Interior Slashes Offshore Oil Estimates

The Department of the Interior has dramatically reduced its estimates of how much oil and gas may eventually be found in offshore fields around the United States. The new figures, which reflect the fact that the oil industry has come up dry in 4 years of exploratory drilling in the Atlantic and off the coast of Alaska, could have major implications for the nation's oil supplies in the 1990's and beyond.

In 1981, the department estimated that 27 billion barrels of oil and 163 trillion cubic feet of gas remain to be discovered in offshore deposits large enough to be exploited commercially. It has now slashed those estimates by about half, to 12.2 billion barrels of oil and 90 trillion cubic feet of gas.

The new estimates were developed several months ago but they did not come to public attention until 9 May, when they were published in a study by the Office of Technology Assessment (OTA) of oil production in frontier regions.* "If [these new] estimates prove true, or worse, if they prove to be still overly optimistic, a serious overhaul of U.S. energy policy may be needed," warns James Curlin, who directed the OTA study.

The offshore regions have long figured prominently in projections of U.S. oil supplies. As recently as last November, for example, a study by the Department of Energy concluded that offshore areas, together with the North Slope of Alaska, offer the greatest potential for discovering large new fields. Such fields, the study noted, will be required if current production levels are to be maintained. The Interior Department's 1981 estimates suggested that almost 40 percent of the as yet undiscovered U.S. oil lies offshore.

Estimates of undiscovered oil resources are by their nature highly uncertain. They are based on geological information and a lot of informed guesswork. Moreover, the 1981 estimates were even more tentative than usual because virtually no exploratory drilling had taken place in many of the offshore regions that were expected to yield major new discoveries.

Over the past 4 years, however, the oil industry has sunk exploratory wells in promising areas of the Atlantic and has come up with a series of dry holes. Similar disappointments have occurred in Alaskan waters, with only one modest find close inshore near the already producing Prudhoe Bay field. Drilling in the western Gulf of Mexico and off Southern California has come closer to expectations, however.

"After something approaching 100 dry wells, I think we have reason to be less optimistic than we were 4 or 5 years ago," says William Bettenberg, head of the Marine Minerals Service, which developed the new estimates. As a result, the estimates for the Atlantic have been slashed by 87 percent, those for Alaska have been reduced by 73 percent, and those for the Pacific have shrunk by 31 percent. Only the estimates for the Gulf of Mexico have remained essentially unchanged.

There seems to be general agreement that the Interior Department's pessimism about the Atlantic is warranted, but there is less certainty about prospects off Alaska. "We have found where oil is not," says Theodore Eck, a resource analyst with Standard Oil of Indiana. "But it is a huge area and there have been so few wells drilled," he says. Similarly, Charles Masters of the U.S. Geological Survey, which developed the 1981 estimates, says he is "bothered by reducing estimates [in Alaska] to trivia on the basis of a handful of exploratory wells."

Bettenberg agrees that the new numbers are far from solid. "The only thing that is certain," he says, "is that they will turn out to be wrong." Noting that nine dry holes were drilled before the giant Prudhoe Bay field—the largest in the United States—was discovered, Bettenberg points out that one major strike "can quickly change thinking." However, as the OTA study notes, the oil industry tends to drill first in the most promising areas and the large fields tend to be discovered first.

"After something approaching 100 dry wells, I think we have reason to be less optimistic," says Bettenberg.

Estimates of the amount of oil yet to be discovered onshore have not been changed since 1981, when they were put at 56.4 billion barrels. However, there have been some disappointing results, particularly from drilling in the overthrust belt and from deep wells, and some observers expect that these estimates will also be reduced when they are eventually updated.

Thus, many analysts view the recent trend of increasing U.S. production and declining imports as relatively short-lived. The Department of Energy has forecast, for example, that imports will climb from the current level of about 5 million barrels a day to about 7 million barrels a day in the 1990's. OTA is even more pessimistic, suggesting that imports may even rise to the record 9.3 million barrels a day that was reached in 1977.

The new estimates of potential offshore oil resources are sure to enliven the already intense debate over the federal government's policy for leasing areas of the outer continental shelf. In 1981, then Secretary of the Interior James G. Watt announced a plan to lease 1 billion acres for exploration by 1987. The program has come under severe attack from some environmental groups, fearful of the possible damage that may result from large-scale production.

Curlin of OTA argues, however, that the more pessimistic figures strengthen the case for encouraging exploratory drilling. "The sooner the nation proves the presence or absence of very large quantities of oil in the [outer continental shelf], the sooner we can develop a strategy that we are confident can meet future energy needs," he says. Bettenberg agrees. "The message," he says, "is to keep drilling, and to keep drilling you have to keep leasing."

—COLIN NORMAN

Oil and Gas Technologies for the Arctic and Deepwater (Government Printing Office, Washington, D.C. 20402, May 1985). Stock number 052–003–00095–1. $8.50.