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Oil and Gas Leasing in the Arctic National Wildlife Refuge (ANWR): The 2,000-Acre Limit

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Summary

Congress is again considering whether to permit drilling for oil and gas on the *geographical* coastal plain of the Arctic National Wildlife Refuge (ANWR), Alaska, or to maintain the Refuge's statutory prohibition on drilling. The House has passed H.R. 6, which would authorize oil and gas leasing in ANWR, and Congress has approved H.Con.Res. 95, a budget resolution that may enhance prospects for legislation opening ANWR to meet spending goals. Section 2207(a)(3) of H.R. 6 would limit the surface area that can be covered by certain oil production and support facilities to 2,000 acres of the 1.5 million acres of the *defined* Coastal Plain. This provision may not apply to some or all of the more than 100,000 acres held by Native Americans in the Refuge that could be developed if the federal lands are opened to oil and gas development. The choice of exactly what facilities would be limited to 2,000 acres is an open question. The answer could constrain development if oil and gas discoveries are widespread. The Department of the Interior will implement the limit through regulations to be written, under a mandate to consolidate facilities. This report discusses both legal and technical aspects of the 2,000-acre limit and will be updated as circumstances warrant.

Congress is currently considering whether to permit drilling for oil and gas on the coastal plain of the Arctic National Wildlife Refuge (ANWR), Alaska. (Inaction would retain the Refuge's statutory prohibition on drilling.) The House has passed H.R. 6, which would authorize oil and gas leasing in ANWR, and the House and Senate have approved H.Con.Res. 95, a budget resolution that may enhance prospects for legislation opening ANWR to meet spending goals. Section 2207(a)(3) of H.R. 6 would limit the amount of surface area that can be covered by oil production and support facilities to 2,000 acres of the 1.5 million acres of the Coastal Plain by directing the Secretary of the Interior to:

> ensure that the maximum amount of surface acreage covered by production and support facilities, including airstrips and any areas covered by gravel berms or piers for support of pipelines, does not exceed 2,000 acres on the Coastal Plain.

Further, § 2207(f) directs the Secretary to prepare periodic plans to avoid unnecessary duplication of facilities, and to encourage consolidation of facilities, among other things. This 2,000-acre "footprint" limitation is frequently cited as one way to minimize impacts of oil and gas development on the Refuge.[1] However, this provision may not apply to some or all of the more than 100,000 acres held by Native Americans in the Refuge that could be developed if the federal lands are opened to oil and gas development.[2] Moreover, this acreage limit will apply to some, and perhaps many, important development facilities. If these facilities are limited as a result, or if oil and gas discoveries are widespread, some otherwise attractive discoveries could be precluded, or the limitation might be lifted at a later date, to permit full development.

Section 2207(a) requires the Secretary to administer the provisions of the title in a manner "consistent with the requirements of section 2203." Section 2203(a) requires, among other things, that the Secretary

> take such actions as are necessary ... to administer the provisions of this title ... in a manner that ensures the receipt of fair market value by the public for the mineral resources to be leased.

There may be a tradeoff between the direction to limit surface use for production and support facilities to 2,000 acres (as well as other constraints) and the determination of fair market value, since bidders could be expected to discount their bids or vary their bidding strategy to reflect the limitation. This report discusses both legal and technical aspects of the 2,000-acre limit.

Current Law on Development of ANWR. ANWR contains federal lands and nonfederal lands held by Native Americans. Section 1003 of the Alaska National Interest Lands Conservation Act (ANILCA)[3] prohibits oil and gas development in the Refuge unless Congress authorizes it. Under a 1983 Agreement (described below), if Congress repeals § 1003, and allows oil and gas development on the federal lands, development may also proceed on the Native American lands in the Refuge.

Native American Lands in ANWR. The Alaska Native Claims Settlement Act (ANCSA)[4] resolved the claims of Alaska Natives against the United States, in part by establishing Native village corporations that could select surface land holdings, and

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[1] Supporters of the limitation favor development, and argue that by limiting surface development, environmental impacts will be reduced. Opponents of ANWR development argue that what they see as major impacts (e.g., caribou displacement, dust, subsistence and recreation resources) would still occur, and an acreage limit would create a false sense of a safety net for the Refuge.

[2] For a more detailed discussion of legal issues related to the Native lands in ANWR, see CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge (ANWR)*, by Pamela Baldwin.

[3] P.L. 96-487, 94 Stat. 2374, 16 U.S.C. §§ 3101, *et seq.*

[4] P.L. 92-203, 85 Stat. 688, 43 U.S.C. §§ 1601, *et seq.*

Native regional corporations, associated with the village corporations, that could select primarily subsurface rights. The Kaktovik Inupiat Corporation (KIC) selected approximately three townships of lands in the geographic coastal plain of ANWR (a township is typically 23,040 acres). However, the legal boundaries of the *Coastal Plain*, as a term defined under ANILCA, were administratively drawn so as to exclude these three townships from the defined Coastal Plain. Also under ANILCA, KIC was entitled to select a fourth township, for a total of approximately 92,000 acres.

