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MASTER OF MILITARY STUDIES

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CARPE DIEM: SEIZING THE OPPORTUNITY IN THE ARCTIC WITH A  
COMPREHENSIVE U.S. ARCTIC STRATEGY.

SUBMITTED IN PARTIAL FULFILLMENT  
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## Executive Summary

**Title:** Carpe Diem: Seizing the opportunity in the Arctic with a comprehensive U.S. Arctic Strategy.

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**Thesis:** The United States must make protection of its national security, environmental and economic interests in the Arctic a major priority and develop a comprehensive strategy to accomplish the same or face being frozen out by the other Arctic nations.

**Discussion:** Due to drastic climate change, increasing accessibility and the renewed promise of wealth, the Arctic region holds increasingly significant implications for the national interests of the United States. This situation is being primarily influenced by four dynamics: climate change, the economy, sovereignty issues, and the environment. This paper examines the elements of each of these dynamics, their specific implications for the U.S., and recommended emphasis for a comprehensive Arctic strategy. The emerging relevance of the Arctic has substantial promise to the U.S. and other Arctic nations, particularly in terms of potential energy resources. However, the Arctic is also a unique and vulnerable ecosystem, whose global impacts are not yet known, thus rushing into the region without having protective regimes and response capabilities in place would be imprudent and irresponsible. The new and dynamic situation in the Arctic presents the U.S. with opportunities that go beyond the region, and can be used as a catalyst to begin reshaping world opinion, particularly as it concerns foreign affairs, energy policy and the environment. By effectively using the instruments of national power the U.S. can simultaneously secure its own interests while promoting a cooperative regional approach to the issues of an emerging Arctic region. In doing so, the U.S. could improve its international reputation and influence the security environment worldwide.

**Conclusion:** The proposed U.S. Arctic Strategy can foster a new atmosphere of cooperation in the Arctic that provides for the sustainable development of the vast economic opportunities while protecting the critical environment. In doing so, the U.S. and its regional partners can improve their long-term economic viability and reduce the influence of energy resources on global security, reducing tensions worldwide.

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Perhaps the only thing heating up faster than the Arctic is the international competition by its surrounding nations to solidify their claims and secure control of the area's valuable resources. At stake is more than 90% of the Earth's remaining unclaimed seabed, which is believed to contain significant amounts of oil, gas and other precious minerals.<sup>1</sup> It has been nearly a century since the first explorers reached the North Pole in 1909, but due to drastic climate change and the renewed promise of wealth, the region is finally stepping to the forefront of international affairs. The United States must take notice and make protection of its national security, environmental and economic interests in the Arctic a major priority and develop a comprehensive strategy to accomplish the same or face being frozen out by the other Arctic nations. This situation is being primarily influenced by four dynamics: the climate, the economy, sovereignty issues, and the environment. This paper will examine the elements of each of these dynamics, their specific implications for the U.S., and recommended strategic emphasis to shape the outcome in the best interests of the U.S.

A U.S. Arctic strategy cannot be considered in isolation or developed unilaterally. Consequently, this discussion will include the positions and influence of the other Arctic states and international organizations in this region. The Arctic states are Canada, Denmark (via Greenland), Norway, Russia, the U.S., Iceland, Finland, and Sweden (See Figure 1).<sup>2</sup> In 1996, they formally established the Arctic Council as an international forum to promote cooperative efforts toward the sustainable development and environmental protection of the Arctic. Included in the Arctic Council are Indigenous representatives to protect the unique interests of these aboriginal inhabitants.<sup>3</sup> Finally, a major participant in Arctic international affairs is the United Nations, and specifically the Commission on the Limits of the Continental Shelf (CLCS). This

body, made up of 21 members, only 2 of which are from Arctic states, will play a major role in determining access and ownership to the economic potential of the Arctic Ocean.<sup>4</sup>

### **CLIMATE CHANGE – THE SHAPING DYNAMIC**

The most significant dynamic shaping affairs in the Arctic is climate change. Former Vice President, and now Nobel Peace Prize winner, Al Gore's documentary, *An Inconvenient Truth*, made famous the plight Polar Bears are facing due to an ever shrinking amount of sea ice. This vignette was a tangible example of the accelerated effects of global warming that are taking place in the Arctic. According to the Arctic Council's Arctic Climate Impact Assessment, released in 2004, Arctic temperatures are now rising at nearly twice the rate of the rest of the world and are forecast to increase by as much as 14 degrees Fahrenheit over the next 100 years.<sup>5</sup> The outcome from this temperature change is drastically declining sea ice coverage throughout the region. The 2007 summer marked the lowest recorded extent of sea ice since measurement began in 1979. For September, annually the month with the least amount of ice, the average area of ice coverage was only 1.65 million square miles, 23% less than the previous record low measured in 2005 (See Figure 2). This is the low point in a trend that has seen ice coverage decline by approximately 10% per decade since 1979. Beyond just the numbers, for the first time in human memory, the fabled Northwest Passage across the Canadian north was ice-free for a month this summer.<sup>6</sup>

The Albedo Cycle is the natural process that amplifies global warming trends in the Arctic. The ice cover retreats when the temperature rises allowing more energy to be absorbed by the ocean and less to be reflected back into the atmosphere. This absorbed energy, in the form of heat, warms the ocean and thaws more ice, amplifying the effect in a continuous loop.<sup>7</sup> Additionally, scientist have recently observed a connection between the shrinking ice and ocean

circulation patterns that bring warmer water into the Arctic region, further speeding the loss of ice cover.<sup>8</sup> Scientists examining Arctic warming have come to a general consensus that we could witness a nearly ice-free Arctic as early as 2030 and no later than 2060.<sup>9</sup> If these predictions are true, they propose a much more accessible arctic region that holds significant environmental, economic and security implications for the U.S. and other Arctic countries.

This paper will not discuss the debate about the validity and causes of global warming, but it is based on the assumption that the observed trends and general predictions are accurate for at least the next several decades.

