
2

Introduction

Chapter 2.--INTRODUCTION

FIGURES

	Page
1. Land Status Map of Alaska .*****	20
2. Metallogenic Provinces in Alaska.	22
3. Transportation Networks in Alaska ,..	24
4. Geographic Study Areas . -	26

Introduction

This report contains information derived from an Office of Technology Assessment (OTA) assessment of the effects of Federal laws, policies, and practices on access through Federal to non-Federal lands. It makes available the results of an analysis, by the OTA staff and its consultants, of the issues associated with the legal aspects of access, and presents a range of options dealing with access through Alaska lands.

The issues concerning access through Federal lands differ in their seriousness, their detail, and their visibility. Based on data collected nationwide,¹ OTA found that Federal laws, policies, and practices are a factor in access decisions in all parts of the country; Federal land management practices are an important issue in the contiguous United States; and the land management laws and policies governing those Federal lands that are to be placed in conservation systems under pending Alaska National Interest Lands legislation are primary concerns in Alaska.

The information contained in this report is relevant to the current congressional de-

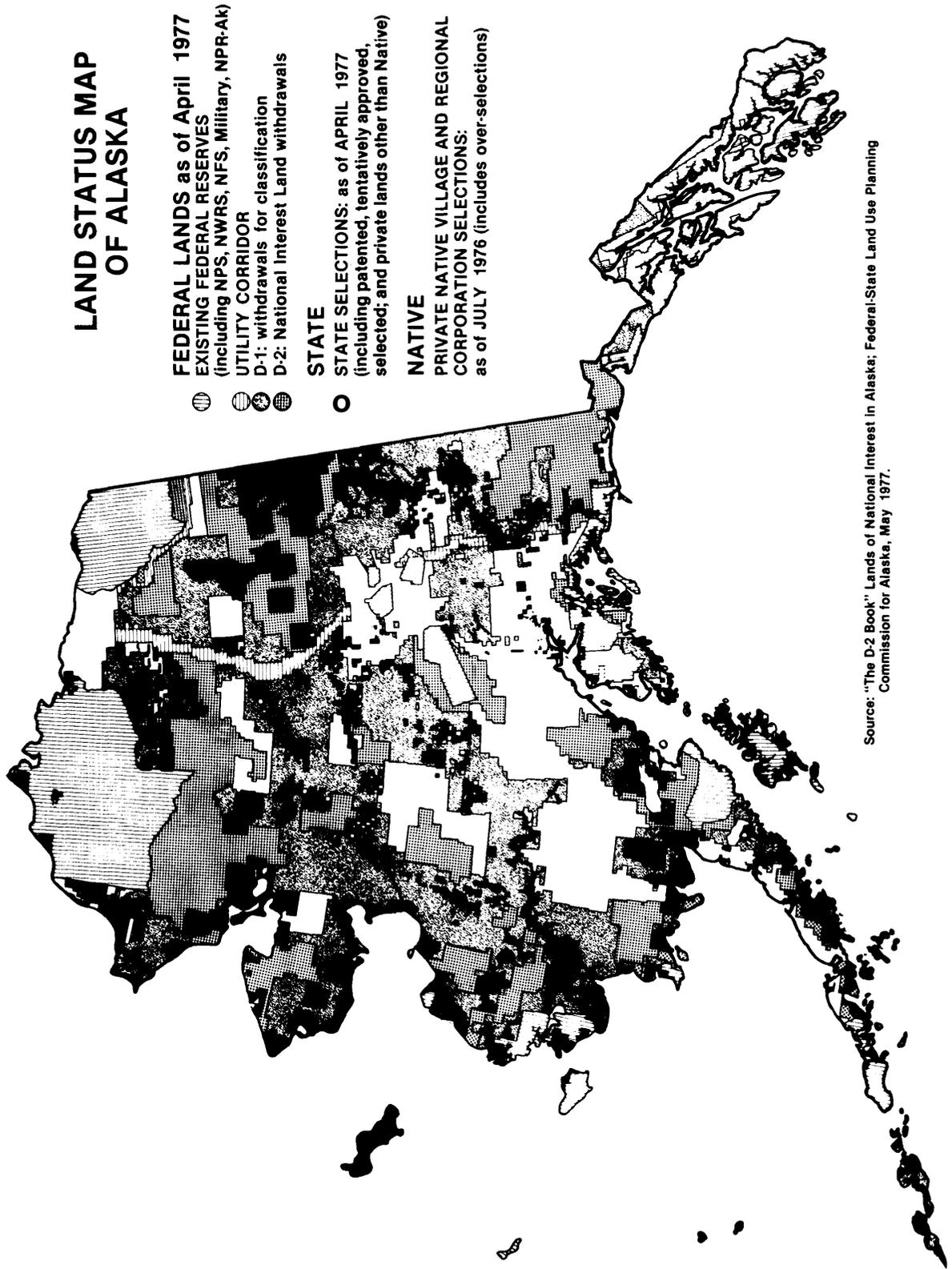
¹Information gathering by public participation interviews was important to analyzing Federal laws, policies, and practices affecting access. Appendix C includes a discussion of the methodology for OTA's nationwide data gathering and analysis effort. Interest groups (nearly 600 individuals) who were contacted by OTA staff and OTA consultants and contractors are cited in the preface and in appendix C. In addition, FSLUPCA summaries of public input gathered in 1973 regarding disposition of (d)(2) lands were reviewed.

