

# NOTES

## Another Step Forward: Reconsidering the Current State of Offshore Drilling in the Arctic

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### INTRODUCTION

Deepwater drilling has had a significant impact on the United States economy by increasing the current oil supply and making the economy less dependent on foreign countries.<sup>1</sup> In fact, because of deepwater drilling and other innovative technologies, the International Energy Agency predicts that the United States will

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1. LINCOLN L. DAVIES ET AL., ENERGY LAW AND POLICY 801 (2d ed. 2018).

become a net exporter of oil by the late 2020s.<sup>2</sup> Due to continuous technological advancements, oil drilling has been able to take place at extreme depths, giving drillers access to oil reserves that were previously thought to be unattainable—but at what cost?<sup>3</sup> Because of the lower temperatures and higher pressures associated with these extreme depths, the risks and complications of drilling are significantly greater than those at traditional depths.<sup>4</sup>

These risks are evident from the 2010 Deepwater Horizon incident. In April 2010, British Petroleum's ("BP") Deepwater Horizon rig was in the process of completing a deepwater oil well when an explosion occurred from a well blow-out.<sup>5</sup> As a result of the fire and explosion on the oil rig, eleven members of the crew were killed and oil and natural gas were released into the Gulf of Mexico.<sup>6</sup> As a result of the explosion, five million barrels of oil poured into the Gulf over a period of roughly three months.<sup>7</sup> The overall effects of this event on the Gulf's ecological system were devastating and would take years to overcome.<sup>8</sup> Further, this accident illustrated that even with advanced technology, deepwater drilling is risky and safety cannot be completely ensured.

Discussions over offshore drilling in the Arctic Ocean have turned into highly contested policy issues. Global warming has caused iced-over parts of the Arctic Ocean to melt and become more accessible for oil exploration.<sup>9</sup> However, due to the inherent qualities of the Arctic environment and the current infrastructure in place, there are many physical challenges involved with drilling in this area.<sup>10</sup> In fact, the effects of an oil spill similar to Deepwater Horizon could be drastically magnified in the Arctic.<sup>11</sup> While many post-Deepwater Horizon regulations were put into place to mitigate the risk from future drilling events, it seems as most of those regulations were not designed to address the unique physical challenges of the Arctic. In order for drilling in the Arctic to become a reality, further regulation is needed.

In the face of these risks, many people wonder why companies should even bother exploring offshore drilling in the Arctic region. The answer lies in the massive

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2. INT'L ENERGY AGENCY, WORLD ENERGY OUTLOOK 2017, EXECUTIVE SUMMARY 4 (2017).

3. See DAVIES ET. AL., *supra* note 1, at 802–03.

4. *See id.*

5. CURRY L. HAGERTY & JONATHAN L. RAMSEUR, CONG. RSCH. SERV., R41262, DEEPWATER HORIZON OIL SPILL: SELECTED ISSUES FOR CONGRESS 1 (2010), <https://perma.cc/K7FS-26C5>.

6. *Id.*

7. Naama Hasson, *Deep Water Offshore Oil Exploration Regulation: The Need for a Global Environmental Regulation Regime*, 4 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T 277, 279 (2013).

8. *Id.*

9. LAURA B. COMAY, CONG. RSCH. SERV., R44692, FIVE-YEAR PROGRAM FOR FEDERAL OFFSHORE OIL AND GAS LEASING: STATUS AND ISSUES IN BRIEF 6 (2017).

10. *Id.*

11. CHARLES EBINGER ET AL., BROOKINGS INST., OFFSHORE OIL AND GAS GOVERNANCE IN THE ARCTIC: A LEADERSHIP ROLE FOR THE U.S. 1–2 (2014).

amount of recoverable energy resources in the region.<sup>12</sup> “The Department of Energy estimates them at something on the order of 400 billion barrels of oil equivalent in natural gas and oil . . . four times the crude oil reserves of Kuwait.”<sup>13</sup> By tapping into this supply of resources, the United States could further bolster both its local and national economies. In regards to local economies, the activity of offshore drilling would bring a significant number of jobs to the Arctic and significantly contribute to the development of the region. For the national economy, the US would benefit by having a cheap supply of oil that would contribute to further decreasing its dependence on foreign oil.

This Note will highlight the current offshore drilling regulatory regime, analyze the inherent problems with offshore drilling in the Arctic, and recommend specific regulations to address the problems still prevalent with drilling in the region. Part I of this Note will delineate the laws that instruct the current regulatory scheme for offshore drilling. Next, Part II will highlight the factors that make offshore drilling in the Arctic such a risky endeavor, and analyze the regulations that have been put in place to address these concerns. Finally, Part III will recommend specific additional regulations to be put in place for offshore drilling in the Arctic, and propose methods for their implementation.

