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Alaska Department of Natural Resources

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1976 Annual Report



JAY. S. HAMMOND
GOVERNOR
STATE OF ALASKA



GUY R. MARTIN
COMMISSIONER
DEPARTMENT OF NATURAL RESOURCES



Overview-Natural Resources

Alaska differs from most states, including many of the large western states, in the vast amount of state-owned land and resources for which it is responsible. The State has working title to 37 million acres, and is moving towards the selection of 32 million additional acres.

The responsibilities of the State for this land are accelerating rapidly in response to the discovery and development of rich resources on state-owned land such as Prudhoe Bay, and in response to the exploration and development of resources on federal and private land in Alaska (the Outer Continental Shelf Program, Naval Petroleum Reserve Number 4, and Native corporate lands). State resource management is a combination of direct management of state-owned resources, and policy and management coordination with the other major resource interests in the state.

Alaska is at the beginning of a new era of resource management, primarily centering on energy resources, but having important land planning and allocation issues as well. Prudhoe Bay, a state-owned area, has twenty percent of the nation's oil reserves, and the entire state is experiencing the most substantial exploration effort in the nation for off-shore oil and gas. During the 1980's there is every reason to expect that Alaska will become one of the world's largest petroleum-producing areas. National and international interest is focussed on Alaska energy resources, including coal, uranium, and hydroelectric power, as well as timber, hard minerals, and overall land and water resources.

Also during the 1980's, the State will complete its 103 million-acre land selection entitlement under the Alaska Statehood Act; the Alaska Natives will receive their 40 million-acre selection under the Alaska Native Claims Settlement Act, and approximately 80 million acres of federal land will become national interest systems (parks, forests, refuges, wild and scenic rivers). All of these events

are being carried out or influenced by actions of the State of Alaska. The period from 1970 to 1980 will unquestionably be crucial for the future of Alaska resources and much of the responsibility will fall on the Alaska Department of Natural Resources.



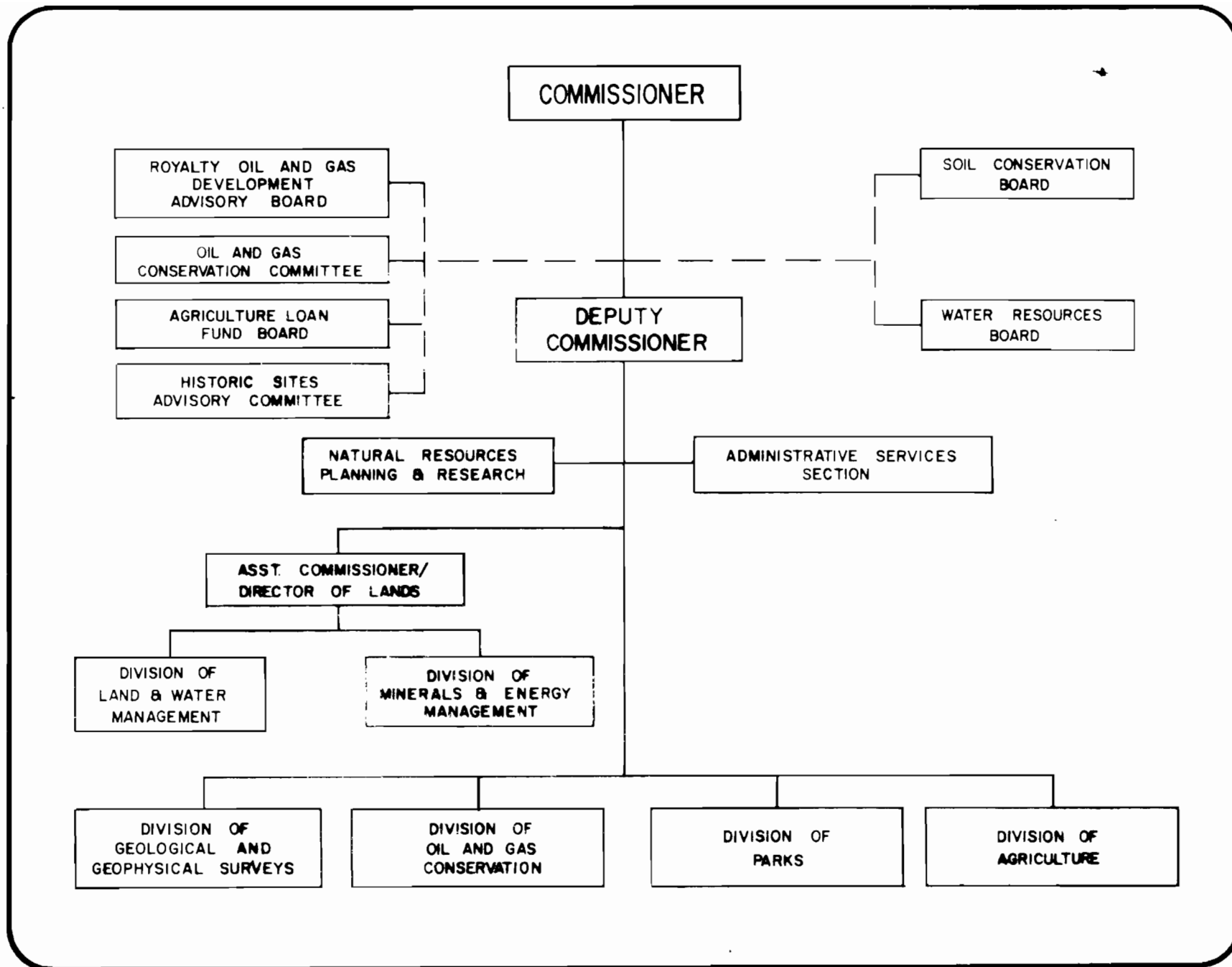
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Alaska Department of Natural Resources

Pouch M

Juneau, Alaska 99811



Commissioner: Guy R. Martin

Deputy Commissioner: John R. Roderick

The Alaska Department of Natural Resources manages state-owned resources and provides policy leadership for the many resources and energy issues now active in Alaska. Department responsibilities include land and water, oil and gas, timber, agriculture, and soil conservation. The Department is also responsible for other energy resources such as coal, geothermal and uranium, and hard minerals. It has the authority for the State Park System and historic preservation programs. The Department provides the principal state interface with the federal government and the private sector regarding the development of Alaska's resources. The Department also shares state responsibilities in the resource area with the Department of Environmental Conservation, responsible for air and water pollution quality programs, and the Department of Fish and Game.

The chief executive of the Department is the Commissioner of Natural Resources, who is responsible for policy guidance and administration of the Department's seven divisions, various boards and agencies. A Deputy Commissioner serves as principal assistant to the Commissioner. Each division in the Department is headed by a director. The seven divisions include:

Alaska Division of Lands

Alaska Division of Land and Water Management

Alaska Division of Minerals and Energy Management

Alaska Division of Geological and Geophysical Survey

Alaska Division of Oil and Gas Conservation

Alaska Division of Parks

Alaska Division of Agriculture.

Resultant from a recent departmental reorganization, the Director of the Division of Lands has the administrative title of Assistant Commissioner, with responsibility for coordinating the activities of the divisions of Land and Water

Management and Minerals and Energy Management, and carrying out the responsibilities of the State Land Act (Title 38 - Alaska Statutes). This reorganization was completed in the fall of 1976 to respond to the rapidly increasing responsibilities of the State for oil and gas management as well as land and water management. Additionally it separates the State's management functions with respect to oil and gas from those relating to conservation and other regulation. The latter will continue to be the responsibility of the Division of Oil and Gas Conservation.

NATURAL RESOURCES PLANNING AND RESEARCH SECTION

Chief: David G. Hanson

Another major organizational change within the Department during 1976 was the formation of the Natural Resources Planning and Research Section in the Commissioner's Office. The new section specifically assists the Commissioner in coordinating the various management and resource planning functions of the Department. Among the basic responsibilities of this section will be new program development, such as water planning or resource inventory efforts. It also has responsibilities for state land selection coordination, assistance to the Commissioner in setting department priorities, and liaison with special programs (new federal energy programs, Land Use Planning Commission, and state or federal legislative matters).

In addition, four boards and two commissions advise or work with the Commissioner on various resource issues:

ALASKA ROYALTY OIL AND GAS DEVELOPMENT ADVISORY BOARD

Executive Director: Donald G. Wold

The Board was created in AS 38.06. It occupies a place in the procedure for disposing of state royalty oil and gas taken in kind, and was first organized in mid-1975. The Board consists of three public members knowledgeable in oil and gas, the Commissioner of the Department of Revenue, and the Commissioner of the Department of Natural Resources, who serves as Chairman. Once royalty oil and gas is taken in kind, upon the decision of the Commissioner of Natural Resources, and some agreement or sale of the royalty oil or gas is completed, it must be approved by the Board and the Legislature before being valid. The royalty statute creates strong incentives for in-state use of royalties for the benefit of the state.

OIL AND GAS CONSERVATION COMMITTEE

Chairman: Hoyle H. Hamilton, Director, Division of Oil and Gas Conservation

This three-member committee was formed to provide official enforcement of Alaska Statute 31. The Statute provides for the conservation and waste prevention of the State's oil and gas resources. This committee makes regulatory recommendations under this statute and carries them out through the Division of Oil and Gas Conservation. The three members; the Director of the Division of Oil and Gas Conservation, the Chief Petroleum Geologist, and the Chief Petroleum Engineer, are employees of the Division of Oil and Gas Conservation. They serve at the pleasure of the Commissioner of Natural Resources.

AGRICULTURAL LOAN FUND BOARD

Chairman: James Reeves

This board was established as a result of Alaska Statute 03.10, the Alaska Agricultural Loan Act. The five members of the Board are appointed by the Governor and serve three-year terms.

The Board makes decisions on issuing loans on each application received under the Alaska Agricultural Loan Act. The Loan Act was designed to promote more rapid development of agriculture as an industry throughout the state by means of long-term, low-interest loans. Decisions of the Board must be approved by the Commissioner of Natural Resources.

WATER RESOURCES BOARD

Chairman: Vacant

This board was established by Chapter 46 of the Alaska Statutes. It is composed of seven members having general knowledge of use, requirements for use, and conservation and protection of water. The Commissioner of the Department of Environmental Conservation or his designee serves as an ex-officio member.

This board informs and advises the Governor on all matters relating to water use and appropriation, and may conduct public hearings to obtain public opinion.

HISTORIC SITES ADVISORY COMMITTEE

Chairman: Russell W. Cahill, Director, Alaska Division of Parks

This committee was established by Chapter 41 of the Alaska Statutes. It is comprised of seven members; the State Archaeologist, State Liaison Officer appointed under Public Law 98.665, three persons with professionally relevant backgrounds in specific fields, and two persons representing indigenous ethnic groups.

The Committee develops criteria for evaluation of state monuments, historic sites and property considered to have historic, prehistoric or archaeological significance. The Committee also reviews, surveys and plans, and approves nominations to the National Register.

SOIL CONSERVATION BOARD

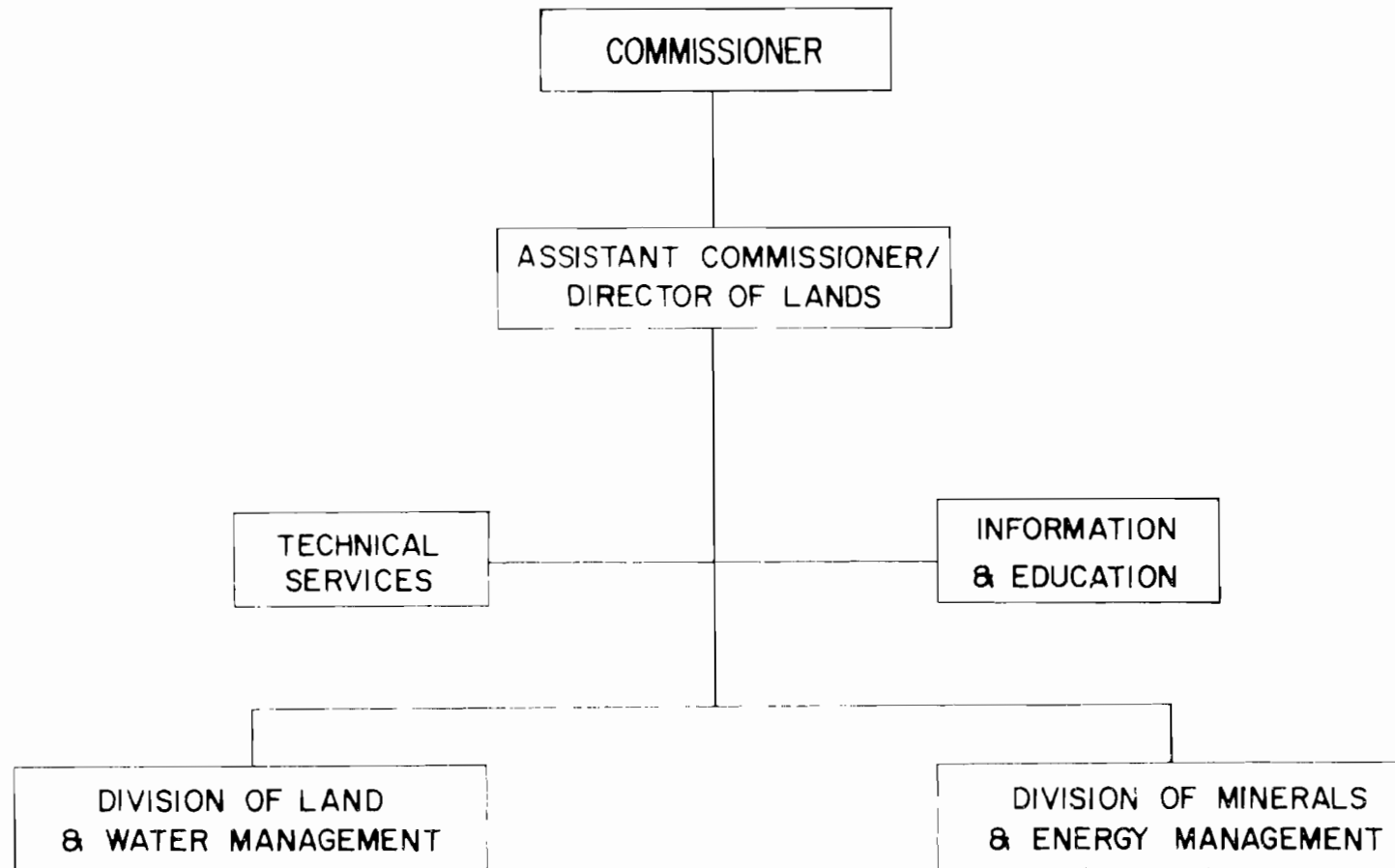
Chairman: Vacant

This board was established by Chapter 41 of the Alaska Statutes and is composed of three members who must be resident, bona fide farmers from the major farming areas of the State.

