



Office of the Minister
Box 2703, Whitehorse, Yukon Y1A 2C6

June 18, 2018

Bureau of Land Management, Alaska State Office
Attn: Coastal Plain Leasing Program EIS
222 West 7th Avenue #13
Anchorage, Alaska, USA
99513-7599

Re: Scoping Phase Comments – Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement

The Government of Yukon provides the following input to the Bureau of Land Management (BLM) Alaska State Office for consideration in the preparation of an Environmental Impact Statement (EIS) for an oil and gas leasing program in the 1002 lands of the Arctic National Wildlife Refuge (ANWR) Coastal Plain. Yukon shares an approximately 190-mile border with the ANWR. The Government of Yukon's principle interest is in ensuring that transboundary impacts of development in the 1002 lands are considered, avoided where possible, and mitigated where necessary. This includes impacts to species for which Yukon, Canada, Alaska and the United States have co-management roles and responsibilities. The *National Environmental Policy Act* process must take a 'hard look' at transboundary environmental and socio-economic effects of proposed activities, when there is a reasonable possibility that there will be effects¹.

In addition to comments made through the EIS process, the Government of Yukon acknowledges that sec. 1005 of the *Alaska National Interest Lands Conservation Act* (ANILCA) requires the Secretary of the Interior to consult with the appropriate agencies of the Government of Canada in evaluating impacts of oil and gas exploration, particularly with respect to the Porcupine Caribou herd. Further, the *1987 Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd* speaks to international cooperation and coordination between these governments so that irreversible damage or long-term adverse effects to the herd or their habitat is minimized. The Government of Yukon will be supporting Canada in consultations with the United States on matters related to Porcupine Caribou and subsistence users.

This submission focuses on the potential environmental and socio-economic effects that the Government of Yukon believes need to be considered and included in the EIS. Due to potential impacts, this submission also identifies the treaties and agreements that Alaska/United States have

¹Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts. 1997. Memorandum to Heads of Agencies on the Application of the National Environmental Policy Act to Proposed Federal Actions in the United States with Transboundary Effects. Available from: <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/memorandum-transboundary-impacts-070197.pdf>



with Yukon/Canada, which provide important context. Topics that have clear transboundary agreements/treaties include the Porcupine Caribou herd, polar bears, and migratory birds, and accordingly, should be scoped into the EIS. The Government of Yukon has significant concern with respect to the potential effects of development of the 1002 lands on Porcupine Caribou and the habitat critical to the herd's survival and long term conservation. Our interest is in ensuring that the full impact of development activity on Porcupine Caribou and habitat is considered.

As we have not seen a draft leasing plan or development scenario, we submit these comments on the assumption that the entirety of 1002 lands are available for leasing and that no areas are currently off limits. Should information or maps become available to confirm or refute this assumption, we ask that it be shared.

The following is a list of topics that the Government of Yukon requires to be addressed in the EIS.

1. Porcupine Caribou Herd

a. Agreements, Treaties, Co-Management Boards and status for the Porcupine Caribou herd

The Porcupine Caribou herd is one of the largest migratory caribou herds in North America, with a range extending from Alaska through Yukon and into the Northwest Territories in Canada. The Government of Yukon is committed to conservation and management of the Porcupine Caribou herd throughout its range and recognizes its importance to the people and communities that depend on the herd for subsistence harvest and cultural sustenance. A total of eight communities in Canada are specifically identified through Canadian legislation as user communities of the Porcupine Caribou herd. In several communities, caribou are the primary means of sustenance and in all, they provide nutritious food and cultural significance. As a result of this importance and in consideration of the pipeline from Prudhoe Bay in the 1970s, the whole northern portion of the herd's range in Canada (north of the Porcupine River) was withdrawn from industrial activities in the 1970s. Currently, Indigenous governments in collaboration with Canada and Yukon have permanently protected or have long standing industrial withdrawals in place for the majority of the herd's summer range in Canada (Appendix 1, attached) including the full extent of the herd's calving and post-calving range. In the few remaining areas where some development is permitted, allowances for industrial disturbance are extremely conservative and would not allow for a major development to occur. On the herd's winter range, limited development has been allowed in an area that sees less frequent use by the herd. We have drilled a total of 76 wells in all of Yukon dating back to the 1950's; 44 of those Yukon wells are in the herd's range. All of these are currently either abandoned or suspended. We have also identified 9 wells in the Northwest Territories that are in the Porcupine Caribou herd's range, making a total of 53 in the Canadian side of the range.

