

OIL AND THE ARCTIC NATIONAL WILDLIFE REFUGE

An environmental, political and cultural debate

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In the far North of Alaska is the Arctic National Wildlife Refuge (ANWR), a federally protected nineteen million acre region in which the demands for oil and the revenue it could bring have clashed with the concerns of environmentalists and some native peoples. Opinions on the status of Area 1002 – the coastal plain of the ANWR – and the potential site for oil development, have become strongly polarized. Many Republicans and oil industry lobbyists dismiss environmental concerns, while environmentalists and Democrats argue that the oil that can be extracted economically do not outbalance the potential dangers to the environment.

Historically, the federal government has protected the ANWR from development by the oil industry. Presidents Eisenhower and Carter both moved to protect the area, and President Clinton vetoed a bill that would have allowed exploitation of Area 1002. However, President Bush and his administration strongly favor the opening up of Area 1002 and the recent omnibus energy bill included a measure to allow such development. Rebecca Adams and John Godfrey, however, note that this bill is unlikely to pass both chambers of Congress in its current form.

Authors and experts are divided over the possible environmental impact of oil exploration and drilling in the ANWR. Environmentalists point to the pollution already endangering Alaska and to the potentially disastrous disruption to both the caribou herds and other flora and fauna. However, oil-proponents argue that the Prudhoe Bay development – and the increase in the size of the caribou herd in this region – refutes this argument. The truth seems to be somewhere in between

these two extremes. While there would certainly be some environmental damage to the fragile and unique ecosystem of the tundra, neutral parties need to further investigate and analyze the evidence to determine to what extent.

An important question is the amount of actual oil that is both economically and technologically removable. All the authors refer to the US Geological Survey report, although they draw different conclusions based upon the stand they wish to take. What is certain is that the true amount of oil is uncertain. There could be up to thirty billion barrels of oil in Area 1002 – an amount that could seriously affect US energy policy. However, the USGS survey notes that even if this upper figure is correct, not all of this oil can be extracted with current technology. Once technology and economic viability are taken into account, perhaps as little as a nine-month supply of oil might be available.

A further consideration is the impact of any drilling upon the native peoples of the region. While each side seems to suggest that they have the best interests of the indigenous peoples at heart, what emerges is a native population that divides over the issue. While some desire the revenues that oil would bring, others are concerned that it would disrupt their hunting grounds and end their ways of life.

The question of whether to drill for oil in the Arctic National Wildlife Refuge is a complicated one with multiple factors. While many of each side of the debate take extreme stances, dismissing their opponents' views, only by considering all the evidence dispassionately can a reasonable solution be reached.

US Fish and Wildlife Service. "Potential Impacts of Proposed Oil and Gas Development on the Arctic Refuge's Coastal Plain: Historical Overview and Issues of Concern." *Arctic National Wildlife Refuge*. 17th January 2001. <<http://www.alaska.fws.gov/nwrO/arctic/issues1.html>>.

This article by the US Fish and Wildlife Service serves as a very useful and detailed overview of the history of the Alaska National Wildlife Refuge (ANWR) and current concerns about the potential effects of oil development on the coastal region of this land. Despite being written by an agency of a government whose administration is strongly pushing for the opening of this land for development, the tone and conclusions of the article are firmly against such a move.

The article first considers the history of the ANWR. In 1960, the Eisenhower administration set aside almost 9 million acres of North Alaska as the Arctic National Wildlife Range. At the same time, the administration set aside 43 million acres for oil and gas development. Exploration located oil and gas near Prudhoe Bay in 1968, and this not only fueled large-scale development of this area but also led to questions about the possibility of using the Range for a similar purpose. However, President Jimmy Carter signed the Alaska National Interest Lands Conservation Act (ANILCA) into law in 1980 that doubled the size of the Range, classified most of it as wilderness and renamed it the Alaska National Wildlife Refuge. Section 1002 of this act identified an area of the ANWR (now known as the 1002 Area) on the coastal plain as a potential source of oil and gas development. However, section 1003 required Congress to authorize any such a move. Since then, oil companies and the US Geological Survey have surveyed the area, considering both the size of the oil reserves together with the environmental impacts to determine whether to allow oil and gas development.