The Board advises the Commissioner of Natural Resources, upon request, in exercising his powers, duties, and functions relating to soil conservation.



***Alaska Division of Lands
323 E. Fourth Avenue
Anchorage, Alaska 99501***



Director: Michael C. T. Smith

During 1976 both the Department of Natural Resources and the Division of Lands have been undergoing reorganizations to better meet the responsibilities assigned them by Title 38 of the Alaska Statutes. Title 38 deals with the State's landowner responsibilities for both surface and subsurface management of state lands.

The departmental reorganization has the principal purpose of improving the State's management of surface resources, including oil, gas, and hard minerals. The new structure consists basically of an expanded organization within the State Division of Lands.

Pursuant to this reorganization the Division of Lands continues to be the central resource management agency of the State of Alaska under Title 38. The Director of the Division of Lands now has the additional administrative title of Assistant Commissioner of Natural Resources. This division has supervisory and coordinative responsibilities over two separate divisions which function to administer respectively the surface and subsurface resources under Title 38. The Division of Land and Water Management is responsible for surface resource management, and the Division of Minerals and Energy Management is responsible for subsurface resource management. The new Division of Minerals and Energy Management is composed of the Minerals Section from the old Division of Lands, five newly created, high-level petroleum specialist positions, and several other mineral related positions which in the past have been scattered among other divisions of the Department of Natural Resources. This will bring all mineral and energy (subsurface) landowner functions under one division for the first time.

The idea of two divisions within a larger division is unique, but the growing responsibilities of the State in resource management, particularly oil and gas, made a stronger management structure essential. The new structure will

provide not only the best framework for state oil and gas management, but will also result in a more efficient and expeditious administration of state lands, including those activities leading to greater land availability and the prompt disposition of issues related to land management.

The Division of Lands, as a continuing entity, will have a responsibility for not only coordination, but for supplying supportive services to the two management divisions beneath it.

TECHNICAL SERVICES SECTION

Chief: Vacant

The Technical Services Section provides technical and administrative support to the two divisions within the Division of Lands.

The Cadastral Engineering Unit is comprised of three subunits:

The District Survey Coordinator and Contracts Administration Subunit has the responsibility for the coordination of the Division of Land and Water Management District Office surveys, state-wide platting controls and regulation contract specifications and contract administration surveillance.

The Engineering Field Subunit's primary function is the preparation of survey instructions for the Open-To-Entry Site Program. This subunit is also responsible for general survey instructions, general survey contracts and field accuracy checks. All computations necessary to assure third order accuracy in field surveys are performed on an in-house Wang 2200 B Computer. The printouts from the computer

substantiate the validity of each survey and are kept as an integral part of each survey work file.

The Engineering Office Subunit is very heavily involved in the platting and computations of the boundaries of the State's outer continental shelf responsibilities. Acreage figures for OCS planning are derived by coordinate geometric closures formed in conjunction with the Federal Bureau of Land Management's criteria for salient points. The plotting is done by use of a customized Wang 2200 B Computer and digital flatbed plotter.

This subunit is also responsible for the updating and maintenance of state information maps such as recording district boundaries, judicial districts, state land activity maps, etc. It is also responsible for the microfilming of official state land records.

The Land Records Unit of the Technical Services Section is responsible for recording and plotting all pertinent data that affect state lands and waters. All title documents received by the Division of Lands are processed, platted and eventually maintained by the Lands Records Unit.

This unit is also responsible for the Land Registration Act which requires owners of real property outside of organized boroughs to file a statement of real property ownership with the State of Alaska. This unit maintains listings of all such private property.

During 1976 a Land Records Data Processing Subunit was formed to commit state land actions to data processing for purposes for storage and immediate retrieval. Immediate accessibility to past and present state land actions will increase the Division's flexibility in accomplishing its statutory responsibilities.

The Administrative Services Unit provides administrative support to the two divisions within the Division of Lands. This unit includes the areas of Accounting, Personnel, Mail, Supply, and Word Processing.

INFORMATION AND EDUCATION SECTION

Information Officer: Charles P. Albrecht

This section deals with the dissemination of public information for the Division of Lands and for the Department of Natural Resources as required. Information is provided in response to a wide variety of written correspondence from the public and the media. All publications of the Division of Lands are prepared by this section.

The Reproduction Unit of the Information and Education Section serves in a departmental capacity, meeting printing requirements for all divisions within the Department of Natural Resources.

AD HOC ADVISORY COMMITTEE ON STATE LAND PRACTICES AND PROCEDURES

During 1976 Governor Jay Hammond created an Ad Hoc Advisory Committee on State Land Practices and Procedures to provide expert public consultation on a wide range of issues relating to the administration of state land laws and regulations. A number of laws, regulations, procedures, and practices regarding state lands needed re-examination and revision to better serve the public interest. In certain cases, practices and procedures have simply become outdated.

The Committee is composed of a cross section of those

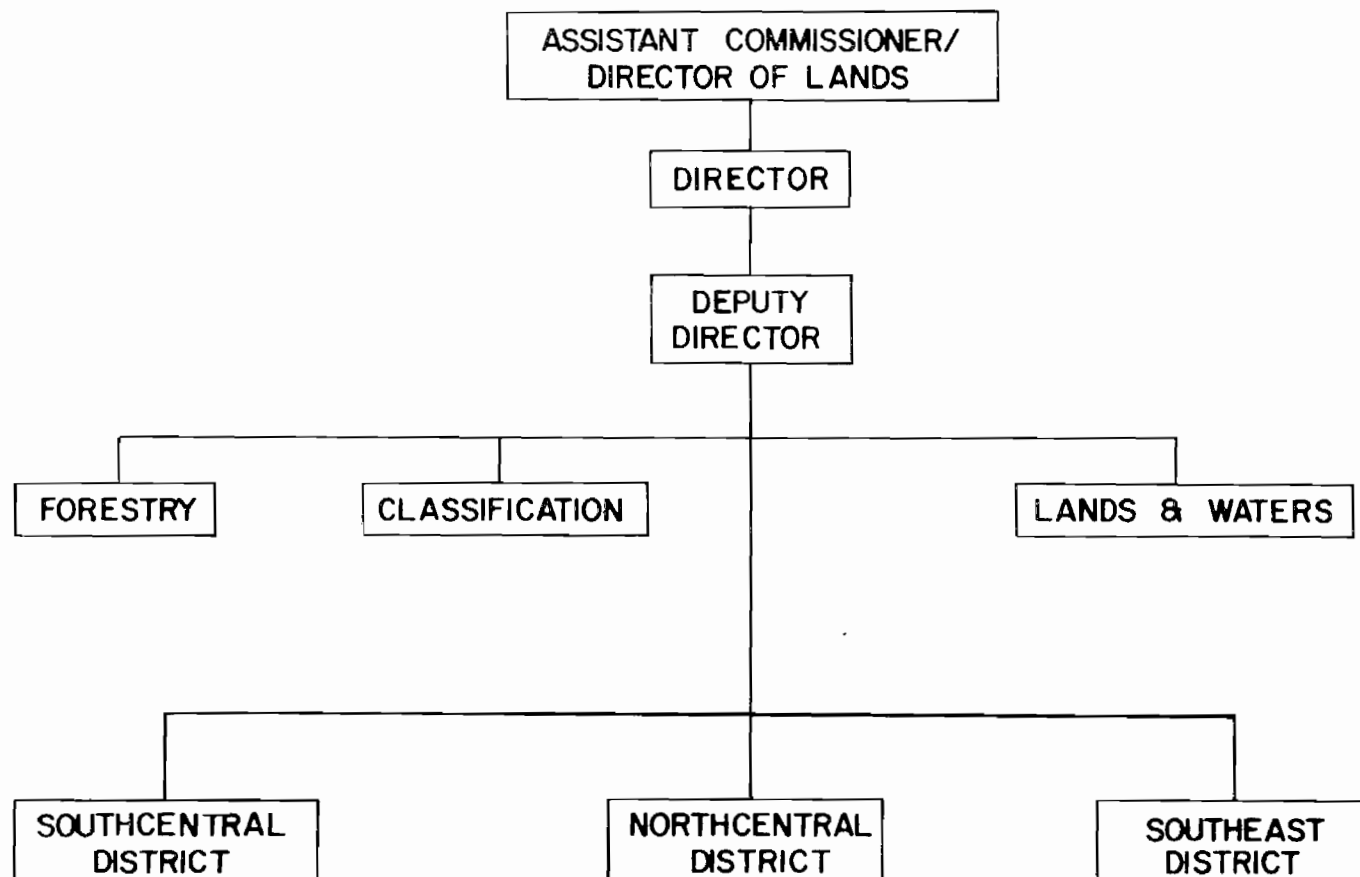
sectors most involved and affected by land administration practices, and consists of individuals chosen for their capabilities in the areas of land law, use and development. The group has been working with the legal and technical aspects of disposals of state land. Members of this committee include: William Mack, Alaska Leaseholders Association; John Norman, an attorney specializing in corporate and natural resources law; Hugh Gellert, President of Bear-Fritz, Inc., a land development company with interests in Anchorage and the Kenai Peninsula; Lydia Selkregg, an Anchorage Assemblywoman and Professor of Regional Planning at the Arctic Environmental Information and Data Center in Anchorage; Jamie Love, Director of the Alaska Public Interest Research Group; Grant Giesler, Vice President of Alaska Mutual Savings Bank in the area of commercial loans; Carl Marrs, Land Manager for Cook Inlet Region, Inc.; David McCabe, a land appraiser; State Senator Michael Colletta, and State Representative Clark Greuning.

The list of issues being considered includes the following: land sales procedures and lease terms; fair value of return standards to taxpayers for state land; appraisal standards; enforcement procedures; annual rental rate procedures; lease performance requirements, and the consistency of state land practices with the private real estate and financial sector.

The results of the panel's deliberations are expected to be implementation of new administrative practices, revised regulations, and legislative recommendations.



Alaska Division of Land and Water Management
323 E. Fourth Avenue
Anchorage, Alaska 99501



Director: Theodore G. Smith

Deputy Director: George K. Hollett

The Alaska Division of Land and Water Management, whose Title 38 obligations are coordinated by the Division of Lands, carries out responsibilities for the management of surface resources including lands, waters, forests, and all related resource activities. State lands include tidelands, submerged lands, shorelands, and the School, Mental Health, and University Trust Lands, in addition to the General Selection Lands selected under the Statehood Act from available federal public domain. Park lands are not included; being managed by the Division of Parks. Responsibility extends to the selection, classification and disposal of land and its related surface resources. Title 38 responsibilities are delegated to the Division of Land and Water Management by the Assistant Commissioner/Director, Division of Lands. The Division of Land and Water Management is composed of three sections and three district offices.

LAND AND WATER SECTION

Chief: Richard A. LeFebvre

The Land and Water Section has the responsibility for providing review and administrative assistance to the Division's District Offices in all activities that affect the state's land and water resources. This section is also charged with administration and protection of all land title received by the State. These responsibilities are met by the Section's three units.

The Contract Administration Unit is responsible for the administration of all land and water case files including leases, land sale contracts, use permits, etc. This unit is currently performing surveillance and maintenance of over 50,000 state land and water case files.

This unit is also responsible for appraisals and reappraisals of state lands. During 1976 this unit appraised 423 parcels and reappraised 175 parcels. The State's now-suspended Open-to-Entry program accounted for 239 of the appraisals. The appraisals were performed throughout the state, with the majority being in the southcentral region.