In Canada, the harvest and management of the Porcupine Caribou herd is collaborative and anchored by advice from the Porcupine Caribou Management Board (PCMB) established under the *Porcupine Caribou Management Agreement* (1985), which is an appendix of the Inuvialuit Final Agreement (1984) – a comprehensive land claim agreement. Membership on the PCMB includes the governments of Canada, Yukon, Northwest Territories, Tr'ondëk Hwëch'in, Vuntut Gwitchin First Nation, First Nation of Na-Cho Nyäk Dun, Gwich'in Tribal Council, and the Inuvialuit Game Council. In recognition of these

governments' roles, we request notice to each of these PCMB Parties as information becomes available.

The Government of Yukon, together with the governments of Canada, United States, Alaska, and Northwest Territories work on Porcupine Caribou herd matters through the International Porcupine Caribou Board and Technical Committee. This Board is established as per the *1987 Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd*. Through the Porcupine Caribou Technical Committee, federal, state, and territorial representatives work collaboratively to advance scientific research and monitoring of the herd. The information prepared by either the Board and/or Technical Committee is an unbiased and highly informed perspective on the needs of the Porcupine Caribou herd. The agreement acknowledges that the Porcupine Caribou herd regularly migrates across the international boundary between Canada and the United States and that caribou – in their large, free-roaming herds – comprise a unique and irreplaceable natural resource of great value, which each generation should maintain sustainably for future generations. The Board has also highlighted the importance of the 1002 area of ANWR as a caribou birthing and rearing area, critical for the well-being of the herd and Canadian user groups. Therefore, the Government of Yukon requests that full consideration given to environmental impacts on the Porcupine Caribou, as required by these international agreements. We ask that a review is provided on the relevant sections of the *1987 Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd* with specific reference to what would constitutes a “significant, long-term, adverse impact” to the herd or its habitat.

The Porcupine Caribou Herd is part of the barren-ground caribou species found in Canada. This species was recently assessed as Threatened by the Committee on the Status of Endangered Wildlife in Canada, the national body designated by Canada's *Species At Risk Act*. This designation requires Canada to develop a Recovery Strategy for this species, which speaks to how habitats will be protected, impacts will be addressed, and population changes will be managed. For the Porcupine Caribou Herd, any development within their range will be considered within the recovery strategy context, as Canada takes measures to ensure the recovery and continuity of the species.

b. Environmental Effects on Porcupine Caribou

For Porcupine Caribou, the Government of Yukon requires the EIS examine, at a minimum, the following:

Reviews and/or summaries of:

- The importance of the 1002 lands to the Porcupine Caribou herd; The role 1002 lands play in the herd's life history, including figures showing use by biological period (e.g. calving, post-calving, early summer or insect relief, etc.).
- Variation in use of the 1002 lands by the Porcupine Caribou herd annually, and by decade, and leading hypotheses for why changes occur. Include all pertinent materials published on the herd, as well as relevant updates from the newest available information.