### **ECONOMICS – THE INTEREST DYNAMIC**

While climate change has opened the door to the Arctic, the economic dynamic has laid out the welcome mat. There is broad scientific consensus that the Arctic seabed holds a significant cache of oil and gas reserves, as well as other minerals. Estimates of oil reserves range from the U.S. Geological Survey's high of 25% of the world's remaining oil to the Wood Mackenzie firm's low of 3%.<sup>10</sup> This "low" estimate still equates to approximately 15 billion barrels of oil, or two years worth of annual domestic consumption, just within the U.S. and another 218 billion barrels undiscovered in the rest of the Arctic. These deposits do not have to be massive to significantly benefit U.S. economic and security interests. Currently the U.S. uses 22 million barrels of oil per day for which it relies on 64% to be imported.<sup>11</sup> Declining global reserves, increasing prices, and growing demand for more secure and dependable energy sources make even modest domestic reserves of major strategic value to the U.S.<sup>12</sup> Additionally, U.S. benefit is not exclusive to domestic discoveries, but also from greater security offered by access to new discoveries by Arctic allies like Norway, Denmark and Canada. As former U.S.

Ambassador to Norway, Tom Loftus, put it, "It may be expensive to extract, but the political expense per barrel is less."<sup>13</sup>

Speculation of large oil and gas resources in the Arctic Ocean has existed since the 1960's, but it is only in the last decade that this possibility has begun to look profitable. The higher costs of exploration in and exportation from the Arctic Ocean are steadily being overcome by rising market prices. For example, in 1998 a barrel of crude oil would fetch less than \$12, the per-barrel average in 2007 was more than 5-times that and surpassed the \$100 mark for the first time in February, 2008. Some analysts predict prices could surge as high as \$130 this year.<sup>14</sup> At these prices, the calculus finally shows significant profit potential for oil companies and has resulted in recent increases in investment. In July, ExxonMobil Canada and its partner firm Imperial Oil bought the most expensive lease in the Beaufort Sea to date, committing to \$585 million in exploration over the next nine years.<sup>15</sup> On the U.S. side of the Beaufort Sea, oil giant Shell invested more than \$80 million into exploratory activities in 2007.<sup>16</sup> This investment has run into significant legal opposition from oil exploration opponents, which will be discussed in detail later in this paper. This litigious activity has failed to put a damper on the interest in Arctic oil as demonstrated by the results of the Feb. 6, 2008, Chukchi Sea lease auction. The U.S. Mineral Management Service (MMS), responsible for the offshore leasing program, initially expected the auction to bring in \$67 million. This turned out to be a gross underestimate, as the auction actually earned a record \$2.6 billion.<sup>17</sup>

No matter how bountiful the resources of the Arctic may be, they are worthless if they cannot be extracted and transported to markets. This requires shipping to support operations and infrastructure, as well as transport the product. For instance, the relatively small Shell Oil operation in the American Beaufort Sea requires the support of nine separate vessels at a cost of

\$40 million.<sup>18</sup> With the promise of long-term need, the shipping industry has begun to take notice and is making a focused effort to design and build bigger and better “Arctic-capable” ships to support the forecasted rise in demand. For example, Samsung Industries is building three 120,000-ton tankers, capable of breaking through over five feet of ice continuously, specifically designed for the Varandey oil export project off northeastern Russia.<sup>19</sup> Similarly, several design concepts are being considered for ice-capable liquefied natural gas (LNG) tankers for use in Russia’s Barents Sea and five specially designed vessels are being built to transport mined resources, such as nickel, from Siberia. Industry-wide the order backlog for ice capable ships is at 152, which would increase the worldwide fleet of vessels of this kind by 50%.<sup>20</sup>

Maritime operations in an ice-free Arctic are not just about oil and gas, but also regional and global shipping operations. In just the last decade, three weeks have been added to the Arctic shipping season and several of the Arctic nations and the Arctic Council have begun to seriously look at the possibilities and ramifications of new trade routes through the Arctic. Canada and Russia began bilateral talks in January 2007, to consider opening an “Arctic Bridge” between Murmansk and Churchill. The discussion was initiated by Russia and accompanied with the offer of using seven of their modern icebreakers to keep Churchill’s port open year-round. Currently, the port operates only four months out of the year primarily for wheat export.<sup>21</sup> The unexploited resources in Canada’s Arctic provinces, including gold, silver, zinc, iron and diamonds, are potentially worth trillions of dollars. The accessibility and profitability of these resources will increase significantly with continued warming and access to year-round port facilities. As an indication of this potential, revenues from the Northwest Territory increased by almost 10-times, from \$24 to \$224 million between 1998 and 2006.<sup>22</sup>

Arctic shipping routes are not of interest solely to the Arctic nations, but have global implications through the possible opening of two new shipping routes, the Northern Sea Route (NSR) and the Northwest Passage (NWP). The NSR follows the northern coastline of Russia, providing a direct route from the North Sea of the Atlantic to the Northeast Passage of the Pacific. The NWP transits between the top of Continental Canada and its Northern Islands. Both provide significant decreases in time and distance from the current routes through the Suez and Panama canals (See Figure 3). In the business of long-distance sea cargo, "time saved is money made."<sup>23</sup> Some analysts estimate the savings could be as much as \$800,000 of fuel and labor savings per trip for a large freighter.<sup>24</sup>

In both trade and strategic terms, China would benefit substantially from a reliable Arctic passage. Currently, 60% of vessels transiting the strategic straits of Southeast Asia are either Chinese, or carrying cargo to or from China.<sup>25</sup> Recently, both China and India have had talks with Russia about using the Northern Sea Route. Russia is also considering plans to ship LNG directly to the United States, which has become the largest LNG importer in the World.<sup>26</sup> Other industrialized nations like Japan and South Korea could alter their energy-import patterns away from volatile regions like the Middle East and Africa.<sup>27</sup>

While conditions, demand and technology are not yet right for these routes to be used regularly, it is clear that they will be in the near future. This will require establishment of consistent and appropriate international regulations for design, construction and use of Arctic shipping. Additionally, capabilities and procedures must be put in place to respond to safety, security and pollution incidents that are likely to accompany an increase in traffic (See Figure 4). Peter Noble, Chief Naval Architect for the oil company ConocoPhillips, laid out the following architectural design challenges that must be considered for ships intending to operate in the

Arctic, these are a good representation, though not all inclusive, of what the International Maritime Organization needs to consider in establishing Arctic-specific regulations for ship design and operation.<sup>28</sup>

- Good performance in ice and open water
- Must be efficient, reliable, cost effective and environmentally sound
- Must possess a higher degree of self-sufficiency to account for limited availability of support infrastructure in the Arctic region and limited emergency/pollution response capabilities.
- High load capacity, but shallow draft.
- High power, but fuel-efficient.
- Robust navigation and communication systems to meet challenging Arctic conditions.
- Extra attention given to crew habitability and work conditions to compensate for the operating environment to include: extended darkness, bitter temperatures, high winds, heavy seas and noises associated with ice operations.