The Title Administration Unit is responsible for execution of state land selection actions, tracking those applications through the federal adjudication process, and defending state title against all competing claims (e.g. adverse adjudication decisions by the Federal Bureau of Land Management, Native claims, etc.). One of the major responsibilities of this unit is the tracking of title under the Alaska Native Claims Settlement Act and discovery of conflicts with the State's land selections.

The Land and Water Coordination Unit is responsible for the coordination of all statewide land and water activities and works on projects of an unusual or transient nature. This unit also handles such duties as synthesis of regulations and easement identification under the Alaska Native Claims Settlement Act.

FORESTRY SECTION

Acting Chief: Raymond L. Settles

The Forestry Section of the Division of Land and Water Management is responsible for coordination of forest protection on all state and private lands and management of state timber lands. The section prepares and administers timber contracts for all state General Selection and Trust lands, and on certain borough lands under contract. Through a cooperative forest management program, this section also provides technical assistance to private landowners and



Entrance to the Willow Experimental Forest northwest of Wasilla in the Matanuska Valley

educational information to the general public. The Forestry Section is divided into three units.

The Fire Management Unit is responsible for the coordination of fire protection activities on all state and private lands. During 1976, as the first step of a gradual transfer of forest fire suppression responsibility from the Federal Bureau of Land Management to the Division of Lands and Water Management, the State assumed direct fire control responsibility for approximately 1.6 million acres of land in Southcentral Alaska. The area included state and private lands from the Knik River, north of Anchorage, to the southern end of the Kenai Peninsula. By reciprocal agreement with the Federal Government, this area also included 270,000 acres of Native land on the Kenai Peninsula

and lands within the federally administered Eagle River Power Project Withdrawal. Not included were other federal lands not under agreement and areas protected by local fire departments. The 1977 fire season will see the Division assuming additional wildfire control activities on one million acres in the Matanuska and Susitna Valleys.

The Upper Eagle River Fire, northeast of Anchorage, was the largest fire the State was responsible for during 1976. The fire consumed approximately 1,050 acres. Although this was the first major fire the State of Alaska was actually responsible for fighting on the ground, nearby municipalities and the Federal Bureau of Land Management commended the State on the successful control and mop-up of the fire. The fire resulted from careless use of a campfire and cost the taxpayers approximately \$500,000.

In the past year, the Fire Management Unit acquired four heavy-duty, medium-range, single-engine Beaver aircraft from the federal government. These aircraft are primarily used for reconnaissance during peak fire periods.

State law requires a person to obtain a permit during the fire season for any open fire in the vicinity of the general highway system of the interior and southcentral regions of the state. The program was operated for the fifth year in 1976 by the Fire Management Unit, and continues to be a successful tool for fire prevention. During 1976 approximately 2500 burning permits were issued.

The Forest Management Unit is involved with the coordination of district timber sales and carries out the continuing inventory of the State's forest resources.

Development of the State's Westside Salvage Timber Sale at Tyonek is continuing. Logging operations were in full production during 1976. The chip processing plant has been

installed and is fully operational.

During 1976 the State received stumpage fees for approximately 36 million board feet of white spruce, three million board feet of birch, and eight million board feet of cottonwood. The Westside Salvage Sale, the largest state offering to date, contains an estimated 285 million board feet of beetle-killed white spruce.

The Kenai Aerial Color Photography project, which began in 1975, is 99 percent completed. The project includes the Kenai Moose Range, and all lands west of the Moose Range to Cook Inlet and Kalgin Island.

Field sampling of commercial forest lands has been completed in the Suckling Hills, Cape Yakataga, and Yakutat Inventory Project areas on the Gulf of Alaska. The total of the separate project areas amount to 714,000 acres. These projects were completed in cooperation with the U. S. Forest Service's Forest Science Laboratory.

The Cooperative Forest Management Unit deals with public service forestry, including such activities as tree planting, sawmill clinics, and other programs designed to instruct and educate private landowners on good forest management practices.

The Cooperative Forest Management Unit maintains a greenhouse and nursery at the Division of Agriculture's Plant Materials Center in Palmer. The nursery's production is 90,000 seedlings annually. The species grown include Sitka spruce, white spruce, and lodgepole pine. By late 1977 two additional pre-fab greenhouses and a workhouse are expected to be completed. This will expand this pilot project's capabilities to over 300,000 seedlings per year.

During 1976 seedlings grown at the Palmer greenhouse were

planted in a logged-over area of the Westside Salvage Timber Sale near Tyonek. These planting plots will be monitored over the next few years to analyze the success of the specific processes used in this type of reforestation method.

Under Title X of the Public Works and Economic Assistance Act of 1965, the State of Alaska received a monetary grant for a timber stand improvement project in the Willow Experimental Forest. The Timber Stand Improvement Project has been under way since the first week of June with a nine-man crew working northwest of Wasilla to establish this experimental forest. The work consisted of thinning the trees on fixed plots to a scientifically-determined spacing, and collecting data on the remaining trees.

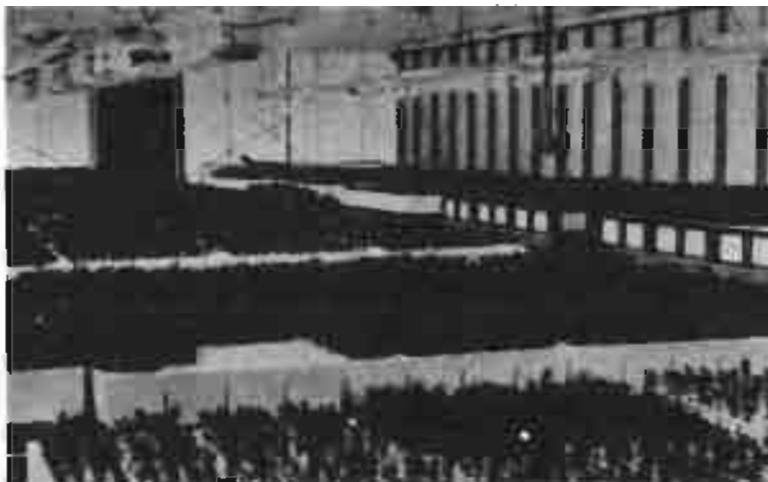
During the next ten years, the spacing study will provide growth data to determine the conditions best suited for the vast Southcentral Alaska Birch Forest. Cooperative efforts with the U. S. Forest Service's Northwest Forest Experiment Station in Fairbanks helped this project to successful completion.

Portions of the Willow Experimental Forest are also being prepared to plant trees raised at the State Forestry Nursery at the Plant Materials Center in Palmer. The seedlings will be closely monitored to obtain information for improving future nursery stock.

CLASSIFICATION SECTION

Acting Chief: Helen D. Nienhueser

The Classification Section of the Division of Land and Water Management is responsible for the coordination of the Division's land use planning activities with other state,



Tree Seedlings at the Division's greenhouse and nursery at the Plan Materials Center near Palmer

federal, and public agencies and persons and groups interested in management of state lands. This section also administers the land classification function of the Division. One of the responsibilities of this section is to provide background information and research for the Division's input to the State's Coastal Zone Management Program.

Land Classification activities are carried on in coordination with district office planning activities related to land disposals by sale and lease, retention for multiple-use management, reservation for recreation areas and access to water systems.

During 1976 the Delta Land Management Plan Study progressed. It is a coordinated team effort which includes representatives of other state, federal, and local government

agencies involved with land use and management responsibilities. In addition, a special local citizens' council has provided a statement of goals and objectives for the area. The citizens' council is now involved in discussions of alternative futures for the Delta area. Two of the four volumes of the study have been published, and the final two are expected early in 1977. The Study, to this point, has indicated certain areas are suitable for agricultural development, timber management, recreational pursuits, and wildlife habitat.

Land use management recommendations for the Haines-Skagway area were drafted in 1975. During 1976 the study has been expanded to examine the regional influence and socio-economic conditions that will influence future management decisions. The resultant planning document will help formulate a basis for planned management and classification of state lands in that area. Other planning activities are centering around the cities of Yakutat and Cordova where the prospect of off-shore oil development has already created significant land impacts. Planning activity has occurred in the Homer-Anchor Point area, and in the Kenny Lake area where the section is working with residents on a townsite development plan.

The section also coordinates Division planning activities with the Department's new Natural Resources Planning and Research Section, and will continue coordination with the Division's district offices for more detailed planning of specific areas throughout the state.

The Division of Land and Water Management has focused on developing a planning capability within the Classification Section to better enable it to respond to the demands upon it created by Outer Continental Shelf (OCS) development. A heavy emphasis has been placed in coordination with other agencies in any oil and gas development proposed in the

Northern Gulf of Alaska.

Considerable progress has been made in changing the emphasis from examining each application for OCS development in isolation to examining each application in relation to other uses, needs, proposed actions, impacts, etc. This coordinated approach is crucially important since clusters of OCS-related applications in Yakutat and Cordova are being received by the Division. Each step taken toward building a system of inter-agency coordination and review and toward integrating the planning function into the overall land management system strengthens the Department of Natural Resources' capacity to manage its coastal lands and water resources in a rational manner.

The district offices of the Alaska Division of Land and Water Management are set up to provide the public with service and information regarding the State's resource and land management programs. Under the departmental reorganization completed during 1976, the three district offices have been expanded to accept responsibilities, previously handled by the state office, in the area of day-to-day management of state land and its resources. Since personnel of these district offices are more familiar with the needs and priorities of their areas of the state, it is more logical for them to make the decisions affecting the state lands in their districts.

SOUTHCENTRAL DISTRICT OFFICE

District Manager: L. A. Dutton

The Southcentral District Office in Anchorage is responsible for land, water, timber, and fire management on all state land in the southcentral region of Alaska. The Southcentral District Office is located at 323 East Fourth Avenue in

Anchorage.

In 1976 this district office assumed direct field fire control responsibilities on state and private lands from the Knik River, north of Anchorage to the southern tip of the Kenai Peninsula. In 1977 this area will be expanded to include certain areas of the Matanuska-Susitna Valley.

The Soldotna Resource Area Office, which is attached to the Southcentral District Office, maintains fire control and surveillance on the Kenai Peninsula. This office is also involved in timber management projects in that area. It is located approximately one mile north of Soldotna on the Sterling Highway.

The Eagle River Fire Control Center, also attached to the Southcentral District Office, is the maintenance and supply center for all fire and district-related projects in the southcentral area. The Center is located approximately one mile south of Eagle River on the Glenn Highway.

NORTHCENTRAL DISTRICT OFFICE

District Manager: William H. Copeland

The Northcentral District Office in Fairbanks is responsible for land, water, timber, and fire management in the north half of the state, with special emphasis placed on land management aspects of the North Slope oil development area at Prudhoe Bay. The Northcentral District Office is located at 4420 Airport Way in Fairbanks.

Much of the work accomplished by this district during 1976 dealt with water use and water-oriented problems on the North Slope. This office, with the cooperation of other state agencies is developing policy for water-use operations in the

northern climes of the state.

The Northcentral District Office was also responsible for the Delta Land Management Planning Study in cooperation with the Classification Section.

SOUTHEASTERN DISTRICT OFFICE

District Manager: Henry L. Hall

The Southeast District Office in Juneau is responsible for land, water, timber, and fire management in the Panhandle area of the state. The Southeast District Office is located in the eleventh floor of the State office Building in Juneau.

The Haines Resource Area Office, which is attached to the Southeast District Office, takes care of land, water, timber, and fire management responsibilities in the Haines-Skagway area. This resource area office is located in the Gateway Building in Haines.

Under the reorganization that formed this Division during 1976, three distinct goals have been met that strengthen the State's ability to operate more effectively as manager of state land and its resources:

1. More emphasis was placed on the Title Administration Unit of the Lands and Waters Section. With the passage of title from the Federal Government to Native corporations under the complicated Alaska Native Claims Settlement Act, it is necessary for the State to discover conflicts and protect its land selections against all competing claims. This unit has been expanded to better meet this responsibility.

2. One of the statutory requirements of the Classification Section is to prepare land classification planning reports prior to the alienation of state land or resources. Since the reorganization this section has been substantially upgraded, and additional staff has been added to meet this obligation.

3. The three district offices have been expanded to handle increased responsibilities. With the doubling of management responsibilities for state lands within the past two years, to 36.5 million acres, more responsibility for the day-to-day management decisions was assigned to the district offices which have considerably more on-the-ground expertise than do personnel in the Anchorage State Office. Specific new responsibilities in the area of water appropriation and permitting, as well as full responsibility for forest management and forest protection (fire control), have been given to the district offices.

