

BARCLAYS

The North Sea: vital to the future of the oil and gas industry

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The survey which underpins this report was conducted by B2B International on behalf of Barclays. All charts, data and statistics featured in this report are the product of the results of this survey. July 2013.

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Foreword

The North Sea success story continues. Investment is at a 30-year high and exploration and production activity levels indicate supply for decades to come. Investment from UK and foreign companies alike, coupled with welcome government tax incentives, support this positive outlook. With global demand strong and substitutes so few, Barclays shares this optimism.

The United Kingdom Continental Shelf (UKCS) remains a region rich in opportunities and ripe for investment, not least because of the high commodity price. In fact, investment in the North Sea has reached a 30-year high¹ and plans are being drawn up to ensure exploration and production (E&P) activity continues for decades to come.

The evidence points to a positive future – certainly in the short to medium term. The first half of 2013, as with the final months of 2012, has been positive, with a procession of good news stories, culminating in increased investment from both UK and foreign corporations. Our research shows encouraging signs of future investment from the companies surveyed and presents an optimistic outlook for the future of the North Sea.

Deals such as those struck by Chinese firms CNOOC and Sinopec (which invested in Nexen and Talisman respectively, following announcements confirming government support for the industry in the form of tax incentives) have been welcomed and are an indication of the growing confidence in the region.

As the following pages suggest, challenges remain in the form of the ongoing skills shortage and the region's ageing infrastructure. These concerns, together with the issues around decommissioning, are the major focal points for players in this space so government support will continue to be important.

"In the short term we will hopefully see sustained production rates as the region benefits from record levels of investment."

Overall, the picture around the longevity of the region is as positive as it is for the industry as a whole, given the increasing global demand for oil and gas, coupled with the lack of viable substitutes in the foreseeable future.

In the short term we will hopefully see sustained production rates as the region benefits from record levels of investment. Encouragingly, it seems that there are several more projects in the pipeline, such as the recent

discovery by Dong Energy in the Cragganmore field to the west of Shetland, that could boost the output from the UK North Sea into 2014 and beyond.

From Barclays' point of view, we are optimistic about the future of the North Sea and continue to support both service and operator sectors. In the last 12 months I have seen growth on both sides of our balance sheet with clients clearly showing belief through investment and growth. Barclays is committed to the oil and gas industry. I hope you find our report an interesting read.



Walter Cumming Head of Oil and Gas Corporate Banking

¹Oil and Gas UK Activity Survey 2013.

Section one: A new dawn

Strong inward investment and the ability to supply the UK's oil and gas for decades assure the importance of the North Sea.

Production levels

Since the 1970s, the North Sea has been at the centre of the global oil and gas industry. Despite its advancing years, the UKCS remains an attractive proposition for investors.

In fact, while production is generally forecast to fall to the range of 1.2 to 1.4 million Barrels of Oil Equivalent Per Day (BOEPD) in 2013, from 1.54 million BOEPD last year, there remains an over-riding case to maximise recovery of our hydrocarbon reserves. A recent Oil and Gas UK economic report said, if the current rate of investment is sustained, the UKCS would still potentially satisfy almost 50% of the country's oil and gas demand in 2020.²

Recent deals have underlined the commitment of many large global corporations to the region as operators look to escalate production from some of the oldest assets in the LIKCS.

Ongoing investment

Recent investment in the UKCS has ensured that the enthusiasm surrounding one of the world's most mature oil producing regions continues to endure. As operators throughout the region step up exploration and production (E&P) activity in the west of Shetland, the North Sea will continue to play a significant role in the global energy industry.

The major operators continue to invest heavily in key infrastructure – such as oil and gas terminals and new networks of subsea pipelines. BP and its partners have announced £300 million plans to upgrade the Sullom Voe oil terminal at the same time as Total E&P forges forward with the construction of a gas plant on a nearby site as part of a £3.3 billion project.

"Recent deals have underlined the commitment of many large global corporations to the region as operators look to escalate production from some of the oldest assets in the UKCS."

The ongoing opportunities for investment are evident as smaller operators continue to acquire the ageing assets from the super majors. This extends the life cycle of many fields far beyond what had been anticipated when these wells were put into production.