The article considers how much oil is actually in the Arctic Refuge and, importantly, how much of this oil it might be possible to extract either technologically or economically. Despite the rather wild estimates at each end of the scale by big oil companies and the

environmentalists, the article uses US Geological Survey data to draw a set of interesting conclusions. They provide percentage possibilities of the amount of oil available and factor in technological and economic factors. While there are probably somewhere between 12 and 25bn barrels of oil beneath the tundra, much of that oil is simply not recoverable with current technology. Only between five and 12bn barrels of oil may be recoverable with current technology and this assumes that it is cost effective to do so. At prices of twenty-four dollars per barrel, estimates range from 1.9 (95% chance) to a maximum of 9.4 BBO (5% chance) available. If prices drop to sixteen dollars per barrel, the article notes that none of the oil will be economically recoverable. The article notes that given the current US consumption of oil, "There is [...] a 50% chance of finding a 9 months' supply of oil in the 1002 Area, at \$24 a barrel." Put in these terms, the article makes it seem that oil development would be not only environmentally but also economically foolish.

The environmental issues are also of great concern. The article notes that while the 1002 area is only a small portion of the ANWR, much of the coastal plain and foothill ecological zone is within this area. In addition, it is the only part of Alaska that still has such zones undeveloped. The coastal plain is home to muskoxen and polar bears. The latter use the area for denning – 42% of all dens are within the 1002 area – and disturbance by development might expose cubs to higher levels of mortality. 135 species of birds, including snow geese, use the 1002 area for the rich vegetation of the coastal tundra, and disturbance and reduction of the vegetation would prevent this. However, the area is most important for the Porcupine caribou, which migrate there in spring and use the area as a birthing ground. At present, it has plentiful food, which allows healthy calves. However, restricting

caribou movement and reducing their food would reduce calf survival and thus potentially impact upon the size of the caribou herd.

Oil supporters argue that the physical footprint of oil installations would only be small; however, the article notes that the effects of oil production would spread far beyond this footprint. It notes that in the Prudhoe Bay area, the footprint is only 10, 000 acres, but that the effects spread throughout the whole 800 square mile region and include pollution, soil contamination, alteration of natural drainage patterns, loss of subsistence hunting as well as the negative effects upon wildlife.

McCarthy, Terry, Blackman, Anne and Dickerson, John F. "War Over Arctic Oil." *Time* 157, no. 7 (2001): 24–29.

This article, published in *Time* magazine, attempts to provide an unbiased overview of the arguments surrounding the Arctic National Wildlife Refuge (ANWR). It considers the effects upon the environment, upon the people living in the region, as well as the current administrations arguments in favor of oil exploration and the potential political repercussions of such a decision.

The authors introduce their article with a brief yet evocative portrait of coastal plain area of the ANWR. They then look into the background of the recent attempts by the administration to open up this plain to development and the possible reasons, including financial gain and as a solution to the ongoing energy problems in, among other places, California. While the administration asserts that oil companies can exploit the wilderness "sensitively", and these oil companies believe that the time is ripe for pushing through the necessary legislation, the authors note the possible political backlash: only forty-one percent of voters favored drilling. A separate box investigates the case for both drilling and for energy conservation measures, as well as whether the oil in the ANWR could make a difference.

This article is an excellent overview of the problems faced on the North coast of the ANWR should oil development be allowed to take place, and of the viability of such development. It uses a good selection of primary sources from the scientific literature and from government surveys to support its case, and is mostly convincing. In particular, its explanation of the 1002 area as a very separate ecosystem from the rest of the ANWR and its comparison of the area with the Prudhoe Bay region seems to put pay to arguments that the development of the 1002 would not have any significant environmental impact.

The authors speculate upon the possible consequences of drilling in Area 1002 by comparing Area 1002 with the nearby Prudhoe Bay coastline. Oil companies have extracted oil from Prudhoe Bay for decades, and the authors paint a rather miserable picture of drilling sites, massive bulldozers, roads, light pollution and steam and flames belching from plants. However, they do note that new technologies – including drilling laterally beneath the surface of the tundra – could reduce the environmental impact. However, they conclude this section with the note that "tundra, like eggshells, is fragile, and once broken cannot be repaired."

The article then considers the opinions of the native peoples of the region regarding oil exploration. Interestingly, opinion is split. The seven thousand strong Inupiat – who rely primarily upon whale hunting for subsistence – want the revenues they believe the development will bring. Their neighbors to the South, the Gwich'in – who rely upon the caribou herds for their sustenance – are afraid that any development would disturb the sensitive caribou, and ultimately the caribou numbers would decline. Academics and environmentalists agree that the Prudhoe Bay development has displaced the caribou, and

development in Area 1002 would similarly affect the caribou there.