liberations about Alaska lands called for by section 17(d)(2) of the Alaska Native Claims Settlement Act (ANCSA), and particularly to the use of Alaska conservation lands for purposes of access to non-Federal mineral-bearing lands.

Prior to the Alaska Statehood Act and ANCSA, less than 1 percent of Alaska's land was in non-Federal ownership. There will be changes in the landownership patterns when conveyance of the Native and State lands under these Acts is completed, but approximately 60 percent or 220 million acres will remain in Federal ownership (see figure 1). The management of these federally owned lands will depend on the land management classification of specific units as designated by Congress. This report examines the existing laws under which Federal land management agencies grant access. A range of access options is presented and discussed.

Alaska land management issues are complex. They have been and continue to be the subject of intense public debate. Deciding how the land should be used is an important national public policy issue. To resolve these land use questions requires balancing many values, among which are resource development, social needs, and environmental protection. The conflict between providing for access (whether for mining or other purposes) and protecting the primitive values of the land is part of the larger public debate. Any analysis of the access process (i.e., the terms and conditions of access and how it

Figure 1.—Land Status Map of Alaska



might be achieved) is, therefore, closely tied to the question of whether or not access across Federal lands for non-Federal mineral development is an appropriate use of the Federal lands. Access, as a value, must be weighed against conservation and social values such as the loss of wilderness, of wildlife, and of a subsistence lifestyle.

Among the access issue-related questions are the following:

- Should an access decision be made now considering the incompleteness of information about mineral potential and the location of minerals?
- Should an access decision be made now considering the uncertainties about the timing of minerals development?
- Will facilitating access be sufficient for the development of Alaska's minerals, or will there be other determining factors, such as market restraints?

Mining interests argue that Alaska lands are important potential sources of domestic supplies of both fuel and nonfuel minerals (figure 2) As the Federal-State Land Use Planning Commission for Alaska (FSLUPCA) has stated, "The major national interests to be met in Alaska, apart from natural values, are those for energy resources and important minerals."²

A central issue in the debate on granting access in Alaska, particularly for the development of hardrock minerals, concerns the economics and the timing of mine development. Some contend that hardrock mining, under present market conditions, is not likely to develop in the near term (between now and 1990).³ Mining interests, however, believe that development is possible before that

date.⁴ These interests argue further that exploration and mine development should be part of the economic development planning of the State and of the Native Corporations and that small mining interests in particular are vulnerable to access restrictions.⁵