STATE LAND SELECTION ACTIVITY

ENTITLEMENTS			ACTIVITY FOR 1976			TOTALS SINCE STATEHOOD		
Grant	Law Granting Entitlement	Land Entitlement	Applied For	Tent. Approval	Patent	Applied For	Tent. Approval	Patent
TERRITORIAL GRANTS								
School	Title 48, Sec 353	*	0	0	1,360	109,211	0	101,562
University	Title 48, Sec 354a	100,000 Ac	0	0	0	99,303	0	99,414
Mental-Health	P.L. 84-830	1,000,000 Ac	0	0	0	1,017,550	186,919	787,591
Univ - Tanana	Title 48, Sec 353	*	328	0	2,544	11,372	0	11,211
STATEHOOD GRANTS								
General Grant	PL 85-508, Sec 6b	102,550,000 Ac	2,976,881	6,412,290	6,681,387	70,451,367	15,585,130	19,669,929
Community	PL 85-508, Sec 6a	400,000 Ac	0	0	381	83,613	11,957	10,216
Community National Forest	PL 85-508, Sec 6a	400,000 Ac	7	0	9	37,209	15,170	3,882
OTHER FEDERAL GRANTS								
Klukwan Bill	PL 94-456, Sec 2	265 Ac	0	0	265	0	0	265
TOTALS IN ACRES			2,977,216	6,412,290	6,685,946	71,809,625	15,799,176	20,684,071

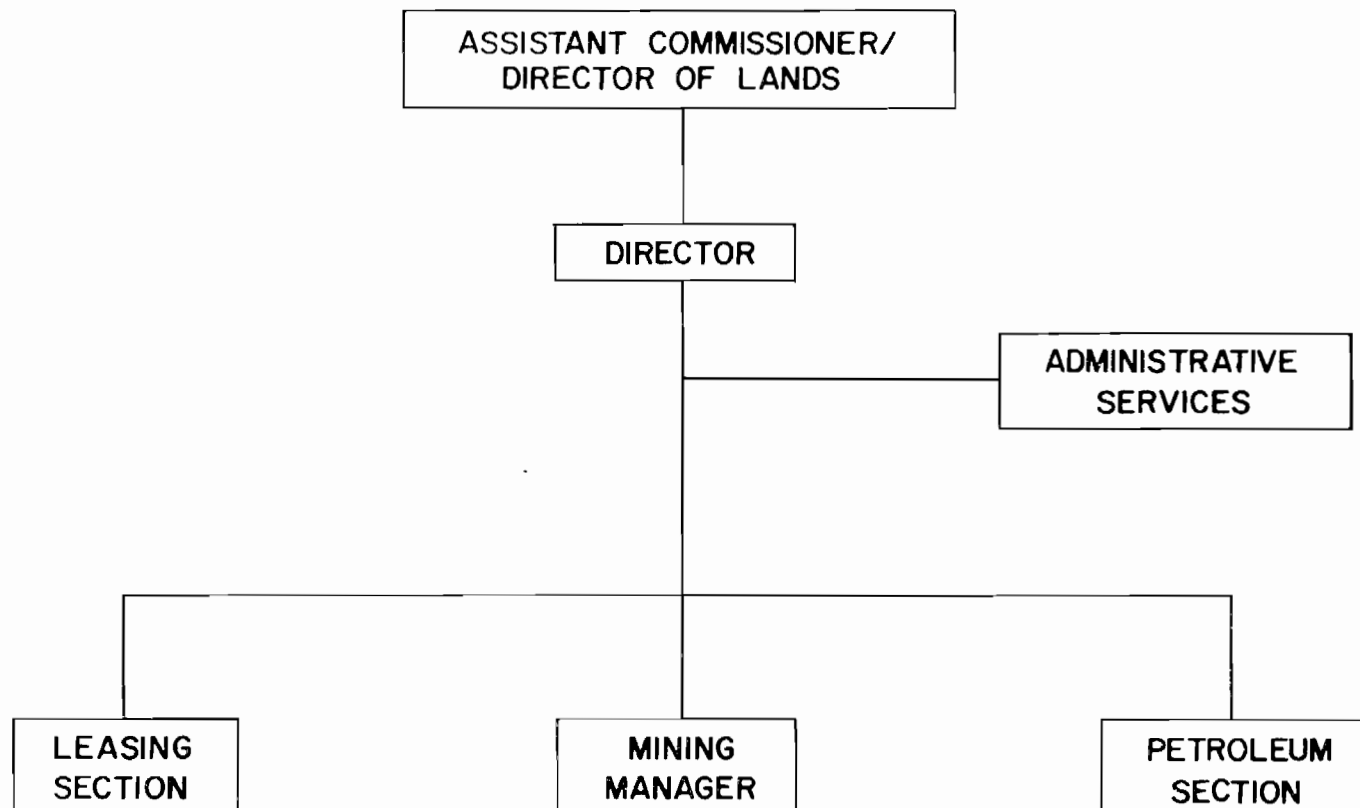
* In place lands surveyed and approved prior to July 7, 1958, where acreage was not determined in the act.

NOTE: The applied for acreage includes land Tentatively Approved and Patented.

Alaska Division of Minerals and Energy Management

323 E. Fourth Avenue

Anchorage, Alaska 99501



Director: O. K. Gilbreth

In late 1976, as part of the departmental reorganization, the Alaska Division of Lands was restructured to include the Alaska Division of Minerals and Energy Management. This division was formed to consolidate land ownership management functions for all subsurface resources.

The creation of the Division of Minerals and Energy Management also precluded the possibility of a conflict of interest within the Division of Oil and Gas Conservation. The aims of conservation and the aims of maximizing revenues are not always compatible, mainly because of the time value of money. The Division of Oil and Gas Conservation, therefore, wore two hats; one as a conservation agency and one as the State's royalty owner representative. They exerted jurisdiction over federal, fee or private, and state lands. Though this conflict of interest was not very serious in the past, it would be likely that ownership desires in the Prudhoe Bay Field may not be in agreement with good conservation practices, and it can be readily expected that it would be referred to the courts on a conflict-of-interest charge if every precaution was not taken to minimize that possibility. Therefore, there was a definite need to separate these functions into two groups making independent recommendations and decisions.

Under the reorganization, the Division of Oil and Gas Conservation retains its regulatory functions and the new Division has management responsibility for all subsurface resources on state lands.

The Division of Minerals and Energy Management has been assigned the management responsibilities for all ownership functions relating to minerals on state lands. Included in this are all leasable and locatable minerals as well as leasing functions associated with geothermal energy. The division is responsible for evaluation of mineral potential, recommendations on leasing methods, timing of lease sales,

administration of leasing, approval and surveillance of plans of operation, economic analyses, settlement of royalties and auditing of royalty returns.

The Division of Minerals and Energy Management is divided into three sections: Leasing, Mining, and Petroleum. Although the Division became a reality on October 1, 1976, the Division is still involved in the infant stages of staffing, organizing, and establishing office space. The following is a general statement as to the responsibilities of each of these sections in this division.

LEASING SECTION

Leasing Manager: Pedro Denton

The Leasing Section is responsible for all mineral leasing and mineral operations on state-owned lands. This includes oil and gas leasing as well as coal and other locatable minerals. The Section is responsible for approval of plans of operation on these leases and for administering the Division's mineral contracts (leases, mining claims, etc.).

This section was the Minerals Section of the Division of Lands prior to the reorganization.

MINING SECTION

Chief: Vacant

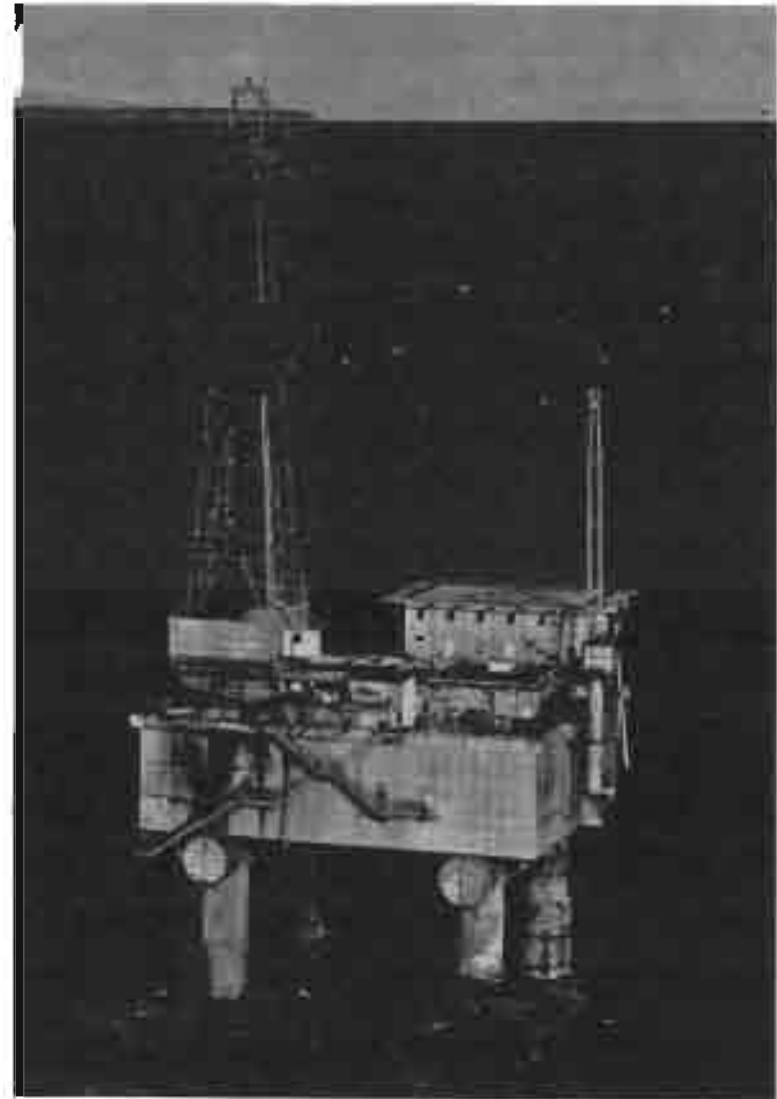
This section is responsible for supervising land management functions relating to operation and abandonment plans for locatable mineral leases, claims, and permits as well as for coal, phosphates, oil shale, sodium, and potassium leases and permits. This section also coordinates mining operations on

state lands with federal, state, and local agencies, and evaluates applications to convert mineral permits and claims to leases. The Section also provides expertise on state land use planning; coordinates investigations to determine location, extent, and value of known and potential mineral resources; and analyzes and makes recommendations on regulations, guidelines, statutes, and policies regarding mining resources on state lands.

PETROLEUM SECTION

Chief: Patrick L. Dobey

This section is responsible for oil and gas management functions such as conducting studies to determine the location, volume, and value of known potential petroleum resources. It also provides technical assistance in state land selections, lease sales, and lease bid acceptance or rejections. The Petroleum Section also interprets data to determine the cost benefit value of petroleum resource development. This section will also monitor petroleum operations and development by federal agencies and industry. The Royalty Oil and Gas Development Advisory Board is advised by this section when requested. This section also supervises studies on energy supply and demand.



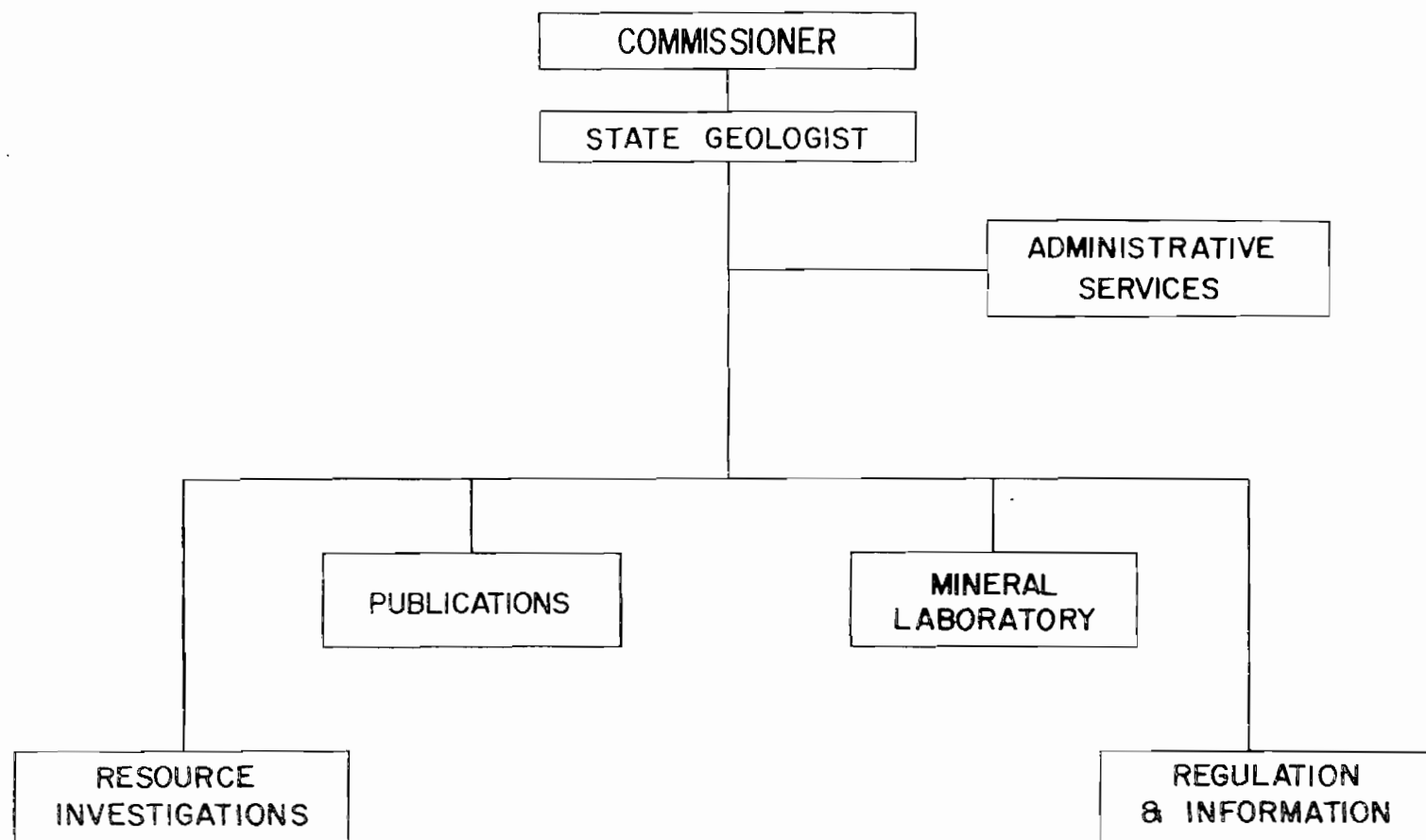
COMPETITIVE OIL AND GAS LEASING OF STATE LANDS

