Frozen Future

Serious concerns for Shell shareholders identified by US Coast Guard investigation

April 2014

INVESTOR BRIEFING

Background

On 31st December, Shell's Arctic drilling rig, the *Kulluk*, ran aground off the coast of Alaska as it was being towed back to Washington State from Alaska. That incident led to the company announcing a 'pause' in its Arctic plans for 2013 and led to two separate investigations – a 60 day review by the US Department of the Interior published in March 2013 and a US Coast Guard investigation published on 3rd April.

This briefing set out key extracts from the Coast Guard investigation highlighting some of the issues which should be of concern to Shell shareholders including inadequate risk management practices and a failure to demonstrate an appreciation of the uniquely challenging operating environment of the Gulf of Alaska. The Coast Guard's findings support a number of concerns previously expressed by the authors on these issues and others including contractor selection and oversight. Finally, we suggest some questions for shareholders to ask of Shell.

The Coast Guard Investigation

The investigation is highly critical of Shell and its contractors involved in the Kulluk towing operation. The criticisms cover almost all aspects of the operation - its planning, selection and use of equipment and tow vessel, and crew experience and behaviour. The Coast Guard's findings raise concerns regarding a number of systemic issues in Shell's Arctic operations.

Inadequate risk assessment and management

1. Failure to demonstrate respect for the unique operating environment

In his comments on the investigation, Rear Admiral Servidio states that '*the inadequate assessment and management of risks by the parties involved was the most significant causal factor of the mishap.*'[1] The Commander of the 17th District states '*I feel that an inadequate determination of risk occurred, demonstrating a lack of respect for the unique risks inherent in Alaskan operations.*'[2]

Several of the Coast Guard's findings point to Shell and its contractors seemingly underestimating the unique risks of a tow in the winter waters of the Gulf of Alaska.

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They include but are not limited to the following:

- "The Shell towing plan was not adequate for the winter towing operation crossing the Gulf of Alaska."[3]
- All of the bridge officers of the towing vessel, the Aiviq, arrived in Alaskan waters in the summer of 2012. This was their first exposure to the Gulf of Alaska as officers on a vessel engaged in towing.
- A key assumption on which the towing plan was based – the bollard pull – was made according to a study conducted in 2010 which assumed a tow in summer months. This assumption was not reassessed to take into account weather data received by Shell for the December 2012 tow.

> *"Despite the severe weather anticipated along the route, tow planners did not recognize the overall risks involved prior to commencement of the tow."*[4]

Shell has regularly offered reassurances regarding its understanding of the challenging operating environment. The findings of the Coast Guard investigation should give shareholders cause to probe for more specific evidence of this. We have long pointed to a failure to test key spill response equipment in real life Alaskan Arctic conditions as a risky decision. The Coast Guard investigation highlights the relevance of Alaskan conditions to adequate risk assessment.

Question for Shell

What specific changes have been made to the company's risk assessment and management practices for its Alaskan Arctic operations since 2012 to demonstrate the company's understanding of the particular risks associated with the region?

Inadequate risk assessment and management

2.Poor planning

(a) The tow plan approval process

The Coast Guard finds that the Shell towing plan was *"not adequately reviewed.... and lacked the proper contingency planning."*[5] We have already noted that key assumptions underlying the plan were no reassessed to take account of conditions in December. In addition, the individual who approved the tow plan had been with Shell approximately 6 months, had never reviewed a tow plan within Shell and had not taken part in any of the planning meetings. He had not received any training in the tow planning or review process nor had he received any specific instructions from his supervisor.[6] The Operations Manager, the individual normally designated as the final approver, was on holiday leave during the final tow planning process and the towing operation.

The tow plan was not updated to reflect the replacement of shackles on the towing vessel which led to their misidentification by 3rd party warranty surveyors. The Kulluk's emergency towline did not conform to the tow plan.[7]

> *"This deficiency in planning is particularly concerning following the Deepwater disaster where the compounding of events was identified as the key issue."*

Questions for Shell

- Have internal sign-off procedures been amended to ensure that only suitably experienced staff who have been appropriately involved in the planning process have the authority to issue 'final approval' of high-risk operational matters such as a tow in harsh weather environments?
- What changes have been made to internal procedures and reporting lines to ensure that alterations are reflected in planning documents such as tow plans?

(b) Contingency planning

Shell created a tow plan which addressed individual contingencies but it did not account for multiple and compounding events. This is, of course, what transpired – the failure of towing equipment compounded by a failure of vessel propulsion. This deficiency in planning is particularly concerning following the Deepwater disaster where the compounding of events was identified as the key issue.

The breakdown of the towing vessel is identified as a contingency but the only mitigation measures listed are, according to the Coast Guard, *"make an alteration of course away from the Kulluk. Once risk of collision passes, the vessels will assess and then stabilize the situation as required."*[8] As the Coast Guard points out, this assumes that repairs can be made in a timely fashion, will not require outside intervention and that the conditions will remain favourable.

This also supports concerns that Shell plan for best case outcomes to worst case scenarios. For example Shell states in its Arctic plans that 90% of a major oil spill will be recovered at the wellhead and half of what escapes before it reaches the shore.[9] Such a recovery percentage is significantly in excess of recovery rates after the Deep-water Horizon and Exxon Valdez spills and government estimates.

