March 13, 2019

Department of the Interior
BLM, Alaska State Office
ATTN: Coastal Plain EIS
222 West 7th Avenue, #13
Anchorage, Alaska 99513 **Delivered by email**

To whom it may concern,

RE: TR'ONDËK HWËCH'IN RESPONSE TO COASTAL PLAIN OIL AND GAS LEASING PROGRAM DRAFT ENVIRONMENTAL IMPACT STATEMENT

Tr'ondëk Hwëch'in submits this letter in response to the Department of the Interior's "Notice of Availability of the Draft Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program and Announcement of Public Subsistence-Related Hearings", 83 Fed. Reg. 248 (December 28, 2018). This letter is our second submission to BLM, after our scoping letter sent June 19, 2018 in response to the Department of the Interior's "Notice of Intent to Prepare an Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program, Alaska", 83 Fed. Reg. 77 (April 20, 2018).

After reviewing the draft EIS, Tr'ondëk Hwëch'in finds that the BLM has failed to adequately assess the potential impacts of oil and gas development on the natural resources of ANWR and the communities who depend on them. Many of our scoping comments were not addressed in the draft EIS (see attached). The goal of this letter is to express our concerns with the major deficiencies we identified in the draft EIS, and to state our position on the development alternatives proposed by BLM in the draft EIS for future oil and gas leasing in ANWR.

Background

Tr'ondëk Hwëch'in (TH) is a self-governing First Nation, based in Dawson, Yukon, Canada. Our Traditional Territory is vast and includes large areas adjacent to the Yukon-Alaska border. Our historical land use included many parts of eastern Alaska and our people continue to maintain close ties with several Alaskan communities. Migratory species that we've followed and depended upon for millennia, such as caribou, do not recognize these borders and must be able to move freely across international boundaries to access important habitats. Our Traditional Territory provides important winter habitat for Porcupine Caribou, and the wellbeing of Tr'ondëk Hwëch'in people continues to depend, in part, on the health of the Porcupine Caribou Herd (PCH). It is well-known that the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) (the '1002 lands') provides critical calving, post-calving and insect-relief habitat for Porcupine Caribou[1].

[1] Porcupine Caribou Technical Committee, 1993. Sensitive Habitats of the Porcupine Caribou Herd. IPCB. 28 p. http://www.pcmb.ca/documents/Sensitive%20Habitats%20of%20the%20Porcupine%20Caribou%20Herd%20booklet.pdf

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Activities associated with implementing an oil and gas leasing program on the Coastal Plain have the potential to impact the distribution and population of the PCH and therefore, the subsistence harvesting rights of Tr'ondëk Hwëch'in citizens and other Indigenous people whose traditional territories overlap the range of the Porcupine Caribou Herd.

Tr'ondëk Hwëch'in Values

The following key traditional laws or foundational principles have guided our evaluation of the draft EIS:

(a) Respect – our stewardship responsibilities stem from a deep respect for the land and the animals and people who depend on that land.
(b) Humility – we do not own the land, the land owns us. We recognize that the world is complex and ever changing;
(c) Reciprocity – we recognize our ongoing relationships with each other, the land, and partners. Working together benefits us all;
(d) Responsiveness – we recognize the dynamic nature of the world we live in and we are responsive to situations as they arise, recognizing that our needs will continually change.

All these concepts are encapsulated by the following quote from one of our respected Elders:

> *"The land ensures our survival. You have to look after the land, you have to look after the animals. The land is our heritage: because we use it, because it is everything, everything comes from the land. Keep your land clean, keep your animals, they are your friends. You look after them, they look after you. You look after your water, land, trees, you look after the land, you respect it. That's our spirituality."*

Links between Subsistence and Conservation

Subsistence activities often go hand-in-hand with conservation. Subsistence activities promote healthy lifestyles and continued connections with the land and wildlife. These connections are reflected in a living body of knowledge that continues to be developed over generations and is based on a foundation of respect, humility, reciprocity and responsiveness. People out on the land are often the first to notice environmental changes and alert decision-makers about potential issues. Management interventions are usually more effective if they are implemented quickly before a problem escalates. Healthy wildlife populations, in turn, often allow for more harvesting opportunities.

