



Humble Oil Co.
Alaskan North Slope discovery well.



Humble Oil Co. photo by Leo Teuchet
Prince William Sound: Scientists say there was "no evaluation of impact."

The environment: A week of big decisions

Pipeline approved despite ecologists' warnings

Two years ago Federal Judge George L. Hart Jr. of Washington, D.C., agreed with environmentalist plaintiffs that the Department of Interior's environmental impact statement on the Trans-Alaska pipeline was perfunctory. The court issued an injunction halting all major construction on the 800-mile line, which is designed eventually to carry two million barrels of oil daily from Alaska's oil-rich North Slope to the port of Valdez in southern Alaska. Judge Hart told Interior it would have to come up with a better impact statement. In March, Interior made public its 25-pound revised statement (SN: 3/25/72, p. 199), and said it would decide within 45 days whether to apply for a lifting of the injunction and issuance of permits. Last week, Interior Secretary Rogers C. B. Morton announced his decision in favor of the pipeline.

The environmentalist plaintiffs—the Friends of the Earth, the Environmental Defense Fund and the Wilderness Society, represented by lawyers from the Center for Law and Social Policy—label the March report impressive only in weight. They contend that it is nearly as perfunctory as the earlier statement, and they are supported by a large array of scientists who contributed to a 1,200-page anti-impact-statement document issued by the environmental groups at a press conference two days before Morton's announcement. The feelings of many of them about joining in an adversary cause were summed up in a statement by environmental biologist Richard E. Warner of the Memorial University of Newfoundland:

"I wish to state unequivocally that I very much regret the necessity of having to review the [Interior] impact statement in this particular fashion. The

existing circumstances and pattern of events surrounding this issue have forced scientists into the unwanted and undesirable role of adversaries. . . . Scientists function best in an atmosphere of open give-and-take, where issues are debated, data exchanged, and solutions sought in an arena of common interest and concern." Interior refused to make such an arena available, Warner avers.

But once having made this kind of disclaimer, Warner and other scientists were blunt in their contempt for the Interior statement. "The predictive component of the impact statement is inexcusably inadequate," says Warner, a well-known specialist on the marine ecological effects of oil spills, with wide field experience in subarctic spills.

". . . There is information available—both within the impact statement itself and in sources available to, but not apparently consulted by, the drafters of the statement—that permits a far more precise evaluation of impact than that contained in the statement." For instance, Warner was unable to find a single reference to the Chedabucto Bay, Nova Scotia, oil spill (SN: 6/6/70, p. 551), Canada's single most disastrous spill. There is a "massive literature" on the spill, says Warner, who adds that the bay's climatic, topographical and ecological conditions are remarkably similar to those of Prince William Sound on which Valdez is located.

"The same phenomenon as occurred in Chedabucto Bay can, with reasonable confidence, be predicted for Prince William Sound should a massive oil pollution incident occur within its confines. However, in the case of Prince

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Automakers refused extension

Sen. Edmund Muskie argued for the strict auto emission standards of his 1970 clean air bill by saying America's technological genius could produce virtually anything it wanted to. If the nation could manufacture thousands of military aircraft on a few months' notice in World War II, he reasoned, then surely the auto companies could manage a 90 percent reduction (from 1970 levels) of carbon monoxide and hydrocarbon emissions in 1975, and of nitrogen oxide emissions in 1976.

Since the bill passed there has been considerable evidence put forward that emission controls are not a complete answer to automobile-caused environmental and social problems in urban areas. Furthermore, the White House Office of Science and Technology and the National Research Council suggested there were large and perhaps insuperable obstacles to achieving the emission controls. Prime ones are the difficulty of maintaining controls in use and the high cost and technical problems of inspection systems.

But the Environmental Protection Agency is nonetheless constrained under the 1970 law to enforce the emission standards, and to determine whether auto companies should be granted one-year extensions in meeting them. Five companies applied for an extension of the 1975 standards, and EPA said at the time its decision would apply to all auto companies. The NRC recommended granting the extension, EPA held 15 days of public hearings and the auto companies then awaited EPA's decision. It came last week. EPA Administrator William D. Ruckelshaus agreed with Muskie; if the companies really want to, he said, they can meet

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Alaska pipeline . . .

William Sound, the intertidal biota, which . . . is of great economic and ecological value . . . would be seriously affected, in addition to the bird populations. . . .

"In reality," says Warner, "there has been no evaluation of impact, only the disclaimer of the ability to carry one out."

That there would be oil spills, not only in Prince William Sound but elsewhere between Valdez and West Coast ports, is a near certainty, say Edward Wenk Jr., Juris Vagners, James A. Crutchfield and Steven H. Flajser of the engineering and economics staffs of the University of Washington, Seattle. "Consider," urge these scientists, "increased dangers of a casualty with the proposed 120,000 deadweight-ton tankers [less than half the size of even larger supertankers proposed by the oil companies], which have a turning diameter of one-half mile and a crash-stopping distance of two miles, when proceeding through the center of Rosario Strait which narrows to about one mile." The strait must be traversed by tankers bringing oil through Puget Sound to refineries at Anacortes and Bellingham, Wash. Crutchfield says there is a "certainty" of an eventual oil spill, given the frequent foggy conditions there. And "a spill in Puget Sound is quite different from one off the coast," say the Seattle scientists. "For example, it takes at least several months for complete flushing of Puget Sound. . . ." The ecological consequences could be irreversible, they say. Crutchfield told SCIENCE NEWS that although the risk may be less in Prince William Sound, it is still great: "The currents are fast, it blows like hell there, and we still don't have adequate traffic control."