## I. BRIEF OVERVIEW OF THE CURRENT OFFSHORE DRILLING REGIME

In order to understand how the problems facing offshore drilling in the Arctic will be addressed, it is imperative to understand the main laws and regulatory bodies that govern the current regime. However, with an astounding amount of law applying to offshore drilling, and regulations being enforced at both the state and federal level, the current regime is complex and difficult to understand. This Part of the Note will attempt to make sense of the regime by delineating the main laws that help establish the regulatory structure for offshore drilling, discussing the scope of power the state and federal governments have in regulating this activity, and laying out the main agencies involved with such regulation.

### A. THE CORE LAWS GOVERNING OFFSHORE DRILLING REGULATIONS IN THE UNITED STATES

In 1953, Congress passed the Submerged Lands Act to give states jurisdiction over the waters and natural resources located within three miles of their coastline.<sup>14</sup> As a result, states have title to the natural resources within their offshore boundaries and the right to develop the land and those resources as they see fit.

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12. Interview by Gwen Ifill with Robert Bryce, Senior Fellow, Manhattan Inst. (Sept. 1, 2015), available at <https://perma.cc/M478-C76D>.

13. *Id.*

14. See Submerged Lands Act, 43 U.S.C. §§ 1311–12 (2017).

Later that year, Congress also passed the Outer Continental Shelf Lands Act (“OCSLA”), which, since its enactment, has served three critical purposes.<sup>15</sup> First, the Act defined the Outer Continental Shelf (“OCS”) as any lands outside the State’s three-mile jurisdictional boundary established by the Submerged Lands Act.<sup>16</sup> Second, it reaffirmed federal jurisdiction over the water and resources within the OCS.<sup>17</sup> Lastly, OCSLA authorized the Secretary of the Interior to create regulations necessary for carrying out the Act and the ability to manage the OCS by granting leases to bidders.<sup>18</sup>

Additionally, in 1982 the United Nations Convention on the Law of the Sea (“UNCLOS”) established territorial limits of the sea.<sup>19</sup> The treaty established that nations could establish a 200 nautical mile Outer Continental Shelf Exclusive Economic Zone (“EEZ”) off their shores where they would have sovereign rights to explore and attain natural resources.<sup>20</sup> By allowing nations’ property rights to extend this far out this treaty was ultimately responsible for the ability to drill in deepwater depths. On March 10, 1983, President Reagan responded to UNCLOS by issuing Presidential Proclamation 5030, which established the United States EEZ.<sup>21</sup>

In short, the development and leasing of offshore drilling sites are controlled by either the state or federal government. If the site is within three miles of the shoreline, states have jurisdiction over natural resource development. However, if the site is outside that boundary, the federal government controls that development, up to 200 nautical miles offshore.

#### B. THE CORE GOVERNMENTAL AGENCIES REGULATING OFFSHORE DRILLING IN THE UNITED STATES

Because of the overlapping nature of drilling, safety, and spill response, numerous entities have legitimate interests in being involved in the regulation of offshore drilling. As a result, there is a lot of interaction and cooperation between agencies throughout the regulation process.

Offshore drilling primarily takes place under the control of the Department of the Interior (“DOI”) which manages offshore drilling leases and develops regulations to carry out the provisions of OCSLA.<sup>22</sup> Before Deepwater Horizon the DOI regulated the Mineral Management System (“MMS”).<sup>23</sup> However, shortly

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15. See *OCS Lands Act History*, BUREAU OF OCEAN ENERGY MGMT., <https://perma.cc/44VS-8BSY> (last visited Nov. 14, 2019).

16. See Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 (2017).

17. See *id.* § 1332.

18. See Outer Continental Shelf Lands Act, 43 U.S.C. § 1334 (2017).

19. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

20. *Id.* arts. 55–57.

21. Proclamation No. 5030, 48 Fed. Reg. 10605 (Mar. 10, 1983).

22. See Hari M. Osofsky, *Multidimensional Governance and the BP Deepwater Horizon Oil Spill*, 63 FLA. L. REV. 1077, 1088 (2011).

23. *Id.*

after that event, the Secretary of Interior split the MMS into numerous agencies based on regulatory function.<sup>24</sup> Today, these agencies consist of: the Bureau of Safety and Environmental Enforcement (“BSEE”), which is in charge of safety, environmental protection, and enforcement functions;<sup>25</sup> the Bureau of Ocean Energy Management (“BOEM”), which focuses on development of the OCS and mineral resources;<sup>26</sup> and the Office of Natural Resource Revenue (“ONRR”), which is responsible for money collections.<sup>27</sup>

In addition to the DOI, other agencies and government entities also play a significant role in offshore drilling regulations. The United States Coast Guard plays a large role in oil spill response and safety.<sup>28</sup> The Ocean Energy Safety Advisory Committee provides guidance on improving offshore drilling safety and oil spill response.<sup>29</sup>

## II. INHERENT PROBLEMS AND CONCERNS WITH OFFSHORE DRILLING IN THE ARCTIC AND CONGRESSIONAL ATTEMPTS TO MITIGATE THEM

As illustrated by the BP oil spill, offshore drilling comes with its fair share of risks and challenges. But when that activity takes place in an environment as treacherous as the Arctic, a whole new set of problems come into play. This Part of the Note will discuss those problems that are inherent with offshore drilling in the Arctic, delineate the current offshore Arctic drilling regulations, and analyze which of those problems are still not adequately addressed by the current regulations.