This article is a brief but coherent overview of the situation in the ANWR. It does not take any overt political positions, although overall it does appear to

Bartholet, Jeffrey, Rogers, Adam and Hsu, Michael. "Alaska: Oil's Ground Zero." *Newsweek* 138, no. 7 (2001): 18–23.

This overview article was published in *Newsweek* and, like the *Time* article, aims to provide a balanced look at the arguments surrounding the Arctic National Wildlife Refuge. It considers the environmental issues related to oil exploration, and notes the potential benefits of drilling as well as the alternatives.

The article begins with a long description of the area, focusing on the wildness of the region. Even though this portrait accepts that the region can appear very bleak and barren, and the authors note, "America's founding myths are largely about taming wild places," they question whether in the twenty first century, this frontier mentality is the right choice. Alaskans use more energy than any other state, and the state is beginning to reap the consequences: climate change is beginning to affect Alaska; average temperatures have risen by five degrees in the last forty years and the polar sea ice has thinned by forty percent in the same time.

The benefits of drilling for oil are questionable. While the US Geological Survey concluded that there are some six to sixteen billion technically recoverable barrels of oil beneath the tundra, the article does remark that perhaps only 3.2 billion barrels might be *economically* recoverable, and this would supply the US for only six months. However, the US reliance upon imports has increased, and the article questions where to drill if not the ANWR, especially as the Bush administration has stopped short of oil drilling in the Gulf of Mexico off Florida after protests from Florida

oppose the opening of the ANWR for drilling. It would have been interesting to see citations for the facts and figures they used, but the absence of citations is in the nature of the publication and so cannot be helped.

politicians, and California has banned drilling off its coast. Environmentalists suggest that increased energy efficiency is a better alternative to the energy question, and the authors include some interesting figures from the Natural Resources Defense Council on US energy consumption. One particular suggestion would be to increase fuel-efficiency standards and potentially save 51 billion barrels of oil over the next half century.

The environmental and social impacts of oil drilling are also addressed in the article. While the Eskimo of Kaktovik village in the region support oil drilling for the revenue, the Gwichin Indians compare the potential effects of drilling upon the caribou herd to the "destruction of the buffalo herds for the Sioux," threatening their entire way of life. Certainly, while geologists argue that new technology allows drilling to be sensitive to the environment, there are serious concerns. While all the articles discuss the threat to the caribou herds, this article also notes the decline of several species of native animals in Alaska: a decline possibly the result of the aforementioned climate change.

This article is a cogent, albeit brief look at the situation in the Arctic. While I would have preferred more fact and less "flavor-text" it does bring home what stands to be lost if drilling takes place. Like the previous article, it is nominally apolitical and non-biased, uses supporting evidence to back up its assertions, and while not reaching any conclusions, leads the reader to question strongly the logic of drilling.

Lee, Dwight R. "To Drill or Not to Drill." *Independent Review* 6, no. 2 (2001): 217–226.

This article by Dwight Lee takes a very different approach to the question of whether there should be oil drilling in the Arctic National Wildlife Refuge. The author implies that the environmentalists are operating under double standards and states that the benefits of drilling far outweigh the possible consequences. He concludes by arguing that improved fuel efficiency for vehicles would endanger human lives and that, as they are more important than caribou, the drilling is necessary.

In the first part of his article, Dr Lee argues that environmentalists are being hypocritical about the protection of the ANWR. He notes that the Audubon Society and Nature Conservancy have accepted oil development on their refuges, money from oil companies and have sacrificed one cause to aid another all because they, as owners of the land, are best able to decide whether the benefits of drilling outweigh the risks. He argues that should the environmentalists have a financial stake in the ANWR, they would consider the benefits and allow drilling. Presumably, by extension, he is suggesting that the environmentalists stop protesting as they are biased by having only a stake in the environment there, not in the financial benefits. This argument might be interesting if I felt that Dr Lee had stated the case against the Audubon Society or against Nature Conservancy more convincingly. The occasions and decisions he cited were relatively small incidences, with apparently clear outcomes. Few people, except those on the extremes of both sides of the argument would argue that the outcome is clear in the ANWR, and the ANWR is undoubtedly one of the few areas of its kind left untouched in the world today.

Dr Lee argues, "The evidence is overwhelming" that environmentalists' claims about potential damage are overblown. He uses Prudhoe Bay as an example of an oil drilling operation with good technology and little

environmental impact, and asserts that continuing technological improvements will only lessen the environmental impact in the ANWR. He also cites an article by pro-drilling governor Murkowski that claims that the drilling in the ANWR would only occupy a tiny proportion of the overall acreage of the ANWR, although it would seem that the US Fish and Wildlife Service article soundly refutes this argument as overly simplistic.

