

Offshore Oil Drilling in the Arctic

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Nicholas Cunningham



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Due to rising global temperatures, sea ice in the Arctic is melting quickly, opening up vast new frontiers to oil and gas development.

This paper evaluates several reasons why the rush by oil companies into the Arctic should be considered more closely. Harsh drilling conditions, unproven oil spill response, inadequate science and fragile ecosystems pose real reasons for caution.

Whether or not the U.S. government allows a full exploitation of the Arctic, both onshore and offshore, and whether private companies fully embrace oil and gas drilling in the Arctic, this paper presents important issues that should be considered by supporters, opponents and policymakers looking at opening up the region to drilling.

There should be a full examination of the issues raised in this paper. In order to safely exploit the untapped energy resources in the offshore Arctic region, a new legislative, safety and technological framework will need to be established.

The views presented in this perspective paper are the author's alone, and do not necessarily represent the views and policy of the American Security Project or its board.

Nick Cunningham is Policy Analyst at the American Security Project

Summary

- U.S. controlled waters off the North Slope of Alaska hold an estimated 29 billion barrels of oil – about one-third of total oil reserves believed to be in the Arctic.
- The Arctic presents unique safety risks for offshore drilling, including harsh storms, sea ice, poor infrastructure and long distances from response centers. However, drilling in the Arctic will be conducted at shallower depths relative to the Gulf of Mexico.
- In the wake of the BP/*Deepwater Horizon* incident, there has been very little legislative or regulatory reform to improve drilling safety.
- Oil spill response capabilities have not substantially improved in decades. The ability to respond to a catastrophic blowout in Arctic waters is questionable.
- The U.S. Coast Guard does not have a permanent presence in the Arctic and it is doubtful that it would be able to adequately respond to an oil spill.
- The impact of drilling in the Arctic on the environment is unknown, and scientific knowledge of Arctic ecosystems is lacking.

1. Introduction

On February 17, 2012, the U.S. Department of Interior (DOI) approved of Shell Gulf of Mexico Inc.'s Oil Spill Response Plan (OSRP), the last major hurdle to allowing Shell to move forward with offshore oil drilling in the Chukchi Sea.¹

In theory, Shell has developed a plan to guard against the environmental fallout of a hazardous incident, including a well blowout. Shell has safety vessels standing by, oil collection equipment on hand, and technology ready to drill a relief well in the event it needs to stop a blowout.

The reformed Department of Interior believes Shell has adequately demonstrated safety preparedness and response, ensuring against another environmental crisis comparable to the BP/*Deepwater Horizon* incident in 2010. However, Shell's OSRP is unproven.

The OSRP does not compensate for the fundamental gaps that pervade the regulatory structure of offshore oil drilling, nor does it ensure against a catastrophic blowout. Very little has changed since the blowout in the Gulf of Mexico – there have been only minor reforms to environmental and safety oversight and no legislative action to address the root causes. Also, the science on Arctic ecosystems remains insufficient, and the effects of such a spill are unknown.

Before offshore oil drilling commences in the Arctic, these problems need to be addressed.



2. The Arctic: Enormous Energy Potential, Threatened Ecosystems?

The Arctic region represents the next frontier for oil and gas development.

The U.S. Geological Survey (USGS) predicts that the Arctic region surrounding Alaska has huge deposits of technically recoverable crude oil. Estimates of crude oil reach as high as 29.96 billion barrels near Alaska compared to a total estimate of 89.98 billion barrels for the entire Arctic region as a whole.²

This means the waters surrounding Alaska hold about 33% of all technically recoverable oil in the Arctic, the largest of any other Arctic country. The technically recoverable reserves in Alaska also represent about one-third of the total technically recoverable reserves on the U.S. outer continental shelf.³

However, drilling in the Chukchi and Beaufort Seas would take place in an area home to a diverse array of marine life, including salmon, herring, walrus, seals, whales and waterfowl.⁴ Additionally, the Chukchi Sea is home to higher occurrences of benthic marine fauna relative to other Arctic habitats.⁵

Scientific understanding of these ecosystems and the anthropogenic effects on them, are both not yet sufficiently understood.