### A. INHERENT PROBLEMS WITH OFFSHORE DRILLING IN THE ARCTIC

The first problem with offshore drilling specific to the Arctic is that the environment of the region itself intensifies the risks and consequences of oil spills, while also complicating their cleanup.<sup>30</sup> Unlike the Gulf of Mexico, the Arctic has a severe climate consisting of freezing temperatures, high winds, perennial sea ice, and intense fog.<sup>31</sup> In fact, the Arctic Ocean is completely frozen eight to nine months of the year.<sup>32</sup> Additionally, on average, the temperature in the

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24. *See id.*

25. *About Us*, BUREAU OF SAFETY AND ENV’T ENF’T, <https://perma.cc/QWF5-ANBU> (last visited Nov. 14, 2019).

26. *About BOEM*, BUREAU OF OCEAN ENERGY MGMT., <https://perma.cc/MF3D-HW5Z> (last visited Nov. 14, 2019).

27. OFFICE OF NAT. RES. REVENUE, <https://perma.cc/BYK9-D275> (last visited Nov. 14, 2019).

28. Osofsky, *supra* note 22, at 1089.

29. Osofsky, *supra* note 22, at 1089.

30. PEW ENV’T GRP., OIL SPILL PREVENTION AND RESPONSE IN THE U.S. ARCTIC OCEAN: UNEXAMINED RISKS, UNACCEPTABLE CONSEQUENCES 1 (2010), <https://perma.cc/N4MM-XCJM>.

31. *Id.* at 3.

32. PEW ENV’T GRP., ARCTIC STANDARDS: RECOMMENDATIONS ON OIL SPILL PREVENTION, RESPONSE, AND SAFETY IN THE U.S. ARCTIC OCEAN 8 (2013), <https://perma.cc/L7HH-KHE4>.

summer is 38 degrees Fahrenheit, and can fall as low as negative 50 in the winter, not including wind chill.<sup>33</sup>

In these harsh conditions, the chemical composition of oil acts differently and endures longer than it does in warmer waters.<sup>34</sup> In particular, “microbes are slow to degrade oil under cold conditions, and the oil’s most toxic fractions [such as benzene and toluene] can persist for long durations before evaporating, posing risks to aquatic species.”<sup>35</sup> Additionally, perennial ice and weather conditions impede skimmers, booms, and other pieces of equipment used to recover oil.<sup>36</sup> In dealing with this issue, new methods for oil removal need to be pursued. However, according to the World Wildlife Fund, “there is no proven, effective method to clean up oil in ice.”<sup>37</sup>

Not only does the environment in the Arctic region create difficulties with oil spill cleanup, but it can also make water navigation and working conditions difficult. Sea ice, freezing temperatures, and strong wind and waves can damage vessels, impair functionality of equipment, limit transportation, reduce resupply options, and delay or prevent emergency response.<sup>38</sup>

Next, the Arctic’s remote location and limited infrastructure impose problems for offshore drilling. As is the case with most of Alaska, the coastlines of the Beaufort and Chukchi Seas lack major roads, airports, and seaports.<sup>39</sup> The nearest major seaport is in Dutch Harbor, Alaska, which is more than 1,000 miles by sea from Utqiagvik.<sup>40</sup> Additionally, there are only two airports in the region, located in Utqiagvik and Deadhorse, which are large enough to handle cargo planes.<sup>41</sup> However, because these airports are only connected to small roads and ports, they can only provide assistance to a small portion of the region’s coast.<sup>42</sup> As such, there is little oil spill response equipment along a majority of the Arctic coastline, ultimately leaving these areas unprotected.<sup>43</sup>

Since the United State Coast Guard is the first responder to emergency offshore oil spills and would likely be tasked with leading and coordinating clean up efforts, it is crucial for them to have a strong presence in the region.<sup>44</sup> However, its closest base to the Arctic is in Kodiak, Alaska, which is more than 950 air

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33. *Id.*

34. Charles W. Schmidt, *Arctic Oil Drilling Plans Raise Environmental Health Concerns*, ENVTL. HEALTH PERSPECTIVES, Mar. 2011, at A116–117.

35. *Id.*

36. PEW ENVIRONMENT GROUP, *supra* note 30, at 65–66.

37. *Oil and Gas Development*, WORLD WILDLIFE FUND, <https://perma.cc/N9GL-2Q5A> (last visited Nov. 9, 2019).