The following agreements and treaties reflect our values and recognize the importance of this link between conservation and subsistence harvesting activities, and support the continued contribution by Tr'ondëk Hwëch'in and other Indigenous organizations toward effective resource management (i.e. stewardship) and sustainable development, particularly in remote Arctic and sub-Arctic areas.

Tr'ondëk Hwëch'in Inherent Rights and Responsibilities

As one of 11 self-governing First Nations in Yukon, our mandate as a government is to maintain our relationship to the land, preserve our heritage and culture, empower our people, and utilize land and resources within our traditional territory in a sustainable way that creates opportunities and prosperity for our citizens.

The objectives of Chapter 16 of the *Tr'ondëk Hwëch'in Final Agreement* (THFA) recognize the critical role that fish and wildlife play in sustaining the culture, lifestyles and traditions of TH citizens. With respect to Porcupine Caribou, the THFA protects our inherent rights in Canada to subsistence harvest and equal participation in fish and wildlife management processes and

decisions based on principles of conservation[2]. Additionally, the *Constitution of the Tr'ondëk Hwëch'in* (1998) includes objectives related to governance of TH citizens, land and resources according to TH culture and traditions; use, management and administration of land and resources of TH; preservation of TH traditions; and attainment of physical, mental, emotional and spiritual health, among others. These treaty rights, as well as those of other self-governing First Nations and Inuvialuit, are recognized and affirmed by the Government of Canada in Section 35(1) of the *Constitution Act* (1982).

Additionally, as one of eight Parties[3] to the *Porcupine Caribou Management Agreement* (PCMA) (1985), Tr'ondëk Hwëch'in has demonstrated a long-standing commitment to conservation of the Porcupine Caribou Herd. The PCMA defines conservation as "the management and use of Porcupine Caribou and its habitat which best ensures the long term productivity and usefulness of the Herd for present and future generations." Objectives of the Parties to the PCMA include:

> "1. To co-operatively manage, as a herd, the Porcupine Caribou and its habitat within Canada so as to ensure the conservation of the Herd with a view to providing for the ongoing subsistence needs of native users;
> 2. To provide for participation of native users in Porcupine Caribou Herd management;
> 3. To recognize and protect certain harvesting rights in the Porcupine Caribou Herd for native users, while acknowledging that other users may also share the harvest;
> 4. To acknowledge the rights of native users as set out in this Agreement; and
> 5. To improve communications between Governments, native users and others with regard to the management of the Porcupine Caribou Herd within Canada.

While the rights granted in these agreements do not extend outside Canada, international treaty obligations do exist between our countries regarding the PCH in the *International Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd* (1987) (the "International Porcupine Caribou Treaty"). This agreement serves to promote international cooperation to achieve herd conservation, while recognizing customary and traditional uses of the PCH, including by those identified as Native users under the PCMA. The objectives of the governments of Canada and the United States under this Agreement are:

> "a. To conserve the Porcupine Caribou Herd and its habitat through international co-operation and coordination so that the risk of irreversible damage or long-term adverse effects as a result of use of caribou or their habitat is minimized;
> b. To ensure opportunities for customary and traditional uses of the Porcupine Caribou Herd by: (2) in Yukon and the Northwest Territories, Native users as defined by sections A8 and A9 of the Porcupine Caribou Management Agreement…;
> c. To enable users of Porcupine Caribou to participate in the international co-ordination of the conservation of the Porcupine Caribou Herd and its habitat;
> d. To encourage co-operation and communication among governments, users of Porcupine Caribou and others to achieve these objectives."