After years of declining investment and dwindling output, the drive to unlock the region's remaining reserves is gathering pace.

Challenges

The UK energy sector is set for growth but challenges such as industry skills shortages and an ageing workforce

need addressing. There are clear obstacles that must be overcome if the region is to effectively maximise its output.

Skills shortages have threatened to stifle production rates and have even caused delays to major projects around the world and the UKCS, with all its years of experience, is no different. Unfortunately, as the region's reserves have aged, so has its workforce – and it must now address the issue if it is to succeed in the medium to long term.

Rising costs

It is against this backdrop that wages – and operating costs – in the region continue to rise. Spiralling costs are inevitably affecting the commercial viability of recovering hydrocarbons from mature reservoirs – and that may hasten the decision of operators to abandon production in favour of decommissioning projects.

But this is a complex matrix and there are many factors to take into account, not least the imminent push to recover the UK's shale reserves and the as yet unknown impact it will have on commodity prices and reserves within the region.

But despite these obvious challenges the energy sector in the UKCS is, for the first time in many years, being discussed as a potential area of growth.

²Oil and Gas UK, Economic Report 2013. Published August 2013.

Section two: Growth and investment

Confidence in UK oil and gas is high, with investment and optimism rising. This is demonstrated by the encouraging plans to increase capital expenditure budgets.

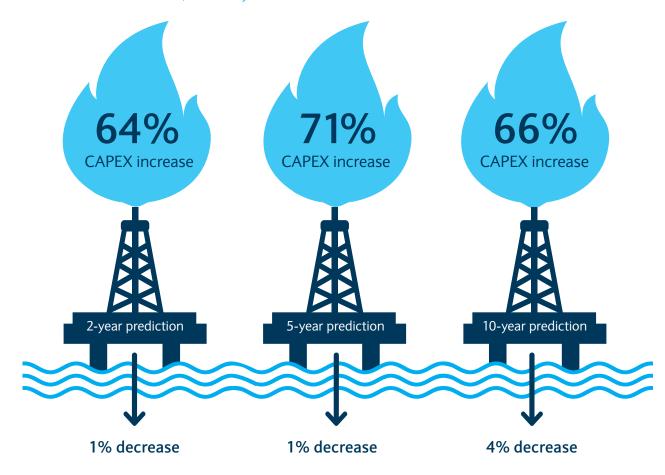
The current high price of oil continues to provide energy firms with the confidence they require to invest, with the majority confident enough in the regional outlook to predict an increase in their capital expenditure budget not only in the short and medium term, but also in the longer 10-year timeframe. This is consistent with Barclays' experiences of working with the industry in recent months; we have witnessed increased confidence among our clients which looks set to continue.

Increased investment anticipated

Most companies anticipated they would increase capital expenditure budget in the near future, i.e. in the next two years. That trend continued with the majority predicting such increases over a five-year period.

By comparison very few predicted decreases over these time periods, with only 4% expecting a reduction in the next decade.

Do you anticipate your company's capital expenditure (CAPEX) budget to increase, decrease or stay at the current level over the next 2, 5 and 10 years?



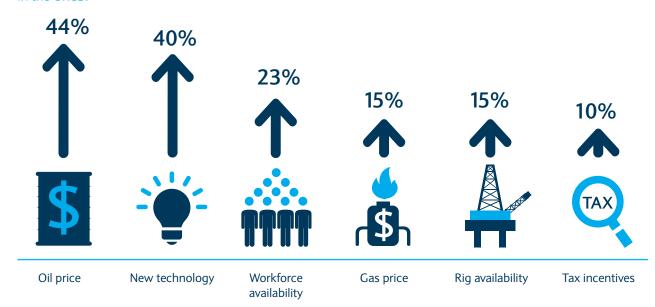
Expenditure: the key influences

These projections have been made after taking into account a variety of complex considerations, but would appear to be principally driven by the oil price, which shows signs of remaining at a high level for some time to come. Of the companies surveyed 44% highlighted oil price as being one of their key considerations. Other factors considered critical to the decision-making matrix included new technology (40%), availability of workforce (23%), rig availability (15%), gas price (15%) and tax incentives (10%).