38. PEW ENVIRONMENT GROUP, *supra* note 32, at 8.

39. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

40. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

41. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

42. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

43. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

44. *See* Osofsky, *supra* note 22, at 1089.

miles south of the region.<sup>45</sup> With this distance being so great, response times would be much longer than for oil spills that take place in more developed areas, such as the Gulf of Mexico. This lack of infrastructure, coupled with the area's severe climate conditions, may preclude any timely response from reaching the Arctic at all.

Aside from impeding emergency responses, the lack of infrastructure also creates logistical obstacles for processing and transporting oil from the Arctic. Without proper access to offshore facilities, roads, ports, and airports, the processing and transportation of oil is difficult. While the Trans-Alaska Pipeline runs 800 miles from the northern end of Alaska, in Prudhoe Bay, to the southern end at Port Valdez, transportation is not necessarily efficient.<sup>46</sup> According to environmental historian Philip Wight:

When lower volumes of oil are shipped through the system, the oil moves more slowly. As the oil slows, it produces less friction and cools faster, causing a buildup of oil wax and ice. This combination of wax and ice can coat critical valves, accumulate at the bottom of the pipeline, and plug up pumping stations—all costly to repair.<sup>47</sup>

Additionally, the severe ice and weather associated with the region can cause damage to vessels and make navigation difficult, making transportation via tanker vessels and trucks unreliable and dangerous.<sup>48</sup>

Lastly, the potential harm that offshore drilling could cause to the marine ecosystem in the region is immeasurable. The Arctic Ocean has a unique ecosystem that is home to a diverse array of species including numerous types of whales, walrus, ice seals, and polar bears.<sup>49</sup> While it is evident that oil spills have the ability to cause devastating harm, the actual effects of offshore drilling on the Arctic ecosystem are not yet well-understood. For example, polar bears are already at risk from global warming melting sea ice because the sea ice is their primary habitat.<sup>50</sup> However, offshore drilling may exacerbate that risk by poisoning their prey, such as seals, through pollution.<sup>51</sup> Additionally, the noise from seismic surveys conducted during offshore oil explorations can damage, and potentially kill, auditory animals such as whales.<sup>52</sup> With few baseline studies addressing the

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45. PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

46. See Philip Wight, *How the Alaska Pipeline Is Fueling the Push to Drill in the Arctic Refuge*, YALE ENVIRONMENT 360 (Nov. 16, 2017), <https://perma.cc/AC63-NK88>.

47. *Id.*

48. See PEW ENVIRONMENT GROUP, *supra* note 32, at 8.

49. PEW ENVIRONMENT GROUP, *supra* note 32, at 6.

50. See *Threats to Polar Bears*, WORLD WILDLIFE FUND, <https://perma.cc/7UN2-ARHV> (last visited Sept. 10, 2020).

51. Elaina Zachos, *Trump's Offshore Drilling Plan—What You Need to Know*, NAT'L GEOGRAPHIC (Jan. 4, 2018), <https://perma.cc/T4HT-AXQF>.

52. NICHOLAS CUNNINGHAM, THE ARCTIC INSTITUTE, OFFSHORE OIL DRILLING IN THE U.S. ARCTIC, PART III: CONCERNS AND RECOMMENDATIONS (2012), <https://perma.cc/MPM6-TUUF>.

potential ecological effects of offshore drilling and oil spills in the Arctic, introduction of the activity into the region is an extremely risky undertaking for wildlife.<sup>53</sup>

#### B. CURRENT ARCTIC OFFSHORE DRILLING REGULATIONS

On September 13, 2016, the DOI, acting through the BOEM and BSEE, attempted to address the problems discussed above by adding specific requirements for offshore drilling and exploration on the OCS in the Arctic region.<sup>54</sup> The regulations codified and developed Arctic-specific operational standards to ensure operators were taking the proper precautionary steps throughout all phases of offshore drilling exploration involving exclusively mobile offshore drilling units.<sup>55</sup> Through these additional regulations, the DOI attempted to resolve a number of important issues and objectives.

First, the regulations help ensure that operators will conduct offshore drilling operations in a manner suitable for the treacherous Arctic conditions.<sup>56</sup> In achieving this objective, the final rule incorporates standards for the design and construction of offshore drilling structures specific to the Arctic region.<sup>57</sup> The regulations, establish an overarching performance standard for equipment which allows for alternative procedures and equipment to be used in offshore drilling.<sup>58</sup> To obtain this approval, operators must submit information regarding the technology such as testing procedures, testing methodologies, quality assurance provisions, operational performance of the equipment, or any other studies relevant to the equipment.<sup>59</sup>

Second, the regulations require operators to develop and submit an integrated operations plan (“IOP”) to the DOI ninety days before filing an exploration plan (“EP”).<sup>60</sup> The purpose of an IOP is to describe how the deepwater drilling operations will be designed, executed, and managed throughout the duration of the endeavor.<sup>61</sup> This requirement ensures that operators will take into serious consideration the extreme conditions of the Arctic early on in the offshore exploration process. Additionally, the DOI is able to comment on any potential issues it sees with the operator’s plans early on.