3. Legal context

To understand the major issues surrounding drilling in the Arctic, it is important to look at the governance of offshore oil drilling generally, which is built on numerous legal precedents established over the course of several decades.

Proclamation 2667

Before President Harry Truman, there were few international norms on the governance of the coastal waters extending from a nation's shores.

In 1945, President Truman issued an executive order, *Proclamation 2667*, stating, "the Government of the United States regards the natural resources of the subsoil and sea bed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control."⁶

Other nations followed suit, claiming rights to the waters adjacent to their shores.

Submerged Lands Act (SLA)

While President Truman's executive order established a claim for the United States in an international context, it did not distinguish which level of the U.S. government controlled those waters, meaning it was still unclear whether the federal government or coastal states controlled the continental shelf.

In one particular case, *United States v. California* (1947), the court ruled in favor of federal control for the waters extending three miles from California.⁷ Fearing an encroachment of federal powers on the sovereignty of states, as well as the expropriation of the potential benefits of mineral exploitation, states lobbied Congress for action.⁸

In response, the U.S. Congress passed the Submerged Lands Act of 1953, which granted exclusive rights of coastal states to the waters extending three miles from their shores.⁹ Within the three-mile boundary, states had the right to exploit the mineral resources in the sea bed, which included oil and gas.

Outer Continental Shelf Lands Act (OCSLA)

In order to codify federal control of the mineral resources beyond the three-mile limit, the U.S. Congress passed the Outer Continental Shelf Lands Act of 1953.¹⁰

OCSLA also granted the Department of the Interior the responsibility for administering the exploration and exploitation of natural resources on the outer continental shelf (OCS). The Secretary of Interior would grant leases to the highest qualified responsible bidder, according to sealed bids.¹¹

Today, DOI has divided the OCS into four regions: the Atlantic, the Gulf of Mexico, the Pacific, and Alaska. OCSLA was amended in 1978 to give states a greater participatory role in the leasing process.¹²

The reforms also required the Secretary of Interior to establish a five-year plan for the leasing program, which best meets “national energy needs” for that period.¹³ Additionally, OCSLA grants the President the power of issuing moratoria on offshore oil drilling in the OCS.¹⁴

United Nations Law of the Sea (UNCLOS)

The United Nations Law of the Sea provides the international legal context for individual nations to claim sovereign control over their coastal waters.

According to Article 57 of UNCLOS, nations have control over their exclusive economic zones (EEZs), extending 200 miles from their shores.¹⁵ Under Article 56, coastal states have “sovereign rights for the purposes of exploring and exploiting, conserving and managing the natural resources,” within their EEZs.¹⁶

According to these two articles, mineral deposits within the EEZ of a nation legally belong to that nation. Since the U.S. moved unilaterally to stake claims on its waters before UNCLOS was written, as it pertained to jurisdictional boundaries, UNCLOS simply reaffirmed a *fait accompli*; the U.S. already claimed its EEZ through Presidential decree and issued laws governing the exploitation of the mineral resources there within.

Additionally, despite the U.S. never ratifying UNCLOS, its tenets are largely accepted as customary international law.

National Environmental Policy Act (NEPA)

On January 28, 1969, an oil well blowout occurred off the coast of Santa Barbara, California, spilling approximately three million gallons of oil into the ocean, much of it washing ashore.¹⁷ The scene galvanized the nascent environmental movement, contributing to a wave of environmental legislation in the subsequent years.

One law, in particular, is relevant to offshore oil development. The National Environmental Policy Act was passed on January 1, 1970, requiring federal agencies to consider the environmental effects of major government actions, as well as the impacts of alternatives to them.¹⁸

Specifically, NEPA requires major government actions undergo environmental impact statements (EISs) to assess the environmental effects of such decisions. Under this law, the five-year plans implemented by the Secretary of Interior under OCSLA are subject to EISs.