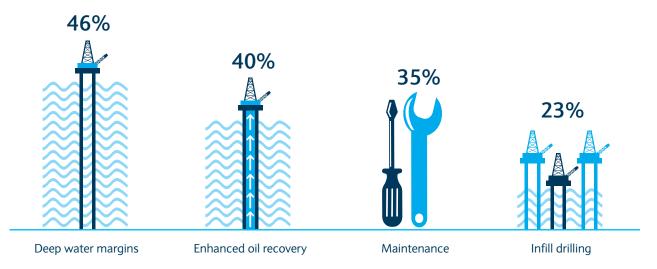
Exploration and maintenance are vital

Increasing investment will allow companies to explore enhanced oil recovery programmes and new deepwater margins, according to more than 85% of respondents to the survey. It will also be of critical importance to increase expenditure on maintenance programmes, according to 35% of oil and gas firms – something which has been highlighted recently in the falling production rates of companies suffering lengthy or repeated shutdowns as a result of ageing infrastructure.

What are your key drivers for capital expenditure in the UKCS?



From your perspective, where will investment be targeted within UKCS?



The UKCS drives the most growth

It's hardly surprising, given the renewed sense of optimism in the region, that firms are underlining their commitment to the UKCS by making plans to expand their businesses. Of those surveyed, 46% highlighted the UKCS as being the area of greatest potential in driving their company's growth.

Elsewhere the picture is different. Despite regular reports of significant oil and gas discoveries in West African waters, less than 5% of respondents highlighted the region as offering the greatest potential for the growth of their company.

Africa is well-placed for growth

Recent discoveries off the coast of Angola illustrate the spike in activity, with predictions it could overtake Nigeria as Africa's biggest oil producer as early as next year.³

Perhaps one reason many companies have overlooked the region is the unique challenges that operating there can pose. With more than 50,000 employees on the ground in Africa, across numerous countries, Barclays understands these challenges and is well placed to support energy clients in their regional development plans.

The Asia Pacific region, often touted as an expanding market, was only seen as being of strategic importance to almost 8% of respondents. Other established markets in the Middle East (11%), North America (1%) and Norway (6%) also lagged behind. Other firms, accounting for 14% of responses, are targeting growth in Brazil, Russia or internationally.

³africareview.com – July 2013.

Which region do you see as having the greatest growth potential for your company?



UKCS 46%

highlighted the UKCS as being the area of greatest potential in driving their company's growth.









Brazil
6%







West Africa



North America

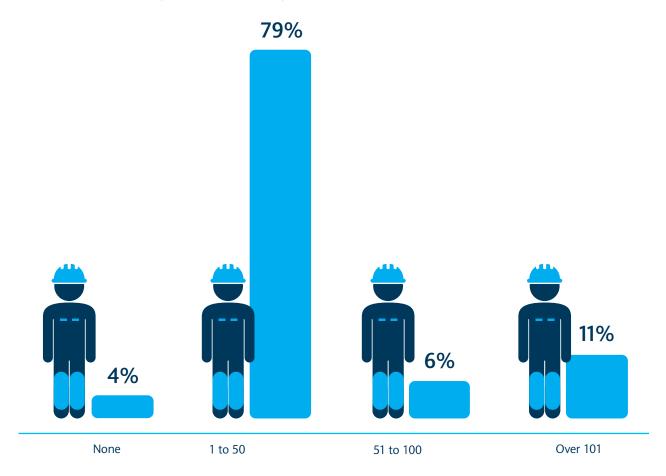
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Section three: Workforce

An emphasis on apprenticeships and training to attract new talent from the industry will lead to rising employment figures, but industry-wide collaboration is vital.

Ambitious recruitment targets were evident from the survey, with participants emphasising their confidence in the region by outlining plans to recruit up to 23,000 new employees in the next five years. The majority of energy firms expect to employ around 50 new members of staff each year. A lesser number are preparing to recruit more than 100 employees over the same period. Whereas, 4% expect to maintain their current staffing levels.