U.S. Coast Guard Commandant, Admiral Thad Allen, expanded on this subject during his remarks at the IMO's 25<sup>th</sup> Assembly in November, 2007. He suggested that the IMO "Polar Code" be broadened to include Arctic navigation and crew training standards, ice-capable vessel construction standards, traffic separation schemes and pollution prevention and response.<sup>29</sup>

### **SOVEREIGNTY – THE FRICTIONAL DYNAMIC**

Sovereignty, and ultimately resource control, is the most frictional dynamic in the shaping of the Arctic's future. The influential publication, *Foreign Policy*, declared the Arctic, "The World's most valuable disputed turf."<sup>30</sup> Sovereignty disputes have existed in the Arctic before Jean Bodin initiated the modern concept in 1576.<sup>31</sup> Pursuit of an east-to-west route from Europe to the Arctic was a driving force behind European expansion and exploration in North America, with the earliest attempt to discover the Arctic's Northwest Passage by Englishman John Cabbot in 1497. Now, more than 500 years later, control of that fabled passage and several parts of the Arctic remain contested. Presently there are six active territorial disagreements over

land, water and seabed, but at their essence they are truly about control of and access to resources.

The only land dispute is over tiny Hans Island located between the Danish protectorate Greenland and Canada. Though the island is uninhabitable, its ownership has implications for the control of a potential shipping route opened by an ice-free Arctic. Officials of both nations have made high-publicity visits to claim the Island, to include the Danish Navy placing a plaque on the Island in 2002 and the Canadian Defense Minister landing on the Island in 2005 to assert Canadian sovereignty.<sup>32</sup> Later that year, the two nations agreed to disagree and jointly manage the Island. Despite this temporary arrangement, both countries continue to pursue their claim, which is likely to be settled by the United Nations.<sup>33</sup> As will be discussed in detail later, Canada and Denmark are cooperating closely to resolve a sovereignty dispute of much greater significance with Russia.

There are three maritime boundary disputes in the Arctic region, but they share one glaring commonality – oil. Russia and Norway have a standing dispute over their boundary in the Barents Sea that is preventing exploration of an area estimated to hold 40 billion barrels of oil.<sup>34</sup> Russia also has a maritime boundary disagreement with the U.S. over a portion of the Chukchi Sea also believed to hold significant energy resources. The 18,000 square-mile area was ceded to the U.S. in 1990 under the U.S. – Soviet Maritime Boundary Agreement, but the treaty was never ratified by the Soviet or Russian parliament. In July 2007, Russian media outlets described the agreement as treasonous and members of the Russian legislature have called for a review of the agreement.<sup>35</sup> Finally, the U.S. and Canada have a standing dispute over the maritime boundary between them in the Beaufort Sea. This 100-square mile area in question is also said to be resource rich with oil and gas.<sup>36</sup> Despite lofty rhetoric, there is genuine interest on

all sides for resolution of these disputes. For example, in 2005, a Norwegian government committee studying issues in the Arctic included in its recommendations that the Barent's Sea dispute must be settled as soon as possible. Russian President Vladimir Putin echoed this sentiment when he said to the Norwegian Prime Minister Bondevik "We've got to solve this issue before you and I become pensioners."<sup>37</sup>

The remaining points of contention are more complex and multi-national in nature with far broader regional impacts. First is the disagreement primarily between the U.S. and Canada, with increasing interest by other nations, regarding the status of the NWP. The dispute is over whether the NWP is an international strait, as the U.S. asserts; or part of Canada's internal waters as part of an archipelagic state. At stake is the degree of control that Canada has over activities within the NWP. By international law, as laid out in the UN Convention on the Law of the Seas (UNCLOS), vessels are entitled to exercise "Transit Passage" through international straits.<sup>38</sup> Vessels transiting through these straits are only required to comply with international laws and additional requirements cannot be made by the states adjacent to the Strait. Vessels transiting through an archipelagic state are entitled to exercise "Innocent Passage." This means they have the right to transit through a state's territorial waters, but that state can establish and enforce its own non-discriminatory regulations for certain activities, including fiscal, immigration, sanitary, and customs laws and the protection of resources.<sup>39</sup>

Canada's specific motivation for controlling use of the NWP is protecting its environment, a reasonable position considering how long and narrow the NWP is and the direct impact an environmental incident would have. More significant in terms of resolution is the emotional nature of this issue for Canadians. They are very proud of the fact that they are an "Arctic Nation" and have traditionally been adamant about demonstrating their independence

from the U.S. in their foreign policy. This places significant pressure on Canadian leaders to be hardliners.<sup>40</sup> The U.S. position is not specific to the NWP but applies to its emphasis on protecting the principle of freedom of navigation, particularly as it applies to maritime chokepoints worldwide. U.S. acceptance of the Canadian claim as it stands now could set a precedent and embolden other nations to make similar claims, a dangerous domino effect in the eyes of U.S. foreign policy and national security interests.<sup>41</sup> It is in the best interest of both nations to come to a workable agreement on this issue sooner rather than later. While they seem far apart on the issue, the fact is that they have substantial mutual interests that can be addressed through compromise, including the environment, safety, security and economic development. Specific discussion on the way ahead will be discussed in detail later.