Third, the regulations require operators to have access and the ability to quickly use source control and containment equipment in the event of a well

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53. See PEW ENVIRONMENT GROUP, *supra* note 30, at 1.

54. See Oil and Gas and Sulfur Operations on the Outer Continental Shelf—Requirements for Exploratory Drilling on the Arctic Outer Continental Shelf, 81 Fed. Reg. 46,478 (July 15, 2016) (to be codified at 30 C.F.R. pt. 250, 254, 550).

55. See *id.*

56. See generally 30 C.F.R. § 250.470 (2019); 30 C.F.R. §§ 250.700–39 (2019).

57. See 30 C.F.R. §§ 250.700–39.

58. See 30 CFR § 250.141 (2019).

59. See 30 C.F.R. § 250.470.

60. See 30 C.F.R. § 550.204 (2019).

61. *Id.*



blowout.<sup>62</sup> When drilling below the surface casing, this includes a capping stack, a cap and flow system, and a containment dome capable of controlling and stopping the flow of an out-of-control well within defined periods of time.<sup>63</sup>

Fourth, the regulations ensure that operators have the capability to predict and respond to dangerous icy conditions and extreme weather.<sup>64</sup> In particular, the regulations require operators to include in their IOP a description of their weather and ice monitoring procedures, forecasting capabilities for all stages in their off-shore exploration endeavor, and thresholds for activating management systems.<sup>65</sup> Once offshore operations begin, the operators are required to notify BSEE and BOEM of any conditions that may trigger ice management activities or affect operations. Operators must also notify BSEE of any termination of ice management activities.<sup>66</sup>

Fifth, the regulations require operators to have access to a separate relief rig and the capabilities to drill a relief well under the conditions expected at the site and during the same season.<sup>67</sup> Further, these regulations require the relief rig to be located close enough to the expected drilling site so it can drill a relief well and disengage the original well within forty-five days of the loss of control.<sup>68</sup>

Sixth, the regulations help ensure that operators effectively manage and oversee contractors.<sup>69</sup> The final rule requires operators to both maintain effective contract oversight and include details of that oversight in the IOP and Application for Permit to Drill.<sup>70</sup>

Next, the regulations require that operators submit oil spill response plans tailored to the Arctic's extreme conditions.<sup>71</sup> This includes not only having the proper equipment in place, but also ensuring personnel with proper training are available as well. Additionally, this final rule establishes planning requirements to maximize oil spill response technology and to set up a coordinated response system.<sup>72</sup>

Finally, the regulations also attempted to mitigate the potential effects of pollution on the ecosystem that are inherent with offshore drilling.<sup>73</sup> Throughout the rulemaking process, locals expressed concerns regarding the effects that petroleum-based mud and cuttings, when discharged, could have on marine life and their environment. This, in turn, would also have an effect on subsistence

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62. See 30 C.F.R. § 250.471 (2019).

63. *Id.*

64. See 30 C.F.R. § 250.470.

65. See 30 C.F.R. § 550.220 (2019).

66. See *id.*

67. See 30 C.F.R. § 250.472 (2019).

68. *Id.*

69. See generally 30 C.F.R. § 550.204 (2019).

70. See generally 30 C.F.R. § 550.204 (2019); see 30 C.F.R. § 250.470 (2019).

71. 30 C.F.R. § 254.70 (2019).

72. 30 C.F.R. § 254.80 (2019).

73. See 30 C.F.R. § 250.300 (2019).

hunting in the region.<sup>74</sup> Environmental analyses show that these discharges could affect not only water quality, but also habitats and organisms within a close proximity to drilling sites.<sup>75</sup> The DOI regulations attempt to solve this issue by requiring oil rig crews to capture all petroleum-based mud and cuttings in Arctic OCS exploration, which would prevent the discharge of such materials from being released into the marine environment.<sup>76</sup> Furthermore, the regulations give Regional Supervisors discretionary authority to capture any water-based mud and cuttings as well.<sup>77</sup>

### C. PROBLEMS WITH THE CURRENT ARCTIC OFFSHORE DRILLING REGULATIONS

As the first of their kind for the Arctic region, these regulations have received a positive overall response from industry experts. In fact, such expert, Eleanor Huffines, Senior Officer for the Pew Charitable Trusts US Arctic Ocean Project, stated:

These new regulations constitute an important first step toward preventing oil spills by providing consistent requirements for the planning and use of oil and gas exploration equipment that can withstand the challenges of the Arctic. Mandating that capping stacks, second rigs, and containment systems be located near drilling operations will help ensure that if an accident should occur, the capability exists to respond quickly using the best available technology and practices.<sup>78</sup>

However, since the enactment of the new regulations, offshore drilling has not taken off as expected. As of November 2019, the Alaska region only had 54 active leases; of which, only three were producing oil.<sup>79</sup> To put this into perspective, at that same point in time, the Gulf of Mexico had 2,546 active leases; of which 1,829 were producing.<sup>80</sup> This data demonstrates that operators are still hesitant to engage in offshore drilling activity in the region. This is likely because the current regulations have not fully addressed the remaining risks associated with drilling in the region.