Conservation interests argue that Alaska is the only State in which there are extensive areas of land with only minimal intrusion from human activities. Rural residents, particularly Aleut, Eskimo, and Indian citizens, still depend on the resources of the land and the waters for food. Thus, continued subsistence hunting, fishing, and gathering are essential to many communities. Since arctic ecosystems are relatively simple and adjust poorly to stress, many areas are vulnerable to the changes that accompany intensive uses such as mining. Regeneration rates for vegetation are slow, and wildlife populations often require extensive habitats. As a result, the environmental consequences of intensive land use, especially in the far north, are more severe than in other States, and it takes a much longer time for flora and fauna to recover.

Access for resource development is closely related to the improvement and future expansion of surface transportation systems. In order to develop hardrock mineral resources in some areas, surface facilities will have to be constructed that move large quantities of bulk ores. Compared to the contiguous United

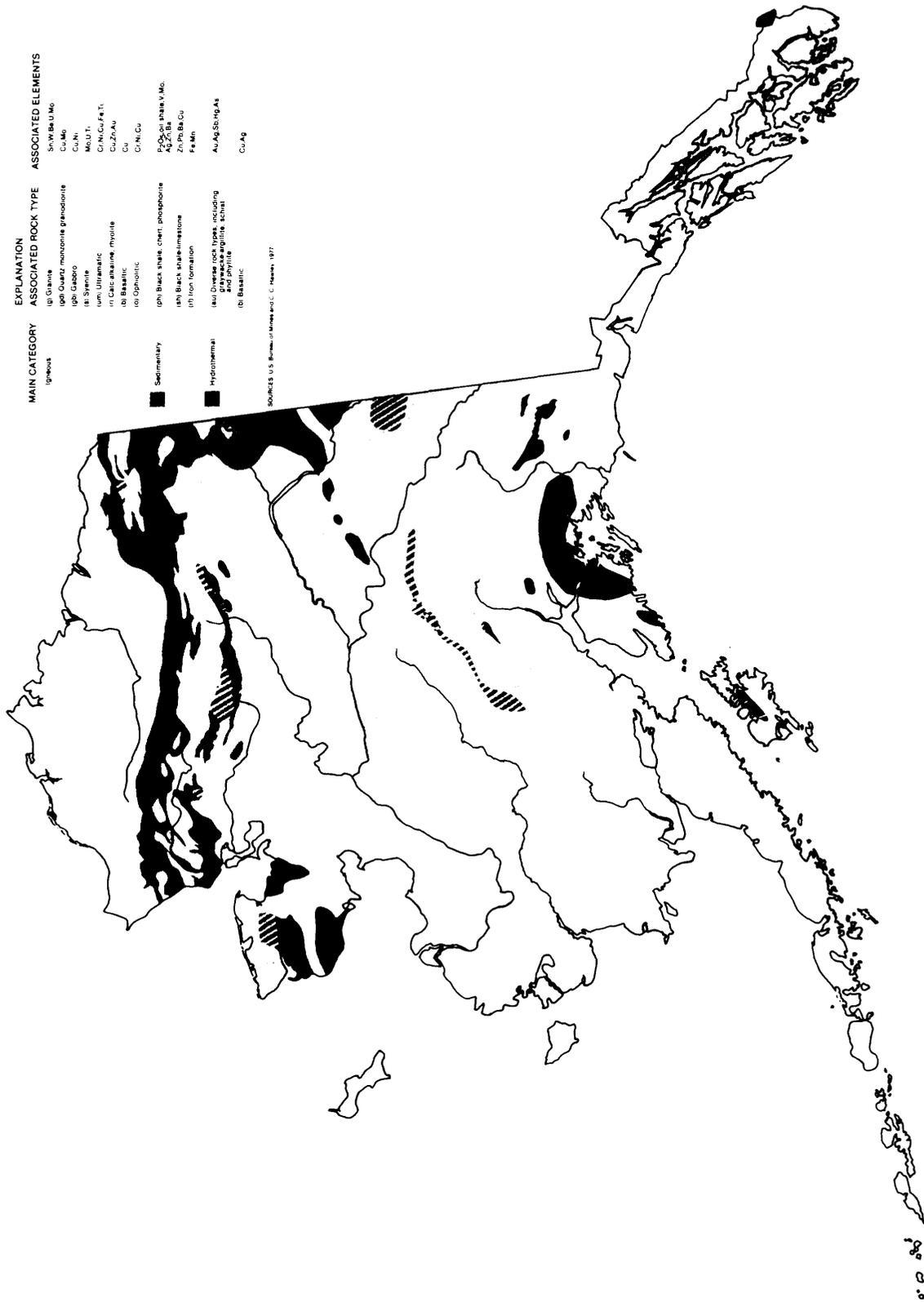
⁴OTA Mineral Resources Workshop, Fairbanks, Alaska, August 1977. This workshop was supported in part by OTA funds and in part by workshop participants.

