Testimony of

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Mr. Chairman, I am Pete Slaiby, Vice President of Shell Alaska. I appreciate the opportunity to testify today regarding maritime activities in the Arctic. My presence here is no doubt related to Shell's exploration program off the coast of Alaska – a program that involves maritime activity.

Today, I will describe Shell's 2012 drilling operations in the Chukchi and Beaufort Seas with a focus on the maritime activities that supported those operations. Then, I will highlight some of the government and joint government-industry initiatives that will contribute to the dialogue about maritime activity in the Arctic. Finally, I will offer some recommendations for policymakers to consider.

Shell Alaska 2012

In 2012 Shell drilled portions of two wells – one well in the Chukchi and one in the Beaufort. Although the wells did not reach the hydrocarbon objective, they did mark an historic re-entry into the U.S. Arctic offshore. They were the first wells drilled in the open water offshore Alaska in over 15 years; and the first step to validating the enormous offshore resource potential. Shell's drilling program, supported by our logistics team, oil spill-response assets, and with serious attention to stakeholder expectations, was carried out safely and successfully. Let me say that again - our drilling operations were completed safely and successfully.

After drilling ceased, we demobilized our vessels, including the Discoverer and Kulluk drilling rigs south of the U.S. Arctic theatre. It was while leaving the theatre of operations that issues with the Discoverer were identified by the U.S. Coast Guard and the Kulluk ran aground. These incidents are the subject of ongoing government review, and therefore, I will not talk about them.

I would like to acknowledge, publicly, the effort of the over 700 hundred men and women who worked 24/7 on behalf of Shell and Incident Command to ensure the incident did not escalate. Shell's onshore

and offshore response teams put forward a herculean effort in a time of need. That includes the immediate escalation and notifications to the proper agencies, deployment of Shell air and marine assets (19 tugs/vessels and 20 aircraft), forward-mobilized personnel to impacted communities and a suite of oil-spill-response equipment to the region.

As you are aware, Mr. Chairman, no people were harmed ,and there was minimal impact to the environment as a result of the Kulluk's grounding. Finally, the assets I referred to that played a key role in the recovery of the Kulluk, in many ways, mirrored the marine and air assets we assembled and had available during our drilling operations in the Arctic in 2012.

Now, I will focus in some detail on aspects of Shell's 2012 exploration program that relate to maritime operations; and highlight some of the steps we took to ensure that these operations were safe and successful.

Going into the Alaska Arctic, we understood that there was limited infrastructure. We had to assemble and bring the majority of onshore and offshore infrastructure with us. And we did so with a commitment to setting the bar for an environmentally responsible Arctic program. We pursued the goal of having the smallest possible footprint and no significant negative impact on North Slope communities and their traditional subsistence hunting activities.

At every step, we worked with federal agencies, the State of Alaska, local governments and most importantly, the residents of Alaska's North Slope, to develop a program that aspired to the highest technical, operational and environmental standards.

Let me give you some facts and figures on our marine and aviation logistics accomplishments.

- *Marine: 240,000 total nautical miles travelled in 2012 by 23 vessels*
- *500 vessel- to- vessel personnel transfers*
- *3,250,000 gallons of Ultra-Low Sulfur Diesel transferred*
- *10 vessels built or modified in 6 shipyards*
- *25,000 tons of cargo moved at sea*
- *20,000 protected species observations (whales, walrus, seals, etc..) from vessels and aircraft*
- *11,877 personnel transfers*
- *562 rotary- wing and 535 fixed-wing flights*

In short, we secured the tools and technology needed to keep people safe and conserve the environment.

Additionally, Shell undertook a number of programs and initiatives - all designed to ensure safe and responsible maritime operations. The following programs and initiatives played an enormous role in our 2012 program, and I will describe them in more detail after listing them.

- Shell Ice and Weather Advisory Center (SIWAC)
- Vessel Tracking System
- Simultaneous Operations Center
- Conflict Avoidance Agreement
- Oil Spill Contingency Agreement
- Communications Centers/Subsistence Advisor Program

SIWAC - Shell Ice and Weather Advisory Center

Shell's commitment to ensuring safe and responsible maritime operations is underpinned by our investment in ice and weather forecasting systems. Shell developed and now operates the Shell Ice and Weather Advisory Center (SIWAC) and has done so since 2007. SIWAC is an integrated ice hazard detection and forecasting service that has evolved to be the most comprehensive and focused ice and weather operation covering the offshore and coastal areas from the Gulf of Alaska to the Canadian Beaufort. SIWAC staff integrate a constant stream of weather, sea, and ice data from many sources, including satellite imagery, Metocean buoy, field observers, high frequency Radar sites , and publically available data; Shell also planned and executed a total of 23 dedicated ice reconnaissance missions in 2012.