The first problem still plaguing offshore drilling in the Arctic is the lack of infrastructure. The regulations enacted in 2016 attempted to resolve this issue by requiring operators to have access to appropriate source control and containment

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74. *See id.*; Oil and Gas, 81 Fed. Reg. 46,477, 46,488 (Sept. 13, 2016).

75. *See* BUREAU OF OCEAN ENERGY MGMT., SHELL GULF OF MEXICO, INC. REVISED OUTER CONTINENTAL SHELF LEASE EXPLORATION PLAN CHUKCHI SEA, ALASKA, 106 (2015), <https://perma.cc/NNC5-HKWP>.

76. 30 C.F.R. § 250.300 (2019).

77. *Id.*

78. Press Release, Pew Charitable Trusts, Pew: New Offshore Drilling Standards Help Protect U.S. Arctic Ocean (July 7, 2016) (on file with author), *also available at* <https://perma.cc/RU4N-JNCL>.

79. BUREAU OF OCEAN ENERGY MGMT., COMBINED LEASING REPORT AS OF NOVEMBER 1, 2019 (2019).

80. *Id.*

equipment and to relief rigs within close proximity to the drill site.<sup>81</sup> Since reliable land infrastructure—such as highways, airports, and ports—does not exist, and the closest United States Coast Guard base is approximately 950 miles south of the region, these regulations do a minimally adequate job of mitigating the potential effects of an oil spill in the Arctic.<sup>82</sup> The regulations do not take into consideration many of the potential scenarios that could occur in the course of drilling. For example, the regulations seem to assume that having access to this equipment and a relief rig is sufficient to contain a possible oil spill. However, the extreme weather of the Arctic has been proven to not only make navigation of waters quite difficult, but also has proven to damage and impair the functionality of vessels and equipment. By not having a legitimate infrastructure in place, oil rigs will still have a limited supply of equipment to address these potential disasters. Depending on the severity of weather and of the oil spill itself, there still may not be enough equipment to contain the spill.

Additionally, the current regulations do not address the full effects of offshore drilling on the ecosystem. The current regulations attempted to solve the issue of pollution by requiring operators to capture all petroleum-based mud and associated cuttings and by giving the Regional Supervisor discretionary authority to do the same for water-based mud.<sup>83</sup> However, this only addresses one way that offshore drilling can affect the ecosystem. As previously stated, the sounds from seismic surveys alone have the potential to affect and potentially kill acoustic animals, like whales.<sup>84</sup> These sound waves can have a significant effect on ocean life that lives on the ocean floor.

Finally, these regulations still do not confront the overall lack of knowledge of Arctic ecosystems and the effects that offshore drilling can have on these ecosystems. As previously stated, the Secretary of Interior attempted to improve the safety and spill response to offshore drilling accidents when he created the Ocean Energy Safety Advisory Committee.<sup>85</sup> However, this Committee provides guidance on these issues for the industry as a whole. Because the Arctic environment's characteristics are extreme in comparison to the norm of the overall industry, experts on the Arctic region are crucial for effective guidance. As such, this committee's reports may not properly address the specific risks and effects that can take place in the region. Furthermore, as previously stated, no baseline studies have been done to adequately determine the effects that offshore drilling and oil spills can have on the environment.<sup>86</sup> If the offshore drilling industry is not fully aware of all the risks and effects that can occur through drilling in the

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81. 30 C.F.R. § 250.472 (2019).

82. Pew Environment Group, *supra* note 31, at 9.

83. 30 C.F.R. § 250.300 (2019).

84. CUNNINGHAM, *supra* note 52.

85. Osofsky, *supra* note 22, at 1089.

86. See PEW ENVIRONMENT GROUP, *supra* note 30, at 1.

region, how can the industry be sure that the new regulations properly address these issues?

With offshore drilling in the Arctic still too risky of an endeavor for the activity in the region to fully take off, it may be time to take another step in the right direction by properly addressing these concerns.

### III. PROPOSED SOLUTIONS TO THE PROBLEMS STILL PLAGUING OFFSHORE DRILLING IN THE ARCTIC

Despite regulations put in place to make offshore drilling in the Arctic less risky, plenty of problems associated with the activity still exist. This Part of the Note will make specific recommendations to address those risks, including constructing various infrastructure projects, creating a specialized research committee, and amending existing regulations.