Oil Pollution Act (OPA)

On March 24, 1989, the *Exxon Valdez* oil tanker collided with Bligh Reef in Prince William Sound and spilled more than 11 million gallons of oil into the surrounding waters.¹⁹

The heavy crude fouled the shoreline and endangered countless birds, whales, porpoises, sea otters and fish. It was the largest oil spill in U.S. history at that point, and it shocked the nation.

In response, Congress passed the Oil Pollution Control Act in 1990. The OPA established liabilities for owners and operators of offshore facilities and vessels. Liability can be established if the owner or operator discharged oil into “navigable waters” that resulted in “damages.”²⁰

However, unless the operator could be proved to be “grossly negligent,” in which case liability costs were unlimited, operators’ liability was capped at \$75 million for an offshore oil spill.²¹

Endangered Species Act (ESA)

The Endangered Species Act of 1973 authorized the Secretary of the Interior, and specifically the Fish and Wildlife Service, to make the determination if certain species qualify as “endangered” or “threatened.”²² Once the determination is made, any unauthorized “taking, possession, or sale” of the species is prohibited.

The U.S. Fish and Wildlife Service can levy fines upon violators. Also, ESA requires federal agencies to insure that any action funded or carried out by them does not jeopardize the continued existence of an endangered species or its habitat.

4. Deepwater Horizon Blowout

On April 20, 2010, the *Macondo* well controlled by BP and the rig operator, Transocean, experienced a blowout, resulting in the worst environmental catastrophe in U.S. history.²³ The *Deepwater Horizon* rig suffered multiple explosions causing the death of eleven workers, ultimately sinking in a fiery blaze after two days.

The gusher of oil continued for 87 days, with an estimated total of 4.9 million barrels of oil dumped into the ocean before the well was finally sealed.²⁴

The causes of the failure were multiple, with a series of failures along multiple steps in the drilling process culminating in the eventual blowout.

The National Commission setup by President Obama to investigate the causes of the blowout detailed the failures in its final report. For one, the regulators responsible for drilling safety had a conflict of interest, responsible for both oversight and revenue collection. The Minerals Management Service (MMS) had the incentive to approve an expansion of offshore oil drilling due to the billions of dollars of revenues from lease sales and royalty payments, which conflicted with its expressed mandate of environmental protection and drilling safety.²⁵

Furthermore, the oversight that was conducted by MMS was often inadequate. MMS regulators would conduct both annual inspections of rigs as well as unannounced inspections, as required under the 1978 OCSLA amendments.²⁶

Inspectors would check for compliance in pollution control, drilling, well completion, and electrical & personal safety, among other requirements. However, over the past few decades, offshore oil drilling has mushroomed and the resources available to MMS have not kept pace.²⁷



Safety regulations governing the practices of offshore drilling were also found to be inadequate. Despite several high profile oil spills in the late 1980's, including the *Exxon Valdez* spill, MMS failed to enact meaningful reform.²⁸

MMS considered several measures to make the regulatory regime more rigorous, but delayed rulemaking, under the pressure from the American Petroleum Institute (API), an industry trade group.²⁹ Twenty years passed without an upgrade in regulatory oversight.

The BP Commission argues that an informal understanding coalesced between the industry and the regulators, with the oil industry convincing the regulators that technology had progressed so considerably that regulations were not needed.³⁰

Instead, MMS merely urged the industry to take voluntary action to operate safely.

5. Reforms in the Wake of the *Deepwater Horizon* Blowout

Regulatory Reforms

In the wake of the *Deepwater Horizon* disaster, the Department of Interior took several steps to address offshore safety.

The Minerals Management Service (MMS) was temporarily reconstituted as the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE).

However, final reforms were made in October 2011, by dividing the functions of the now defunct MMS into three bodies: the Office of Natural Resources Revenue, responsible for revenue collection; the Bureau of Ocean Energy Management (BOEM), responsible for administering the development of mineral resources on the OCS; and the Bureau of Safety and Environmental Enforcement (BSEE), responsible for environmental regulations and enforcement.³¹

These three agencies were intended to enhance regulatory oversight by reducing the conflict of interest between collecting revenue from the very industry it was meant to regulate.

