

# CRS Report for Congress

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## ANWR Oil: Native Lands and State Waters

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### Summary

As part of its deliberations over energy policy, Congress is deciding whether to continue to protect the ecosystem of the Arctic National Wildlife Refuge (ANWR) or to open it to oil and gas development – with good prospects of finding economically recoverable amounts of oil. A new preliminary report by the U.S. Geological Survey (USGS) presents a broader assessment of economically recoverable oil than included in the USGS's 1998 study, but not necessarily more favorable or unfavorable.

The coastal plain of Alaska just east of present oil production sites is the virtually undisturbed home to a wide variety of plants and animals. This "1002 Area" is part of the Arctic National Wildlife Refuge. Created in 1960, the Refuge was expanded and made off-limits to oil and gas development in 1980 explicitly to conserve "fish and wildlife populations and habitats in their natural diversity" and for other purposes. The large fields to its west suggest that the potential for oil could extend into the 1002 Area. Reprocessed seismic data from the 1002 Area supports this suggestion of oil potential in ANWR.<sup>1</sup> This report examines a new USGS report in a context apart from the broader controversial issue of whether to seek oil in ANWR.

### The USGS 1998 Report

Several assessments of oil and gas resources in ANWR have been made over the years – of varying nature and scope. The most recent study of oil and gas prospects in the Refuge was that done by the USGS (U.S. Department of the Interior) in 1998. USGS scientists gathered new data from nearby fields both onshore and offshore, and examined reprocessed seismic data collected in the Refuge in 1984-1985. USGS published a detailed report on the oil and gas potential in 1999.<sup>2</sup>

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<sup>1</sup> For more extensive information and discussion concerning ANWR see CRS Report RL31278, Arctic National Wildlife Refuge: Background and Issues.

<sup>2</sup> U.S. Department of the Interior, Geological Survey. *The Oil and Gas Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*. U.S.G.S. Open File Report 98-34. 1999.

In the 1999 report, USGS estimated that there is a 95% chance that there are at least 4.3 billion barrels (bbls) and a 5% chance there are at least 11.8 billion bbls of *technically* recoverable oil (recoverable with current technology, but ignoring costs) in the federal 1002 area, with a mean estimate of 7.7 billion bbls (see table). Estimated *economically* recoverable amounts are smaller. The USGS estimated that, if the price of crude oil is \$24 per barrel (1996 dollars), there is a 95% chance of at least 2.03 billion bbls and a 5% chance of 9.4 billion bbls or more of economically recoverable oil in the federal 1002 area, with a mean estimate of 5.2 billion bbls. In addition, estimates of economically recoverable oil increase if a higher price is used and decrease with a lower price. After the September 11 attacks and the associated brief and mild increase, oil prices ranged between \$18 and \$20. In mid-March 2002, the price was about \$24 per barrel. Prices can be expected to continue to fluctuate,

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While the USGS, in 1998, studied, assessed, and prepared estimates for a larger area than the Federal 1002 area, its published report included estimates of economically recoverable oil only for the Federal area. The study covered adjacent lands beneath Alaska state waters (to the 3-mile line) and native lands “within the 1002 area,” as well as the federal portion of the 1002 area.<sup>3</sup> Because of the close proximity of these lands, it can be argued that more complete assessment data on the non-federal areas may be useful in policymaking decisions regarding ANWR.

Alaskan Natives have various property interests related to the issue of oil drilling in ANWR that may present complex legal issues for refuge management if the coastal plain is opened to oil and gas exploration and development.<sup>4</sup> Over 100,000 acres of ANWR, some within the legal description of the 1002 area, are owned by Alaska Natives either individually or collectively. Between and within groups of Natives, there is disagreement over whether to open ANWR and the 1002 area to oil and gas exploration and development. Regulation of development on these lands is problematic, and often is not considered explicitly in legislative proposals.<sup>5</sup>