#### A. INFRASTRUCTURE PROJECTS TO SUPPORT OFFSHORE DRILLING IN THE ARCTIC

The first recommendation to address the problems inherent to offshore drilling in the Arctic region is to develop legitimate infrastructure that properly addresses the needs of the activity. As previously stated, the Arctic region severely lacks infrastructure such as roads, ports, and airports.<sup>87</sup> Additionally, the closest United States Coast Guard base is approximately 950 miles away.<sup>88</sup> With limited ways to connect Arctic communities to these ports and bases, the region is susceptible to numerous risks inherent to offshore drilling.

The first risk is that current regulations do not adequately supply the region with emergency oil spill response equipment. If the equipment on the oil rigs or nearby relief rigs fails, there is no backup supply of equipment readily available to control or stop the spill.

Second, in the event of an emergency oil spill, response times are drastically longer than those in more developed areas like the Gulf of Mexico. The oil spill from Deepwater Horizon took approximately three years to be completely cleaned up, costing over \$14 billion and 70 million personnel hours.<sup>89</sup> A lack of infrastructure, combined with the severe conditions of the Arctic, increases response times, which are crucial to mitigating the detrimental effects of an oil spill in the region.

Lastly, the lack of infrastructure further contributes to the logistical issues associated with processing and transporting oil from the Arctic. Without proper access to offshore facilities, roads, ports, and airports, the processing and transportation of Arctic oil will remain a difficult and costly endeavor.

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87. See PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

88. *Id.*

89. Jessica Hartogs, *Three Years After BP Oil Spill, Active Clean-up Ends in Three States*, CBS NEWS (June 10, 2013, 4:21PM), <https://perma.cc/7HA5-MTH8>.

Under a potential infrastructure project, government at both the federal and state levels should cooperate to implement a multi-year and multi-project infrastructure plan. Such a plan would include a large Arctic port with a connected refinery, an airstrip large enough to handle cargo planes, a US Coast Guard base, and an improved network of roads connecting the port to cities along the coast.

Nome, Alaska is an ideal choice of location for a large Arctic port because of its geographic location and existing infrastructure. Not only does Nome already have an airstrip, it also has a hospital and fuel supply facilities.<sup>90</sup> Nome has also previously been considered for an Arctic port.<sup>91</sup> In 2016, the U.S. Army Corps of Engineers announced it would examine whether the benefits of an Arctic port in the city warrant the expenses associated with its construction.<sup>92</sup>

Although Nome already has certain structures in place, numerous improvements will still need to be made to support successful offshore drilling. One of the biggest concerns regarding the Port of Nome is its shallowness.<sup>93</sup> The inner harbor is 10 feet deep, and the outer harbor only 23 feet deep.<sup>94</sup> At these depths, large ships and tankers are unable to use the port and are forced to dock out in deepwater.<sup>95</sup> To address this issue, the port could construct long docks and dredge the seafloor in the port to a depth that is suitable for large vessels.

Additionally, although the current airstrip in Nome is large enough to accommodate jets, it is not large enough to handle cargo planes.<sup>96</sup> This capability would enable the region to receive an adequate supply of proper equipment and supplies, which would ultimately improve oil spill response times. The construction of hangars large enough to house cargo planes and the widening and lengthening of the airstrip will be essential to increasing airstrip capacity.

A potential infrastructure proposal will also create a stronger Coast Guard presence in the region. Currently, there is no guaranteed way to clean oil spills in the icy conditions of the Arctic.<sup>97</sup> As the Coast Guard is primarily responsible for coordinating offshore oil spill response, their presence in the Arctic is crucial.<sup>98</sup> Therefore, ready access to the Coast Guard's assistance and knowledge regarding methods for the control and prevention of oil spills would shorten response times and make cleanup more efficient. Additionally, the sooner a Coast Guard presence is established in the area, the sooner it can gain experience dealing with spills in the region's severe conditions and develop an effective method for their control while minimizing environmental damage.

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90. *Nome, Alaska, Gets Fresh Review as Possible US Arctic Port*, VOA NEWS (Feb. 5, 2018, 10:10PM), <https://perma.cc/4LGA-FK7Y>.

91. *See id.*

92. *Id.*

93. *See id.*

94. *Id.*

95. *Id.*

96. *See id.*

97. World Wildlife Fund, *supra* note 37.

98. *See* Ososky, *supra* note 22, at 1089.

Lastly, the infrastructure proposal would establish a reliable network of roads from the Port of Nome to cities along the Arctic coastline. The current lack of roads poses a difficult challenge to the connection of communities in the region to one another.<sup>99</sup> As a result, numerous communities off the coast lack resources needed to protect themselves, and their waters, from potential oil spills.<sup>100</sup> A reliable network of roads connecting Nome to Arctic coastline communities, would grant those communities access to a steady supply of oil spill response equipment, providing defenses against coastal spills.