In addition, there are over 10,000 acres of Native-owned *allotments* in the Refuge. These are basically surface ownerships, with the federal government reserving the oil, gas, and coal rights. Although allotments were originally restricted titles, under P.L. 108-337, allotments may now be subdivided and dedicated as if the surface estate were held in unrestricted, fee-simple title, a fact that could facilitate development on them if the Refuge is opened.

The Arctic Slope Regional Corporation (ASRC), the regional corporation associated with KIC, initially could not select lands within ANWR under the terms of ANCSA, but did receive such lands pursuant to a 1983 land exchange agreement negotiated by then Secretary of the Interior James Watt. This agreement is known as the *1983 Agreement* or the *Chandler Lake Agreement* after some of the other lands in the exchange. Under this agreement, ASRC received the subsurface rights beneath KIC lands and allotments in the Refuge, but cannot develop any oil and gas unless and until Congress authorizes oil and gas development on the federal lands in the Coastal Plain, on the ASRC lands, or both. *ASRC lands* are defined in the agreement as including, as the context requires, the surface lands as well.[5]

Appendices I and II of the 1983 Agreement contain terms and stipulations that would govern oil exploration activities on ASRC lands unless superseded by legislation or regulations. In addition, par. B.9 of Appendix II states that any oil and gas production activities *on ASRC lands* (which are both within and outside the Coastal Plain):

> shall be in accordance with the substantive statutory and regulatory requirements governing oil and gas exploration, including exploratory drilling, and development and production that are designed to protect the wildlife, its habitat, and the environment of the *coastal plain*, or the ASRC Lands, or both. [emphasis added]

Therefore, it appears that oil and gas production activities on ASRC lands would be subject to the same environmental requirements as those governing oil and gas production on federal lands.

Applicability of the 2,000-Acre Limit to Native Lands. H.R. 6 does not address how the 2,000-acre limit might apply to oil and gas development on Native lands in ANWR, but the leasing regulations to be issued by the Secretary may. If the applicability of the limitation to Native lands were to be litigated, a court might possibly find that (1) the provision is not the type of environmental protection referred to in the 1983 Agreement, and therefore does not apply to development of any ASRC lands; (2)

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[5] An owner of a mineral estate typically also has the right to use as much of the surface as is reasonably necessary to develop the minerals.

oil and gas development on ASRC lands within the defined Coastal Plain (i.e., the fourth township lands) are subject to the 2,000-acre limit; or (3) all ASRC lands in the Refuge are bound by the restriction because of the wording of par. B.9 of Appendix II of the 1983 Agreement. H.R. 6 does not address how the 2,000 acres would be allocated among ASRC and federal lessees if the acreage limit applies to any ASRC lands.

In addition, the limitation arguably would not apply to surface use of the three townships of KIC lands and allotments not in the defined Coastal Plain, and possibly not to those lands, wherever located, if they were not being used as support for ASRC development. Therefore, it is possible that the 2,000-acre limit would not apply to some or all of the more than 100,000 acres of Native lands that, under the 1983 Agreement, could be opened to oil and gas development in ANWR if the federal lands are.

Dispersion of Footprints. Technological advances have significantly reduced the size of oil drilling facilities in recent decades. However, assuming there were commercial finds, it is unlikely that full development of the Coastal Plain could be accomplished from a single compact site, and development could require a dispersed network of drill pads, roads, pipelines, gravel mines, and other structures. Even with advanced drilling techniques, there are limits to the lateral reach of drilling from a given wellhead. The current record in northern Alaska is 3.78 miles from one wellhead.[6] (The coastal plain is approximately 104 miles long and between 16 and 34 miles wide.) The extent of needed infrastructure (in both quantity and type) cannot be determined until or unless discoveries are actually made. Discoveries in the western part of the Refuge could necessitate fewer structures since some support or production structures might be located just outside of the Refuge's boundaries. And many smaller, widely scattered fields would likely necessitate greater infrastructure than a few larger fields. Failure to find economic discoveries could lead to relatively minor, transient disturbance; important, scattered, or numerous finds could produce impacts lasting decades or possibly a century or more.

To What Facilities Does the Acreage Limitation Apply? There is little consensus in the ANWR debate on what facilities and features might be considered to be part of development's footprint. The limitation in H.R. 6 requires the Secretary to develop regulations, stipulations, and other measures for its implementation. The wording does not appear to include features some scientists, Natives, or environmentalists might wish: areas under elevated pipelines, or affected by blowing dust or visual impacts, etc., though these might experience some protection under other regulations. The potentially limited facilities can be divided into two categories: (1) areas directly covered with gravel (e.g., gravel roads, drill pads, airfields, culverts, bridges, ports, causeways, pump stations, water treatment facilities); and (2) areas whose surface is otherwise removed or covered (e.g., gravel mines, pipeline supports, water impoundments).