- The current role of climate in herd population dynamics and what is expected in the future. Consideration of current sensitivities for the herd with respect to habitat change and existing developments.
- A summary of reproductive biology and ecology of the Porcupine Caribou herd with reference to other herds (and more specifically to the Central Arctic Caribou Herd), to point out similarities and differences, and the importance of calving and post-calving grounds to large migratory tundra caribou populations.
- Past assessments of the risk of development of 1002 lands to Porcupine Caribou and their key conclusions.
- Relevant sections of the *1987 Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd* with specific reference to what would constitute a “significant, long-term, adverse impact” to the herd or its habitat.
- Other developments within the range of the herd that may contribute to cumulative effects.
- A summary of available mitigations that could be applied to projects in 1002 lands. For each, a quantitative demonstration of the effectiveness should be provided through reference to peer reviewed literature where available, or alternatively, a quantitative demonstration of the effectiveness of mitigation using data collected from existing monitoring programs (e.g., monitoring of effects for the Central Arctic Herd in Prudhoe Bay). Specific reference to how impacts may vary with a naïve vs. experienced herd should be included.
- The likely effects of development on the 1002 lands on caribou behaviour and movements (e.g., migration routes, selection of calving areas, abandonment or stranding of specific seasonal habitats), including:
 - An assessment of alternative seasonal ranges and whether specific seasonal ranges could be limited by either the quantity or spatial structure of development in 1002 lands (e.g., insect relief habitat).
 - Given available climate change scenarios for the area, the anticipated effects for specific seasonal habitats.
 - How access for harvesters into 1002 lands may exacerbate the impacts of the development.
- The likely effects of oil and gas development on the 1002 lands on Porcupine Caribou herd demographics rates, including recruitment, adult female survival, and the growth rate of the population (λ), including identification of the likely mechanisms of change. Specifically:
 - How recruitment metrics such as gestation, age at first parturition, and calf survival may change.
 - How metrics for adult cows, such as body condition, reproductive status, and survival will be altered as a direct result of impacts.
 - Identification of any lag effects on cow or calf vital rates.
 - Any anticipated changes in age structure within the herd.
 - How the parameters will vary in the context of climate variability and change, including changes in forage quantity and quality.
 - The ability of other seasons to buffer the impacts caused by development.

- Addressing the herd size and trend where we would anticipate the herd to be limited by the interaction between the development and the herd's inability to increase quickly (i.e., recruitment sink).
- Consideration of likely effects on the herd as herd size varies (observed high, low, mean, and a 25% and 50% reduction in herd size), including consideration of impacts during changes in trend (increasing, stable, decreasing)
- Description of the likely effects of oil and gas development on caribou health (direct and indirect effects through forage, crowding, exposure to contaminants, and inability to move to new ranges).
- The cumulative effects of oil and gas development, including environmental stochasticity, on subsistence users (as defined in the 1987 International Agreement), including herd size and availability and implications for harvest management.
- Consideration of monitoring that would be required to evaluate the possible effects of development and the success of mitigation as part of an adaptive monitoring framework. Monitoring should focus on anticipated likely impacts identified above, metrics that are feasible and sustainable logistically, financially, and socially, and should use an evidence-based design. Include estimates of the number of years of monitoring likely required to detect specific effect sizes for any given metric (i.e., similar to a power analysis). Include consideration of the requirement for a committee of industry and Porcupine Caribou technical experts to engage in a review of the mitigation successes and adaptive responses.

c. Subsistence harvest, food security, and human health

The Government of Yukon recommends that Canadian subsistence needs be incorporated into the EIS. It is estimated that Canadian users harvest between 4000-6000 caribou annually when the herd is readily available, which in most years makes up greater than 85% of the total harvest of the herd across all users. Canadian user groups are the primary harvesters of this herd and stand to lose the most from any impacts on the herd.

In Canada, Yukon is signatory to modern day land claim agreements (i.e., treaties) with the Inuvialuit and the First Nations of Tr'ondëk Hwëch'in, Vuntut Gwitchin, and Na-Cho Nyäk Dun. The Indigenous and treaty rights flowing from these agreements are protected by section 35 of the Canadian *Constitution Act, 1982*, which recognizes the right of Indigenous peoples to harvest wildlife species like the Porcupine Caribou as they have for millennia. The Porcupine Caribou Management Agreement referenced above provides the specific rights to specific Indigenous peoples with respect to the harvest of Porcupine Caribou in Canada.