BOEMRE and its successor agencies issued several regulatory reforms after learning lessons from the *Deepwater Horizon* incident. BOEMRE issued the "Interim Drilling Safety Rule" on October 12, 2010, which made several reforms to technical drilling safety requirements. For example, industry best practices according to the American Petroleum Institute were made mandatory instead of voluntary.³²

Also, independent third party verification is required for the proper functioning of the blind shear rams, a crucial component of the Blowout Preventer (BOP), which is the last line of defense in the event of a well blowout. Rig operators must demonstrate their preparation for a "worst-case discharge," and their steps to deal with a blowout scenario.³³ BOEMRE would also begin using multi-person inspection teams for inspections of offshore oil and gas rigs.

Another reform implemented by BOEMRE is the requirement for offshore oil rig operators to implement Safety and Environment Management Systems (SEMS), known as the "Workplace Safety Rule."³⁴ The SEMS requires performance-based standards for equipment, management, safety practices, environmental safeguards and clear protocol to address hazards in all of these categories.

The Workplace Safety Rule was established in order to address the human error that was so evident in the *Deepwater Horizon* disaster.

Legislative Reforms

In the immediate aftermath of the blowout, a flurry of activity occupied the time of the U.S. Congress, as public outrage was at a peak.

The House of Representatives held 32 hearings on the matter while 27 hearings were held in the Senate.³⁵ Over 150 pieces of legislation were introduced to reform the offshore drilling process and regulatory regime. However, Congress has failed to take steps to address drilling safety and incorporate lessons learned from the *Deepwater Horizon* incident.

While there were several attempts to pass legislation, particularly in the first few months after the blowout, enough bipartisan support could not be mustered to implement legislative changes. Once the well was contained, and the oil stopped flowing, the impetus for reform melted away.

The White House pushed a legislative package three weeks after the blowout to increase funding for regulatory oversight, raise liability limits on responsible parties for disasters, and increase a tax on the oil industry to pay into the Oil Liability Trust Fund from 8 cents per barrel to 9 cents.³⁶

The White House bill did not pass. More recently, the RESTORE Act was signed into law as part of a larger transportation bill in July 2012, which would dedicate 80% of penalties BP might pay in the future under the Clean Water Act to restoration of the Gulf of Mexico.³⁷

While this provision will help Gulf restoration, it does not affect regulatory oversight.

With the oil industry and some members of Congress upset over a temporary drilling moratorium enacted by the President and the perceived intentional delays in permitting, political attention shifted from a regulatory regime that was not strong enough, to one that was overly burdensome.

A bill introduced in March 2011 sought to establish deadlines for permitting, forcing the Department of Interior to accelerate the permitting process.³⁸ While this too did not pass, the significant support it received from a sizable faction of Congress demonstrated the political momentum for strengthening the regulatory regime had passed.

The U.S. had experienced its worst environmental disaster in history, and not only did Congress not tighten oversight, but now the political winds had shifted to weaken it.

6. Drilling in the Arctic

With warming temperatures from climate change causing glaciers to retreat, and an increasing global need for energy supplies, the Arctic is the next frontier for energy development.

Although drilling is planned in shallow water, which will reduce risk, offshore oil drilling in the Arctic involves higher innate risk relative to drilling in warmer waters such as the Gulf of Mexico, including harsher weather, shorter days, varying amounts of ice coverage, and less developed infrastructure.

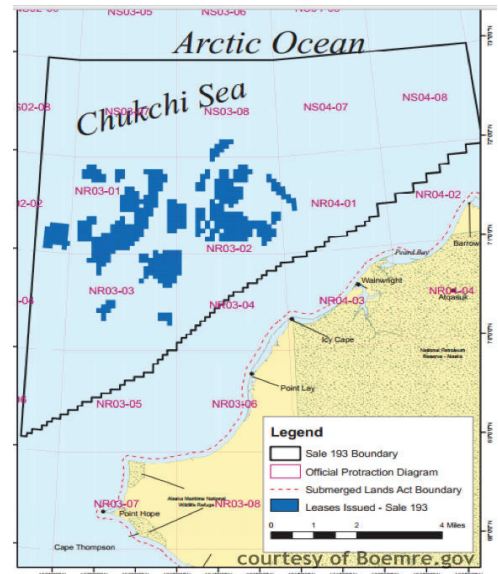
The memory of the *Deepwater Horizon* blowout remains fresh, and with the failures leading to that incident in mind, the Obama administration and the oil industry have taken a series of steps to enhance safety for Arctic exploration.