Finally, Dr Lee makes the argument that oil is needed because increased fuel efficiency standards threaten human lives. He uses studies that suggest that increasing the average weight of a car by one hundred pounds, reduces the fatalities by two hundred per annum. He uses fuel efficiency figures to conclude that by consuming 2.07 billion barrels of gasoline per annum, refined from the 9.5 billion barrels in the ANWR, the US could save 18000 lives. These lives, he believes, are more important than the caribou. However, while the figures initially appear compelling, they raise some questions. Are increased car fatalities a result of intrinsic problems with smaller cars, or are they the result of the growing disparity in size and bulk between the smaller cars and the increasingly ubiquitous SUVs? How do US car fatalities compare with countries such as Italy or Great Britain where car size is on average smaller and fuel efficiency higher? Is there no way to increase fuel efficiency while maintaining a larger car size? That he does not ask or answer these questions speaks to his credibility.

While this article is by an academic, it has the feel of a polemic more than a well-reasoned argument. While some of his points might be interesting, Dr Lee clearly uses evidence only that supports his belief and fails to ask important questions or even to attempt balance.

LaDuke, Winona. "Alaska: Oil and the Natives." *Earth Island Journal* 18, no. 3 (2003): 30–31.

Winona LaDuke was Ralph Nader's running mate in the 2000 Presidential Election. In this article, she states the case that oil drilling in Alaska is both environmentally harmful and a dangerous point of contention among the native populations of the state. While the article contains some interesting and disturbing facts, it does not attempt to provide a balanced view of the problem.

Ms LaDuke opens with a quote from Dune Lankard, a native concerned about the effects of the oil industry on native ways of life. He has joined with other native activists to form the Alaska Native Oil and Gas Working Group to counter the power of the industry in Alaska and to show that not all native peoples are in favor of development. Indeed, the article notes that often oil has been a source of acrimony between native groups, including the Inupiat and the Gwich'in in the ANWR. These comments are interesting, and certainly useful to note. Undoubtedly, oil has an impact upon native life. However, Ms LaDuke does not consider what benefits the oil might bring to the native populations, or to any other arguments made by the indigenous peoples in favor of the oil industry. This is disappointing especially as she has interviewed a pro-oil Inupiat but only included his concerns about oil. It would have been enlightening to hear the whole story.

Adams, Rebecca and Godfrey, John. "Nobody Expects to Get What They Want as Energy Bill Heads to Conference."

CQ Weekly 60, no. 17 (2002): 1090–1091.

This article examines the energy bill that included the means to open the Arctic National Wildlife Refuge to oil exploration and drilling and is thus concerned more with the procedural and governmental issues rather than any other. It details the differences between the House and Senate bills and considers what the effect of these differences will be, as well as identifying the different attitudes of politicians to the issues.

The most important segment of this article concerns the damage to the environment of Alaska, which Ms LaDuke brings home with a series of data. She claims that Alaska is the fourth most polluted state in the US, with some 265,000 pounds of toxic releases from the oil industry in 2000 and 1534 oil spills in 2001. She notes that much of the oil and gas industry in Alaska is exempt from toxic release reporting requirements. However, she does not cite sources for these facts, nor does she really try to explain their significance. She clearly intends for the figures to speak for themselves, yet lack of context renders them essentially meaningless. What constitutes an "oil spill"? Of the 1534 oil spills in 2001, how many were large enough to have an impact upon the environment? I believe she is being disingenuous with her readers, knowing that many will picture the massive and destructive spills such as the Exxon Valdez.

Like Dr Lee in the previous article, Ms LaDuke is clearly writing an opinion piece, aimed at stirring up opposition to the oil industry in Alaska. While she cannot be faulted for this, her article would have been more powerful and informative had she asked more questions and looked at both sides of the argument before making her case.

While both the House and the Senate passed versions of the omnibus energy bill in 2001, the authors make clear that they do not believe that the bill will pass without major changes. Drilling for oil in the ANWR was a major aim of both Senate and House Republicans in this bill, while Democrats pushed for increased fuel efficiency standards. Due to the controversies on both sides, neither side is likely to succeed with these aims. In light of this, some on both sides would prefer no bill at all.

Since President Bush began his term, he has been pressing strongly for the opening up of the ANWR for oil drilling, but while the House – which is more strongly Republican – voted narrowly for the measure, the Senate – which is more closely balanced – defeated the legislation. Now, the two sides must meet in conference to find a compromise. The authors quote both Democrats and Republicans on the issue: the former vowing to stand firm, and the latter criticizing their opponents for ignoring issues of “economic and national security.”