The subsistence needs and rights protected under various modern land claims and agreements compels the Government of Yukon to work towards ensuring First Nations subsistence needs are fully met. Subsistence rights are acknowledged in Canada's constitutionally protected land claim agreements (i.e., treaties) and the *Porcupine Caribou Management Agreement*, and both the 1987 international treaty and ANILCA have provisions regarding subsistence rights.

In addition, both the 1987 international treaty and ANILCA have provisions regarding subsistence rights. Yukon will be supporting Canada in consultations with the United States on matters related to Porcupine Caribou and subsistence users.

It is important to the Government of Yukon that the EIS consider project effects to subsistence rights of Inuvialuit and Yukon First Nation people in the socio economic analysis, including:

- Current harvest for the herd including identification of user group harvest levels, where harvest occurs and what the harvest is for each user group.
- In light of current harvest, whether the herd population is sustainable and resilient in scenarios where critical habitats are also impacted.

The nutritional value of caribou contributes to the health of populations using this traditional food source. Market-based foods in some northern communities is expensive in comparison to southern jurisdictions, exacerbating issues of food insecurity for households with limited income, and potentially increasing needs for income supports. Traditional food sources, whether harvested directly by a household member or obtained through sharing or bartering, provide a supplementary source for those who are unable to afford a complete nutritious food basket at market prices.

In addition to providing a source of food, the harvesting of caribou is an activity with cultural, health and recreational value. Individual and community well-being may be supported or enhanced through participation in traditional activities - increasing or protecting cultural, intergenerational and community connectedness, and building or enhancing a sense of accomplishment or self-sufficiency. The act of harvesting itself is a form of physical activity that provides health benefits.

Impacts to the calving grounds and/or migration patterns of the Porcupine Caribou herd would affect the ability of several communities in Yukon, Alaska and NWT to rely on caribou as a food source, and to participate in the associated activities and receive the multiple benefits to physical and mental well-being.

Impacts on the availability of caribou could result in an increased need for and use of social services (e.g. income supports; mental health services). Health services may also be impacted over the long term, due to the risk of increased obesity and related chronic diseases that have been associated with a shift towards market foods among Indigenous populations².

The following must be considered and examined in this EIS:

- Food security for communities and populations who use the caribou as a primary food source.
- Impacts on individual and community well-being in connection with the caribou.
- Impacts, such as increased demand and access, to services for health and social programs, if access to caribou as a subsistence and cultural resource is diminished.

² Damman, S., W.B. Eide, and H.V. Kuhnlein. 2008. Indigenous peoples' nutrition transition in a right to food perspective. Food Policy 33:135-155.

In the event that the Porcupine Caribou were no longer available to communities for harvesting, food security impacts could theoretically be mitigated through other means (such as ongoing provision of an equivalent nutritious food source for those otherwise unable to purchase or procure this food). However, even if equivalent foods were accessible and affordable, it may not be a preferred option for resident diets, and would potentially be less nutritious. This would not mitigate the impacts on individual and community well-being associated with loss of a culturally important resource and practice.

2. Polar Bear

The Agreement on the Conservation of Polar Bears is a multilateral treaty among the five range states (Canada, United States, Denmark/Greenland, Norway and Soviet Union/Russia) to foster cooperation in sustainably managing polar bear populations. Canada and United States are also subject to a 2008 Memorandum of Understanding between Environment and Climate Change Canada and the United States Department of the Interior for the Conservation and Management of Shared Polar Bear Populations. Subsistence harvest of polar bears is an important cultural, economic, and food for the Inuvialuit of Canada. The EIS must consider effects of development on polar bear, in particular:

- Assessment of bear denning habitat including assessment of denning habitat quality.
- Potential effects of disturbing denning females in winter.
- Potential effects of any other anticipated impacts during other seasons including the summer where bears aggregate on shore.