Sale No. and Date	Acres Offered	Percent Leased	Acres Leased	\$/Acre	Tracts Offered	Tracts Leased	Bonus Received
1. Dec. 10, 1959	88,055.00	87.66	77,191.00	\$ 52.08	37	31	\$ 4,020,342.43
2. July 13, 1960	17,567.51	93.96	16,505.57	24.70	27	26	407,654.54
3. Dec. 7, 1960	73,047.70	31.30	22,866.70	1.54	26	9	35,325.31
4. Jan. 25, 1961	400.00	100.00	400.00	679.04	3	3	271,614.40
5. May 23, 1961	97,876.00	98.06	95,980.00	74.71	102	99	7,170,464.88
6. Aug. 4, 1961	13,257.00	100.00	13,257.00	8.35	6	6	110,671.55
7. Dec. 19, 1961	255,708.44	73.14	187,025.40	79.47	68	53	14,863,049.33
8. April 24, 1962	1,061.70	100.00	1,061.70	4.81	8	8	5,097.00
9. July 11, 1962	315,668.93	87.77	264,437.13	59.42	89	76	15,714,112.60
10. May 8, 1963	167,583.06	84.43	141,490.51	29.23	200	158	4,136,224.92
11. C A N C E L L E D BECAUSE OF U.S. PROTEST ON YAKUTAT BAY AREA							
12. Dec. 11, 1963	346,782.40	71.25	247,089.00	12.31	308	207	3,042,680.74
13. Dec. 9, 1964	1,194,373.00	60.51	722,659.00	7.66	610	341	5,537,100.94
14. July 14, 1965	754,033.00	53.45	403,000.00	15.25	297	159	6,145,472.59
15. Sept. 28, 1965	403,042.06	74.87	301,751.28	15.49	293	216	4,674,343.74
16. July 19, 1966	184,410.05	72.66	133,987.29	52.55	205	153	7,040,880.17
17. Nov. 22, 1966	19,229.70	96.67	18,589.70	7.33	36	35	136,279.67
18. Jan. 24, 1967	47,729.00	88.82	42,397.00	34.87	23	19	1,478,777.23
19. Mar. 28, 1967	2,560.00	R E J E C T E D 12-9-74					
20. July 25, 1967	311,249.89	82.39	256,447.31	73.14	295	220	18,757,340.88
21. Mar. 26, 1968	346,623.00	47.59	164,961.00	18.24	308	147	3,009,224.00
22. Oct. 29, 1968	111,199.48	54.20	60,272.15	17.29	230	125	1,042,219.90
23. Sept. 10, 1969	450,858.47	91.50	412,548.47	2,181.66	179	164	900,041,605.34
24. May 12, 1971	196,635.07	47.10	92,617.97	4.87	244	106	455,640.57
25. Sept. 26, 1972	325,401.42	54.78	178,244.71	7.43	259	152	1,324,673.40
26. Dec. 11, 1972	399,920.96	44.50	177,972.56	8.75	218	105	1,557,848.84
27. May 9, 1973	308,400.81	36.93	113,891.71	9.93	210	96	1,130,324.51
28. Dec. 13, 1973	166,648.04	58.69	97,803.69	253.77	98	62	24,819,189.91
29. Oct. 23, 1974	278,269.43	50.00	127,119.65	8.19	164	82	1,040,909.98
	6,877,591.12	63.57	4,371,567.50	\$ 235.09	4,544	2,858	\$1,027,969,069.37

22nd competitive sale bonus received included 1/5th bonus from forfeited leases.

26th competitive sale, 1/5th bonus received calendar year 1972. 4/5ths received 1973.

Alaska Division of Geological and Geophysical Survey
3001 Porcupine Drive
Anchorage, Alaska 99501



State Geologist: Ross G. Schaff

The Alaska Division of Geological and Geophysical Survey, according to Alaska Statute 41, is charged with conducting geological and geophysical surveys to determine the mineral and energy potential of Alaska Lands; the location and character of ground waters and construction materials; and the potential geologic hazards to buildings, roads, bridges, and other installations and structures. The Division is to conduct such other surveys and investigations to advance the knowledge of geology in Alaska.

The Alaska Division of Geological and Geophysical Survey has main offices in Anchorage and College, and also maintains mining information offices in Anchorage, College, Juneau, and Ketchikan, where files on mining claims, deeds, and affidavits extending back to 1953 are maintained for public use. This year, the kardex files were converted to a microfiche system, wherein a computerized listing of all claims according to claim name and stream, claim owner, and cardex number is cross referenced for ready access.

The Division of Geological and Geophysical Survey is divided into four sections: Resource Investigations, Mineral Analysis Laboratory, Regulation and Information, and Publications.

RESOURCE INVESTIGATIONS SECTION

Supervisor: Gilbert R. Eakins

The Division's Resource Investigations Section, which consists of twelve geologists and geophysicists, and five geological assistants, provides the state with geologic and geophysical information through field investigations and the coordinated efforts of other state and federal agencies which are involved in furthering the knowledge of Alaska's geology.

During 1976 field investigations were conducted in the Brooks Range, Lower Cook Inlet, Kenai Peninsula, Alaska



Mill and workings of the Blue Lead Mine near the Goodpaster River drainage area which was inspected by the Division as part of a Division of Land and Water management planning study

Range, Matanuska and Susitna Valleys, Gulf of Alaska, Kodiak Island, and the Forty Mile District.

The focus of investigations in these regions is determined through an annual analysis of the geologic information needs of the state. Two oil and gas related studies were conducted to evaluate the potential of the state's off-shore, three-mile limit; one off Kodiak Island and the other in Lower Cook Inlet. A third study of the waters contained in various formations of Cook Inlet provided information about the origin and migration of oil and gas as well as insight into boundaries between fresh and saline waters along the edge of the basin.

Mineral resource appraisals were conducted to assist the

Division of Lands in evaluation, classification, and selection of state lands. Target areas during 1976 were the Alaska Range, Brooks Range, and the Forty Mile District. Geophysical studies (aeromagnetic and gravity surveys) were important ancillary operations in these same areas.

Delineation and evaluation of construction materials, mainly sand and gravel, and geologic hazards were made in the Matanuska and Susitna Valleys, the Tanana Valley, and the Kenai Peninsula. The results of these studies are fundamental to land evaluation and land use planning.

Whenever possible, the Division of Geological and Geophysical Survey utilizes information generated by on-going projects of the U. S. Geological Survey and the Bureau of Mines. Cooperative programs with the U.S.G.S. in 1976 consisted of hydrologic data collection in Cook Inlet; oil and gas evaluation in Lower Cook Inlet and Kodiak Island; and geophysical studies in the Brooks Range. The Division also began a volcanic hazards program in cooperation with the Geophysical Institute of the University of Alaska.

During 1976, the Division initiated a series of regional and site-specific evaluations of geologic hazards with emphasis on communities affected by the federal Outer Continental Shelf Lease Sales and areas which may be potentially affected. Such data is expected to be widely used by municipal, borough, federal and state governments in zoning and planning.

MINERALS ANALYSIS LABORATORY

Supervisor: Henry S. Potworowski

During the period of December 1, 1975 through



Division geologist, R. D. Reger, taking notes in the Central Alaska Range

November 30, 1976, the Minerals Analysis Laboratory performed 20,266 determinations on 6,651 samples, and increase of 95 percent of the 1974-75 period. Of these, 506 were submitted by the public; the rest were submitted by the Division staff. These analyses represent fundamental data for the mineral and energy evaluation of lands in Alaska.

REGULATION AND INFORMATION SECTION

Supervisor: Cleland N. Conwell

The Regulation and Information Section attempts to maintain a feeling for the pulse of the mining and energy resource activity state wide. This information is shared with

the Bureau of Mines which publishes a statistical summary annually. The four mining information offices of the Division directly provide the public with current information on mining claims and other pertinent information.

A second function of this section is to administer the safety regulatory provisions of the Alaska Mines and Safety Code for coal and metallic and nonmetallic mining. In 1976, thirty mine and prospect inspections were made. In addition, one inspection for compliance with mine-land reclamation laws was completed.

During 1976 1,198 visitors requested information from the Division's mining information offices. The information resulted from processing 46,507 mining claims plus an additional 18,431 documents related to mining.

Mineral Exploration

Mineral exploration continued at an accelerated pace. A meaningful indicator of the accelerated pace of exploration activity is the 13,275 new mining claims filed in 1976, which is an increase of 25 percent over 1975. In addition, there were 1,667 affidavits of labor filed on 29,155 active claims, which is 13 percent above the 1975 total. The total number of active mining claims in the state in 1976 was 42,430, which is up 22 percent over the previous year. The amount expended on Alaska exploration for 1976, once the figures are known, will probably exceed 30 million dollars.

Arctic Alaska

An estimated 7.5 million dollars were spent in this area on mineral investigations in 1976. At least one-third of this amount was invested in physical exploration of the

high-grade copper, lead, and zinc-ore bodies north of the Kobuk River in the Southwestern Brooks Range.

Three major companies had active field parties exploring for uranium on the North Slope and other portions of arctic Alaska.

Western Alaska

Expenditures in Western Alaska exceeded an estimated six million dollars in 1976. Limited exploration continued on the Lost River Mine, which has the potentially mineable resource of fluorite-tin ore. Exploration for placer gold continued at an accelerated pace for both on-shore and off-shore placers. In addition, exploration continued on marine science studies for the possibility of marine tin placers off the Lost River-Wales-Shishmaref area.

The Calista Native Corporation had an extensive mineral exploration program during 1976 to evaluate the lands for selection under the Native Claims Settlement Act. Two major companies were also active, exploring for uranium and other metals, including tungsten in Western Alaska.

Interior Alaska

About 2.2 million dollars has been expended on mineral exploration on the interior part of the state. Major mining companies explored for minerals southwest of Mount McKinley, on the north and south slopes of the Alaska Range, and in the Orange Hill district. Near Healy, coal mining exploration continued during 1976. A group reportedly investigated the Jarvis Creek area for possible coal production.

Southeastern Alaska

In 1976 possibly more than six million dollars was spent on mineral exploration and development in Southeastern Alaska. U. S. Borax and Chemical Corporation announced that a major molybdenum deposit was discovered 45 miles west of Ketchikan. The mineralized area is reported to cover over a square mile. The company expects to mine the ore by open pit, at a rate of about 30,000 standard tons per day. The project, if brought into production, would employ 700 to 1000 people during the construction phase and about 500 full-time workers thereafter.

Considerable activity took place on Admiralty Island by companies looking for copper, lead, and silver deposits. Exploration of the large copper-nickel deposits at Glacier Bay was halted with the passage of federal legislation prohibiting mining in the Glacier Bay National Monument. There was some additional exploration on barite deposits north of Haines.

Mineral Production

Total hard mineral production in Alaska in 1976 is estimated at 119 million dollars. This is a decrease of six percent over 1975. Accounting for this figure in order of value were sand and gravel, stone, coal, gold and silver, barite, chromite, antimony, tin, and gemstones. Gold production continued to increase.