⁵The possible effects of access restrictions on small mining interests were identified during interviews in Alaska conducted by Dr. F. J. Wobber, OTA project director, in January 1977. An OTA Working Paper, *The Economic Importance of the Small Miner and Small Mining Businesses in Alaska* by C. C. Hawley and J. W. Whitney suggests that the future interests of small miners and prospectors may well be dependent upon land status, mining laws, and reasonable access. Economic benefits from small mining businesses are also discussed. See *Analysis of Laws Governing Access Across Federal Lands: Options for Access in Alaska, Volume II, Working Papers (OTA M-76)*.

²"The D-2 Book" *Lands of National Interest in Alaska*, FSLUPCA, May 1977, p. 17.

³Bradford H. Tuck, *Land Use Planning, the(D)(2) Lands and Alaska Resources: Some Economic Considerations*, FSLUPCA Study No. 22, August 1977.

Figure 2.—Metallogenic Provinces of Alaska



States, Alaska has a limited surface transportation network (figure 3). Most of the settlements throughout the State are connected by air. But, like access, the expansion of surface transport is a controversial issue.⁷

Settling the uncertainties about an access policy decision can facilitate the resolution of transportation issues. But regardless of whether Congress specifically addresses the topic of transportation requirements across the proposed conservation areas, the d-2 lands access policy decisions will have implications for non-Federal landowners. Because of the large tracts of Federal lands and because of the transportation limitations, resource development on non-Federal (State and Native) lands will have to take into account nearby or adjacent Federal holdings.

In choosing in which of the various Federal conservation systems (Parks, Wildlife Refuges, Wild and Scenic Rivers, or National Forests) to place the Alaska lands (the d-2 land designations), Congress will decide about how these Federal lands will be managed. The access authority of the agencies that manage Federal lands (the Park Service, the Fish and Wildlife Service, the Forest Service, and the Bureau of Land Management) is derived from the laws that govern the various systems. Therefore, the availability of access through Federal lands is dependent on the laws and policies that govern the management system in which they are placed.

Congressional deliberations on access in Alaska range from local concerns about the surface movement of ore, to statewide concerns about the ramifications of extending surface transportation systems. These issues have implications both for the economy of the State and for the conservation values of the national interest lands.

This report is not intended to deal comprehensively with all of the issues associated

⁷Paul Engelman and Bradford Tuck with Jerry D. Kreitner and Dennis M. Dooley, *Transportation and Development of Alaska Natural Resources*, FSLUPCA Study No. 32, March 1978.

with access. It reflects a more specific concern. The Technology Assessment Board approved a study to ascertain the problems of access to non-Federal land arising from Federal land policies, and the impacts of modifying those policies.⁷ This authorization focused on determining the extent to which Federal policies on the use of Federal lands for access purposes influence hardrock mining on non-Federal lands.