Furthermore, these international treaty obligations are tied to the purposes set forth for ANWR in the *Alaska National Interest Lands Conservation Act* (ANILCA) (1980) Section 303(2)(B):

> "(i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic Char and grayling;

[2] THFA, Chapter 16. http://www.trondek.ca/downloads/TH_Final_Agreement.PDF
[3] Also Government of Canada, Government of Yukon, Government of the Northwest Territories, Vuntut Gwichin Government, First Nation of Na-Cho Ny'ak Dun, Inuvialuit Game Council, and Gwich'in Tribal Council

(ii) to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;"

We acknowledge that PL 115-97 (i.e. *Tax Cut and Jobs Act*) requires an additional purpose to be added to ANILCA Sec. 303(2)(B): "(v) to provide for an oil and gas leasing program on the Coastal Plain"; however, *this new purpose should not overshadow the other purposes originally set forth for ANWR*.

On a broader scale, both Canada and the United States have also endorsed the *United Nations Declaration on the Rights of Indigenous* Peoples (2007). The following articles provide additional support regarding matters of subsistence, conservation and/or consultation:

Article 24

"Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals."

Article 25

"Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, water and coastal seas and other resources and to uphold their responsibilities to future generations in this regard."

Article 29 (1)

"Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources."

Article 32 (2)

"States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources."

TRONDËK HWËCHIN PERSPECTIVES ON PROPOSED OIL AND GAS DEVELOPMENT IN ANWR

Stewardship & Sustainable Development

Tr'ondëk Hwëch'in is well aware that it can be difficult to fully evaluate potential impacts to natural resources from any type of development when large amounts uncertainty exist, particularly in pristine wilderness areas that have not been exposed to development before. A conservative approach to development is often the best strategy in these circumstances. A great deal of uncertainty may potentially be addressed with the full consideration of a few key elements:

a) The primary factor that will affect the degree of impacts is the potential location, extent and type of proposed development. This is defined by the range of alternatives proposed in the draft EIS. A comprehensive EIS would explore a full range of alternatives to explore best- and worst-case scenarios, including an option that meets *minimum* legal requirements.

b) Once we know the general location of potential development, wildlife values for those areas can be identified. These values can be determined using traditional and scientific knowledge about wildlife occurrence, distribution and movements, as well as habitat characteristics of those areas. These values should be relatively straightforward to identify for a well-studied keystone species like Porcupine Caribou.

c) Cumulative effects can then be calculated using development scenarios, wildlife data, and other pertinent information (e.g. climate, other development, predation rates, etc.). It is important that the impacts of development are not examined in isolation from other limiting

factors affecting wildlife. A holistic approach is particularly important for a wide-ranging species like the Porcupine Caribou Herd.

d) Once impacts to wildlife populations are quantified through cumulative effects analysis, it becomes possible to determine how people who depend on wildlife for subsistence will be impacted. If development causes changes to wildlife abundance or distribution, people may be impacted by changing availability of the wildlife that they depend upon. These impacts can be particularly severe for isolated northern communities. It is also important to consider impacts to communities located throughout the range of a migratory species like the PCH.

e) Mitigation measures may offset or lessen some impacts to the land, wildlife and people. However, to protect resources, the results of mitigation must be carefully monitored and adjusted, if necessary, to maximize effectiveness. Adaptive management is particularly important for large-scale projects with timelines that may extend over many decades. Terms and conditions of leases also need to be enforced regularly by personnel with well-defined powers and responsibilities.

DEFICIENCIES WITHIN THE DRAFT EIS

After careful examination of the draft EIS, TH has identified several alarming deficiencies related to the statement's methodology and scope. It is our conclusion that rather than addressing possible development impacts of oil and gas development, the draft EIS serves only to highlight the unacceptably high degree of uncertainty surrounding proposed development for the Coastal Plain in ANWR. Our most pressing concerns related to: i) impacts to Canadian subsistence use, ii) range of proposed development alternatives, iii) habitat values to the PCH, iv) cumulative effects on the PCH population, and v) unknown effectiveness of proposed mitigations.