President Obama signed Executive Order 13580 on July 12, 2011, to establish the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska.³⁹ The working group,

chaired by the Deputy Secretary of Interior David Hayes, will coordinate efforts across all federal agencies to develop energy in the Arctic.

The move is meant to streamline governmental work on offshore oil development, share information and more efficiently issue permits for drilling. Engaging with local Alaskan communities as well as preparedness and response to an emergency situation is also a key objective of the working group.

Shell Gulf of Mexico, Inc. promises to be at the forefront of oil exploration in the Arctic, specifically in the Chukchi Sea and the Beaufort Sea. It acquired leases for exploration in the Chukchi Sea during Lease Sale 193, which took place in February 2008. The figure below shows the leases issued in Lease Sale 193 in the Chukchi Sea.



The lease sale drew criticism from environmental groups that opposed Arctic drilling on the basis of a lack of understanding of the effects of an oil spill on the marine environment. Earthjustice filed a suit against the Minerals Management Service on behalf of a variety of environmental organizations and local communities, and in July 2010 a federal judge ruled that MMS had not adequately considered the environmental impacts of oil and gas development on the surrounding environment as required under the National Environmental Policy Act.⁴⁰

The court also ruled that MMS had failed to consider the impacts of increased natural gas development in the Chukchi Sea. The ruling halted all oil and gas activities in the area, effectively suspending Lease Sale 193 until MMS conducted a proper environmental impact statement.

To comply with the court order, the reformed BOEMRE issued a supplemental environmental impact statement (SEIS), published in the Federal Register on August 26, 2011, which detailed a revised environmental analysis, including the effects of a hypothetical Very Large Oil Spill (VLOS).⁴¹

Shell Gulf of Mexico also produced an Oil Spill Response Plan, detailing their preparedness for a worst case discharge in the Arctic. The plan commits Shell to planning for several contingencies that were not required before the *Deepwater Horizon* incident. For instance, Shell must have ready access to a “capping stack,” to shut off the flow of oil in the event other systems fail.⁴²



Additionally, Shell must be prepared to drill a relief well within a few days in the event of a blowout, a process that took BP months to do. Shell committed to having an oil spill response fleet onshore near the drilling rigs, 24 hours a day, 7 days a week, during drilling operations. Also, if a well were to blowout, Shell promised to have its response fleet onsite within 60 minutes.

Finally, Shell has agreed to limit drilling when whales are present, and also cease drilling if ice coverage returns earlier in the year than expected.

7. Gaps

Environmental Sensitivity and Risks to Marine Ecosystems

Oil drilling in the marine environment has been shown to have deleterious effects on the marine environment. Evidence suggests that noise from seismic surveys conducted during oil exploration damage acoustic animals such as whales, which can ultimately lead to fatalities if within close proximity.⁴³

While whales can generally alter migration patterns to avoid such dangers, an increase in industrial activity may push whales further away from preferred habitats, potentially damaging feeding or spawning patterns. Increased tanker traffic associated with higher oil exploration and production will worsen noise pollution in the Chukchi and Beaufort Seas.

Additionally, the impacts of hydrocarbon releases in the marine environment have been shown to cause detrimental impacts on reproductive health, immunological and neurological functioning, as well as higher incidences of mortality for marine wildlife.⁴⁴

Contaminants from oil and gas drilling are also believed to travel higher up on the food chain, ultimately having cascading effects for marine ecosystems. Shell's 2012 exploration plans include drilling exploratory wells in the Chukchi Sea, a critical habitat for bowhead whales.⁴⁵

The National Wildlife Federation released a report in April 2012 detailing some of the scientific findings of the effects on the Gulf of Mexico from the *Deepwater Horizon* incident. An estimated 523 dolphins were reported stranded in the oil spill area, 95% of which were dead.⁴⁶

These strandings are four times the historic average. The Gulf of Mexico is also the spawning grounds of the Bluefin Tuna, and contact with oil may have reduced juvenile Bluefin Tuna by as much as 20%.⁴⁷ These are only a few examples of the damage that can be done due to an oil discharge.