3. Species at Risk: Special Concern

The Government of Yukon recommends that the EIS consider impacts to northern species of special concern whose populations are likely shared between Yukon and Alaska. We also note some species' ecology is reliant on the Porcupine Caribou herd, and in some cases that species' population size and availability for subsistence harvest is directly linked to the presence and abundance of Porcupine Caribou. In particular, we note that grizzly bears and wolverine on the Yukon North Slope are managed specifically for subsistence use by Inuvialuit users. Recent analysis indicate that grizzly bear population size is directly tied to the availability of the Porcupine Caribou herd³.

a. Grizzly bear and Wolverine

Grizzly bear and wolverine are assessed by the Committee on the Status of Endangered Wildlife in Canada as a species of special concern due to their sensitivities to harvest and anthropogenic disturbance. The EIS must consider:

- Assessment of denning habitat and denning habitat quality.
- Use of the area in spring, summer and fall.
- Assessment of known human-caused mortality of grizzly bear in the area.

³ Fish and Wildlife Branch, Government of Yukon, unpublished data.

- Assessment of the effective loss of habitat for grizzly bear within the zone of influence of infrastructure. An assessment of these potential effects needs to be carried out at a scale (recommended watershed units of about 300 km²) appropriate to the multi-annual home range bears.
- Assessment of changes in population size in Canada caused by any changes in availability of the Porcupine Caribou herd.
- Potential for development in 1002 lands to create a population sink for grizzly bear and wolverine and how that may impact Canadian subpopulations.

b. Buff breasted sandpiper

Buff breasted sandpiper breeds in the open tundra of Canada and United States and is unique among shorebirds for its courtship display. The species is listed as a species of special concern under the Canadian Species at Risk Act. Buff breasted sandpiper have relatively low population densities and their population is declining. The EIS must consider:

- Impacts to Buff breasted sandpiper lekking habitat.

4. Additional Wildlife Considerations

For all species listed above, analysis and study of impacts must also take into consideration

- Risks and impacts of malfunctions, and the significance of those impacts, including risk of accidents/malfunctions to marine environments.
- Additive, multiplicative, and synergistic cumulative effects of this proposed development on key species and habitat, and how they will relate to existing anthropogenic and natural stressors.
- A complete description of the use and importance of 1002 lands in ANWR to each life stage of each species, during each season of the year, and across multiple years (preferably decades – such as on the scale of time as major climate forcing cycles such as the Pacific or Arctic Decadal Oscillations). Descriptions should include scientifically defendable methods of delineation and rating of areas for importance. Consider interactions between species such as predator-prey dynamics.
- an examination of how spatial and temporal use by a species may change in the future with changes to spring snow melt and plant phenology, changes in precipitation, temperature, permafrost, and offshore ice conditions and extent as it influences on-shore use by the species.
- A comprehensive, up-to-date review of the potential impacts and suggested mitigations.
- Species-specific zones of influence of various infrastructure elements and barriers to movement.
- Spatially explicit consideration and confirmation go/no go areas for development (including road access routing) in 1002 lands to conserve and protect key wildlife species.

5. Traditional Knowledge

The Government of Yukon recommends that the EIS integrate traditional knowledge of Indigenous Peoples in Canada and United States with respect to effects of the oil and gas leasing program to the species listed above. We strongly urge the BLM to engage directly with affected Canadian First Nation and Inuvialuit governments on this topic.