1) The Draft EIS does not adequately consider impacts to Canadian subsistence users from proposed oil and gas development in ANWR

Our primary concern is that the draft EIS fails to give effective consideration to the potential indirect impacts to Canadian subsistence users from oil and gas development on the calving and post-calving range of the Porcupine Caribou Herd. This omission undermines the intent behind of the International Porcupine Caribou Treaty[4] (section 3.b.), and demonstrates a lack of understanding and appreciation for customary and traditional uses by Canadian subsistence users.

TH acknowledges that the draft EIS does include some brief references to Canadian subsistence harvest in section 3.4.3 (pp. 3-167 to 3-177). However, when making conclusions on the effects of each development alternative on subsistence, the draft EIS limits its analysis to direct impacts to Alaskan subsistence communities only (as per requirements under ANILCA Sec. 810, Appendix E). Given this narrow view, the only community to be directly affected would be Kaktovik residents who hunt within the program area. The draft EIS does not explain why BLM chose to limit its analysis to "study" communities despite recognizing that "Canadian communities would be among the most likely to experience potential indirect impacts due to their proximity to and reliance on the PCH" (p. 3-170).

While the draft EIS does recognize that Canadian users have been known to account for as much as 85% of annual Porcupine caribou harvest (p. 3-168), the BLM did not elaborate on the Canadian harvest of the PCH. It is difficult to comprehend the potential impacts of development on Canadian users without understanding the Canadian harvest regime. The BLM may find it useful to know that Canadian harvest of the PCH is guided by the "Harvest Management Plan for the Porcupine Caribou Herd in Canada" (HMP) (2010) which was cooperatively developed by all 8 parties to the PCMA (one federal government, two territorial governments, four First Nation governments, one Inuvialuit government). The goal of the HMP is "to conserve the Porcupine

4 "3.b. The Parties will ensure that the Porcupine Caribou Herd, its habitat and the interests of users of Porcupine Caribou are given effective consideration in evaluating proposed activities within the range of the Herd."

Caribou Herd by adjusting the number and sex of caribou we harvest based on the changes in the herd size and population trend." The HMP is based on the principles of adaptive management, whereby a number of indicators are monitored and reviewed annually and these results inform harvest management decisions each year. The plan allows harvest management to become progressively more restrictive if the herd's population declines, for both licensed hunters and native users. Harvesting rights of native users continue to be protected through land claims agreements; however, for conservation purposes, native user communities have agreed to implement a series of harvest restrictions when the herd falls below certain thresholds. For example, if the herd fell below 45,000 animals (i.e. the "red zone"), harvest by licensed hunters would be closed and harvest by native users would be limited to ceremonial purposes only. It should now be clear that if oil and gas development causes or accelerates a substantial decline in the PCH population, Tr'ondëk Hwëch'in and other Parties to the PCMA may be subject to harvest restrictions thereby impacting our ability to participate in subsistence activities and threatening our cultural ties to the herd.

These restrictions would represent a significant sacrifice by Tr'ondëk Hwëch'in citizens for the conservation of the Porcupine Caribou Herd in the face of threats to critical caribou habitat from oil and gas development. TH has demonstrated similar commitments to conservation and stewardship in the management of other transboundary species. For example, when the Fortymile Caribou Herd (FMCH) was having difficulty recovering from a population crash in the 1970s, TH, along with the Yukon government, chose to allocate Canada's share of the harvest to herd recovery. After two decades of sacrifice, the FMCH population has grown enough that TH is now promoting the gradual reintroduction of subsistence harvest of Fortymile caribou. However, after a 20-year near-absence of harvesting, the relationships between an entire generation of TH citizens and the FMCH that normally develop through the practice of traditional harvesting activities have been impacted.