On average how many employees do you expect to recruit in the UKCS each year for the next five years?



Industry collaboration

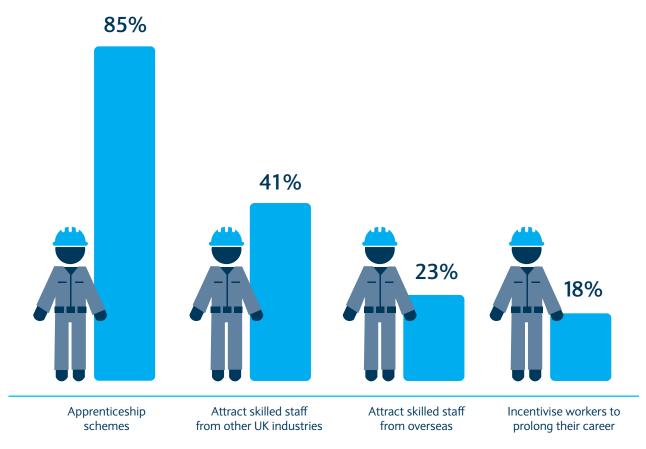
Competition for experienced workers continues to increase, so achieving those targets may present a challenge to many companies. It is critical that they collaborate to find the best route forward in tackling the issue, with it being widely accepted that several measures must be put in place to ensure a steady flow of young talent into the industry.

Youth unemployment in the UK remains disappointingly high. Recent government data shows that the unemployment rate among 16-24-year-olds stands at 20.9%, which compares with an overall unemployment figure of 7.8%. There is, therefore, not only a need but, importantly, an opportunity for the industry.⁴

There is encouraging evidence to suggest widespread sector support for increased investment in apprenticeship schemes. Initiatives are also underway to attract skilled staff from other UK industries and from overseas. And as a contingency, 18% of those surveyed also suggest putting in place incentives for existing workers to prolong their careers.

Another area for discussion is whether the increase in foreign ownership of North Sea assets will have an impact on the amount of talent available to operators and service companies in the region. Opinion is divided on this at the moment with 41% of companies predicting an influx of foreign workers to the UKCS, while 40% disagreed.

How should the industry tackle the issue of an ageing workforce?



⁴Office for National Statistics, Labour Market Statistics, July 2013.

Section four: Foreign ownership

Despite doubts raised by the media, the oil and gas industry welcomes foreign investment in the UKCS.

Concerns have been reported in some quarters of the media about the level of foreign ownership of UK energy reserves, particularly around the time of the significant acquisitions made by CNOOC and Sinopec. Yet, according to our survey, the industry itself is overwhelmingly supportive towards overseas companies, with 75% of energy companies welcoming the influx of foreign funding. Conversely only 1% of respondents felt it was a negative step.

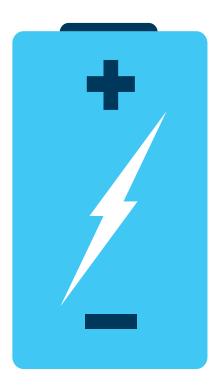
Recent media coverage⁵ highlighted the major investments made by foreign oil companies in the region and questioned whether these firms would commit to the region in a meaningful way by ensuring every last drop of oil was extracted.

It highlighted that companies controlled by overseas governments now account for 12% of overall production, compared with 0% a decade ago, and raised concerns about the long-term impact of this on the region.

For the time being at least, these companies are investing heavily in the region and many firms are seeing the benefit of the increased activity that it brings.

What impact will foreign investment have on the future of the North Sea?

75% positive impact



1% negative impact

⁵The Sunday Times, Sunday 4 August, 2013.

Section five: Unconventionals

Whilst the public interest in fracking is high, little is known about the level of output that could be achieved and there is scepticism surrounding the potential impact on the UK's energy resources.

In recent years the energy industry in North America has undergone something of a revolution, with the volume of available gas reserves increasing dramatically as a result of huge investment in fracking projects. The energy industry in the UK is now set to follow suit after the government gave its approval for companies to unlock the region's shale gas. Yet the survey suggests there is little optimism within the sector that such projects will dramatically increase available reserves in the short term.