PUBLICATIONS SECTION

Supervisor: Frank L. Larson

The major way to communicate results of geologic and

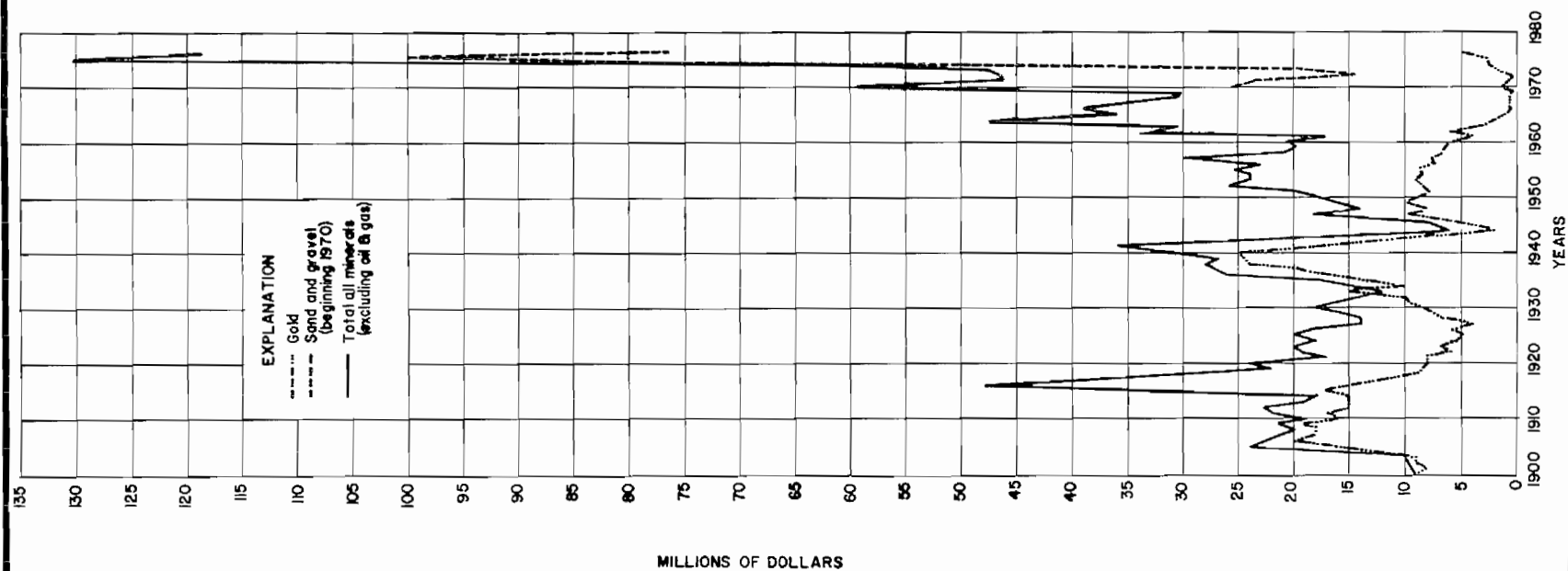


Recently reactivated gold mining dredge near Nome

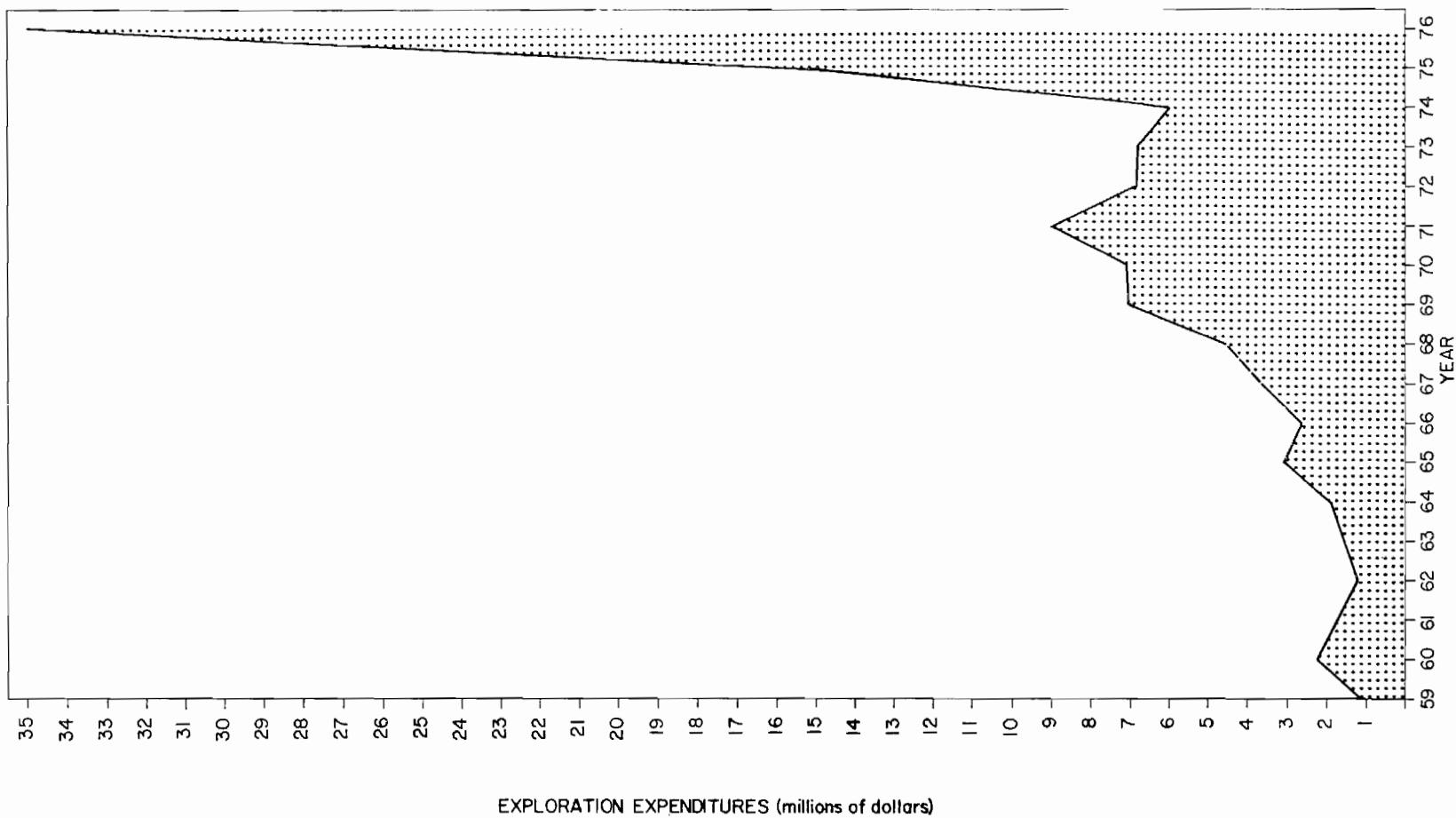
geophysical investigations to the people of Alaska is through publication of maps and reports. During 1976 the Division of Geological and Geophysical Survey published four geologic reports, five special reports, 12 open-file reports, 26 aeromagnetic maps, one biennial report, and five issues of the Mines and Geology Bulletin. Total documents prepared by the Division were 28,802. These publications are available for purchase and/or inspection at the mining information offices of the Division of Geological and Geophysical Survey.

A list of all publications and reports published by the Division during 1976 may be found on the back pages of this report.

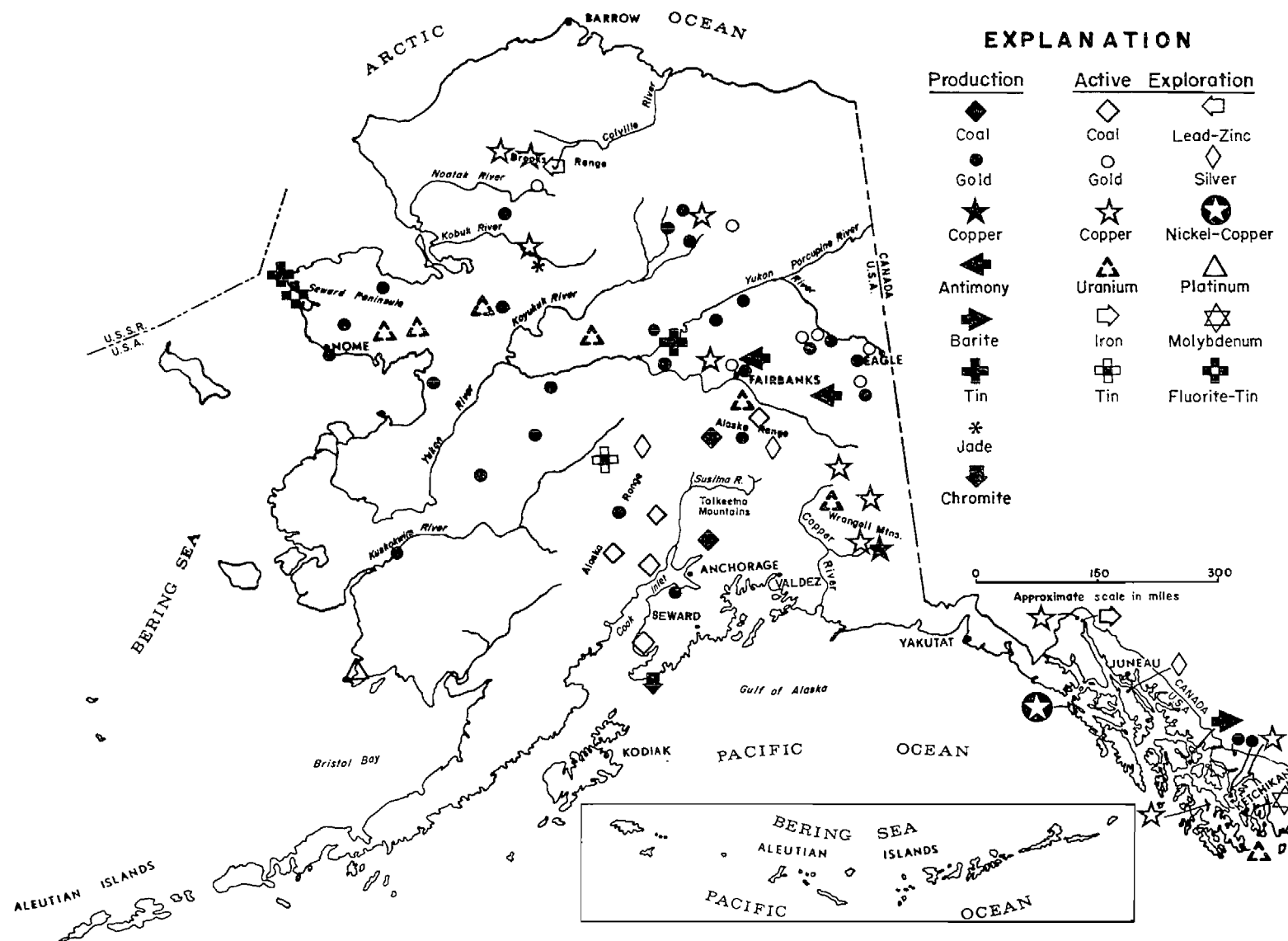
Annual mineral production in Alaska, 1900-1976.



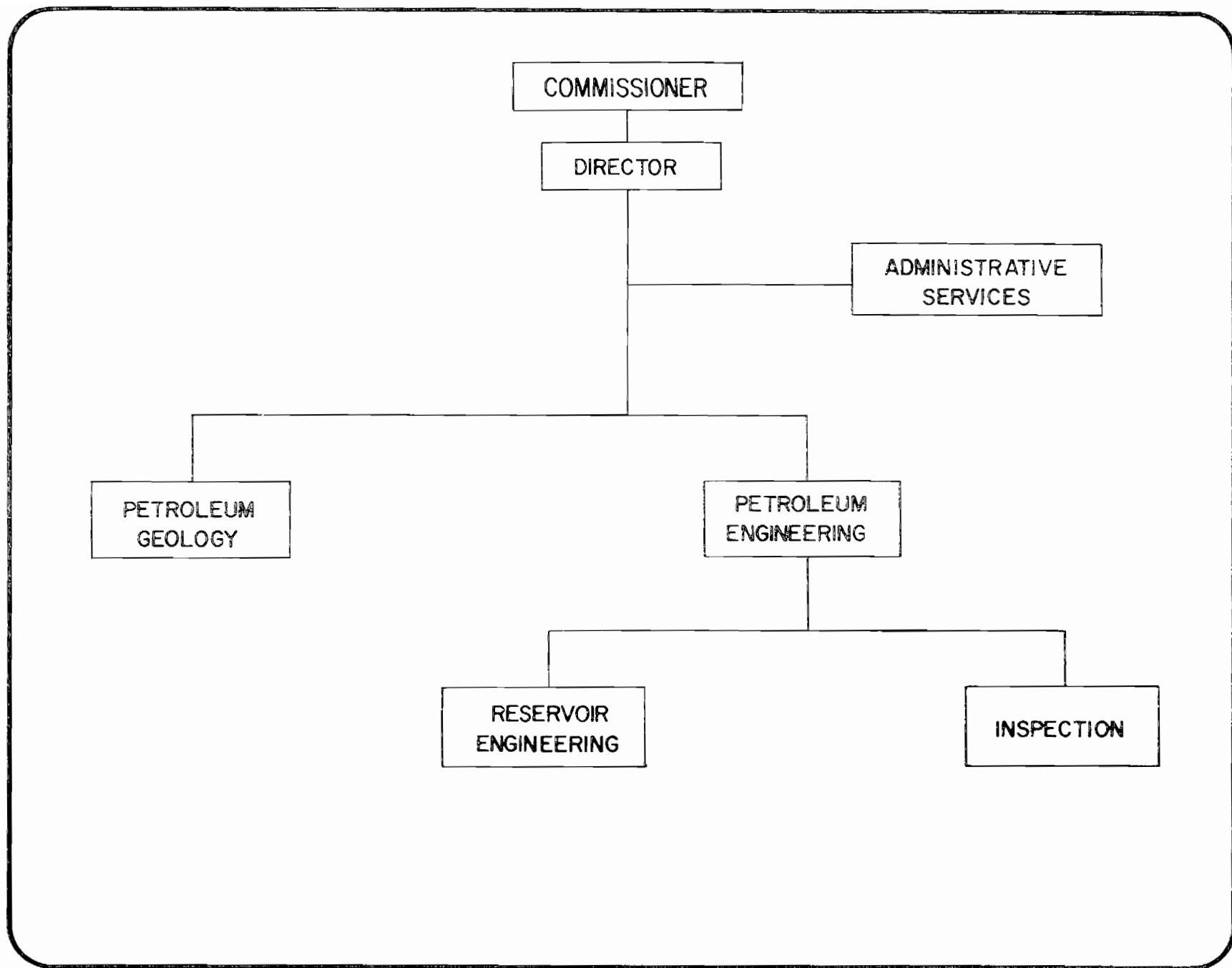
Estimated exploration expenditures in Alaska, 1959 – present.
The graph excludes oil and gas exploration.