The following words from one of our citizens best articulates the effect that loss of caribou can have on TH:

> *"[We] as humans are part of the land as well…everything is connected. The land, the plants, the fish, the wildlife, the caribou…a holistic connection, and without it, there's no true balance. And so, without the caribou…it contributes to a loss of a part of our culture, a loss of part of our traditions, a loss of part of our lifestyle, so it goes right into a loss of part of our spirit, which ties into our identity of feeling wholeness, and that full balance, so with the loss of any part of what we rely on, it affects all of those areas of our lives."*

The key point we want to stress is that if oil and gas development causes long-term adverse effects to the PCH, those

2) The draft EIS fails to provide a development alternative that meets minimum legal requirements

Tr'ondëk Hwëch'in acknowledges that Sec. 20001 of PL 115-97 requires the sale of at least two leases by December 22, 2027, and that these leases must be a minimum of 400,000 acres each in areas with the highest hydrocarbon potential. Therefore, it is unclear why BLM did not provide an alternative which considered leasing only the *minimum* amount of land legally required under the Tax Act (i.e., 800,000 acres).

All of the action alternatives in the draft EIS proposed to lease more than 1 million acres of land in ANWR. Section 2.3 (pg. 2-39) failed to provide any substantive explanation for why a minimum alternative was not included within the range of alternatives provided for consideration.

TH interprets the omission of a minimum alternative as a demonstration of the lack of commitment by the United States government toward fulfilling the other purposes set forth for ANWR (ANILCA Sec. 303(B)(2)), including conservation of fish and wildlife populations and habitats, and fulfilling international treaty obligations with regard to fish and wildlife and their habitats.

3) The draft EIS understates the importance of the Coastal Plain to the Porcupine Caribou Herd, and implications to future herd health

The Porcupine Caribou Herd is likely the most studied caribou herd in the world. This is a reflection of its high intrinsic value as a keystone species in the western Arctic, and its subsequent importance to northern communities. Several key herd indicators are monitored regularly by Canadian and Alaskan partners, including those related to herd demographics[5], body condition[6], and habitat[7]. The Porcupine Caribou Technical Committee (PCTC), summarizes this information every year in the "Porcupine Caribou Annual Summary Report"[8]. Herd movements and range use are well documented by over 40 years of location data collected from collared caribou, and abundant traditional knowledge about Porcupine caribou exists in every community that depends on the herd. Despite this breadth of available knowledge, the BLM failed to adequately characterize the importance of ANWR to the PCH.

Calving habitat

The draft EIS does acknowledge that the Coastal Plain provides both highly digestible forage for lactating cows and lower predation risk for newborn calves (pg. 3-105). It also notes the high level of variability demonstrated by Porcupine Caribou when selecting suitable calving areas each year (pg. 3-106), but *does not explain the reasons for that variation.* Although the draft EIS acknowledges that "calving location and vegetation growing conditions appear to affect calf survival" (pg. 3-107), the BLM fails to link the mechanisms driving calving location and the effect this has on early calf survival. Independent analysis conducted by internationally-recognized experts[9] has confirmed that calving location directly affects early calf survival. When calves are born in 1002, the primary factor affecting calf survival is spring forage available to lactating cows. When calves are born outside of 1002, in years with late snow melt, the primary factor that affects calf survival is late winter snow conditions prior to their birth. Therefore, if caribou are prevented from calving in 1002 by oil and gas development, poor winter conditions (e.g. freezing rain, rain-on-snow events) could have a disproportionately negative impact on early calf survival. Calving in 1002 allows cows to overcome a bad winter and reduces the chances that cows will wean their calves early.

Post-calving habitat

Porcupine caribou use the 1002 lands even more during the post-calving season. Even when snow conditions prevent cows from giving birth in ANWR, cows will still take their calves westward as the snow melts. Consequently, collared cows have used ANWR every year since 1985 when the PCH were first collared. Collar data indicates that cows and calves spend the most time in ANWR during post-calving, in areas classified as medium to high hydrocarbon potential. Access to high quality forage found on the Coastal Plain supports the high energy demands of lactation and high movement rates associated with insect harassment. Like other barren-ground caribou herds, the PCH forms large aggregations in response to insect harassment. However, unlike other caribou herds on the Coastal Plain, these 'super groups' can include >120,000 caribou (more than half the herd). The larger the group, the denser they form and the faster they move, pushing the animals into an energy deficit. Movements of these aggregations are unpredictable but reflect the need for caribou to balance insect exposure with access to forage. If oil field infrastructure prevents or delays the movements of these 'super groups', caribou may experience a greater energy deficit resulting in poorer body condition and possible implications to