The most contentious of the Arctic disputes is over the Lomonosov Ridge, an undersea ridge that extends across the Arctic Ocean from North America, under the North Pole, to Siberia. The region has been subjected to conflicting claims by Russia, Denmark and Canada. At the heart of determining the outcome of this issue is likely to be UNCLOS, which provides the procedures for establishing national sovereignty over the continental shelf beyond 200 nautical miles based on submissions submitted to the CLCS. Russia submitted a claim over the ridge up to the North Pole in 2001. If accepted, the claim would have added another 460,000 square miles of Arctic seabed to Russia. The CLCS returned the claim citing a lack of scientific evidence. In the aftermath all three nations have engaged in research efforts to strengthen their claims. This is no easy task because, as the Wall Street Journal put it, "we currently have better maps of Mars than of the Arctic seafloor."<sup>42</sup> Canada and Denmark are working cooperatively to counter the Russian claim, while the Russians recently placed emphasis on their claim by literally planting their flag on the seabed directly under the North Pole (See Figure 5).<sup>43</sup>

Conspicuously absent from this dialogue is the U.S., which has yet to ratify UNCLOS. The UN adopted UNCLOS in 1982, but the U.S. opposed the treaty as “global socialism.” Since then, the concerns expressed against UNCLOS by President Reagan have been resolved and the treaty was signed in 1994, however, it still awaits Senate ratification. The treaty is now supported by the current administration, several past Secretaries’ of State, including Reagan’s, the Joint Chiefs of Staff and the Commandant of the Coast Guard. However, Congressional conservatives remain concerned about the perception of ceding so much control to the UN. At stake is a seat with veto power on the decision-making body.<sup>44</sup> UNCLOS supporters, including the odd allegiance of oil and environmental lobbyists, hope the Russian flag planting serves as a tipping point for U.S. ratification.<sup>45</sup>

The challenge for the U.S. is protecting its sovereign interests and meeting its responsibilities in an accessible Arctic. The opening of the Arctic opens a fifth border that must be monitored and secured and increased maritime activity requires a regulatory and response capability. Responsible for addressing this challenge is the U.S. Coast Guard, which is both the federal law enforcement presence and military maritime component commander for the region. While the Coast Guard is familiar with and has significant resources in Alaska, these operate almost exclusively on the southern side of the state and are not positioned or prepared for regular Arctic operations. Additionally, the Coast Guard’s polar icebreaker fleet is in bad shape. There are currently only three polar class icebreakers in the Coast Guard, however two of these are over 30 years old, with one currently inoperable, and the third was not designed for Antarctic operations, restricting the already challenging management of these precious resources. With sovereign interests at both poles of the earth the U.S. must examine the value of the interests at stake and make appropriate investments to protect these.<sup>46</sup> By comparison, Russia has 18

icebreakers, seven of them nuclear; Finland has seven; Canada has six, though they are in declining condition; and Sweden has one.

### ENVIRONMENT – THE IRONIC DYNAMIC

“To environmentalists, then, the prospect that the Arctic – thus far the place where climate change has been most dramatic – might yield significant oil deposits...forestalling further movement toward alternative fuels, is particularly galling.”<sup>47</sup> This quote effectively sums up the irony of the environment dynamic in the Arctic region’s new prominence on the international scene. Relatively little is known about the Arctic’s environmental system and its global influence, but natural recovery in the Arctic zone is very slow, and thus the idea of “short-term” impacts is irrelevant when considering the consequences of our actions in the region. It is the significance of what we know, and the potential of what we do not know that motivates environmental and scientific interest in the Arctic, which is in direct and active conflict with economic activities.

This conflict is being fought out in both the courts of law and public opinion. Examples include several lawsuits pitting energy development plans against environmental interests. Shell Oil was not able to conduct the exploratory drilling they hoped and paid to do in 2007 due to a U.S. Federal Court injunction resulting from a lawsuit filed by the interesting pairing of indigenous whalers and environmentalists against the MMS. Similarly, conservationists and some Alaskan native groups filed a lawsuit, also against the MMS, to block the sale of leases for drilling in the Chukchi Sea due to concerns about the protection of polar bears, whales and walruses. At issue in both cases is the opinion that not enough research was done concerning the potential environmental impact of these activities and the threats of a major oil spill. The MMS contends that its environmental impact program is ongoing and that enough of an assessment has

been completed to allow preliminary exploration activities, and more detailed assessments are required for more invasive activity. Additionally, leaseholders are required to implement mitigating measures for whaling activity.<sup>48</sup>

Related to these lawsuits is the battle between the polar bear and the oil companies. A conglomeration of environmental groups petitioned the U.S. Fish and Wildlife Service (FWS) in 2005 to add the polar bear to the Endangered Species Act (ESA). The most interesting thing about this petition is that it bases the polar bears threatened condition on global warming. Opponents fear that granting the polar bear ESA status on these grounds would give environmental litigators a legal basis to go after countless industries, even those well outside the animals natural habitat, that contribute to the greenhouse gases in the atmosphere believed to cause global warming. Additionally, these opponents contend that the science being used to justify the listing is faulty and that polar bears are actually more abundant now than any time in the 20<sup>th</sup> century.<sup>49</sup> Most recently, three conservation groups filed a lawsuit against the Department of Interior, which oversees the FWS, requesting the court to order the department to make a decision regarding the polar bear's status. This determination was originally supposed to be made by Jan. 9, 2008, but the FWS delayed the decision citing the need to evaluate new data provided.<sup>50</sup> Proponents for protecting the bears believe the delay in this determination was intentional so as to not interfere with the MMS Chukchi Sea lease auction, which took place Feb. 6, 2008 and was announced on Jan. 2.<sup>51</sup>

The clamor over the Arctic has been loud enough to get the attention of lawmakers. Bills have been introduced in both houses of Congress intended to delay any drilling activity in the Chukchi Sea until the polar bear listing decision has been made and more thorough research into the full impacts of exploration.<sup>52</sup> More proactively, the Senate has approved a resolution

requiring the U.S. to pursue an international agreement for managing Arctic fisheries. This resolution follows a decision by the North Pacific Fishery Management Council to put a moratorium on fishing in federal Arctic waters until a formal management plan is in place.<sup>53</sup>