While this assessment has been sensitive to the complex issues of land use and management in Alaska, the tasks have been limited to analyzing Federal laws, policies, and practices as they affect access through the Federal domain to non-Federal mineral-bearing lands. Issues such as the impact of large numbers of people who might cross Federal lands if access is unregulated; the social consequences of changes in the rural Alaskan lifestyle with expanded surface transportation; the reduction of wildlife and wild lands resources from increased use; and the impact of access on recreation are all of major importance in the Alaska Lands debate.⁸ However, as noted above, the analysis of these issues is beyond the scope of this assessment.

In response to a full range of views on how Congress might best respond to access issues, OTA has generated a variety of policy alternatives for congressional consideration. The development of these options drew on many sources: OTA staff interviews in Alaska; an examination of existing Federal land management laws (analyzed in this report); an independent analysis of five Alaskan geographic study areas by the OTA staff, complemented by the working papers prepared

Technology Assessment Board, Summary Minutes, March 16, 1976, p. 4. See also correspondence between Senator Ted Stevens and OTA Director Daddario dated March 9, 1976 and assessment proposal dated March 12, 1976.

⁸OTA Environmental Resources Workshop, Fairbanks, Alaska, October 1977. This workshop was funded by OTA under a grant to the Wilderness Society.

by contractors and consultants;⁹ and discussions with congressional staff members.

In recent years, some interest groups in Alaska—such as Native Regional Corporations, mining interests, and others—have expressed concern about possible restrictions on access for natural resources development. Some also anticipate that large tracts of Federal conservation system lands will inhibit the expansion of the State's limited surface transportation network that might be needed for minerals development. In response to these concerns, OTA selected five areas for study to measure the seriousness of the access problem.

The five areas selected for intensive analysis are (figure 4): the Seward Peninsula, the Ambler River-Baird Mountains region, the Yukon-Charley-Forty Mile Rivers drainage, the Wrangell-St. Elias Mountains region, and the Mt. McKinley region.¹⁰ The criteria for their selection included past and present mineral extraction, high scenic, wildlife, subsistence, and other values, existence or lack of surface transportation, adjoining Federal/non-Federal landholdings, and the perception by mining and environmental interests that value conflicts involving access were likely to occur in the area.

The information on study areas was gathered by OTA staff who conducted interviews,

⁹Analysis of Laws Governing Access Across Federal Lands: Options for Access in Alaska, Volume II, Working Papers (OTA-M-76). Other unpublished OTA working papers addressing various questions concerning access in Alaska and other States are cited in appendix C.

¹⁰Six candidate study areas were identified during OTA staff interviews in Alaska. Mining and environmental groups and the Advisory Panel supported the choice of the five study areas finally selected by OTA. Despite the interest of many groups over growing minerals development activity in mineralized areas of southeastern Alaska, OTA omitted southeastern Alaska as a study area. Southeastern Alaska was excluded as a study area because OTA staff interviews suggested that the area highlighted issues of access to minerals on Federal, rather than non-Federal land.

and by workshops.¹¹ The workshops were independently convened by conservation and mining industry representatives. All data were then re-evaluated by the OTA staff.

The analysis of these various study areas¹² gives a perspective of the seriousness of the problems associated with access through Federal lands in Alaska. Based on existing information about the location of mineral deposits, landownership patterns, and transportation availability, it was found that:

1. The need for rights-of-way across Federal lands to reach non-Federal minerals is a localized problem, likely to occur in scattered instances. Similarly, the need for rights-of-way across Federal lands to reach existing surface transportation is likely to occur infrequently.