In light of this proposed project's expected cost, financing methods will be an important consideration. The proposed infrastructure project would produce benefits at both local and national levels. Accordingly, this plan proposes funding be obtained from both the state and federal government.

At the state level, direct spending for infrastructure projects is relatively low.<sup>101</sup> In fact, Alaska's current spending levels are not enough to keep up with current maintenance projects.<sup>102</sup> In 2018, the Alaskan state government approved a capital budget of \$150 million for the entire state.<sup>103</sup> As such, Alaska will need to raise more capital to fund the infrastructure project. Such additional funding could be obtained by raising state gas and sales tax rates.

In the fiscal year 2019 budget report, the Trump Administration's infrastructure initiative sought to generate \$1 trillion in infrastructure investment through both direct federal funding and incentivized state funding.<sup>104</sup> In support of this goal, the Administration requested \$100 billion in incentivized grants for state and local governments that demonstrated innovative ways of obtaining additional revenue.<sup>105</sup> Additionally, the budget requested \$11.3 billion for the DOI, a portion of which would be dedicated to the "responsible development of energy on public lands and offshore waters."<sup>106</sup> As such, the proposed infrastructure should be able to obtain a material amount of financing from the funds set aside by the federal government for both infrastructure and the DOI. Furthermore, if the Alaskan government is able to demonstrate that it is proactively creating new ways to obtain additional capital for infrastructure projects, such as the tax rate hikes discussed above, it may also be eligible for the incentivized grants.

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99. See PEW ENVIRONMENT GROUP, *supra* note 32, at 9.

100. *See id.*

101. *See generally* James Brooks, *With Infrastructure Funding in Short Supply, Alaska Lawmakers Look Outside for Help*, ANCHORAGE DAILY NEWS (Apr. 24, 2019), <https://perma.cc/Y4YQ-W695>.

102. *Id.*

103. *Id.*

104. U.S. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOVERNMENT FISCAL YEAR 2019 (2018) at 17, <https://perma.cc/ST99-2TEM>.

105. *Id.* at 17–18.

106. *Id.* at 67–68.

### B. SPECIALIZED RESEARCH COMMITTEE

Second, this Note proposes creating a specialized research committee. The purpose of this committee would be to study, in-depth, the Arctic ecosystem and the effects of offshore drilling and oil spills on that ecosystem.<sup>107</sup> The committee should consist of scientific, engineering, and technical experts that specialize in either the Arctic or deepwater drilling. The committee should also include locals that would be affected by deepwater drilling in the Arctic. This specialized committee will conduct controlled oil spill tests in the Arctic, thus enabling the industry to better understand the effects of spills and pollution on the Arctic environment, develop efficient methods to clean up spills, and develop equipment designed to withstand the harsh conditions of the region. This knowledge will, in turn, help the DOI better understand the best course for permitting oil leases in the Arctic.<sup>108</sup>

### C. AMEND REGULATIONS TO FURTHER REDUCE POLLUTION ASSOCIATED WITH OFFSHORE DRILLING IN THE ARCTIC

Third, this Note proposes revisions to 30 C.F.R. § 250.300. The current regulation mandates the capture of petroleum-based mud and associated cuttings, while providing for the discretionary capture of water-based mud and associated cuttings.<sup>109</sup> Because of the current lack of scientific knowledge on the Arctic ecosystem, the extent to which water-based mud and associated cuttings have a detrimental effect on the ecosystem is not yet fully understood. Therefore, it would be in the best interest of the Arctic environment to require the capture of all discharges until more in-depth studies concerning the subject are conducted. Furthermore, the additional costs associated with capturing all discharges should be small, taking into consideration the offset costs of avoided discharge monitoring, reporting, and recordkeeping.<sup>110</sup>

### CONCLUSION

While the DOI took a step in the right direction by enacting Arctic-specific regulations in 2016, offshore drilling activity has not taken off quite like expected. With numerous problems and risks associated with drilling in the region still not being adequately addressed, private corporations continue to find it less risky to conduct their oil explorations in areas like the Gulf of Mexico. For steady offshore drilling activity in the Arctic to become a reality, a reconsideration of the current regulations and infrastructure must take place.

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107. See CUNNINGHAM, *supra* note 52.

108. *Id.*

109. 30 C.F.R. § 250.300.

110. Oil and Gas, 81 Fed. Reg. 46, 477, 46, 505 (Sept. 13, 2016).

Through the development of additional infrastructure, the creation of a specialized research committee, and the enactment of amendments to existing regulations, offshore drilling in the Arctic would be noticeably less risky. First, the proposed infrastructure project would provide a noticeable increase in oil spill protection to the Arctic coastline and improve oil spill response times. Second, the specialized research committee would increase the industry knowledge of the Arctic ecosystem and develop efficient oil spill response methods. Finally, revising the pollution requirements in existing regulations to include all types of discharges would better conserve the Arctic environment until the effects of offshore drilling in the region are fully understood.