While the lawsuits get the headlines, it is generally agreed that the largest environmental threat in the Arctic is the possibility of a major oil spill. An event like this could be devastating to the environment, much more so than in other parts of the world. The freezing temperatures and clustering habits of many of the region's species would make the effects simultaneously more enduring and damaging. Additionally, the response capabilities are currently non-existent to meet the unique challenges of a major Arctic oil spill. Contrary to conventional wisdom, the reduction in sea ice has actually increased the risk of having a spill. While the amount of shipping activity increases, the unpredictability and mobility of the ice increases the hazards to navigation.<sup>54</sup> One positive from this is the increased emphasis on researching and developing response strategies to an Arctic oil spill. Along these lines, the National Oceanographic and Atmospheric Administration is spearheading efforts to study the behavior of oil in ice, how to locate oil under ice or during dark periods, and the best response strategies, including mechanical methods, chemical dispersants, burning, and weathering.<sup>55</sup>

Oil is actively engaged in its own public relations campaign to appear "greener" and to gain the support of the indigenous population in Alaska. Shell Oil's President of U.S. operations, John Hofmeister, recently made the rounds in Alaska, visiting a Shell-funded academic program at the University of Alaska-Anchorage and several villages on the North Slope. What is most interesting about this is their apparent willingness to invest now while progressing patiently. "We have to earn the respect of the communities of the North Slope and we have to demonstrate by our actions that they can rely on what we're saying. That will take

some time. Over a period of time we do expect that we can win the trust, that we can operate successfully and safely and that we can demonstrate that environmental stewardship is part of our business model,” said Hofmeister.<sup>56</sup>

Not all of the economic development in the Arctic is bad. One positive example is the potential for use of northern ports to support activities in the Arctic tundra regions. Historically, the only way to access these areas was by extending roads from the south across the sensitive terrain. With more accessible northern ports shorter, more economic road networks, and even barges in the case of the Mackenzie River, can service these same areas.<sup>57</sup>

### **U.S. ARCTIC STRATEGY IMPLICATIONS TO 2020**

Implications for the U.S. and the Arctic are about what *is* and what *could be*. The Arctic *is* the newest and most unique region influencing U.S. national security interests. It *is* a major source of future energy resources vital to the nation’s long-term security and viability. The U.S. approach to the Arctic *is* an opportunity to begin reshaping world opinion, particularly as it concerns foreign affairs, energy policy and the environment. U.S. strategy in the Arctic *could be* the catalyst to improve its international reputation and influence the security environment worldwide without compromising its specific interests. This opportunity is enhanced by its timing simultaneous to a changing U.S. Administration, making it easier to overcome the credibility challenges America currently suffers from. It is worth noting that two of three remaining presidential candidates have visited Norway’s Svalbard Islands to better understand the impacts of global warming.

This paper’s proposition for a U.S. Arctic strategy will start with the macro-level focus and then provide more specific actions to support those. The period for this strategy is out to 2020. This was chosen to both make the strategy long-term, while not extending it out so far that

it is beyond our focus or reality. This date is supported by the fact many of the changes being observed in the Arctic will not be substantial enough to change human behavior until after that date. At the same time, some of the decisions that need to be made regarding the Arctic have to be made now in order to allow enough time for research, development and execution of actionable items and prevent actions that may have irreversible negative consequences.

The first dynamic to be addressed by a U.S. Arctic strategy must be sovereignty. The increasing accessibility of the Arctic not only increases our sovereign opportunities, but it also influences our sovereign responsibilities, particularly in the areas of safety, security and environmental stewardship. The focus on the Arctic must look beyond sovereign interests and work to support a regional consensus that improves relationships and enhances cooperation throughout the Arctic. Next, the U.S. must find the right balance between the economic and the environmental dynamics, ultimately emphasizing sustainability and stewardship over development. This is not to say that the economic potential of the region cannot be tapped, but the Arctic environment and its potential global influence must be better understood before actions are taken that may irrevocably harm it, thus development must be pursued cautiously and in concert with our efforts to understand the Arctic environment. The economic potential of the Arctic should be looked at as long-term economic opportunity across a range of enterprises, rather than as a short-term energy boom that could have long-term negative repercussions. The mantra for this Arctic strategy should be borrowed from the medical profession's philosophy of nonmalificence; *to help, or at least to do no harm.*<sup>58</sup>

The U.S. Arctic strategy should look to capitalize on both the real and perceptual opportunities presented and *Carpe DIEM* – seize the day. This expression is chosen both to be representative of the opportunity the Arctic could be for the U.S., but to also frame the strategic

approach. DIEM is a play on the traditional acronym for the instruments of national power: diplomacy, information, economy, and military. The order of these elements is intentional based on the priority they should be given relative to each other.

Diplomacy – Emphasis in this area should be put toward resolving issues of sovereignty and strengthening a cooperative environment among the Arctic states that emphasizes regional stability and sustainability. Specifically, the U.S. should actively embrace the Arctic Council and seek to expand its role as a forum of cooperation, collaboration and arbitration for the region, fostering an environment where regionalism is at least on par with nationalism. Ratification of UNCLOS is of paramount importance to any effective U.S. Arctic strategy. Without doing so, the U.S. is unable to influence the outcome of the sovereignty disputes favorably and will further enhance its global reputation as a unilateral actor. The U.S. should establish the position domestically and internationally that the Arctic region is unique in terms of both geography and environment, thus foreign policy can be applied to the region uniquely. Once established, this policy could allow a special compromise with Canada on the NWP that could be justified in a manner that counters any potential ripple effect from other nations straddling strategic straits. As established earlier, there is plenty of common interest between the two nations to both allow the NWP to be used as a sea lane, but provide adequate protections to national and regional interests, particularly concerning security and the environment. Negotiations toward this compromise could be facilitated through the Arctic Council and UN, which would enhance the council's efficacy while demonstrating U.S. commitment toward cooperation in the region.

