

Frozen Future

Shell's ongoing gamble in the US Arctic

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Introduction

Royal Dutch Shell stands at a strategic crossroads. Its response to the reserves scandal in 2004 has been a global reserves replacement hunt through a programme of relentless capital expenditure. This search included an investment in US Arctic leases in the mid-2000s that dwarfed other companies' spending. Yet, Shell's US offshore Arctic plans have been a failure despite capital expenditure, to date, in excess of \$5bn. Following a 2012 drilling season beset by multiple operational failings and a subsequent 'pause' in the company's Arctic programme, Shell announced, on 30 January 2014¹, a forced reversal of its intention to return to the Chukchi Sea in the summer of 2014.

Attitudes towards drilling in the Arctic are continuing to change across the industry. Other oil majors – Statoil², Conoco-Philips³ and Total⁴ – have all stepped back from drilling for oil in US Arctic waters – largely at the project level – for reasons of cost, as well as regulatory uncertainty. Total has announced that it would not drill for oil at all in the Arctic Ocean due to the reputational risk of any spill in the region⁵. And yet, despite this and increasingly vocal shareholder calls for greater capital discipline, Shell remains committed, at least publicly, to the high cost, high risk US Arctic Ocean.

The US Arctic Ocean presents almost a perfect storm of risks – a requirement for a long-term capital-intensive investment for uncertain return, a remote and uniquely challenging operating environment, ongoing court challenges, a lack of extraction and spill response infrastructure, and the spotlight of the world's environmental organisations, the US political community and international media. As Ben Van Beurden, the new CEO of Shell, prepares to deliver his vision for the future of the company and to set its strategic priorities, he and investors must carefully balance any focus on reserves replacement ratio with the potential financial impact of the short and long-term risks inherent in any project.

This briefing accompanies a new report published by ShareAction, Greenpeace UK, Platform, Oil Change International, Oceana and Pacific Environment called "Frozen Future: Shell's ongoing gamble in the US Arctic" [shareaction.org/arcticshell]. This briefing provides an overview of some of the key findings of the report. We suggest a number of questions investors should ask Shell, to enable them to understand whether the company has adequately assessed the various risks it faces and is taking appropriate steps to mitigate and manage them.

Investor risk

- Uncertain long-term profitability
- Inadequate spill response plans
- Lack of disclosure on the financial impact of a major spill
- Ongoing litigation leading to delays
- Management oversight and contractor risk

Uncertain long-term profitability (see section 2 of the report)

Shell's capital investment in 2013 is at a record high, while at the same time, the company has recorded a steep drop in profits⁶. In this context, shareholders should question whether Shell's continued investment in Arctic Ocean drilling is likely to return capital in the long run. Such a return would require finding significant oil reserves at Shell's prospects and sufficiently high oil prices continued beyond the 2030s. Shell's Chief Financial Officer, Simon Henry, acknowledged that Shell depends on an oil find to make profit from the Chukchi Sea project⁷. While proprietary data from Shell's geological assessment of Burger may encourage the company to drill for oil there, all other sources of information suggest that Burger is a high cost gas play that is unlikely to be commercial. The US government has estimated the "Burger Gas Discovery" (Shell's prospect) to contain 14 trillion cubic feet (tcf) of dry gas and 724 million barrels of condensate – no crude oil⁸.

Even with an oil find, Shell would depend on high oil prices to justify extraction from the Chukchi Sea prospect. These prices would be determined by the oil market in the 2030s, which depends on both highly unpredictable technological changes in transportation efficiency and whether government policies will continue to fail to address global climate change. Effective climate regulation would involve reducing oil demand and result in lower oil prices, thereby making Arctic oil extraction unfeasible. Considering economic analysis by the International Energy Agency (IEA), Shell appears to be gambling on a lack of effective climate regulation, and even the IEA considers that gamble to be highly risky.