While scientific evidence suggests drilling will damage the marine environment, the full impacts are not well understood, which will be discussed further below.

Lack of Science on Arctic Ecosystems

Ultimately, the effects of a very large oil spill on the marine environment in the Chukchi and Beaufort Seas are unknown. Since oil production in the Arctic thus far has been limited, impacts have not been thoroughly studied.⁴⁸ Moreover, even the effects of the *Deepwater Horizon* blowout are so far unknown; the full effects will require years of careful scientific study.

The lack of scientific evidence presents critical concerns about further oil and gas development in the Arctic.

The U.S. Geological Survey released a report in June 2011, detailing the gaps in scientific knowledge on the effects of an oil spill in the Arctic.⁴⁹



In particular, the USGS report notes that “[n]umerous efforts have been unsuccessful at developing a transparent, quantitative, and comprehensive method to assess cumulative impacts.”⁵⁰ The report issued three recommendations, “(1) large-scale synthesis of data and information, (2) enhanced dialog and collaborative science planning, and (3) a more transparent and inclusive planning and decision-making process.”

However, the acquisition of scientific knowledge on the Arctic has been relegated to a secondary priority when oil and gas development are in question.

When BOEMRE submitted the supplemental environmental impact statement to comply with the court order that allowed Lease Sale 193 to proceed, BOEMRE ostensibly agreed that science should guide permitting decisions, but its submission allowed Shell to move to the next phase of permitting.

Oceana, a marine conservation group, criticized BOEMRE and its SEIS, noting that despite submitting additional forecasts on the impact of a “very large oil spill” on the environment, the models were simply conjecture.⁵¹ Literally nothing has changed about the general lack of scientific knowledge that exists on effects of Arctic ecosystems from oil drilling.

Inherent Risk of Deepwater Drilling

Offshore oil drilling is a highly complex and technologically advanced industrial activity. The *Deepwater Horizon* blowout demonstrated that despite innovative technology, drilling is inherently a risky operation and safety is not absolutely certain.

The problems with drilling safety are compounded in the Arctic. Shorter days, harsh weather, presence of ice and lack of infrastructure are just some of the additional problems in the Chukchi and Beaufort Seas that do not exist in the Gulf of Mexico. Aware of these risks, Shell has only been given legal permission to drill during the warmer months of July to October.⁵²

Additionally, lessons learned from the *Deepwater Horizon* blowout have not translated into increased safety for offshore oil and gas drilling, as accidents around the world continue.

In the spring of 2012, French oil and gas firm Total finally plugged a well in the North Sea that spewed natural gas for nearly two months.⁵³ Chevron Corp. faces up to \$22 billion in environmental damages in Brazil, for allowing 3,000 barrels of crude oil to leak into the ocean off the coast of Rio de Janeiro in November 2011.⁵⁴ Executives are potentially facing time in prison.

Shell is also facing litigation in Nigeria for its accident at its Bonga offshore oil facility in December 2011. Fifty-five local communities in Nigeria impacted by the oil spill are filing a case against Shell for spilling 40,000 barrels of oil into the ocean.⁵⁵

While the industry would claim that drilling operations have grown much safer since the *Deepwater Horizon* and that these are isolated incidents, they merely demonstrate that offshore oil drilling remains an inherently risky activity.

Inadequate Resources for Regulatory Oversight

Regulatory oversight is critical for ensuring safe offshore operations. Inspections of drilling equipment and operations were woefully inadequate. The newly reconstituted BOEMRE vowed to increase inspections and allocate more resources to oversight. However, oversight remains inadequate.

Oceana noted in a new report that only one-quarter of the inspectors needed to effectively oversee the Gulf of Mexico have been hired.⁵⁶ Additionally, inspections of platforms actually declined by 13% from 2010 to 2011.