Max Blumer, a chemist at Woods Hole Oceanographic Institution who has specialized in the long-term effects of oil spills on marine biota (SN: 3/14/70, p. 263), finds the Interior report seriously flawed. For instance, it makes no stipulation for baseline chemical or biological studies of Prince William Sound. Without such measurements there is no possible way later to determine the precise effects of oil lost into the Sound. Likewise, says Blumer, Interior has failed to provide standards for acceptable levels of oil pollution in the marine environments or cleanup procedures if standards are exceeded.

Scientists of equal stature comment critically on terrestrial and engineering aspects of the pipeline. For instance, H. Brandt of the engineering staff at the University of California at Davis says that contrary to oil company statements, the pipe now stockpiled in Alaska for the pipeline was *not* fabricated from

special alloys designed for the temperature extremes to which it will be exposed. Rather, he says, it is the same pipe used routinely for years in the lower 48 states. "Moreover," says Brandt, "the steel has significantly less impact-resistant properties in the transverse direction than longitudinally. It is this transverse loading which will be critical in causing pipe failure due to soil instability."

But the largest concern of the scientists is for the marine environment. In the environmentalist report, scientist after scientist points to an alternative route that would obviate shipping the oil by sea: Pipe it via Canada's MacKenzie Valley to Edmonton, where it could be transferred to existing, or new, pipelines to the Midwest and the West Coast.

Says contributor S. David Freeman, former energy policy staff chairman in the President's Office of Science and Technology: "The central comment

"In reality, there has been no evaluation of impact, only the disclaimer of the ability to carry one out."

which I made—and it is crucial to your [Morton's] decision—is that the Canadian alternative is not only environmentally superior and economically more attractive but that it would materially strengthen our national security as compared with the Trans-Alaskan alternative.

"The Canadian route would provide the incentive and the means for marketing the vast oil resources of the Canadian North, as well as the Alaskan oil, and thus lessen our future dependence on insecure Eastern Hemisphere sources.

"Any decision to grant a permit for the Trans-Alaskan route in the name of national security would be a mistake. . . ."

The Trans-Alaskan route has at least two serious international implications from an environmental point of view. The first is the threat of oil spills to Canada's West Coast. The second is revealed in Morton's statement that a Canadian route would imperil "reliability of energy supply" to the United States, and thus that Canadians are somehow unreliable. Environmentalists claim that Canada would be perfectly willing, during the three-to-five-year delay entailed by taking the Canadian route, to make up the U.S. petroleum deficit from Canadian oil fields. Canadian Minister of Energy Donald S.

Macdonald corroborated this claim in the House of Commons April 9.

Economist Crutchfield, formerly a member of the Stratton Commission on offshore oil, says the claim that the West Coast desperately needs the Alaskan oil is "nonsense," because Canadian oil can meet interim needs there.

Crutchfield told SCIENCE NEWS he believes Interior's national security arguments "make no sense at all." Instead of using up domestic reserves of oil while Near Eastern oil is still relatively cheap, he says, the United States should do exactly the opposite: Keep the Alaskan oil in the ground as long as possible so it *would* be available in a national emergency. In the broader perspective, Crutchfield agrees with a growing number of scientists and officials that the nation should take steps to reduce exponential growth in petroleum consumption. Taxing gasoline heavily enough to pay for the real environmental costs of its use—as he says is now done in Europe—would be a start.

Morton was given a copy of the environmentalist document a week before he announced his decision, but he declined to comment on it. Obviously he wasn't swayed by the ecological arguments. "Appropriate officials of the United States Government have advised me that it is in the interest of national security, balance of payments, and reliability of energy supply to achieve early delivery of North Slope oil to reduce our dependence on [Eastern Hemisphere] imports," Morton said.

The next move appears to be up to Judge Hart. □

Auto emissions . . .

the standards in time, and thus there is no justification for an extension.

No one has argued the emission standards are a bad idea just because they are not a panacea for all auto-caused urban problems, although some economists doubt their cost-effectiveness. There is little doubt of their general desirability. However, the NRC recommendation seemed to give Ruckelshaus a good excuse for approving the applications for extensions. Using it may have been particularly tempting in an election year.

Ruckelshaus did not. Instead he acted in conformity with the law and the facts as he saw them. Observers (for instance, the New York Times) called his decision an act of rare courage. There is no doubt the opposition to the decision was powerful. Henry Ford II claimed afterward that the decision may force Ford to halt production of autos during 1975, and auto companies are now reported to be planning court actions against EPA. □