5 population size & trend, adult female survival, birth rate, calf:cow ratios, bull ratios, peak of calving

6 back fat, hunter assessments

7 snow conditions, wildfires, linear disturbance

8 http://www.pcmb.ca/resources

9 Russell, D. and A. Gunn. 2019. Vulnerability analysis of the Porcupine Caribou Herd to potential development of the 1002 lands in the Arctic National Wildlife Refuge, Alaska. Report prepared for: Environment Yukon, Canadian Wildlife Service, and GNWT Department of Environment and Natural Resources. 143 pp. http://www.pcmb.ca/1002

herd productivity. Cows in poor body condition will prioritize their own survival and may wean their calves early and/or may not get pregnant in the fall.

Differences between PCH and CAH

In the draft EIS, the BLM often used the responses of the Central Arctic Herd (CAH) to oil and gas development in Prudhoe Bay to draw conclusions about possible impacts to the Porcupine Caribou Herd. Key differences between the herds indicate that it may be inappropriate use CAH data to draw conclusions about the PCH when considering impacts of development in ANWR.

Notably, the PCH is likely the least productive of the large migratory herds in North America. In the absence of development, the herds' rate of growth or decline has never exceeded 5% in the past 40+ years. Additionally, PCH population numbers are known to be most sensitive to survival of adult females and calves, which in turn are most strongly influenced by spring and summer range conditions. Therefore, if development displaces Porcupine caribou from prime calving and post-calving habitat, we should expect herd productivity to be impacted to a greater degree than the Central Arctic Herd which is more influenced by fall conditions from the previous year. The Coastal Plain is also much narrower in the calving and post-calving range of the PCH, compared to the CAH. The wider Coastal Plain near Prudhoe Bay has allowed the CAH to avoid infrastructure while still remaining within suitable habitat. Porcupine Caribou, on the other hand, have less habitat available and, therefore, a greater chance of being displaced into the foothills of the Brooks Range or east into Canada.

If oil and gas development causes long-term displacement of Porcupine Caribou from the Coastal Plain in ANWR, the health and condition of maternal caribou and their calves may be negatively impacted. Declines in cow or calf survival may be significant enough to cause the population and/or distribution of the PCH to decline or contract, thereby affecting availability of Porcupine caribou to subsistence users.

4) The draft EIS failed to accurately quantify the potential cumulative effects to PCH from oil and gas development in ANWR

The draft EIS does not adequately consider cumulative effects of oil and gas development to Porcupine Caribou on the Coastal Plain. The BLM arrived at weak conclusions based on questionable assumptions and a lack of quantitative analysis.

Key assumptions in the draft EIS

The first assumption by BLM is that Porcupine caribou will not be displaced by oil and gas activities or infrastructure if they are more than 2.49 miles away. We understand that this assumption is based on responses of the Central Arctic Herd (CAH) to oil and gas activity in Prudhoe Bay that were recorded nearly 30 years ago[10]. Key differences between the PCH and the CAH mentioned above make this assumption tenuous at best. In particular, it is unknown how PCH post-calving 'super groups' may react to infrastructure. Also, the PCH has demonstrated a zone of influence (ZOI) of as much as 18.5 to 30 km surrounding the Dempster Highway within the winter range of the herd, a time of year when caribou are far less sensitive to human activities[11]. We expect that oil field access roads could receive as much as or possibly more traffic than the Dempster Highway. The ZOI could also increase if hunting is permitted from oil field roads, as is suggested in the draft EIS (pg. 3-122). *Based on these differences, TH expects that the area that Porcupine Caribou will be displaced from will be larger than that reported in the draft EIS*.

10 Cameron, R.D. 1993. Distribution and productivity of the Central Arctic Caribou Herd in relation to petroleum development: case history studies with a nutritional perspective. Alaska Dep. Fish and Game, Fed. Aid in Wildl. Restor. Prog. Rep. Proj. W-24-1, Study 3.35. Juneau. 34pp.