Coulter, Ann. “Nine out of 10 Caribou Support Drilling.” *Human Events* 58, no. 15 (2002): 6–8.

In this typically opinionated article by Ann Coulter, the right-wing maven lambasts Democrats for “trying to sabotage the country’s energy policy” with their opposition to the drilling for oil in the ANWR. In an utterly one-sided argument, which bizarrely accuses the opponents of drilling of lying, she makes broad statements without any evidence and concludes that caribou would be better voters than would Democrats.

Ms Coulter first accuses the environmental lobby and the news media of deliberate obfuscation by showing picturesque images of the ANWR. She describes the region as “tiny, desolate” and “a little like the moon, but less inviting.” She claims that news outlets ignored Secretary of the Interior Gale Norton’s film of the possible drilling site, and goes on to vilify the Democrats for suppressing the truth. While it might be interesting to see Secretary Norton’s film, not only is it likely to be biased – coming as it does from a strong supporter of drilling – but it is also illegal for federal agencies to promote a film designed to influence legislation pending in Congress.

This article was a short, balanced insight into the workings of the Federal government and Congress, and the possibilities of gaining a working, useful piece of legislation from among the partisans on the Hill. The authors present both sides of the often-intense argument without any apparent bias, and illustrate that whatever the arguments about the environment and the native peoples, ultimately the fate of the Refuge will be in the hands of politicians.

Ms Coulter then proceeds to state that drilling is “overwhelmingly supported” by both Eskimos and caribou. She claims that not only is the 1002 Area uninhabited and uninhabitable much of the year, but that caribou actually “frolic and play by the pipeline.” She presents no evidence to back up these statements, nor do they agree with what most neutral parties seem to say. Certainly, the federal agency in charge of the ANWR notes that there is year-around wildlife use in the region, and other articles have articulated the opposition to the plans by some native groups.

This is the most staggeringly prejudiced piece I have read on the subject, yet is typical of Ms Coulter’s *oeuvre*. She uses half-facts and clever, even amusing, prose to state her “case” but is really using the serious question of the ANWR to further put forward her argument that all Democrats are stupid, evil or both. The article, even as an opinion piece, does not stand up to much examination and is useful only as an insight into the arguments of the extremists on this side of the debate.

Murkowski, Frank H. "Drilling Won't Make it Less of a Refuge." *Washington Post*. 10 December 2000, B05.

In this commentary article, Senator Frank Murkowski – former governor of Alaska and now Chair of the Senate Energy and Natural Resources Committee – puts forth his argument for the opening up of the coastal plain of the ANWR for oil drilling and exploration. While Senator Murkowski is clearly aiming to persuade, he is less confrontational and more rational than are many pro-oil proponents.

Senator Murkowski begins his article by addressing the political and legal status of the Arctic National Wildlife Refuge. He notes that it remains within the authority of Congress to open up 1.5 million acres for oil development, while previous legislation has protected the remaining 17.5 million acres from any development.

Senator Murkowski asserts that the coastal plain is different from the rest of the refuge: unlike the beautiful Brooks Range, it is an inhospitable and featureless plain, little used by local fauna. As many analysts have done, he compares the area to the Prudhoe Bay development and to areas in nearby Canada and concludes that the effect of oil development upon the caribou and polar bears may be overstated. He notes that since 1978, the numbers of caribou in the Prudhoe Bay area have actually increased, and that not one polar bear has been killed as a result of the oil development there.

In addition, all development would be done during the winter months when it would have least impact upon the environment, and affect only two thousand acres. This latter is a common figure used by pro-oil campaigners, yet Senator Murkowski does not address the assertion that while oil development might only directly affect this area, it would have a much larger indirect "footprint."

Senator Murkowski considers the amount of oil beneath the ANWR, and again uses the US Geological Survey figures. While he acknowledges the lower limit of 3.2 billion barrels, he clearly believes that more barrels of oil are available – citing the fact that amounts of oil retrieved from the Prudhoe Bay fields has exceeded expectations – yet does not consider the question of economic viability. He clearly believes that this oil, however much is available will be able to lower US oil imports, but does concede that they will not have a huge impact on their own, that conservation and renewable energy sources have their place.

This article is undoubtedly in favor of drilling for oil in the coastal plain area of the ANWR. While the author skirts over some questions about the economic viability and true environmental impact of oil extraction, he is clearly less doctrinaire about the issue than many on both sides of the debate.