Litigation risk (see section 3 of the report)

Corporate and government decisions to move forward with oil and gas activities in the US Arctic Ocean have generated substantial opposition and litigation by conservation organisations, local government and community bodies, and Alaska Native entities. Since 2007, successful federal court challenges have been brought at all relevant stages of the process – Five-Year Leasing Program, lease sale, and exploration⁹.

Most recently, on 22 January 2014, a US appeals court invalidated the environmental impact statement underlying the government's decision to hold Lease Sale 193 – the sale in which Shell purchased the leases on which it seeks to drill in the Chukchi Sea¹⁰. The challenge was filed by Alaska Native and conservation organisations, and the ruling is the second court decision invalidating the government's 2008 analysis. Petitioners are asking the court to invalidate the leases and, even if that request is not granted, the government will need to remedy the problems identified by the court, which may delay Shell's drilling by several years, as the previous decision did.

The strong opposition and litigation are almost certain to continue. In another pending case, Alaska Native and conservation organisations are challenging the government approvals of Shell's oil spill response plans for the Chukchi and Beaufort seas.

Inadequate oil spill response (see section 4 of the report)

The US government estimated that there is a 40% chance of a large spill (over 1000 barrels) during the lifetime of exploration and extraction of oil in the Chukchi Sea¹¹.

Significant concerns remain regarding Shell's preparedness and capabilities for responding to a major incident. Essential safety equipment has not been tested in appropriate real-life conditions. A 2012 Freedom of Information Act request revealed that Shell's capping stack (vital equipment in case of a well blowout) was tested for less than two hours off the coast of Seattle rather than in icy water and was not attached to a simulated wellhead and blowout preventer as would be necessary in real life¹².

The potential financial impact of a major oil spill in Arctic waters has not yet even been assessed by Shell¹³. In addition to significant financial penalties in the form of clean-up and remediation costs (compounded by the practical challenges involved) regulatory

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finances and prolonged litigation in a variety of courts from a myriad of claimants, Shell would also likely face uncertain impacts on share price and credit ratings, unprecedented reputational damage, and a threat to its ability to do business in the US. Almost four years after the *Deepwater Horizon* disaster, BP is still banned from bidding for government contracts¹⁴. In order to pay the penalties and address longer lasting financial impacts, BP has sold assets worth \$38bn in the past three years¹⁵.

Since Shell is self-insured to only \$1.15bn per event¹⁶, it is likely that Shell would have to conduct a similar 'fire sale' of assets to meet the resulting financial liabilities of a major Arctic spill. At present, it is far from clear that Shell has adequate physical or financial oil spill response plans. In fact, there is no available information about how the company would address the financial implications of a major spill.

So far, no analyses have been published quantifying the specific oil spill response impediments in Shell's lease areas in the Chukchi Sea. But a study commissioned by WWF found that it would not be possible to respond to an oil spill in the Canadian Beaufort Sea for seven to eight months of the year¹⁷. During the most favourable weather conditions (July–August), a response would only be possible 44%–46% of the time, assuming that the infrastructure and workforce were readily available. A response gap analysis needs to be carried out and published to be able to accurately assess the threat that spills pose to Shell's potential operations.

Even if response efforts can be mounted, the usual techniques for controlling a spill (booms, skimmers, and dispersants) are of questionable efficacy in icy waters. Nonetheless, Shell's worst-case scenario planning is based on the questionable assumption that those types of mechanical recovery equipment would recover 95% of a major spill before it could reach the shoreline¹⁸ – a clean-up rate that has not been achieved for any large spill anywhere to date. Less than 10% of spilled oil was recovered using these techniques after the *Deepwater Horizon* and *Exxon Valdez* spills¹⁹.

The infrastructure to mount a large-scale response to an oil spill in the Chukchi Sea simply does not exist. The nearest major road system is more than 500 miles away as the crow flies. There are no hotels or other housing capable of accommodating thousands of responders. The nearest Coast Guard station is roughly 1000 miles from the likely drilling sites.