11 Johnson, C., and D. Russell. 2014. Long-term distribution responses of a migratory caribou herd to human disturbance. Biological Conservation 177:52-63.

The second key assumption by BLM is that the development footprint in ANWR will not exceed 2000 acres. However, Sec 20001 of PL 115-97 specifies that 2000 acres of surface development are permitted '*at any given time*'. This caveat suggests that there will likely be a larger footprint if old sites are 'reclaimed'. Reclamation standards, however, were not specified. Given the low productivity of the Arctic landscape, it is unlikely that reclamation will be effective enough within the lifetime of the oil field (10 – 50 years, pg. B-18). Therefore, we expect that far more than 2000 acres will be disturbed over the lifetime of the oil field. Also, BLM did not include gravel pits within their interpretation of "production and support facilities". Gravel pits will be essential to build all the roads, airstrips and pads that will be necessary within the proposed oil field. The draft EIS estimates nearly 13 million yd^3 of gravel could be required for construction and that 320 acres of surface disturbance could result from gravel mines. This would be a 15% increase in surface disturbance that would not be included in the 2000 acre limitation. *TH expects that over the lifetime of a typical oil field, the area of surface disturbance in ANWR will greatly exceed the 2000 acres reported in the draft EIS.*

Lack of quantitative impact analysis

TH was disappointed to find that "No quantitative cumulative analysis bas been prepared specifically for this EIS" (pg. 3-16). Environmental impacts cannot be assessed in isolation from each other. A holistic approach is required to understand the full range of effects that could result from development. Fortunately, a vulnerability assessment[9] for the Porcupine Caribou Herd was recently completed by internationally-recognized experts served to help fill those gaps.

Cumulative impacts modelling recently completed by Russell and Gunn (2019) used the development alternatives presented in the draft EIS, along with herd demographics, energy-protein relationships and climate data. The results from that modelling support these troubling conclusions:

- **All of the development alternatives proposed in the draft EIS will increase the risks of a population decline and decrease the chances for herd growth,**
- **As development alternatives become less restrictive, the risks of a population decline increase**
- **As the population shrinks, the risks of further population declines increase**

Tr'ondëk Hwëch'in finds that these conclusions represent an unacceptable level of risk to the Porcupine Caribou Herd from proposed oil and gas development on the Coastal Plain of ANWR.

5) The draft EIS fails to incorporate adaptive management principles into mitigation of potential impacts from proposed oil and gas development in ANWR

TH understands that leasing stipulations and required operating procedures (ROP) will be the primary tools used by BLM to control potential impacts to natural resources from proposed oil and gas development on the Coastal Plain. Many stipulations and ROPs applicable to the PCH[12] are based on the flawed assumptions we raised in the prior section, regarding PCH displacement and potential size of the development footprint.

Each action alternative proposes to divide the Coastal Plain program area into various areas subject to No Surface Occupancy (NSO), timing limitations (TL), controlled surface use (CSU), or standard terms and conditions. TH recognizes that the more restrictive alternatives contain larger areas that are subject to more restrictive stipulations (i.e. NSO, TLs or areas not leased). However, TH is not convinced that these stipulations are restrictive enough to offset potential effects to PCH movements and distribution. Specifically, TH is concerned that although drilling will not be permitted in NSO areas, roads and pipelines will still be allowed to cross over these

12 Stipulations 6, 7, 8, 9; ROP 18, 21, 23, 24, 28, 33, 34, 36, 38, 42

areas. Additionally, timing limitations will only apply to construction activities and not to operational activities. The extent and location of roads and pipelines may have serious consequences for caribou movements and habitat use. Caribou will likely respond in some way to any type of oil field activity, whether that activity is associated with exploration, construction or operations. To be clear, NSO areas should not contain *any* sort of surface infrastructure, and timing limitations should apply to all oil field activities, including but not limited to exploration, construction and operations.