6. Tourism in North Yukon

The current tourism market in North Yukon is small but increasing. It is important that Old Crow and Vuntut Gwitchin First Nation maintain the ability to develop their cultural tourism industry and visitor market. Natural resources like the Porcupine Caribou herd are an integral feature to the overall experience and significant motivating reason for tourist travel to the region. Vehicle traffic to our northern parks including Tombstone Territorial Park, and cruise ship traffic on the north coast are increasing, bringing record numbers of visitors to the region in recent years. The two features of the North Yukon region that have the most potential for drawing visitors are wildlife viewing and cultural tourism. The Yukon's Visitor Tracking Program surveyed 19 different visitor experiences and wildlife viewing is ranked the highest in providing satisfaction, and is ranked second (out of 19 activities) in importance for making the decision to come to Yukon⁴.

Of the wildlife features that attract visitors to Old Crow and surrounding area, the Porcupine Caribou herd is at the top of the list. The herd is also closely tied with the cultural aspects of the region and would feature prominently in cultural products.

Other key wildlife viewing activities important for tourism in the region are bear viewing and bird watching. Ni'iinlii Njik (Fishing Branch) Ecological Reserve and Settlement Land has hosted a commercial bear viewing business for more than 10 years. This Management Plan states that "...effectively managed viewing has the potential to increase public understanding and appreciation of bears and bear ecology...and under controlled circumstances, increase tourism and provide economic benefit". Tombstone Territorial Park includes a wide range of habitats that support 145 recorded bird species. The area attracts birdwatchers from around the world⁵.

Pristine wilderness and parks are key features of the region. Ivvavik National Park and Vuntut National Park border on Alaska and are linked to the Arctic National Wildlife Refuge. Qikiqtaruk (Herschel Island) Territorial Park, Ni'iinlii Njik (Fishing Branch) Territorial Park, and Tombstone Territorial Park all create tourism revenue for the region. Tombstone Park is becoming increasingly popular. Tombstone Park, accessible via the Dempster Highway, saw record numbers in 2017. Visitor statistics taken at the Tombstone Interpretive Centre, showed an increase of 46% between 2016 and 2017⁶. This indicates potential for more tourism in other parts of the north region.

⁴ Government of Yukon. 2013. Yukon Visitor Tracking Program. Available from: http://www.tc.gov.yk.ca/isu_vtp.html

⁵ Government of Yukon. 2009. Tombstone Territorial Park Management Plan. Available from: http://www.env.gov.yk.ca/publications-maps/documents/tombstone_mgt_plan.pdf

⁶ Parks Branch, Government of Yukon, unpublished data.

The tourism industry also considers it of high importance to limit impacts to areas that remain intact, and to limit impacts to species in Yukon that are specially protected, in order to preserve the region as a pristine and desirable wilderness destination.

The EIS must consider the following:

- Socio-economic impacts to existing and potential wildlife and wilderness tourism opportunities in Yukon areas adjacent to the 1002 lands and areas within the range of the Porcupine Caribou herd.
- Likelihood and potential for impacts to Yukon lands and parks adjacent to the 1002 area, including a zone of influence caused by those activities.

Conclusion

Oil and gas development in the 1002 lands of ANWR risks adverse environmental and socio-economic effects that will be felt far beyond the borders of the reserve and will extend across international boundaries. The Government of Yukon will continue to work with our counterparts in First Nation, Inuvialuit, state, territorial and federal governments through our involvement with various Boards and Technical Committees. We would be pleased to make our scientific experts, products, data and reports available to BLM in preparing the draft EIS. We will also provide support to Canada during meetings between officials from Canada and United States to fulfill the ANILCA consultation obligations.

The Government of Yukon looks forward to continued active involvement in providing input to the EIS for an oil and gas leasing program in the 1002 lands of the Arctic National Wildlife Refuge Coastal Plain. Please direct future correspondence and information updates to Allan Koprowsky, Assistant Deputy Minister, Environmental Sustainability, as the designated contact for this EIS process.

Sincerely,



Minister Pauline Frost
Department of Environment, Government of Yukon

Attachments:

Appendix 1: Porcupine Caribou Core Range and Protected Areas

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