What percentage of the UK's energy reserves do you expect to be provided through fracking projects over the next decade?

92% predict fracking will provide less than 25% of our energy.

The great debate over shale gas has grabbed national headlines for months, yet the survey highlights that more than 60% of respondents are sceptical about the potential impact of fracking on the UK's energy reserves and predict that it will deliver less than 10% of the country's resources over the next decade. More than 90% of respondents expect it will be less than a quarter, while less than 4% of those surveyed predicted fracking projects would contribute more than a third of the region's reserves.

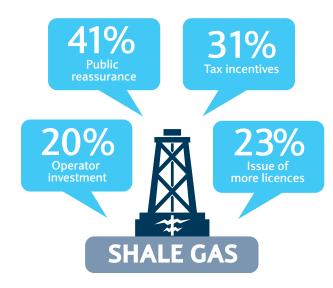
Releasing the potential of shale reserves

The industry is clearly aware of the heightened debate and depth of feeling over the issue. Despite the UK government giving its support to fracking projects, there has been great dispute over what measures might have to be put in place to stimulate growth and ensure it becomes a more commercially viable option.

More than 40% of respondents identified the need for greater public engagement about the environmental impact of recovering the UK's shale reserves, which is reflective of the strong public distrust of a new form of energy production.

Almost a third of those surveyed had called on the government to offer tax breaks for fracking projects, although plans have since been unveiled to reduce some shale-related taxes by more than half. Increased operator investment and the issuing of more licences were also highlighted as being key in stimulating the growth of unconventionals.

What is required for the UK to realise the potential of its shale reserves?



Section six: The road ahead

The government's continued support, together with investment in infrastructure, research and development, and skills, are vital to overcome the challenges ahead.

The impact of the skills shortage on the energy industry on a global level is well documented so it is little surprise that the majority of those surveyed (66%) highlighted the issue as being the biggest challenge facing the industry today. Clearly the problem is a major concern for those running businesses, but is only one of a number of considerations for investors.

Research and investment

Another obstacle – identified by 13% of companies – was a lack of investment in research and development (R&D) activity.

Barclays Oil and Gas team recognises the role new technologies have played in increasing the commercial viability of producing both commodities and as such we are keen to work with companies not only to ensure new fields can be brought into production, but also to see new technologies developed to improve the sustainability of the region's brown fields.

There is clearly a high level of appreciation within the industry for recent UK government backing given to the sector, with only 6% of respondents calling for more support. Difficulty in sourcing finance, ageing infrastructure and a lack of technology to develop marginal fields were all flagged up as being restrictive, too.

What are the biggest challenges to the success of your business?