Moreover, a lack of safety culture within the industry and the pursuit of cost cutting to enhance profits have exacerbated risk.

Records of BP's oil spill response plan submitted to the Department of Interior show a careless approach to safety. According to the National Commission on the BP oil spill, the designated lead person for oil spill response on BP's application had been deceased for several years before the submission.⁵⁷ Also, BP listed seals and walrus as animals that could be affected by an oil spill.

Since seals and walrus do not live in the Gulf of Mexico, the error proves that BP must have literally copied an application from a different drilling project.⁵⁸

Unproven Oil Spill Response

While the technology used in deepwater oil extraction has dramatically improved over the last several decades, oil spill response has remained largely unchanged. Although the U.S. government has setup several bodies to address oil spill response and recovery, there has been little innovation in oil spill response.

In the event of an oil spill, response and cleanup operations involve oil containment, skimming, and even burning. These are techniques that have not changed since the *Exxon Valdez* spill in 1989.⁵⁹ Shell has included similar operations in its oil spill response plan for the Arctic.

Moreover, confusion reigned during the response to the blowout in the Gulf of Mexico. Under the Oil Pollution Control Act of 1990, the "responsible party" (BP in this case) plays an active role in responding and controlling the oil spill. This created confusion as the Coast Guard was forced to alternately cede control and take the lead at different points in the response.



In the Arctic, the situation is unchanged. Shell has planned to use skimming for oil spill containment, and a "capping stack" to contain a well, similar to one used in the BP response. The Government Accountability Office noted in a report in February 2012 that these technologies could face technical and logistical problems in the Arctic. Ice near the seafloor could prevent the use of the capping stack to contain the well.

Inadequate infrastructure presents dilemmas as well. If a blowout were to occur at the end of drilling season in October, surface ice could prevent an effective response.⁶⁰ Despite Shell's plan to have oil spill response equipment and vessels ready to respond, moving personnel and equipment around in a region so far from

population centers and without sufficient road infrastructure, calls into question their readiness.⁶¹

The Coast Guard is also not up to the task, lacking ice breakers and a presence in the Arctic. As quoted in a Congressional Research Service report, the former Commander of the 17th Coast Guard District (Alaska) said, "we are not prepared for a major oil spill [over 100,000 gallons] in the Arctic environment. The Coast Guard has no offshore response capability in Northern or Western Alaska."⁶²

8. Recommendations

Based on the problems identified above, Arctic drilling plans should be suspended until the multiple gaps can be closed. The following recommendations should be considered to address these issues:

Congress should codify enhanced regulations by the Department of Interior

The Department of Interior took several steps in the aftermath of the *Deepwater Horizon* blowout, implementing rules to address drilling safety and technology. In particular, the Interim Drilling Safety Rule required higher technology standards for the blowout preventer and the blind shear rams, as well as other technical and safety requirements.

The Workplace Safety Rule established performance-based standards for the workplace, including safety protocol, management practices, and environmental safeguards to address the safety culture onboard drilling rigs.

Both of these rules have addressed some safety and operational gaps. However, the longevity and permanence of these rules is uncertain, as executive initiatives can easily be undone in subsequent administrations. Were an administration more favorable to oil drilling to assume office, these rules could be scrapped.

To address this, Congress should codify these rules into law, effectively shielding them from political whims.

More resources should be allocated to BOEM and BSEE

Effective regulatory oversight requires adequate resources. Inspections of oil rigs remain inadequate, and more resources to BSEE are needed. Industry safety culture may not change on its own, and only rigorous oversight will ensure technical and operational standards are being satisfied. Also, BOEM should be allocated more resources to enhance review and oversight of lease applications.

The oil industry has shown a pattern of submitting lease applications with false or incomplete data while still receiving regulatory approvals. More resources are needed to bolster oversight.

A high-level commission on Arctic science should be established

The effects of oil spills on the marine environment are still not well understood, particularly in the Arctic.