Another equally important concern is that these stipulations and ROPs can be waived or altered at any time by the BLM Authorized Officer (pg. 2-3). The draft EIS does not specify the process that the Authorized Officer would use to make those decisions or the conditions that would warrant such consideration, and, therefore, does not promote confidence in the long-term, effective implementation of these provisions. Increasing the amount of land that will not be leased and providing long-term protection for those lands is the only way to prevent oil and gas development from expanding over the lifetime of the oil field.

It is important that the mitigation measures used are proven to be effective. Very few of the proposed mitigations in the EIS have been proven to be effective for caribou, and certainly not for the PCH. When there is uncertainty in the response of natural resources to mitigations, a process must be in place to monitor the effectiveness of those mitigations and management practices must be adjusted as required to ensure that residual effects from development are minimized. Tr'ondëk Hwëch'in is concerned to find that BLM did not incorporate *adaptive management* into the draft EIS. There were some references to monitoring some aspects of oil and gas development including vehicle use, aircraft, conflict avoidance, contaminants, invasive plant species, and wildlife attractants. However, some monitoring appears to be mandatory while others "may be required". It is unclear how BLM personnel will make decisions about when monitoring will be required, what indicators or thresholds will be used, or how that information will influence management of oil and gas activities.

The draft EIS proposes relatively weak and unproven mitigation strategies to control the impacts of oil and gas development in ANWR, and fails to provide a framework for monitoring and improving mitigations over time.

BLM has the opportunity to demonstrate a commitment to minimizing impacts of oil and gas development by limiting the total amount of land available to oil and gas leasing, and by granting strong protection to non-leased lands to prevent development from expanding over time.

Conclusions

The many deficiencies that we have identified in the draft EIS serve only to highlight the unacceptable level of uncertainty currently associated with proposed oil and gas development in ANWR. The risks of significant, long-term adverse impacts on Porcupine Caribou and the people who depend on this herd are too great.

Tr'ondëk Hwëch'in does not support any

We understand that Alternative A (no development) does not comply with PL 115-97; however, it is the only scenario provided in the draft EIS that will continue to protect the Porcupine Caribou Herd from the effects of oil and gas development in their critical calving, post-calving and summer range.

It is obvious that the draft EIS is the product of a hasty attempt to push a lease sale through as quickly as possible. However, the first lease does not need to be sold until December 22, 2021. Given the multitude of deficiencies in the draft EIS, there is still time to produce a more comprehensive document (i.e. a supplementary EIS) that:

- includes a development alternative that proposes to lease the minimum amount of land required by law,

- gives full consideration for indirect impacts to all subsistence users throughout the range of the PCH,
- provides defensible rationale for key assumptions,
- incorporates a quantitative analysis of impacts to wildlife using the best available scientific and traditional knowledge,
- uses adaptive management based on proven mitigation measures, systematic monitoring and a conservative approach to development in the face of uncertainty,
- identifies proven reclamation standards that factor in the reduced capacity of the Arctic landscape to recover from disturbance, and that
- proposes long-term, permanent protection to areas on the Coastal Plain that won't be leased.

If the BLM manages to do all of these things, however, it would likely become apparent that the remaining risks (i.e., residual effects) to Porcupine caribou and the people who depend on them are still unacceptably high. Proceeding with development in the face of these risks undermines the principles of conservation, sustainable development, stewardship and reconciliation that are encompassed in the numerous agreements, treaties, declarations, and policies that our countries have committed to over the past decades.

The Porcupine Caribou Herd is a unique, irreplaceable, essential ecological and cultural component of the vast landscape through which it ranges. Tr'ondëk Hwëch'in remains committed to the conservation and sustainable management of the Porcupine Caribou Herd. We will continue to advocate for the protection of this important resource, to ensure that future generations will be able maintain a relationship with the herd, and that the landscape will continue to benefit from the existence of this keystone species.

Sincerely,

Chief Roberta Joseph
TR'ONDËK HWËCH'IN

Cc: Mr. Joe Tetlichi, Chair, Porcupine Caribou Management Board
Attachments: TH Scoping Letter, June 19, 2018