Airstrips and pipeline supports are expressly limited in §2007. But more debatable is the applicability of the limitation to other facilities: gravel mines, bridges, water impoundments, and causeways are examples. DOI's regulations that define the facilities

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[6] See CRS Report RL32108, *North Slope Infrastructure and the ANWR Debate*, by M. Lynne Corn, and see CRS Report RL31022, *Arctic Petroleum Technology Developments*, by Bernard A. Gelb et al.

to be limited would critically affect not only industry bids but also ultimately the potential for constraints on development.

As the Alpine model makes clear, new fields make relatively small surface disturbance.[7] But as fields expand with new discoveries, surface disturbance increases. In the ANWR context, this means that an initial lease offering of 200,000 acres (the minimum required in H.R. 6) may not be seriously constrained by the wording of the 2,000-acre limit in §2207(a)(3), in the first draw on the "bank" of available acreage. But successful, scattered, numerous finds could reduce the "bank's" remaining acreage so as to constrain industry's participation in future lease sales. In this light, the Secretary's obligation to develop plans for consolidation of facilities would become both critical and more difficult, since the Secretary would need to allow for potential future discoveries.

Exploration in the ANWR Terrain. In general, a footprint limit would not be important in the exploration phase, since exploration has typically been accomplished with ice roads and ice pads. But in the 1002 area, exploration may be more difficult than in previously developed areas. Liquid fresh water is much more scarce in the rolling terrain of the Coastal Plain; in similarly rolling terrain on state land, conditions have caused Alaska regulators to allow gravel exploration roads for safety reasons.[8] Also, the warming trend of the last few decades has cut the season for ice construction from over 200 days to about half of its previous length.[9] Some lengthening was achieved by creating a longer season for lighter vehicles, and restricting heavy vehicles to the shorter period. In combination, the terrain, scarcity of fresh water, and a shortened season might bring an acreage limitation into play in the exploration as well as the development phase.

Interaction of Acreage Limit and Economics. A company's investment calculus would affect the amount the company would bid for a lease — or its willingness to bid at all. A very large prospect, near existing development at the coast, close to gravel sources and the limited year-round liquid fresh water, would likely generate industry interest even under tight environmental restrictions. Large but widely scattered or less convenient prospects would present opportunities which could be profitable under some regulatory scenarios, but not others. And small, or otherwise unattractive prospects might not be of interest under any foreseeable conditions.

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[7] At the Alpine field, initially on 40,000 acres of state, Native, and federal land west of Prudhoe Bay, the early development consisted of about 100 acres of pads, a road, and an airstrip, plus a 150-acre gravel mine. An approved expansion plan to create five new drill pads will contain 28 miles of new gravel roads, and a new gravel mine. Under the plan, there would be an additional 251 acres of roads, causeways, and other structures, plus a 65-acre gravel mine, for a development total of 566 acres (p. 1036 in U.S. Dept. of the Interior, Bureau of Land Management, *Alpine Satellite Development Plan, Final Environmental Impact Statement*, Sept. 2004).

[8] State of Alaska, Dept. of Natural Resources, Div. of Oil and Gas, *Supplement to North Slope Areawide Best Interest Finding*, July 24, 2002, 3 pp.

[9] National Research Council, *Cumulative Effects of Oil and Gas Activities on Alaska's North Slope*, March 2003, pp. 134-137 and figs. 7-8.

A lessee making a discovery will make its judgment on whether and how quickly to proceed[10] based on the size of the field, quality of the oil, expected prices, regulatory costs, and other considerations. This decision may be affected by limits on the operation of the field such as the size of the drill pads, access to fresh water, or limits on gravel roads (forcing expensive seasonal limitations and air transport to move work crews). All else being equal, if restrictions (including an acreage limitation) became more costly, fewer prospects might be developed.

If the footprints of development throughout the Coastal Plain were strictly limited to a total of 2,000 acres, a tradeoff could occur between this limit and the determination of fair market value for them, unless the facilities subject to limits were defined very narrowly or discoveries prove limited. If the Secretary of the Interior determined that some oil would not be developed, what options are available?

Responses to Acreage Limits. The acreage limitation will be closely watched both from the perspective of its putative contribution to limiting adverse environmental affects and its possible constraint on development. If development legislation is enacted, environmentalists will likely focus on a strict interpretation of the limit and on DOI's mandate in §2207(f) to consolidate and minimize the footprint. Development proponents will likely focus on its costs. Depending on how much oil is found, how it is distributed, and where the limit is applied, the effect of the 2,000-acre limit could range from irrelevant to a significant factor affecting any development. In the latter case, industry's response could be expected to include technological improvements, a shift of facilities to uncontrolled areas, a changed bidding strategy, an effort to obtain regulatory or legislative relief, or a combination of these options.

[10] For diligence requirements under the Mineral Leasing Act, see 30 U.S.C. §226(e) and (i).