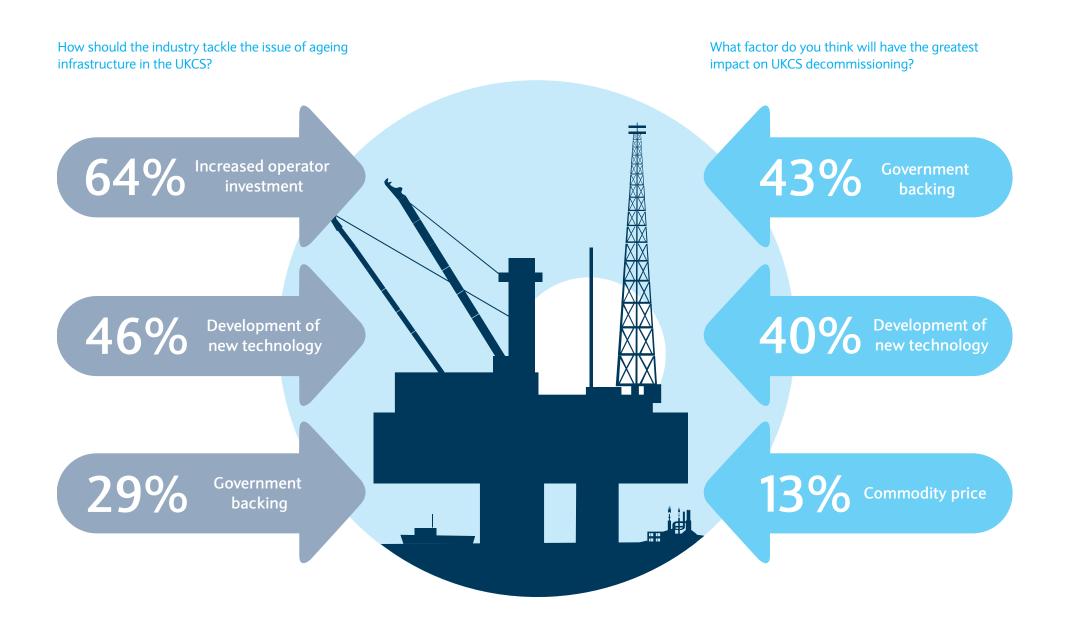
Infrastructure challenges

Tackling the issue of the region's ageing infrastructure will be vital in ensuring projects are not abandoned earlier than is necessary. It is widely accepted that repair and maintenance programmes will themselves have a direct impact on the viability of continuing to produce from the region's mature fields. As many as 60% of respondents called on operators to invest more money in their assets. More than 46% suggested new technology may hold the key, while almost 30% called on the UK government to offer greater support to the industry in relation to this particular issue.

Support for decommissioning projects

The industry welcomed announcements earlier in the year regarding the UK government's willingness to offer tax breaks for decommissioning projects. Operators continue to look for fiscal support with their decision-making process for the decommissioning of their assets. 43% of respondents to our survey called for greater clarity on what level of government support will be available, better enabling them to form decommissioning strategies.

Other factors which may impact on decommissioning included the introduction of new technology (40%) and the commodity price (13%).



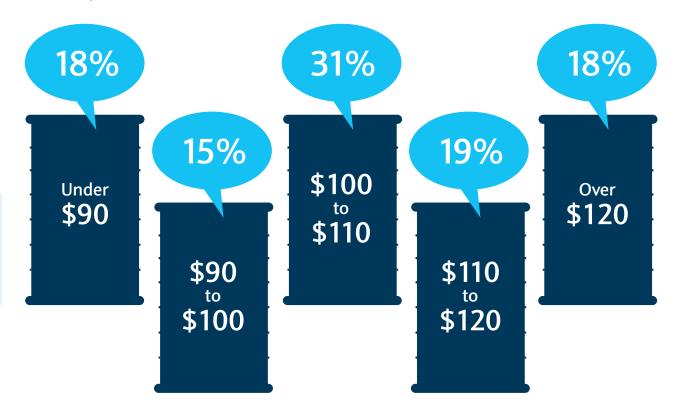
Section seven: Forecasts and financials

With oil prices hard to predict and opinion divided on the availability of bank finance, sources of investment continue to be a key consideration for the future of the UK oil and gas industry.

Although a critical component of the decision-making process for oil and gas companies, the commodity price remains difficult to predict with any degree of certainty. The spread in responses to the question of what the oil price will be in five years' time is reflective of this, with almost a third estimating a price somewhere between \$100 and \$110 per barrel. More than 17% of respondents are predicting a slump in oil price – to less than \$90 a barrel. By contrast the same number of respondents are anticipating a surge in the value of a barrel of oil to more than \$120.

In the nearer term, Barclays' own oil analysts annual average forecast for 2015 is \$115 a barrel.

What do you predict the barrel price of oil will be in 5 years' time?



Accessing additional funds for expansion

The availability of bank finance is another key area for companies looking to expand their operations in the UKCS and there is evidence that firms are having some difficulty in accessing funding through these channels. More than 40% of those surveyed stated that the availability of bank finance was weak, compared to the 38% who said it remained stable or strong.

At Barclays we're continuing to support the oil and gas industry and, indeed, from year end 2011 to year end 2012 we increased our exposure by 33%. It also increased in 2012 to 2013 year to date and we expect to see further exposure and financing provided to the oil and gas industry.*

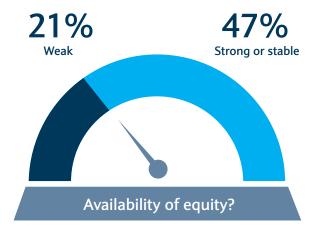
capital markets among the companies surveyed, with 34% rating it as being strong or stable, compared to 26% rating it as being weak. But the greatest optimism among operators and service companies is in the availability of equity, with 47% rating it as strong or stable.