## The USGS 2002 Report

In a brief March 2002, designated as preliminary, USGS presented assessment data in a way that allows readers to deduce its estimates of the amount of economically recoverable oil in adjacent lands beneath Alaska state waters (to the 3-mile line) and native lands “within the 1002 area.” This was done by presenting figures for the Federal 1002

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<sup>3</sup> The report appears to indicate a misunderstanding of the fact that most, but not all, of the Native lands are outside the 1002 area but are within the Refuge. Some of the Native Lands are geographically on the coastal plain but outside the “1002” coastal plain area that was articulated in response to 1980 legislation. USGS appears to have meant that it studied and now is addressing Native lands within the Refuge.

<sup>4</sup> For further discussion of legal complications, see CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge*.

<sup>5</sup> For a discussion of current legislative proposals on ANWR, see CRS Issue Brief IB10094, *Arctic National Wildlife Refuge: Legislative Issues*, updated regularly.

area alone and the totals for the entire study area. USGS presents these figures along with its previously published estimates of technically and economically recoverable oil in the Federal 1002 area.<sup>6</sup>

Thus, it appears that USGS estimated that there is a 95% chance that there are at least 1.5 billion barrels (bbls) and a 5% chance there are at least 4.2 billion bbls of *technically* recoverable oil in lands under state waters adjacent to the Federal 1002 area and in Native lands, with a mean estimate of 2.7 billion bbls (see table). Similarly, it appears that USGS estimated that, if the price of crude oil is \$24 per barrel (1996 dollars), there is a 95% chance of at least 0.9 billion bbls and a 5% chance of at least 3.7 billion bbls of economically recoverable oil in the non-federal 1002 portion of the study area, with a mean estimate of 2.4 billion bbls.

From the above, it can be concluded that adjacent state waters and Native lands account for about one fourth of the assessed resources in the USGS study area. However, as noted by USGS, although significant accumulations may exist under State waters and in Native lands, they will be difficult to develop without access to Federal land.

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<sup>6</sup> U.S.G.S. *Frontier areas and resource Assessment: the case of the 1002 Area of the Alaska North Slope*. by Emil D. Attanasi and John D. Scheunemeyer. U.S.G.S. Open File Report 02-119, March 2002. The report is preliminary and has not been reviewed for conformity to USGS editorial standards and stratigraphic nomenclature.

**Probability of the Presence and Recoverability of Oil in the Federal  
1002 Area, Adjacent State Waters, and Native Lands**

(billions of barrels)

Crude Oil	95% Chance This Much or More	Mean Estimate	5% Chance This Much or More
Total			
Technically recoverable	5.72	10.36	15.96
Economically recoverable at ... a market price of \$30 per barrel	4.22	8.80	14.35
... a market price of \$24 per barrel	2.94	7.60	13.08
... a market price of \$18 per barrel	0.66	3.55	8.89
Federal 1002 Area (previously published)			
Technically recoverable	4.25	7.69	11.80
Economically recoverable at ... a market price of \$30 per barrel	2.98	6.30	10.47
... a market price of \$24 per barrel	2.03	5.24	9.37
... a market price of \$18 per barrel	- 0 -	2.40	6.15
Land Under Adjacent State Waters and Native Lands (preliminary)			
Technically recoverable	1.47	2.67	4.16
Economically recoverable at ... a market price of \$30 per barrel	1.24	2.50	3.88
... a market price of \$24 per barrel	0.91	2.36	3.71
... a market price of \$18 per barrel	0.66	1.15	2.74

Sources: U.S. Department of the Interior, Geological Survey. *The Oil and Gas Potential of the Arctic National Wildlife Refuge, 1002 Area, Alaska*. U.S.G.S. Open File Report 98-34 (Washington, DC:1999) Summary and Table EA4; and U.S.G.S. *Frontier areas and resource Assessment: the case of the 1002 Area of the Alaska North Slope*. By Emil D. Attanasi and John D. Scheunemeyer. U.S.G.S. Open File Report 02-119, March 2002.