Location of mineral exploration and production, 1976.



Alaska Division of Oil and Gas Conservation
3001 Porcupine Drive
Anchorage, Alaska 99501



Director: Hoyle H. Hamilton

Chief Petroleum Geologist: Thomas R. Marshall, Jr.

Chief Petroleum Engineer: Lonnie C. Smith

The Alaska Division of Oil and Gas Conservation regulates the petroleum industry under Alaska Statute 31, known as the Oil and Gas Conservation Act. This law prohibits the waste of oil and gas and charges the Department of Natural Resources with enforcement. This responsibility has been delegated to the Oil and Gas Conservation Committee, which is composed of the Chief Petroleum Geologist, Chief Petroleum Engineer, and Director of the Division of Oil and Gas Conservation.

The objectives of the Division of Oil and Gas Conservation are to regulate oil and gas drilling operations to prevent the waste of oil and gas and to protect the correlative rights of owners. It is to insure that oil and gas volumes are properly measured for accounting, royalty, and tax purposes, and to furnish information and advice to other agencies and the public on oil and gas matters and practices.

The Division of Oil and Gas Conservation is composed of a highly specialized group of engineers, geologists, and technicians with necessary support personnel. The entire staff is located in Anchorage, and all activity is coordinated from that point.

The Division of Oil and Gas Conservation both advises and constitutes the Alaska Oil and Gas Conservation Committee, which has been assigned responsibility for regulating the drilling, producing, and abandonment of oil and gas wells. Geological and engineering considerations are applied to the issuance of drilling permits, establishment of field and pool rules, drilling and production safety, reservoir production practices, production tax studies, determination of productive areas, and oil and gas revenue forecasting.

OIL AND GAS CONSERVATION COMMITTEE

During 1976, the Oil and Gas Conservation Committee, which is attached to the Commissioner's Office, issued eight orders, sixteen administrative approvals, and one emergency order. The orders were based on technical information presented to the Committee and pertained to specific wells, oil and gas pools, or field operations. The administrative approvals deal primarily with pressure maintenance projects and are issued to facilitate the drilling and production practices in established fields.

Drilling Permits

There were eighty drilling permits issued in 1976. This compares with seventy permits issued in 1975. The purpose of a drilling permit is to insure that casing strings meet size, strength, and setting depth criteria; adequate volumes of cement will be used; adequate blow-out prevention equipment will be installed; the location of the well satisfies the regulations; and a satisfactory plan of operations is proposed.

Exploratory Drilling

Only fourteen exploratory wells were spudded in 1976, a decrease of 39 percent under the 1975 activity for the same period. The major decrease in activity was in the Arctic Foothills. Exploratory activity remained about the same in the Arctic North Slope and the Cook Inlet Basin, but there is increased activity in the Naval Petroleum Reserve 4 (NPR-4). There were no new discoveries announced in 1976.

Development Drilling

Development drilling increased slightly during 1976 with 63 development and service wells spudded. This represents an eight percent increase over 1975. Development in Prudhoe Bay in the Prudhoe Bay Field continues to be the center of state activity as the operators prepare to commence production in mid-1977.

Producing and Shut-In Fields

No new oil and gas fields were discovered in 1976. Oil and gas continued to be produced from six Cook Inlet area oil fields. Oil from Prudhoe Bay was produced for both local fuel and fuel for contractors working on the Alyeska Pipeline. Gas from the Prudhoe Bay oil fields fuels the field electric power generation plant. Gas was produced from seven Cook Inlet area gas fields, and from the South Barrow Gas Field in the Naval Petroleum Reserve No. 4. Eleven small, undeveloped gas fields remain shut in. At least two of these Cook Inlet fields have contracts to sell liquified natural gas for manufacture and others remain shut in for the lack of market or pipeline.

Surveillance of Operations

The field surveillance over oil operator activities relative to drilling permit requirements in state regulations continued to increase in 1976 with 167 field trips required to observe 697 separate operations. These trips required 254 man days, which is up 42 percent over 1975, by two petroleum inspectors and three engineers with some participation by geologists. Field observations included pressure tests of blow-out prevention equipment and casing, production well test, down-hole and surface safety valve test, bradenhead

casing pressures, meter provings and calibration, pipeline run tickets, cleanup and abandonment of wells and locations.

Well Data

Information on wells drilled since statehood is on file in the Division of Oil and Gas Conservation's office. This information includes various logs and reports along with core chips and well cuttings from selected wells. That information marked confidential is held confidential for two years after the date it is required to be filed, and is then made available to the public. Information from 22 such wells was released during 1976. Information marked confidential was received on over fifty wells during 1976: it will be released during 1978.

Well Sample Materials

The Division maintains materials which have been processed at no cost to the State and which are derived from the State's well cuttings and core chips, a permanent collection of lithologic samples from wells drilled in the State. These specially-prepared materials on selected Alaskan wells are available for examination in the Division's office. In addition to the normal ditch and core lithologic samples, thin sections of ditch and core samples are available, as well as nannoplankton, palynologic, foraminiferal and thermal alteration index (maturation) slides. The collection continues to grow as well materials are released and interest is shown in these special materials. Eight different sedimentary basins are represented in the slide collection. Reports on pyrolysis-fluorescence, pyrolysis-flame ionization detector, vitrinite reflectance, and palynologic studies and potassium argon age determinations are also available on a few wells. Use of these specially-prepared materials by the public

continues at a high level. Cuttings and core chips from over 25 wells were received during 1976 and will be released during 1978. During 1976, well samples from ten wells were released for examination by the public.

Technical Assistance to Other Agencies

Some major efforts of the Division of Oil and Gas Conservation were to prepare production forecasts and to furnish technical assistance to other state agencies. The Division estimated future oil and gas production and disposition of gas production for a variety of purposes and agencies. This division and the Department of Revenue combined forces to forecast revenue to the State of Alaska and to the Natives in compliance with the Alaska Native Claims Settlement Act. Revenue estimates based on the most probable production and economic conditions were given to user agencies, the Administration, and the Legislature for planning and budgeting. On request, other revenue estimates were made to analyze the effects of proposed tax legislation, decontrolled crude prices, and higher crude or gas pipeline tariffs.

The staff of the Division of Minerals and Energy Management was given technical assistance and production history on many studies to determine future state energy requirements and future optimization of royalty and bonus bidding for state mineral leases.

Geologists and engineers serve on and contribute to numerous Interstate Oil Compact Commission committees.

Many special studies were made by the Division. State hydrocarbon production and drilling activity was analyzed for reports by state agencies, lending institutions, and state bond analysts. Environmental impact statements and plans

for OCS lease sales and OCS orders for regulating drilling and operating oil and gas wells adjacent to state waters were critiqued. At the request of the Administration or the Legislature, proposed laws and special problems relating to the oil and gas industry were analyzed.

The Alaska Royalty Oil and Gas Development Advisory Board also requested the technical assistance of this division. All gas sale contracts in effect in the state were studied and periodically reviewed. Gas reserves and production were analyzed for the fields where the sale of state royalty gas was being negotiated.

Prudhoe Bay Field Reservoir Studies

In January 1976 the report, "Prediction of Reservoir Fluid Recovery, Sadlerochit Formation, Prudhoe Bay Field," was issued. This report was the result of work done by H. K. van Poollen, and Associates, Inc. in conjunction with the Division of Oil and Gas Conservation. The reservoir model and the results established by this report are now being used to aid in evaluating the proposed plan of operations for the Prudhoe Bay Field.

During the last half of 1976, a reservoir study on the Kuparuk River Reservoir was initiated. This study is also being done by H. K. van Poollen, and Associates, Inc. in cooperation with the Division of Oil and Gas Conservation and is not expected to be completed until late 1978.

Technical Meetings Attended by Division Personnel

During 1976, Division personnel attended meetings of the Interstate Oil Compact Commission, Offshore Technology Conference, the International School of Hydrocarbon

Measurement, the National Convention of the American Association of Petroleum Geologists, and Schlumberger's Basic Cased Hole Logging School. Members of the Division are active in the Society of Petroleum Engineers of AIME, the Alaska Geological Society, American Institute of Professional Geologists, and the Alaska Society of Professional Engineers.

Statistics

Complete statistics of all 1976 permits, drilling, producing and releasable data will appear in the 1976 Division of Oil and Gas Conservation Statistical Report to be published during the first half of 1977.



1976 State Drilling and Production Statistics

Drilling

Seventeen permits for exploratory wells were approved in 1976 which is one more than in 1975. Seventeen exploratory wells were active during the year with seven dry holes, six suspended wells and four drilling wells. There were no discoveries announced during 1976. These statistics do not include wells in Naval Petroleum Reserve No. 4 or the Outer Continental Shelf areas. Standard Oil Company of California established a new drilling depth record for Alaska when they reached 17,689 feet in the still active Soldotna Creek Unit No. 33-33 well.

Drilling permits were approved for 63 development and service wells which compares with 54 in 1975. Most of the activity continues to be in the Prudhoe Bay Field.

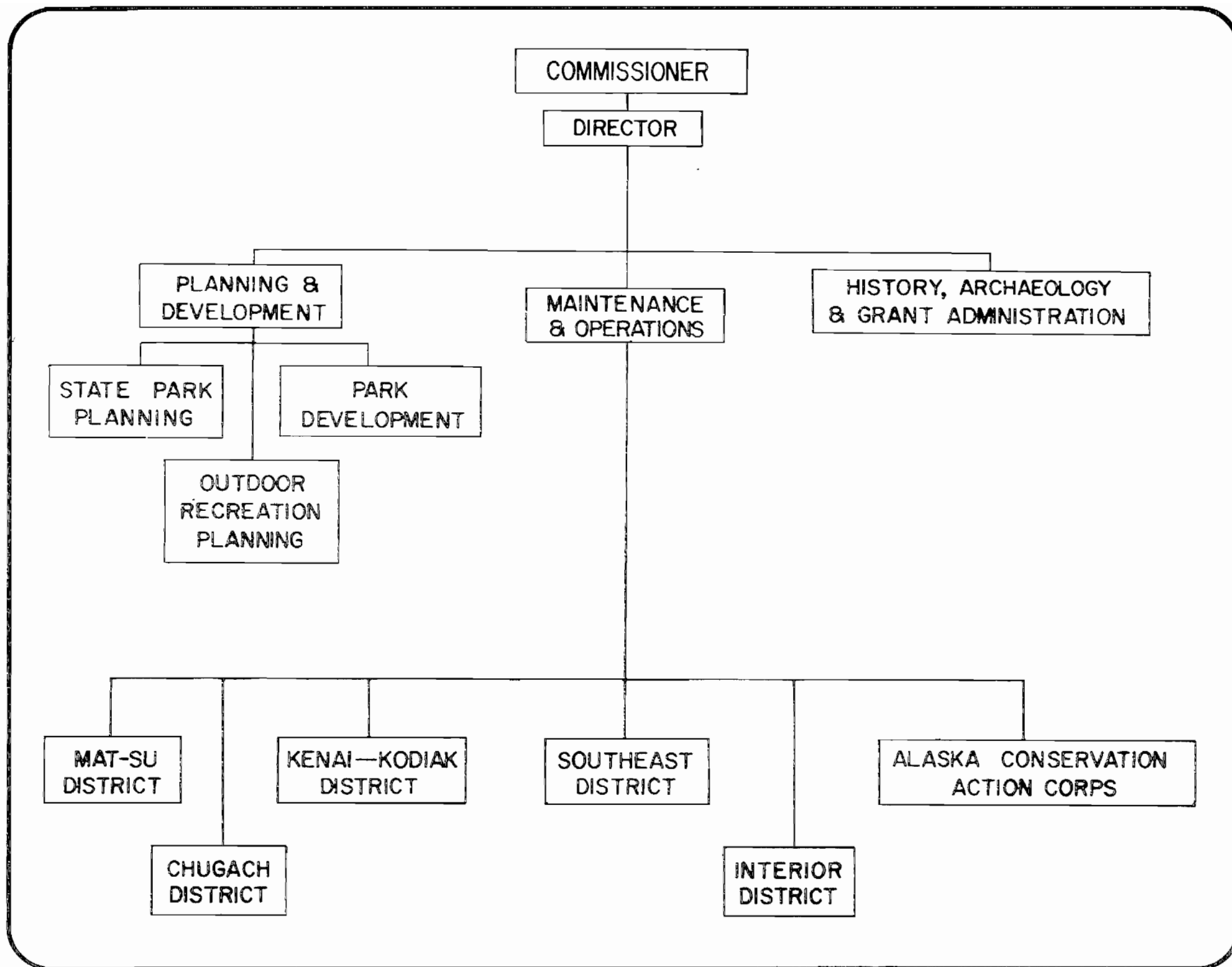
Production

	<u>Bbls. or MCF</u>	<u>Bbls. or MCF/Day</u>
Oil	67,014,515	183,100
Water	20,982,895	57,330
Casghd. Gas	126,850,568	346,586
Dry Gas	143,725,090	392,692
Condensate	547	1.5
Nat. Gas Liquids	764,039	2,008

Oil production declined 6.9%, but 4.0% of this decline is attributed to the 2.9 million barrel production loss which resulted from an explosion and fire on the King Salmon platform in the Cook Inlet; natural gas liquids declined 0.1%; gas production increased 6.3%; 3,611,042 barrels of oil were reinjected in the Prudhoe Bay Field.