Questions for Shell

- Was the failure to account for multiple and compounding events isolated to this tow plan or is this a failure across Shell's project planning?
- What changes have been made to the company's contingency planning to ensure they account for multiple and compounding events?

Contractor selection and management

As with the March 2013, Department of the Interior report, the Coast Guard's findings raise concerns about Shell's selection and oversight of contractors. In addition to the inexperience of the bridge officers of the towing vessel, the *Aiviq*, the Coast Guard is blunt in stating the *"Aiviq had a number of mechanical issues and design deficiencies which should have precluded its selection as the single towing vessel for the Kulluk on this departure date."*[10] The Coast Guard highlights a failure to conduct a thorough assessment of the "*performance, operational history, mechanical and physical condition and finally the competence of the personnel of the Aiviq to determine if that vessel was suitable for that role."*[11]

> *"In January 2013, Shell downplayed the running aground of the Kulluk as a "maritime transit incident".*[15] *However, it's clear from the Coast Guard investigation that this incident highlights wider issues of risk assessment and management, inadequate procedures and risks relating to contractor selection and oversight."*

Questions for Shell

- What specific changes have been made to contractor selection and oversight practices across Shell's operations but particularly in Alaska since 2012?
- Are assessments of the operational history and mechanical and physical condition of vessels now a standard part of Shell's risk assessments practices?

On 22nd December, the Master of the *Aiviq* and the the Tow Master became concerned about the weather and on 25th December contacted the Shell Marine Manager requesting a change of course. The Coast Guard states that *"their request for a change in course was not formally granted..".*[12] However, it also states that the tow plan gave the *Aiviq* Master and the Tow Master the discretion to make course changes in certain circumstances. A course change was eventually made on 27th December (by which time problems had arisen) and was approved by the Shell Marine Manager.

The Coast Guard also highlights the differences between the review of the tow plans conducted by warrant surveyors MatthewsDaniel in the case of the outward summer tow and Noble Denton in the case of the December tow noting that the latter checked that the tow met Shell's plan but not whether it met Noble Denton's own standards. It was Noble Denton who also misidentified the new shackles.

Edison Chouest the contractor responsible for the *Aiviq* was, according to the Coast Guard, unable to produce any written policies and procedures on key issues relevant to towing a vessel such as the *Kulluk*.

Questions for Shell

- Why did the Shell Marine Manager not formally respond to the request for a change in course?
- Were the Aiviq Master and the Tow Master unaware of the discretion they had to change course without Shell approval?
- Has Shell improved communication with contractors to clarify when discretion may be exercised?

Recommendations

The Coast Guard recommends that Shell and others intending to work in the Arctic *"develop and maintain policies and guidance that addresses all aspects of marine operations to include tow planning for operations across the globe, and establish additional criteria for operations that take place in areas of historical heavy weather, such as the Alaskan theatre."*[13] It goes on to list a number of criteria that Shell should consider.

Shell's response to the Coast Guard investigation has been to say that they *"appreciate the thorough investigation and will take any findings seriously."* The company goes onto say that *"Already, we have implemented lessons learned from our internal review of our 2012 operations. Those improvements will be measured against the findings in the USCG report as well as recommendations from the US Department of Interior".*[14]

Questions for Shell

- What specific 'lessons learned' have been implemented? Are updated policies publicly available reflecting their implementation? What changes has this led to in practice?
- Will you comply with the Recommendation 4 in the Coast Guard investigation and will you ensure that all contractors comply with Recommendation 5?

Conclusion

In January 2013, Shell downplayed the running aground of the Kulluk as a *"maritime transit incident"*.[15] However, it's clear from the Coast Guard investigation that this incident highlights wider issues of risk assessment and management, inadequate procedures and risks relating to contractor selection and oversight. It points to a number of critical operational issues which must be addressed before Shell considers returning to the Alaskan Arctic. In this context, its concerning that in its 2013 Strategic Report Shell reasserts its commitment to returning to drill in Alaska without detailing how key failings – identified by both the US Department of the Interior and the US Coast Guard - have been rectified. Investors might also note that the Coast Guard points to the fact that currently tow plans do not have to receive regulatory approval. This is yet another reminder that compliance with regulatory requirements is not, in itself, sufficient evidence of best practice in risk assessment and management. Shareholders may also wish to consider whether any of the issues identified by the Coast Guard may have relevance to Shell operations beyond the US Arctic.

Further information:

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ENDNOTES

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3. United States Coast Guard Report of Investigation into the circumstances surrounding the multiple related marine casualties and grounding of the Modu Kulluk on 31 December 2012. 3rd April, 2014, p.112
4. Ibid., p.113
5. Op. Cit. 3
6. Op. Cit. 3. p.20
7. Op.Cit. 3 p.31
8. Op. Cit. 3 p. 75
9. Shell Chukchi Sea Oil Spill Response Plan www.bsee.gov/uploadedFiles/BSEE/OSRP/Chukchi%200SRP%20-%20February%202012.pdf, p.C-11 (177)
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