Information – A successful U.S. Arctic strategy requires broad-based domestic support, thus emphasis has to be given to an information campaign that increases awareness of the nation's Arctic status, touts the long-term benefits of this status, but plays down the energy potential of the region while making environmental considerations paramount. Internationally, the U.S. should use its significant scientific and research capabilities as good-will currency to foster a collaborative spirit within the Arctic Council. This measure could be used to support diplomatic efforts by helping to provide the scientific support for a single seabed-claim submission on behalf of the entire Arctic region to the CLCS. Finally, the U.S. must work to completely separate the development of the Arctic and the theory of energy independence. Instead, the potential of future energy resources should be framed in terms of improving the global energy situation and reduce the tensions these resource demands cause.

Economics – Consistent with the points emphasized in the information element of this strategy, U.S. economic activities in the Arctic should not be overly focused on energy resources. As established earlier, the economic opportunities in the region are substantial, but to be beneficial for the long-term they need to be effectively pursued and regulated. Again, the emphasis here should be on regional cooperation, using the Arctic Council as a coordinating body to develop regulatory regimes that are supported and enforced uniformly. Specific actions in this area should include Arctic-specific shipping regulations passed through the International Maritime Organization and development of an international Arctic fisheries management plan. Additionally, there are economic opportunities related to the environmental emphasis on the region. One opportunity this strategy should look to exploit is the potential for mutually beneficial cooperation between industry and scientist to simultaneously study the Arctic for both

environmental understanding and economic potential. These efforts could be international in scope and regionally coordinated through the Arctic Council. Finally, the economic benefit of the region should be used in part to establish a regional fund to support cooperative efforts in research, emergency response programs and sustainable development.

Military – As stated in the new National Maritime Strategy, released in October 2007:

“Climate change is gradually opening up the waters of the Arctic, not only to new resources development, but also to new shipping routes that may reshape the global transport system. While these developments offer opportunities for growth, they are potential sources of competition and conflict for access and natural resources.”<sup>59</sup>

Though this strategy recommendation emphasizes regionalism over nationalism, in the area of national security the U.S. must be prepared and postured to protect itself first. As established earlier, our current capability to operate effectively in the Arctic environment is severely limited, and there is no quick fix to this situation. The capital investment must be started now to enhance our ability to establish a permanent sovereign presence in the Arctic environment. In the interest of stewardship, the primary means for this presence should be in the form of multi-mission platforms, like the icebreakers we currently have, that are able to conduct near simultaneous military, law enforcement, rescue, research and environmental response operations. Additionally, the U.S. should gradually establish the shore-based support infrastructure required for a near-continuous Arctic presence by 2020.

Even in this area of national power there are numerous opportunities to enhance regional cooperation. The U.S. should work closely with its Canadian allies toward complementary development, basing and employment of Arctic assets; this could be done through the joint organization already in place at the North American Aerospace Defense Command. Additionally, the network of regional Coast Guard forums already in place in the North Pacific

and North Atlantic could be used as a model for the development of an Arctic Coast Guard Forum to improve regional security, safety and response coordination.

## CONCLUSION

The increasingly accessible Arctic presents a new and unique opportunity for the U.S. and it should *Carpe DIEM* as proposed above. By doing so, the U.S. can simultaneously reduce the level of competition and conflict in the Arctic; secure its own national interests; and improve its global reputation. The recommended U.S. Arctic Strategy can foster a new atmosphere of cooperation in the Arctic that provides for the sustainable development of the vast economic opportunities while protecting the critical environment. In doing so, the U.S. and its regional partners can improve their long-term economic viability and reduce the influence of energy resources on global security, reducing tensions worldwide.

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<sup>1</sup> Colin Woodard, "Who Resolves Arctic Oil Disputes?" *The Christian Science Monitor*, Aug 20, 2007

<sup>2</sup> Finland and Sweden do not actually border the Arctic Ocean, which is a primary influence in Arctic international affairs.

<sup>3</sup> <http://arctic-council.org/article/about>

<sup>4</sup> Annex II to the U.N. Convention on the Law of the Seas: Provisions governing the Commission on the Limits of the Continental Shelf. As set forth in article 3 of Annex II, the functions of the Commission are:

- (a) To consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with article 76 and the Statement of Understanding adopted on 29 August 1980 by the Third United Nations Conference on the Law of the Sea;
- (b) To provide scientific and technical advice, if requested by the coastal State concerned during preparation of such data.

In accordance with article 76(8), the Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

Source: [http://www.un.org/Depts/los/clcs\\_new/commission\\_purpose.htm](http://www.un.org/Depts/los/clcs_new/commission_purpose.htm)

<sup>5</sup> Arctic Climate Impact Assessment, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment*. (Cambridge University Press, 2004), 8. <http://www.acia.uaf.edu>

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- <sup>38</sup> Article 38 of Part III to UNCLOS: Right of transit passage
1. In straits referred to in article 37, all ships and aircraft enjoy the right of transit passage, which shall not be impeded; except that, if the strait is formed by an island of a State bordering the strait and its mainland, transit passage shall not apply if there exists seaward of the island a route through the high seas or through an exclusive economic zone of similar convenience with respect to navigational and hydrographical characteristics.
  2. Transit passage means the exercise in accordance with this Part of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone. However, the requirement of continuous and expeditious transit does not preclude passage through the strait for the purpose of entering, leaving or returning from a State bordering the strait, subject to the conditions of entry to that State.

3. Any activity which is not an exercise of the right of transit passage through a strait remains subject to the other applicable provisions of this Convention.

<sup>39</sup> Article 21 of Part II to UNCLOS: Laws and regulations of the coastal State relating to innocent passage

1. The coastal State may adopt laws and regulations, in conformity with the provisions of this Convention and other rules of international law, relating to innocent passage through the territorial sea, in respect of all or any of the following:

- (a) the safety of navigation and the regulation of maritime traffic;
- (b) the protection of navigational aids and facilities and other facilities or installations;
- (c) the protection of cables and pipelines;
- (d) the conservation of the living resources of the sea;
- (e) the prevention of infringement of the fisheries laws and regulations of the coastal State;
- (f) the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof;
- (g) marine scientific research and hydrographic surveys;
- (h) the prevention of infringement of the customs, fiscal, immigration or sanitary laws and regulations of the coastal State.