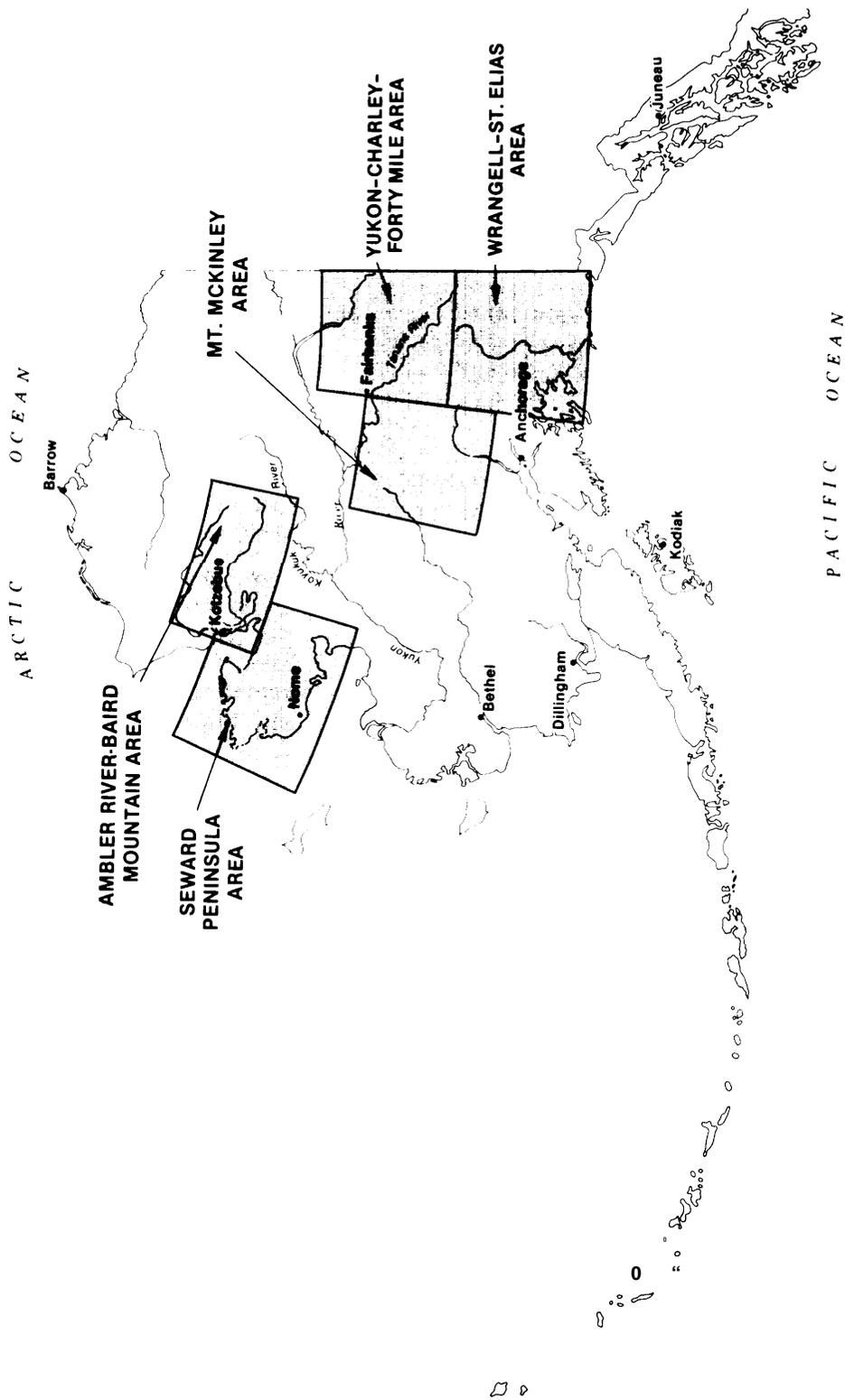
Rights-of-way to reach existing transportation are most likely to be required in the near term in the Yukon-Charley-Forty Mile Rivers area. Surface transportation and rights-of-way exist in the Mt. McKinley, Wrangell-St. Elias, and Yukon-Charley-Forty Mile areas where non-Federal lands are contiguous. Jurisdiction over existing transportation routes in these areas is already in non-Federal hands.

