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

Pamela Baldwin
Legislative Attorney
American Law Division

M. Lynne Corn
Specialist in Natural Resources
Resources, Science and Industry Division

Summary

Congress is again considering whether to permit drilling for oil and gas on the coastal plain of the Arctic National Wildlife Refuge (ANWR), Alaska, or to maintain the current statutory prohibition on oil and gas development in the Refuge. The 109th Congress has considered the issue in authorizing bills, budget reconciliation bills, and an appropriation bill, but legislation opening the Refuge has not yet passed both chambers. Several measures would have limited the surface area that could be covered by certain oil production and support facilities to 2,000 acres of the 1.5 million acres of the Coastal Plain. These provisions raise several issues: they may not apply to some or all of the nearly 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; and exactly what facilities would be subject to the limitation is not clear, although the limitation could constrain development if oil and gas discoveries are widespread. 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 current statutory prohibition on drilling in the Refuge.) Congress has considered the issue in authorizing bills, budget reconciliation bills — which cannot be filibustered in the Senate — and an appropriation bill.[1] The House-passed energy bill, H.R. 6, authorized leasing in ANWR, but the Senate did not pass a comparable bill, and the provisions were eliminated before enactment as P.L. 109-58. The Senate passed S. 1932, a budget reconciliation measure that would have authorized ANWR leasing, but the

[1] See CRS Issue Brief IB10136, *Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress*, by Lynne M. Corn, Bernard A. Gelb, and Pamela Baldwin.

comparable House reconciliation measure did not, although an earlier version did. An attempt to add ANWR leasing to the Defense appropriations bill (H.R. 2863, P.L. 109-148) also failed.

Section 2207(a)(3) of H.R. 6 would have limited 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. Section 4001(f) of the Senate-passed S. 1932 contained a similar acreage limit, as did § 7(a)(3) of Div.C of H.R. 2863. The H.R. 6 provision would have directed 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) would have directed 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.[2] However, the H.R. 6 provision might not have limited exploratory facilities, and might not have limited some permanent structures. The acreage limit would have applied to some, and perhaps many, important development facilities. If facilities were limited as a result, or if oil and gas discoveries are widespread, some otherwise attractive discoveries could have been precluded, or the limitation might be lifted at a later date, to permit full development.

Section 2207(a) would have required the Secretary to administer the provisions of the title in a manner "consistent with the requirements of section 2203." Section 2203(a) required, among other things, that the Secretary ensure the receipt of fair market value by the public for the mineral resources to be leased.

There may have been 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.

The Senate measure, S. 1932, was less detailed than the House measure because it was a part of a budget reconciliation measure and special procedural rules applied, but leasing language in it and in the DOD appropriation bill was similar to that in H.R. 6. 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

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[2] 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.

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

repeals § 1003, and allows oil and gas development on the federal lands, development may also proceed on the Native American lands in the Refuge.[4]

Native American Lands in ANWR. The Alaska Native Claims Settlement Act (ANCSA)[5] resolved the claims of Alaska Natives against the United States, in part by establishing Native village corporations that could select surface land holdings, and 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. This township is within the area administratively defined as the Coastal Plain.

In addition, there are several thousand acres of claimed or conveyed 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 the subsurface of these lands pursuant to a 1983 land exchange agreement, known as the *1983 Agreement* or the *Chandler Lake Agreement,* negotiated by then Secretary of the Interior James Watt. *ASRC lands* are defined in the agreement as including, as the context requires, the surface lands as well.[6] However, ASRC's oil and gas cannot be developed unless and until Congress authorizes oil and gas development on the federal lands in the Coastal Plain, on the ASRC lands, or both.

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 that are designed to protect the wildlife, habitat and environment of the coastal plain, ASRC lands, or both. 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.

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[4] 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.

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

[6] 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.

Applicability of the 2,000-Acre Limit to Native Lands. The House-passed H.R. 6 did 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 might. However, H.R. 6, applied to oil and gas activities in the *Coastal Plain* of ANWR, which was defined as the area identified on a map (now missing) referenced in ANILCA, and "as described in appendix I to part 37 of title 50, Code of Federal Regulations." This CFR definition of the boundary of the Coastal Plain was published in 1983,[7] and excludes from the defined Coastal Plain the three townships then held by KIC. The description was not changed to reflect the fourth KIC township. Therefore, arguably three KIC townships are outside the defined Coastal Plain and one township is inside, with ASRC holdings underlying all of them. If the applicability of the 2,000-acre limitation to Native lands were to be litigated, a court might possibly find that (1) the provision is not "environmental protection" referred to in the 1983 Agreement, and therefore does not apply to development of any ASRC lands; (2) ASRC lands within the defined Coastal Plain (i.e., the fourth township lands) are subject to the 2,000-acre limit, but the others are not; 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. The House-passed H.R. 6 did not address how the 2,000 acres would be allocated among ASRC and federal lessees if the acreage limit applies to ASRC lands. The Senate developed a new map of the Coastal Plain in connection with the Senate budget reconciliation measure. This map shows the Native lands as being within the Coastal Plain, but the bill does not clarify the intended applicability of leasing restrictions.

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, that are 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 nearly 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.

Furthermore, the limitation might not apply to exploratory activities, which ASRC could conduct under the 1983 Agreement, which arguably is favorable to ASRC.[8]

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.[9] (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

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[7] 48 *Fed. Reg.* 7936, 7980 (February 24, 1983).

[8] For example, if ASRC and the United States disagree as to the environmental impacts of ASRC's exploratory activities, the United States must get a court to agree with its restrictions.

[9] 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.

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. 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 House-passed H.R. 6 required the Secretary to develop regulations, stipulations, and other implementation measures. 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. 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 removed or covered (e.g., gravel mines, pipeline supports, water impoundments).

Airstrips and pipeline supports were 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 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 can make relatively small surface disturbance.[10] 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), but scattered, numerous finds could reduce the remaining available 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. Exploration on the North Slope 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 and the terrain more rolling in the Coastal Plain — conditions that elsewhere have resulted in the use of gravel roads for safety reasons.[11] Also, the warming trend of the last few decades has cut the season for ice construction from over 200 days to about half of

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[10] At Alpine, on 40,000 acres of state, Native, and federal land west of Prudhoe Bay, development initially consisted of about 100 acres of pads, a road, and an airstrip, plus a 150-acre gravel mine. Approved expansion will create five new drill pads and 28 miles of new gravel roads, making an additional 251 acres of roads, causeways, and other structures, plus a 65-acre gravel mine, for a 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).

[11] 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.

its previous length.[12] In combination, these factors might necessitate permanent exploration facilities (e.g., roads, pads, and gravel mines) in ANWR, and if the 2,000 acre limit does not apply to exploration facilities, these facilities could be located throughout the Coastal Plain. If exploration is successful, facilities on specific leases might be converted to production facilities, raising the issue of whether such converted facilities would be limited once they are used in production.

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. A lessee will judge whether and how quickly to proceed[13] 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 for work crews). All else being equal, if restrictions (including acreage limitations) became more costly, fewer prospects might be developed.

If the footprints of production and support (and possibly exploration) facilities 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.

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 being 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.

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

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