While exposure to oil spills damages many species of marine life, the full effects on broader ecosystems remains unclear. A high-level commission to study the ecosystems in the Arctic should be setup, and its charter should include studying the effects on the marine environment of an oil discharge in the Chukchi and Beaufort Seas.

The results could be used to determine the best course for permitting oil drilling leases in the Arctic.

More federal resources should be dedicated to oil spill response

Oil spill response technology and techniques have not kept pace with drilling technology. As offshore oil operators move further into deepwater, oil spill response has remained largely unchanged for decades. To ensure oil spills can be contained, innovation is needed in oil spill response.

The Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) was setup under the Oil Pollution Act of 1990 to conduct research on oil pollution, but only recently began a program on spill response. Members (13 separate government agencies) have done very little since the late 1990s to coordinate oil spill

response research.⁶³

The Coast Guard, as the lead on the committee, should prioritize coordination on oil spill response across agencies.

Also, ICCOPR currently lacks sufficient resources to drive innovation in oil spill response. R&D for oil spill response is funded primarily through the Oil Spill Liability Trust Fund.

The trust fund sources most of its revenue from an 8-cent per barrel of oil excise tax. Congress should consider raising this excise tax to bolster federal resources to the ICCOPR to boost oil spill response research.

Offshore oil drilling in the Chukchi and Beaufort Seas should be suspended until other recommendations are implemented

As noted above, despite advancements in technology, offshore oil drilling is inherently risky. Drilling in new frontiers, such as the Arctic, presents additional risks that do not exist in warmer regions.

Until safety can be assured and the effects of oil on the marine environment are scientifically understood, oil drilling in the Chukchi and Beaufort Seas should be put on hold.

9. Conclusion

Despite delays in permitting and local ice conditions, Shell still hopes to begin exploratory drilling in the Chukchi and Beaufort Seas this year, marking the beginning of a new era in offshore oil drilling.

The Arctic represents the last great frontier for oil exploration, with a potentially large prize for those companies willing to invest in the region and brave the harsh Arctic elements. However, risks abound. The *Deepwater Horizon* blowout demonstrated the dangers of offshore oil drilling and the lack of oversight of an industry that has repeatedly cut corners to boost profits. The National Commission on the oil spill convincingly detailed the gaps that exist in the regulatory regime, but precious little has been reformed.

Without robust regulatory oversight, one cannot be assured the problems onboard the *Deepwater Horizon* will not be repeated in the Chukchi and Beaufort Seas.

Moreover, the lack of scientific understanding of the ecosystems in the Arctic suggests the magnitude of the impacts of oil drilling and a potential oil discharge is unknown.

Until these issues can be resolved, offshore oil drilling in the Chukchi and Beaufort Seas should not move forward.

Nick Cunningham is Policy Analyst for Energy and Climate at the American Security Project

The Arctic Institute is an independent Washington, D.C. - based non-profit organization concerned with public policy and interdisciplinary research and analysis as they relate to a rapidly changing circumpolar Arctic
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Building a New American Arsenal

The American Security Project (ASP) is a nonpartisan initiative to educate the American public about the changing nature of national security in the 21st century.

Gone are the days when a nation's strength could be measured by bombers and battleships. Security in this new era requires a New American Arsenal harnessing all of America's strengths: the force of our diplomacy; the might of our military; the vigor of our economy; and the power of our ideals.

We believe that America must lead other nations in the pursuit of our common goals and shared security. We must confront international challenges with all the tools at our disposal. We must address emerging problems before they become security crises. And to do this, we must forge a new bipartisan consensus at home.

ASP brings together prominent American leaders, current and former members of Congress, retired military officers, and former government officials. Staff direct research on a broad range of issues and engages and empowers the American public by taking its findings directly to them.

We live in a time when the threats to our security are as complex and diverse as terrorism, the spread of weapons of mass destruction, climate change, failed and failing states, disease, and pandemics. The same-old solutions and partisan bickering won't do. America needs an honest dialogue about security that is as robust as it is realistic.

ASP exists to promote that dialogue, to forge consensus, and to spur constructive action so that America meets the challenges to its security while seizing the opportunities the new century offers.



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