At no time was the value of these professionals more evident than when we made the decision to moveoff the Burger well site in the Chukchi Sea one day after we commenced drilling. As frustrating as that was, it was the right call and one made possible by the world-class ice and weather forecasting we employ in the U.S. Arctic.

Mr. Chairman, as you are acutely aware, Shell takes additional steps to ensure that others can benefit from these Arctic forecasts.

For example, in 2012 SIWAC entered into a collaborative agreement with NOAA to share both near real-time and archived environmental data, such as buoy data and sea ice charts, which improves forecast products poduced by NOAA for the US Arctic. Moreover, Shell also maintains a data-sharing agreement with NOAA regarding hydrography. The sea floor in the Beaufort and Chukchi Seas continues to be

mapped, as Shell vessels transit these seas we collect hydrographic data and provide it to NOAA. We also engage in discussions to focus on mapping priorities.

Vessel Tracking

Mr. Chairman, 23 Shell vessels traveled 240,000 nautical miles in the course of mobilization, demobilization, and season operations. Shell's marine activities to support operations in the Beaufort and Chukchi seas are bounded by a number of factors, including compliance with air and other permits and authorizations, management of protected species interactions, whaling blackout commitments, and significant steaming distances – many of which I will further describe. When active, Shell vessels provided real-time position data via vessel tracking systems to BOEM, the USCG, and the Alaska Marine Exchange. Shell vessel movement data was remotely monitored for internal safety, compliance, and operational reasons, and this data was also used in a Shell-developed Graphical Information System which allowed data such as ice interpretations and temperature to be overlaid on maps.

Communication Centers and Subsistence Advisor Program

Shell also carried out significant activities to communicate our operational and maritime activities with local communities, allowing us to minimize impacts on their subsistence and cultural activities. For example, Shell employed Subsistence Advisors in the local communities. Through twice-daily calls, we learned what hunting activities were occurring, how animals were migrating, and received feedback that helped us plan and adjust our operations so as to avoid interference and impacts. This worked very well and allowed for real-time adaptation. Shell also funded the operation of Communications Centers in each of the coastal communities. All Shell vessels called in to these centers every six hours around the clock, to state current location, current activities, and planned activities. These communications were

made public, free and available to anyone who wanted information. This worked well for Shell and helped supply information to communities.

SIMOPS - Simultaneous Operations Center

To enhance communication with the greater maritime communities and regulators, Shell also operated a forum for managing Simultaneous Operations in Barrow to facilitate mutual aid and conflict avoidance. In this forum, Shell staff brought forward information from the Subsistence Advisors and vessel tracking programs, incorporated data from other parties and conducted a daily information exchange via teleconference. All entities with operational activities – USCG, other agencies, communities – could use the forum for information exchange to keep tabs on Shell's activities, as well as other shipping activities to the extent possible. We have run this for the last five years, and it has worked well.

CAA – Conflict Avoidance Agreement

As previously noted, Shell understands the importance of subsistence to local communities and has negotiated and signed key agreements to minimize our impacts on them. For example, Shell signed and abided by a Conflict Avoidance Agreement with the Alaska Eskimo Whaling Commission, which allowed operations following certain criteria and outside blackout times. This agreement also required zero discharge of drillig muds and cuttings and other treated waste streams in the Beaufort, the communication centers in coastal villages, protected species observers on marine vessels and overflights, transit and logistical requriements during the hunt, and providing assistance to whalers in the event of an emergency. Protected Species Observers have been used on all our vessels and have a critical role, being tasked with observing and reporting protected species and advising the vessel master to take appropriate mitigations, such as altering course and/or reducing vessel speed.