There was some confidence in the availability of debt

In terms of funding for capital expenditure and growth, how do you rate the following?







^{*}Barclays July 2013.

Section eight: Conclusion

There will always be challenges in the oil and gas industry. But overall, optimism is high and the industry remains strong, with positive predictions for the future.

The results of our survey represent both an optimistic outlook for the future of the North Sea and an industry reaching a crossroads in its history. With investment continuing to grow, it is critical that funding is available to the industry and diverted to the areas of greatest need.

Opportunities include:

- High investment and expenditure, for example smaller operators are on the asset acquisition trail
- Increasing global energy demand
- Research and development to maximise reserves from ageing reservoirs
- The lack of viable alternatives in the foreseeable future.

It is evident from the responses that some areas remain a cause for concern if output from the UKCS is to be sustained.

These include:

- The ongoing skills shortage
- Ageing infrastructure
- Challenges of decommissioning
- Rising wage demands and operating costs.



Barclays supports the industry's optimism

There is clearly work to be done within the industry and also through government initiatives to ensure the prolonged lifespan of the region.

Yet there is much cause for optimism and Barclays shares the industry's positivity about the future of the UKCS. Budgets are swelling and new discoveries are being made off the coast of Shetland and brought into production. Ambitious growth and recruitment targets are supported by a bullish prediction of the future oil price.

As a long-term supporter of the industry, Barclays is keen to play our part in supporting the resurgent energy sector in the UK to enable sustainable production for decades to come. Our specialist Oil and Gas team will ensure that our products continue to fit the needs of an evolving industry as it faces the challenges of an exciting future.

"With investment continuing to grow, it is critical that funding is available to the industry and diverted to the areas of greatest need."

Section nine: Interview with Robin Watson

Our report gives fresh insight into what the industry thinks. But what's it like at company level? Robin Watson, CEO at Wood Group PSN, comments on some of the findings and issues.

The results from our survey indicate a healthy and confident oil and gas industry. Do you share this optimism?

I think it is good to see such a level of optimism in the oil and gas industry. It is a buoyant time for the sector right now. But we have to make sure that, while activity levels are up, we don't lose sight of the challenges that face us. One of those significant challenges is to ensure an effective return on capital efficiencies. We are dealing with a mature basin in the later stages of its life. In those circumstances, production will always be more difficult, being from more complex sources. Enhanced oil recovery, or the creation of an intricate subsea completion tieback for example, is more expensive than dealing with a conventional, straightforward well and leads to a higher dollar per barrel quota. However, we have recognised this issue and worked with the UK government to mitigate it to some extent. The brownfield tax allowance has very successfully supported the industry.

The other significant issue is the low level of production that we have seen both this year and last year. There are a couple of significant projects that will help production volume and that has to be welcome. We also see

opportunities in terms of adding value in the integrity management area, particularly around fabric maintenance. If, as an industry, we can make the production process more robust we will boost volume. There is a lot of money being spent on investment. Let's make sure it's spent in the right way: to maximise return.

The majority of those surveyed highlighted the skills shortage as being the single biggest challenge facing the industry. Would you agree?

I like some of the things certain companies are doing with blue-collar apprenticeships. We take on over 100 apprentices, trainees and graduates each year and actively engage with industry skills forums. But I don't think the responsibility is being shouldered evenly, particularly in the service sector. We engage with a lot of people who have non-oil and gas experience but have potentially related skills, such as commercial plumbers and the military. But there is a cost element in training and that needs to be shouldered properly.

I think the skills challenge is a significant issue. But I feel the production issue and the incremental development are highly important too.



Most companies surveyed said the UKCS was the region which held the biggest potential for their growth. As an international service company, which regions do you see as being key to the growth of the industry at a global level?