2. Such laws and regulations shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards.

3. The coastal State shall give due publicity to all such laws and regulations.

4. Foreign ships exercising the right of innocent passage through the territorial sea shall comply with all such laws and regulations and all generally accepted international regulations relating to the prevention of collisions at sea.

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<sup>47</sup> Drake Bennett, "Northern Exposure: As the Arctic melts, vast deposits of oil and gas may be opened up for exploration. Will an Arctic without ice only prolong our dependence on fossil fuels?" *Boston Globe*, Feb. 18, 2007.

<sup>48</sup> Felicity Barringer, "Suit Seeks to Block Oil Search Off Alaska," *The New York Times*, Feb 1, 2008; and Minerals Management Service, "Remarks Prepared for MMS Director Luthi, Chukchi Sea Sale 193," Feb 6, 2008 [http://www.mms.gov/PDFs/Speech--LuthiRemarksSale193-02-05-08%20\\_2\\_%20\(2\).pdf](http://www.mms.gov/PDFs/Speech--LuthiRemarksSale193-02-05-08%20_2_%20(2).pdf)

<sup>49</sup> M. David Stirling, "Polar Bears and Melting Ice," *The Washington Times*, March 7, 2008, A17.

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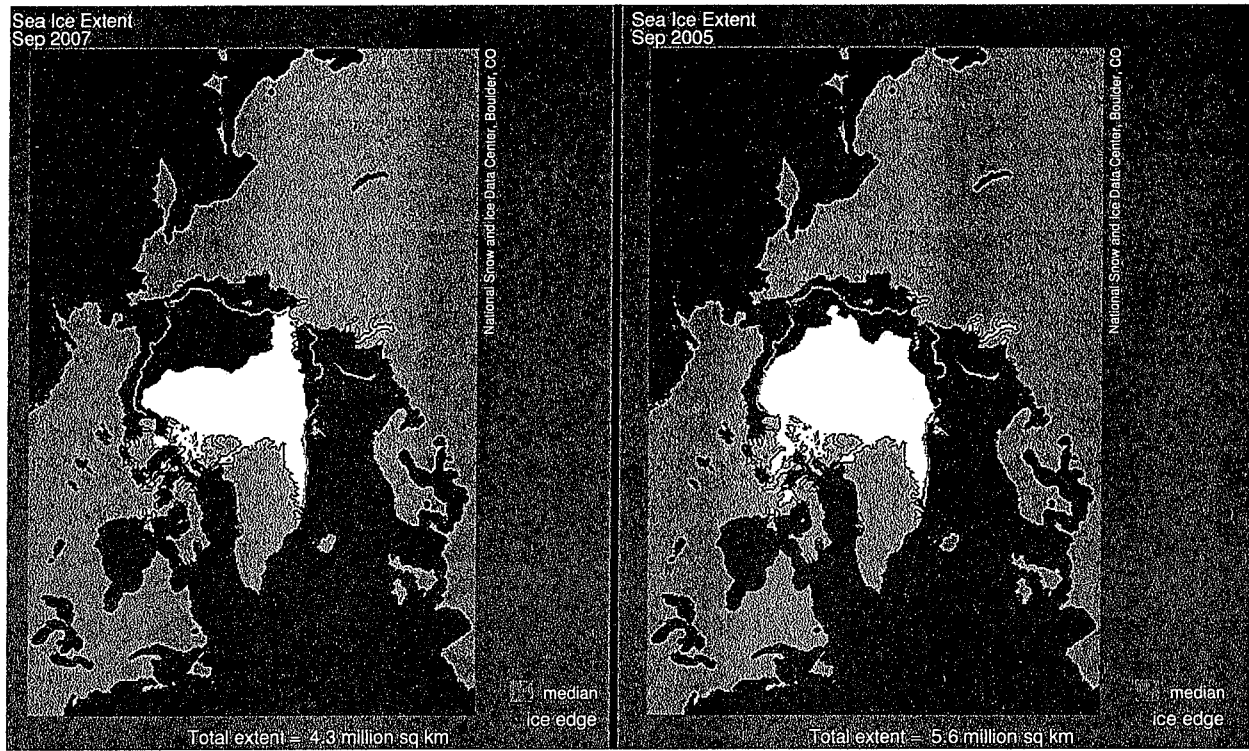
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Figure 2: Reducing Sea Ice Coverage



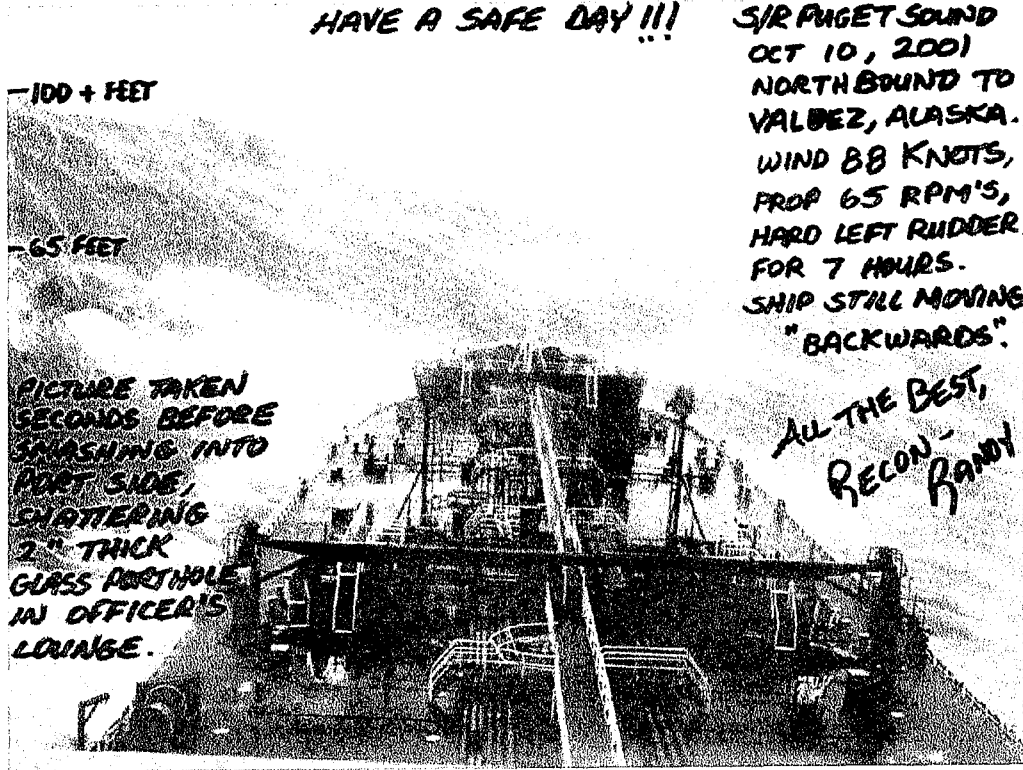
Source: National Snow and Ice Data Center

