decommissioning, rather than field development, will become the main source of activity within the next decade.

Collaboration and innovation

The scale and expense of this challenge the decommissioning challenge was presented to delegates at industry organisation Decom North Sea’s annual Decom Offshore event last month, with operators, contractors and industry experts alike warning that both collaboration and innovation are needed to provide significant cost saving and efficiencies for the burgeoning decommissioning industry. Carlo Procaccini, senior commercial advisor at new executive agency the Oil and Gas Authority, told delegates that in the next 5 to 10 years we are likely to decommission up to 1,000 wells and 100 installations, and that eventually we will require up to 5,000 wells and 400 installations to be decommissioned. Industry body Oil & Gas UK has estimated the total cost of decommissioning to be in the region of GBP 43.5 billion by 2050, 60% of which will be paid by the government. However, OGA has estimated the total cost to be GBP 58 billion by 2050.

Real risk

There is no doubt that ageing, defunct infrastructure requires removal, but delegates were also warned of the dangers of premature decommissioning. According to FieldsBase, only one discovery has been made in UK waters so far this year, and so we are facing a real risk that confidence in the future potential of the UK Continental Shelf (UKCS) will continue to decline, resulting in the failure to secure critical, long-term investment. In the near term, with the sustained low oil price, there is also the risk that the profitability of producing fields will not be sufficient to attract continued investment, leading to early decommissioning.

Indeed, last month Fairfield Energy announced it was commencing preparations to decommission the Dunlin field cluster at least three years ahead of its original schedule. At the time, David Peattie, Chief Executive of Fairfield, said: “Taking into account the asset’s lifecycle, the depressed oil price and challenging operational conditions in the North Sea, starting the decommissioning process is the most appropriate action.”

In response, the UK government has introduced a GBP 1.3 billion package of measures - including tax reductions, a new basin-wide investment allowance and government-funded seismic - in a bid to rejuvenate investment in exploration and production.

However, with the taxpayer footing the majority of the bill, the OGA also pressed the need to find cost savings for near-term decommissioning projects, particularly for well plug and abandonment (P&A) work. According to Oil & Gas UK, P&A work will cost around GBP 20 billion. Furthermore, the 2014 Decommissioning Insight by Oil & Gas UK puts the average cost of subsea well P&A at GBP 11.6 million, compared to GBP 2.7 million for a platform well.

On the starting blocks

According to FieldsBase there are a total of 1,763 installed subsea trees in Northwest Europe, with over 900 located in UK waters. In the near term, we can expect over 130 subsea trees to be decommissioned in the North Sea, with the vast
majority – 88% – in the UK sector. To date, *FieldsBase* records that only 125 subsea trees have been removed in the region, highlighting that the decommissioning sector is still on the starting blocks for this type of work. Indeed, the largest P&A campaign to date – Hess’ Fife, Flora, Fergus and Angus, and Ivanhoe/Rob Roy abandonment programmes – covered over 30 wells and is expected to draw to a close this month.

The OGA therefore highlighted that cost savings in subsea P&A work could be made with higher equipment utilisation, asking operators to collaborate on rig campaigns and also selecting “fit for purpose” technology, such as rigless P&A when the opportunity arises. This view was echoed by Professor Paul de Leeuw, director of Robert Gordon University’s (RGU) Oil and Gas Institute, who called for the industry to become more transparent and collaborative. Indeed, Callum Falconer, chairman of Decom North Sea and commercial manager at Marathon Oil Decommissioning Services LLC, told delegates that the prize for collaboration in decommissioning could be a potential overall cost reduction of 30%.

**Dominated by several players**

The opportunity for innovation, collaboration and cost savings within the field of platform removal was also highlighted to delegates, with contractors Boskalis Offshore and Aker Solutions presenting their buoyancy tank assembly (BTA) solution. The concept uses specifically built buoyancy tanks to refloat structures in a single lift, and is targeted towards the removal of large jackets weighing over 7,000 tonnes. The technology was most recently used in 2008 for the removal of the 11,600-tonne Frigg DP2 jacket. With the heavy lift market dominated by several players, including Heerema, Allseas and Saipem, another single lift solution could help widen operators’ options for platform removal and reduce costs.

Looking at market demand for platform removal, there are a total of 37 platforms scheduled for removal in the near to medium term in Northwest Europe according to *FieldsBase*. A total of thirty of these have jacket substructures, while five are gravity base structures (GBS) and two are jackup platforms. A total of 21 platforms weigh 7,000 tonnes or less, while only 9 weigh 7,001 tonnes and over\(^1\). This means that a number of these smaller platforms could potentially be removed by either a smaller heavy lift vessel, or by another method such as piece small removal.

\(^1\) The Miller platform was expected to be removed in 2013. IHS has kept the original removal year in both of these charts in order to show slippage.
Looking also at the water depth of all platforms scheduled for removal, nine structures are located in 50 msw or less, with the majority located in depths 51 msw and over. For those platforms located in shallow waters, jackup vessels, particularly those working in the offshore wind sector, could provide a more economic removal solution. Indeed, this method has been used recently in the North Sea, with Swire Blue Ocean using its six-legged jackup Pacific Osprey to remove the B-11 and H7 platforms from the German sector of the North Sea.

Fifty years ago the United Kingdom required innovation and collaboration to capitalise on its offshore hydrocarbon reserves. Half a century on, it would seem that this decade we will require those same skills as decommissioning begins to finally overtake field development.