From our perspective, we see that we have some good, sustainable, quality business in the North Sea. But we certainly see more opportunities for growth on an international basis too. I would expect the areas of industry growth to follow where the reserve bases and exploration activity are: regions such as the Middle East, the former Soviet Union, South America – and North America from a shale perspective.

What we do have in the UK is a centre of excellence for the technologies we produce and the people we employ. Some of the subsea technologies from the UK, for example, are world-leading. We must hold on to that. In that respect, the UK will remain strategically important for the global oil and gas industry.

The survey unearthed ambitious recruitment targets over the next five years and suggested apprenticeship schemes would be key in tackling the skills shortage. As a company with a successful apprenticeship scheme, would you agree?

As an industry, recruitment and training patterns are still too closely linked to the cyclical nature of the business. There has traditionally been a tendency, when times are good, to hire people who can hit the ground running, pay top dollar for those people, and then release them when there is a downturn. However, we need to invest more of our time and effort into training people for the long-term benefits. I would like to see an increase in people who

have skills and competency that we could use, converted to the hazardous industries. It should not be beyond us to create a system that can deliver that.

If it is to operate beyond 2025, taking on a couple of dozen apprentices a year probably doesn't satisfy the needs of the North Sea industry.

Many respondents felt that the region's ageing infrastructure is the biggest barrier to success. In general terms, how big an issue is this?

We must be at a stage where more than 60% of our assets are beyond their design life. That is absolutely an issue for us, probably more around the process facilities and equipment that was installed 40 years ago. However, we have made great improvements in production technology and integrity management, even in the last 10 years. So there are solutions to extending life out there. If they can be delivered efficiently and cost-effectively, there is still all to play for.

How do you envisage the UK's fracking industry developing and what is its importance to the country's future energy mix?

In the UK there is obviously a gap between supply and demand. The fracking industry is enjoying success in the USA but I think we are maybe three to five years out before we need to seriously consider it as an option. There will have been significant technological developments by then. It has been interesting to see the debate in recent times. There appear to be a lot of potential reserves to exploit. But they will have to be

matched up with our future power requirements and the levels of energy that can be provided from other sources.

Urbanisation is also a bigger issue in the UK than the USA. Quite significant populations are adjacent to some of the shale plays.



Robin Watson CEO Wood Group PSN

Section ten: Key takeaways

Barclays' survey into the UK oil and gas industry raised the following issues:

- Despite being a mature province, the UKCS remains rich in opportunities and ripe for investment. Barclays shares the industry's optimism about the region's future
- The drive to unlock the UKCS' remaining reserves is gathering pace; particularly as smaller operators continue to acquire ageing assets from the super majors, extending the life cycle of many fields
- Almost 65% of those surveyed anticipated their company increasing its capital expenditure budget over the next two years, with more than 70% predicting an increase over a five-year period
- 44% highlighted the oil price as a key consideration in expenditure decisions
- Tackling the ageing infrastructure is vital for continued prosperity. As many as 60% of respondents called on operators to invest more money in their assets
- Government support will be key in the areas of decommissioning, skills shortage and tackling the ageing infrastructure
- The skills shortage was highlighted by a majority of respondents as being the biggest challenge facing the industry today
- The banking industry needs to work harder to demonstrate its support to the oil and gas industry
- Contrary to media reports, the industry is overwhelmingly supportive to overseas companies, with 75% of companies surveyed welcoming the influx of foreign funding.

Find out more about how we can help you. Speak to your Relationship Director or visit barclays.com/corporatebanking/oilandgas

About the author

For further information and to find out how our Oil and Gas sector specialist team can help your business succeed, please contact Walter Cumming, Head of Oil and Gas.



Walter Cumming
Head of Oil and Gas
Corporate Banking

Walter Cumming has over thirty years banking experience, most of which has been spent in a variety of roles in corporate banking in the UK and US. He has been involved in oil and gas finance for around 20 years both during his time in New York and in various roles in the UK including credit, leveraged finance and corporate banking. He is a Chartered Banker who holds an MBA from Edinburgh University.

Walter is currently located in Aberdeen and also manages a team in London covering the oil and gas sector for Barclays Corporate Banking.

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