Figure 3: Maritime Transit Distances (Nautical Miles) From Germany to Japan

Northern Sea Route	6920
Northwest Passage	9800
Suez Canal	11073
Panama Canal	12420
Cape of Good Hope	14500

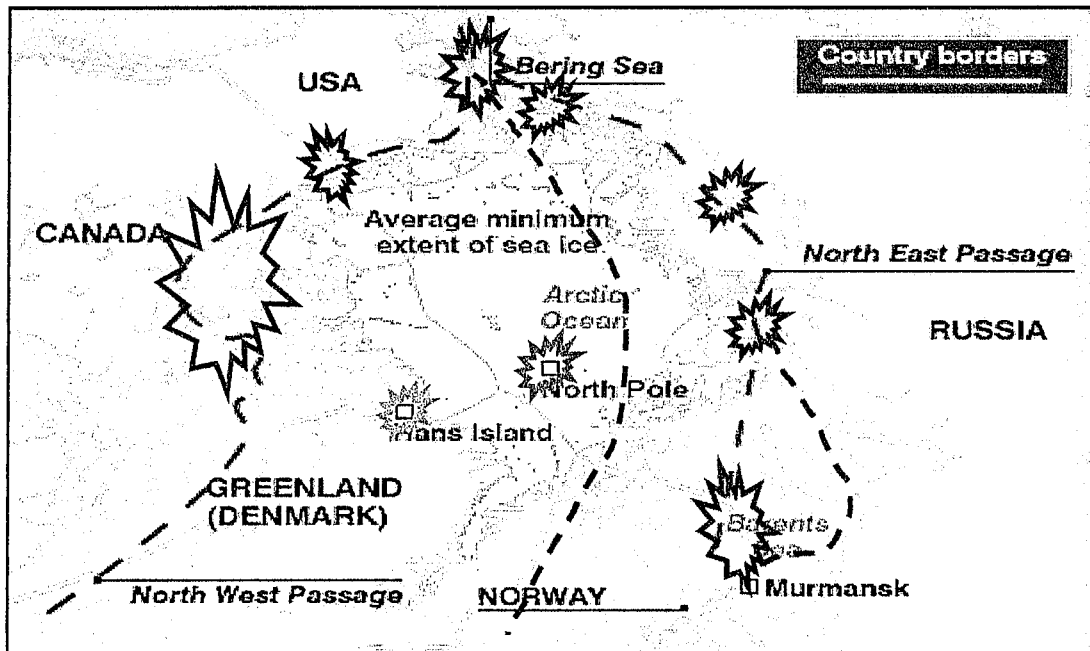
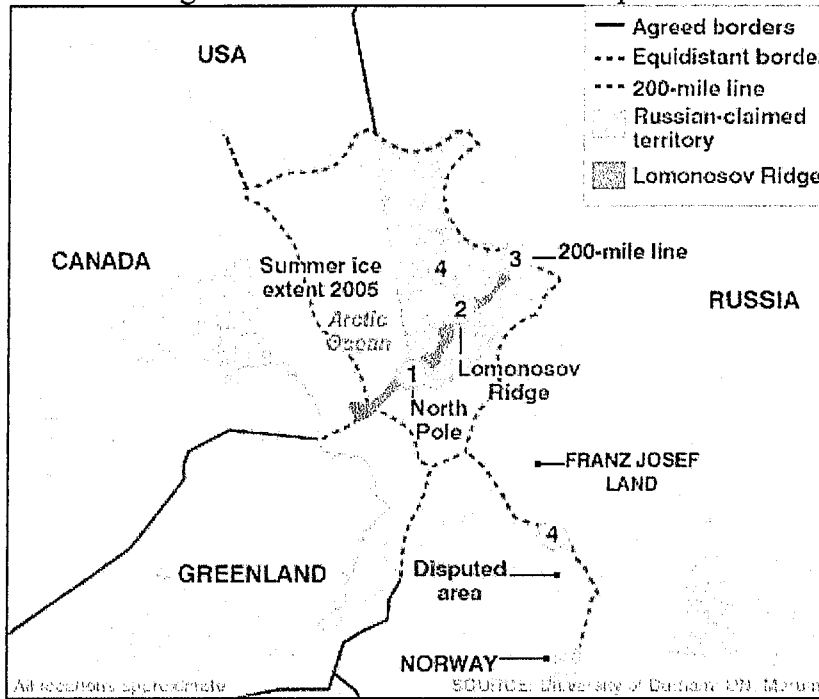
Source: Arctic Marine Shipping Assessment

Figure 4: The challenges to Arctic shipping



Source: Peter G. Noble, ConocoPhillips

Figure 5: Arctic Seabed Claims/Disputes



- International strait or territorial water?
- Maritime border dispute
- Territorial dispute
- Conflicting shelf claims
- Disputed shelf rights and maritime jurisdiction

Source: [bbc.co.uk](http://bbc.co.uk), ECON

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