Management risk (see section 5 of the report)

In its review of the 2012 season, the US Department of the Interior found that there were "significant problems with contractors on which Shell relied for critical aspects of its programme". The review went on to describe the problems with contractor management and oversight as "the most significant shortcomings in Shell's management systems²⁰".

Shell does not specify in its 2014 integrated operations plan what changes have been made in contractor oversight and selection practices since 2012. BOEM has requested more detailed information from Shell regarding contractors, stating that Shell's documents "must clearly detail how Shell conducts contractor oversight to ensure that its safety and environmental protection policies and standards are implemented by its contractors²¹".

2012's operational failures stood in marked contrast to the confident statements of board members about the company's preparedness for Arctic exploration, suggesting a lack of senior executive oversight of a high risk, heavily scrutinised project. 2014's most recent development – the finding of the Ninth Circuit Court of Appeals – appears to have blindsided the company.

“There is nothing up there to operate from at present... no way we could deploy several thousand people as we did in the *Deepwater Horizon* spill.”

Admiral Robert Papp JR

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Conclusion

Shell's continued public commitment to Arctic exploration sits uneasily with its operational track record in the region and with growing industry and investor skepticism about the operational and economic feasibility of offshore US Arctic oil exploration.

While other IOCs have publicly retreated from the US Arctic, citing regulatory uncertainty and technological difficulty, Shell chose to lift the 'pause' button and to attempt to position itself for a possible return to the Chukchi Sea as early as the summer of 2014.

While these plans have now been abandoned following successful court challenges by Alaska Native and conservation groups, investors should be concerned that an examination of Shell's 2014 Chukchi Sea exploration plan indicated that the company has not learned the appropriate lessons from its 2012 failures.

Those issues which lay at the heart of Shell's 2012 setbacks remain unresolved:

- a refusal to test essential safety equipment in real life conditions;
- a reliance on spill clean-up technology that industry research and Shell itself acknowledge will not be sufficiently effective in icy waters;
- a failure to conduct analyses of the ability to respond to a major spill in a remote area in challenging conditions;
- a lack of specificity on contractor selection and management; and
- an outright refusal to disclose assessments of and contingency plans for the financial impacts of a worst case scenario spill.

And while the risks of such projects are many and identifiable, the potential returns from such projects remain highly uncertain – doubts over the level of commercially recoverable reserves; no substantial extraction before 2035; and profitability likely to require unsustainably high oil prices. Investors must question whether this represents an appropriate risk/return matrix.

Questions for Shell

ECONOMIC RISK

- What is the company's anticipated total capital expenditure for the lifetime of the company's offshore US Arctic projects?
- When does Shell expect any of its offshore US Arctic projects to begin extraction?
- What oil/gas balance is Shell expecting to find in the Burger prospect? Does the company expect gas exports from these prospects to be economically viable, and under what circumstances? What factors have changed Shell's view as to the economic viability of the Burger prospect since 1989?
- What is Shell's assumed break-even oil price for US Arctic projects?
- Please provide information to shareholders demonstrating the robustness of the company's project portfolio against a range of oil price demand and price scenarios.

LITIGATION RISK

- Did Shell anticipate the Ninth Court of Appeals ruling upholding a challenge to the supplemental environmental assessment?
- What is the impact of this judgement on Shell's plans?
- What is Shell's view on the outcome of the other case pending – the challenge to the oil spill response plans?
- Who at senior management level is overseeing potential legal threats to Shell's Arctic plans?

SPILL RISK

- Has the company carried out an analysis of the environmental and financial worst case spill scenario and, if so, will it be publicly available?
- What is Shell's contingency for raising the necessary funds to pay all arising costs in the event of a worst case spill, eg asset disposals. Given that Shell's self-insurance covers only up to \$1.15bn per event – what is Shell's financial oil spill response plan?
- Does Shell have any plans to conduct more rigorous testing of its spill response equipment (particularly well containment devices) in Arctic and simulated real-life conditions. Will the company make detailed disclosures of the conditions and results of these tests?