2. In some regions of Alaska, mineral development will necessitate the improvement of existing transportation and the construction of new systems. The lack of transportation modes capable of moving large volumes of bulk materials, in combination with local economic or interna-

¹¹Initial interviews with Federal, State, and private interest groups in Alaska were conducted by Dr. F. J. Wobber, OTA project director, in January 1977 with followup interviews in August and in October 1977. Based on these interviews, five areas were identified and verified as representative of anticipated conflicts among mineral resources and other values that might emerge because of the need to use Federal lands for access to non-Federal land,

¹²See Working Papers, *supra*, note 9.

Figure 4.—Geographic Study Areas



tional market restraints, could deter the future expansion of hardrock mining in those areas.

Some areas that contain Federal holdings isolate non-Federal lands from the rest of the State and from each other. In these remote areas, such as the Seward Peninsula and the Ambler River-Baird Mountains region, the construction of new transportation systems—whether a statewide or regional approach is adopted—will involve long distances. These systems will probably have to cross lands in Federal, State, and Native ownership.

It must be noted that these conclusions could be subject to some modification as new information on mineral deposits becomes available, as State and Native selections progress, and as Congress decides on the final boundaries of d-2 lands.

Where existing air and water transportation does not serve bulk mineral production adequately, new transportation facilities will have to be constructed if resource development is to proceed. Elsewhere, improved access to existing transportation, particularly roads, is needed. The availability of rights-of-way to reach existing transportation systems or new ones, which may be developed in the future, is site specific. It depends primarily on the access provisions of existing laws that govern the particular land management system involved and the proposed access route and use.

Little published information could be found about the factors, particularly surface access use of Federal land, that influence the availability of minerals on non-Federal lands. For this reason, a special effort was made to acquire new data (see appendix C). A substantial amount of information was obtained



A e d h ghM M K e P kwh h erve heKa h am gd h d m d
 b h N P S r v d g h mm m h d d h w



R d m Ch m e g d d gh w ea M ed
h A h db dge ed h

through interviews conducted by OTA; additional information was obtained by consultants and contractors. To verify the results of consultant and contractor interviews, OTA conducted supplementary interviews to obtain the disparate views of the various interest groups.

A number of sources supplied background information, which proved to be particularly useful. The Congressional Research Service provided an issue brief, "Alaska National Interest Lands (d-2] Legislation," and a special report for OTA entitled, "Access to Minerals: With Emphasis on Private Lands." The Federal-State Land Use Planning Commission for Alaska contributed numerous internal legal memoranda, since published as "Selected Legal Memoranda, Volumes I and II." Background data concerning non-Federal mineral resources and transportation access requirements for hardrock minerals development are contained in an OTA Working Paper titled "Assessment of Transportation Access Requirements for Minerals Exploration and Mine Development and Operation in Alaska." Insights into the environmental and social impacts of access were provided in a workshop report, "Assessment of Environmental Penalties Introduced by Transportation Access to Alaska Non-Federal Mineral Resources" prepared by the Wilderness Society (see Vol. 11, Working Papers). Various contractor and consultant reports (see appendix C) and consultations with the Advisory panel provided additional information.

This report focuses on two topics: the access provisions of Federal laws, and options for congressional consideration that deal with the process of obtaining access across Federal lands in Alaska.

Chapter 3 is a summary of the Federal laws governing access across Federal lands. Chapter 4 describes and analyzes the access provisions of the laws that govern Federal land management systems. Chapter 5 examines Alaskan land laws, such as the Alaska Native Claims Settlement Act, the Trans-Alaska Pipeline Authorization Act, and the Alaska Statehood Act. Chapter 6 discusses major environmental and land planning laws that affect access across Federal land systems.

Chapter 7 presents five access policy options for congressional consideration. These range from an extension of the existing access policies of the Federal land management systems to the Alaskan additions to the national conservation systems, through special Alaskan right-of-way and transportation system provisions, to a statutory restriction of most access uses of conservation system (d-2) lands.

The focus of this report is on the legal dimensions of access policy, and particularly on those factors that affect hardrock minerals development. Options are presented for alternative access provisions that may prove useful during congressional deliberations on the Alaska Lands legislation.