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PUBLIC COMMENT SUBMISSION

Ms. Nichole Hayes  
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Re: DOI-BLM-AK-0000-2018-EIS-Coastal Plain Oil & Gas Leasing

Dear Ms. Hayes,

Thank you for the opportunity to comment on the Draft EIS for Alaska North Slope Coastal Plain Oil & Gas Leasing. I'm an almost forty-year resident of Alaska and a retired periglacial geologist who has conducted frozen ground research and worked as an engineering geologist for private industry on the North Slope.

I am writing you with concerns about basic information omissions and misconceptions concerning the study area and related geotechnical issues for its infrastructure design and construction.

- 1) E.D. Leffingwell's USGS Professional Paper 109 apparently is not cited in the EIS bibliography. This paper was the first of its kind to describe periglacial phenomena directly in the study area and in North America. His description of weather, aufeis and coastal erosion differ distinctly from many of the EIS's presentations, ie Appendix A, figure 3-1 for the wind rose for Barter Island is unrelated to most of the development areas (usually more than 40 miles inland, not coastal); his fall, winter and spring experiences on rivers in the area clearly report major icing events that will significantly adversely impact river crossings, whether ice bridges, culverts or bridges; and his recounting of coastal erosion of a century ago has only intensified today so that design problems for seawater treatment plants or barge port facilities on the coast will be difficult and repetitive for a projected oil & gas field of 85 years.
- 2) Appendix A, figure 3-6 shows the proposed marine barge route to supply the CP development. How wise is it that this ~1200-mile course of serious marine navigation has no marine dry-dock repair capability nor any year-round, substantive USCG rescue support? Though this maritime concern may be thought beyond the scope of this draft EIS, clearly it should not be when twice-yearly barge resupplies are projected.
- 3) Continuing in regard to littoral development, marine coastal erosion rates in the study area are increasing over time due to warmer, more intense and more frequent storms. Offshore open-water fetch is longer in duration than in the past and consequent storm surges extend farther inland with greater severity. These factors threaten suitability of any infrastructure built on the coast, necessitating unanticipated gravel pits and an undesirable scenario of trying to armor causeways, docks and ramps. No where is dredging addressed to handle deeper-hulled craft nor varying seabed profiles.
- 4) Figures B-1 and B-2 are conceptual projections for oil development facilities. Both suggest serious problems that are unaddressed in the draft EIS. It is that any modification to the surface of the plain will significantly affect water drainage over the oil & gas field during its lengthy lifetime. With increases in minimum temperature ranges, active layer thicknesses are increasing, degree-day permissible activity for heavy-equipment operation is shortened, and generally design for effective, long-lived structures and facilities is made more difficult. There is a likely prediction, heretofore unseen, that the variable wind directions of the inner coastal plain will significantly respond to any surface relief change (ie roads of any kind, utilidors, pipelines, VSMs and buildings and facilities) by deposition of windblown snow in a changed manner so that combined with thermally-degraded surficial permafrost, an entire new network of

thermokarst and fluvial features will grow, effectively "gridding" in migrating animals and any proposed construction changes during the field's life.

- 5) A major omission in this document is no discussion of how these new oil & gas fields would tie in to the existing Trans-Alaska Pipeline System. Such an extension of ~120 miles would entail serious construction plans that need to be addressed, most importantly that all such major pipelines, whether elevated or buried, require year-round, hence gravel roads, and possibly a midpoint pump station. From a policy viewpoint, how wise is it to utilize the original TAPS to bring any new oil to market when the TAPS went on-line in 1977, had a design life of 30 years, and thus has outlived its reliability by a dozen years? Is the oil industry willing to replace such a line during the subsequent 85-years of development of ANWR?
- 6) Policy-wise, the Administration's fast-track of this draft EIS in a shortened format that is difficult to consult; its proposing a lease sale within a year when Congress allowed four years for such; its action alternatives offering more acreage than the Tax Cuts & Jobs Act of 2017 (PL 115-97) specified; and its interpretation of the 2000-acre cap on surface development not including gravel mines and being a rolling cap interpretation of "reclaimed" land are deleterious to the best interests of the US public.

Since you are constrained by the above Congressional act, I urge you to reassess your parameters in Alternative D-2 so that they align most closely to Alternative A. In an ideal world, sitting on your hands and taking no-action until a new Administration would be the soundest course so that no further climate degradation would occur.

Sincerely,

*Philip S. Marshall* 

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