- Will the lack of oil spill response capacity due to the lack of a second fleet operating in the Beaufort Sea affect Shell's ability to respond to spills? Given that this change of capacity means Shell's approved oil spill response plan is out of date, has Shell submitted a revised oil spill response plan to BSEE?
- Given the remoteness of the Chukchi Sea drilling sites, eg the lack of an airport with jet capacity and access to a major road system within a radius of several hundred miles, the distance of approximately 1000 miles to the nearest US Coast Guard station, and the lack of accommodation for responders to a spill – what are Shell's specific plans for managing the logistics of a response to a major spill?
- What assumptions, eg travel speed, weather conditions, underlie Shell's assessment that the Polar Pioneer can reach a drilling site from Dutch Harbor within 8.5 days (7.5 days travel time)? What evidence does Shell have that the stated towing speed of 6 knots can be achieved in icy conditions?
- Given that in previous large spills, mechanical recovery has only resulted in removal of 3–8% of a spill, what is the basis for Shell's assumption that they would capture half of the oil at surface in worst case scenario?
- Has the company carried out a spill response gap analysis of its prospects in the Chukchi Sea where it hopes to drill in 2014? If so, will the company make it available publicly?
- Will the company analyse the potential effects of using in situ burning or chemical dispersants and make detailed disclosure on this analysis?

MANAGEMENT RISK

- What level of oversight did Royal Dutch Shell plc's board of directors exercise over the company's 2012 US Arctic plans and has this oversight increased?
- Cost overruns are typical for Arctic oil and gas projects with long lead times. What is Shell doing to avoid this given Shell's experience with Sakhalin II where costs more than doubled?
- What changes have been made to internal reporting structures to address the obvious disconnect between the operational reality of ill-preparedness and the confident statements about the company's ability to carry out its 2012 Arctic plans made by Royal Dutch Shell board members including the Chairman and Peter Voser?
- Why did Shell not complete the third party audit of its management systems including the SEMS prior to submitting its integrated operations plan?
- Contractor oversight at the Shell Group has been identified as an issue in both the Review and at its Nigerian operations. What specific steps is Royal Dutch Shell taking to ensure adequate contractor monitoring across the Shell group?
- What specific changes has Shell made to its contractor selection and oversight policies and practices since 2012?
- Royal Dutch Shell held a number of individual and group meetings with investors to discuss progress and setbacks in its US Arctic operations during 2012. Why were the issues with contractors not highlighted by the company?
- Has Shell reviewed its processes for contractor selection in light of the criticisms in the Review of the company's selection of Superior who lacked appropriate certification for ship design and build work?
- What steps is Shell taking to ensure no future breaches of air emission permits which have resulted in fines to date in excess of \$1,000,000?
- Is Shell able to provide the specific information requested by BOEM in respect of contracted work?
 1. who within the company is responsible for the completion of the work?
 2. who possesses decision-making authority when faced with unplanned interruption to planned 2014 drilling operations. (Provide the job title/personnel position for person(s) that would be in charge of the Noble Discoverer.)?
 3. how does Shell ensure that communication and lines-of-accountability between Shell and the contractors are clearly established; and how does Shell hold contractors responsible for their safety performance and safety culture?
- What steps or procedures has Shell adopted to ensure that similar problems to those that occurred with the towing of the Kulluk will not be repeated in the future?
- Why did Shell not disclose specific information in its annual report's Arctic summary regarding contractor failings given that contractor risk is specifically identified as a risk factor in the general risk factor section?

REGULATORY RISK

- How comfortable is the company that it can meet what ConocoPhillips has termed "evolving federal regulatory requirements and operational permitting standards" in the US Arctic Ocean over the next several years?
- What impact would a reduction in subsidies and fiscal incentives currently available to the company have on its US Arctic operations?

Endnotes

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