Good Neighbor Policy or Oil Spill Contingency Agreement

Shell has a "Good Neighbor Policy", also known as the Oil Spill Contingency Agreement, among Shell, the Alaska Eskimo Whaling Commission, the North Slope Borough, and Inupiat Community of the Arctic Slope whereby Shell agrees to provide the financial and/or logistical support to facilitate an affected community's subsistence hunt in the event such hunt is impacted by an oil spill from Shell's exploration driling.

Science

In the scientific arena, Shell has a long history of investing in environmental studies necessary to properly characterize and assess potential impacts to important ecological areas of the Chukchi and Beaufort Seas and the terrestrial areas of the North Slope. Shell invested $35 million in environmental monitoring and research in 2012 alone, and we plan to continue our work in anticipation of future drilling. Shell also has an agreement with the North Slope Borough to invest annually $5 million in science projects related to oil and gas activities offshore.

The bottom line is this: Shell continues to go above and beyond in putting a structure and systems in place that managed our operations in a safe and responsible manner and served to build confidence in our programs among stakeholders closest to the resource and, I'm proud to say, strong relationships built on trust. Most of what I just described to you was not required by government regulation, but reflects a corporate desire to do things right. All of these activities – as well as the professionalism of the people who carried them out – contributed to safe and successful offshore maritime and drilling operations.

Shell will also continue to be an active collaborator with intergovernmental scientific planning and review boards, and Shell is pleased that Dr. Michael Macrander, our science team lead for the Arctic, is a member of the National Academy of Science's panel on Emerging Research Questions in the Arctic

Arctic Maritime Activity: Challenges Going Forward and Policy Responses

Marine activity in the Arctic will increase as northern routes open and oil and gas activity expands across the Arctic. Oil and gas development is happening in the U.S. Arctic, as well as offshore Russia, Canada, Norway, and Greenland. Governments are considering the appropriate policy responses through various international organizations, such as the Arctic Council. Industry is contributing to the dialogue through a range of assessments and joint industry programs that increase knowledge about the Arctic. Such government and private sector initiatives should continue and be coordinated. There is a shared goal to ensure that as maritime operations expand in the Arctic they go forward safely.

Policymakers should consider the following:

Strong support for the Arctic Council - The Arctic Council is proving to be a viable forum for Arctic nations to come to agreement on mutually beneficial programs that can make a significant contribution to maritime safety and protection of the environment. The Arctic Council has several relevant working groups, such as the Arctic Monitoring & Assessment Programs; Emergency Prevention, Preparedness & Response and the Task Force on Oil Spill Preparedness and Response; Protection of the Arctic Marine Environment; and Sustainable Development Working Group. Given the proximity of oil and gas basins and the likelihood of oil and gas development stretching across national borders, the Arctic Council is best positioned to encourage harmonization of regulatory standards covering industrial development in

the Arctic. This will facilitate development by reducing costly duplication or conflicting requirements in a single development basin.

Ratification of the Law of the Sea Treaty - The U.S. is one of the few countries in the world that has not ratified the Treaty. Broad and diverse industry groups and companies support ratification.

Support Industry Efforts to Set Arctic Shipping Standards. IMO is currently developing a draft International code of safety for ships operating in polar waters (Polar Code), which would cover the full range of design, construction, equipment, operational, training, stability, search and rescue and environmental protection matters relevant to ships operating in the waters surrounding the two poles.

Support Additional Arctic Scientific Research and Technology Development. Technology development is essential for taking safe operational practice and making it safer and enhancing mitigations to further protect the environment. These are areas where Shell invests. Shell is supporting the ongoing Arctic oil spill response joint industry project that is advancing capability in this important area.

Revenue Sharing for Alaska.

I want to acknowledge the effort you and Senator Murkowski are spearheading in Washington D.C. to extend OCS revenue sharing for Alaska. Current law provides that revenue from OCS leases in the Gulf of Mexico is shared with the Gulf States of Alabama, Louisiana, Mississippi and Texas. It is not fair that revenue from OCS leases off the coast of Alaska is not shared. Congress should approve legislation that gives Alaska a portion of the federal revenue generated by production on current and future leases.

Revenues shared with Alaska could then be available to invest into coastal marine infrastructure such as ports and harbors, community-based support equipment, airports and other shore-based logistic infrastructure available for all marine users to benefit.

Conclusion

I hope these remarks are useful and informative. Thank you, Senator Begich. I am happy to answer questions.