Above totals are preliminary figures subject to revisions which may be made prior to our requesting a 1976 well data system annual printout at the End of February, 1977.

*Alaska Division of Parks
619 Warehouse Drive
Anchorage, Alaska 99501*



Director: Russell W. Cahill

The Alaska Division of Parks is charged with the planning, developing, and operating of a system of state parks and historical sites. It prepares and maintains statewide comprehensive outdoor recreation and historic preservation plans. The Division administers federal and state grant-in-aid programs in the areas of outdoor recreation and historic preservation and provides assistance to local government units. It additionally administers the programs of the Alaska Conservation Action Corps which was established for the purpose of providing avenues of action for youth interested in preservation of a healthy environment, neighborhood improvement, and similar activities.

The origin of the Alaska Division of Parks activities extends back to statehood. Article III, Section 7 of the Alaska State Constitution speaks directly to the need for "the acquisition of sites, objects, and areas of natural beauty or of historic, cultural, recreational, or scientific value." The framers of the Constitution, recognizing a need to manage these areas, stated that the Legislature may reserve these areas for the public domain and "provide for their administration and preservation for the use, enjoyment, and welfare of the people." In 1959 the Legislature enacted statutes which stated as their purpose, "To foster the growth and development of a system of parks and recreational facilities and opportunities in the state, for the general health, welfare, education, and enjoyment of its citizens and for the attraction of visitors to the state." To obtain this objective, the Legislature directed the Department of Natural Resources to oversee these obligations.

The Division of Parks is a relatively youthful agency. On August 16 of 1970, the Commissioner of Natural Resources proposed that under the authority of Alaska Statute 41.20.040, a Division of Parks be established within the Department of Natural Resources. The Governor approved the proposal ten days later. Prior to 1970, park and

recreation functions of state government were carried out initially in the Division of Lands Forestry Section and then by the Parks and Recreation Section in that division.

WHY MAKE STATE PARKS?

While struggling with the rationale for parks, attempts to place dollar values on parks and recreation areas are sometimes important factors. But always the aesthetic variable crops up. How much is a view worth? How do you rate the aesthetics of this canoe stream on a scale of one to ten?

These are called imponderables, and although they are hidden, they are always still sought. One reason they are sought may be that the service rendered by a parks system such as the Alaska Division of Parks is in itself an imponderable. It is not bushels of wheat; it is not barrels of oil produced. It is not even numbers of fish caught. To many, the time spent standing at the edge of the stream with a fishing rod in hand is more important than the number of fish caught.

Many Alaskans have developed the feeling that most lands in Alaska are being locked up in parks. The Federal Government has seven million acres of park lands in Alaska; the State of Alaska, 1.7 million acres and local governments less than 10,000 acres. Geographically, of the 1.7 million acres either in state park status or the two million acres proposed for state parks in this year's legislative program, 95 percent of the acreage is within 100 miles of one or more of the state's communities of more than 1000 people. Conversely, 73 percent of the existing seven million acres and proposed 32.9 million acres of federal parks is more than 100 miles from these population centers. There are 218 camp sites in the national parks in all of Alaska. There are

1144 camp sites in state park facilities.

The point to all this is that the State is more recreation-user oriented and the Federal Government more preservation oriented. The figures simply prove the assertion that the missions of the different levels of government are less confusing than they appear to be. The answer to the question, "Why make more state parks?" is that the State needs to respond to the needs of its residents and those of the traveling public. This response, in most cases should be near the transportation corridors, the communities, and the recreational and scenic resources of Alaska. It may be that 100 areas such as the Nancy Lake Recreation Area scattered around the state, may be more valuable to Alaskans than the Gates of the Arctic National Park.

The establishment of state parks in Alaska need not apply a hard, fast rule to the issues of compatibility of resource usage in state parks. There are places to find compromises and real multiple-use designations. In the Talkeetna Mountains, for example, there is no need to close off mining in all areas. There is no need to eliminate grazing in areas of high grazing potential. There is a need to stop bad land subdivision proposals and the lock up of lands by so-called private recreational lot disposals. There is also a need to provide recreation opportunities to the thousands of visitors to the area. Examples show that the compatibility decision on each piece of land is an individual one. Decisions should be made with care, and plenty of public input. As not all land is suitable for clearcutting, neither is all land suitable for total preservation. Wise multiple use can mean different schemes for different parcels of land rather than all multiple use on the same scheme.

ALASKA STATE PARK SYSTEM

The Alaska State Park System is divided into four use areas:



Opening of the Izaak Walton Wayside. Left to right: Russell W. Cahill, Director, Division of Parks; Russ Redick, Regional Supervisor; and Rupe Andrews, Director, Division of Sport Fisheries; and Sam McDowell, Izaak Walton League

1) **Waysides:** Prior to the establishment of the Alaska State Park System, the Federal Government constructed a series of roadside campgrounds along the state's highways to contain the use of campfires to specific areas. Sites with unique natural features of scenic beauty were chosen to encourage the use of these facilities. After statehood, thirty-two such areas were transferred to the Alaska Department of Natural Resources. Today there are fifty waysides in the system ranging in size from several acres to several hundred acres. Thus, while each of these areas may in effect be a "little recreation or park area," they are designed and managed primarily for the highway traveler.

2) **Recreation Areas:** The primary purpose of a

recreation area is to provide a wide spectrum of outdoor recreational opportunities. These opportunities may include snowmobiling, vehicular camping, and possibly off-road vehicle driving on one end of the spectrum; and opportunities for nature study, cross-country skiing and hiking on the other. The range of opportunities which may be provided is dependent upon the size of the area, capabilities of the state's ecosystems to support various activities, and the demand for each activity.

Recreation areas are destination sites and people will travel specifically to reach the area and generally stay from several days to several weeks.

A recreation area may not contain a feature or value of outstanding significance. The primary requirement is that the area be aesthetically pleasing and capable of supporting a wide variety of recreational activities.

Thus, being more utilitarian in nature, recreation areas are usually more intensively developed than state parks. Recreation areas generally range in size from 1000 to 100,000 acres. There are presently four recreation areas in the system; Captain Cook, Chena River, Harding Lake, and Nancy Lake. Caine's Head Recreation Area is authorized, but not yet dedicated.

3) State Parks: A state park designation is reserved for those areas which possess outstanding natural, cultural, and/or scenic values which are generally of statewide significance. These areas are managed to insure protection of these values. Recreational activities which are consistent with the use of a park are encouraged. However, the intensity of development is controlled to insure that use levels do not impair the resource. To insure the adequate protection of the park resource, zoning designations may include recreation use areas, wilderness areas, or scenic areas. Usually the exact

purposes of each state park area are identified in the parks enabling legislation. There are presently three state parks in the System; Chugach, Denali, and Kachemak Bay. Chilkat State Park is authorized, but not yet dedicated.

4) Historic Sites: Historic sites commemorate significant periods in Alaska's past including examples of Alaska Native culture, the Russian-American era, and World War II. The primary purpose of these areas is to preserve and interpret features and areas relevant to the historic theme of the site. Overnight camping and picnic facilities may be available to facilitate the public's visit to the site. However, since these facilities and activities are secondary to the sites' purpose, they are often located on the perimeter of the area and are designed with more emphasis on accommodating visitors and less emphasis on creating a camping experience. At present, there are four historic sites in the system; these are: Old Sitka, Baranof Castle Hill, Totem Bight, and Fort Abercrombie.

Organizationally, the Alaska Division of Parks is divided into three major operational areas; Planning and Development, Maintenance and Operations Section, and History, Archaeology and Grant Administration Section.

PLANNING AND DEVELOPMENT

Deputy Director: George A. Hall

The Division's planning and development functions are conducted by the staff in the main office under the direction of the Deputy Director. One of the major projects accomplished by this section during 1976, were the Coastal Zone Studies made in the Cordova area and the West Kenai Peninsula which identified areas of recreation potential. This

was particularly important since the sites on the Peninsula receive up to twenty times the capacity on peak days. Demand for the salt water recreation areas showed no sign of abating and a Kenai Peninsula study to upgrade and expand holding capabilities is to be carried out in 1977.

Planning is divided into two sections; the State Park Planning Section and the Outdoor Recreation Planning Section.

STATE PARK PLANNING SECTION

Chief: Neil C. Johannsen

The State Park Planning Section is responsible for park system planning, as well as regional, master, and site planning. The preparation of park proposals to the Alaska Legislature is also a function of the State Park Planning Section.

A 6.6 million dollar bond for capital improvements in state parks was approved in the November general election and will make possible major acquisition projects as well as several development programs. The focus of activities is being refined to visitor services and facilities.

OUTDOOR RECREATION PLANNING SECTION

Chief: Nathaniel M. Goodhue

The Outdoor Recreation Planning Section is responsible for preparing the Statewide Outdoor Recreation Plan and working with other agencies in local governments to foster the acquisition and development of park and recreation programs throughout Alaska.

PARK DEVELOPMENT SECTION

Chief: John A. Pierog

The Park Development Section is charged with the construction of new facilities, surveys, and major maintenance projects beyond the capabilities of district staff. Real estate management and surveying are additional duties of the Park Development Section.

MAINTENANCE AND OPERATIONS SECTION

Chief: Jeanne B. Comer

The daily operations of park areas and programs is the responsibility of the Maintenance and Operations Section. To facilitate management of the Alaska State Park System on a statewide basis, six management districts have been established. The statewide Chief of Maintenance and Operations is stationed in the Director's Office in Anchorage.

Matanuska-Susitna District

Superintendent: Lawrence D. Wilde

This district is responsible for the Denali State Park and the Nancy Lake State Recreation Area. It is also responsible for all state-operated waysides in the Matanuska-Susitna Valley, the lower Glenn Highway, and the lower Richardson Highway from Glennallen to Valdez.

The first building constructed in the Division program was completed at Nancy Lake in 1976. A combined maintenance and forestry firefighting station went on line in December and will give support to a year-round service for park visitors.

Chugach District

Superintendent: Daniel A. Robinson

The Chugach District is mainly responsible for the operations of the Chugach State Park on the outskirts of Anchorage. It also operates waysides on the north side of Turnagain Arm, and north of Anchorage in the Birchwood area.

In cooperation with the Audubon Society, the Chugach District Park conducted a series of outdoor programs each weekend during the summer and continued in the winter season with programs on survival techniques. These were the first concerted efforts to develop and sustain an interpretive program on outdoor topics by the Division of Parks.

The Seward Mail Trail, also known as the Iditarod Trail and the Crow Creek Pass Trail, through Chugach State Park was completed this year. The project was carried out by the Girl Scouts over a several-year period and the Division of Parks assisted in installing bridges in which engineering knowledge was needed. Completion of this trail provides an excellent means for hikers to cross the Park from upper Eagle River to Girdwood, thus retracing the historic route used by the early pioneers and the mail carriers in the period prior to the construction of the railroad.

Kenai-Kodiak District

Superintendent: Michel D. Lee

The Kenai-Kodiak District is responsible for the Kachemak Bay State Park and the Captain Cook Recreation Area. It is also responsible for all state waysides and park facilities along the Sterling Highway on the Kenai Peninsula and also on Kodiak Island.

Southeast District

Superintendent: Hilton J. Wolfe

The Southeast District is responsible for the operation of all state park waysides and facilities in Southeastern Alaska. Facilities are located in Ketchikan, Sitka, Wrangell, Juneau, and the Haines-Skagway area.

Totem Bight in Ketchikan was the greatest state park attraction in Southeastern Alaska During 1976, with over 19,000 visitors arriving on tour busses of the Ketchikan Sightseeing Service alone. The principal attraction is the Community House and Totem Pole Exhibit. A program of the Ketchikan municipality to preserve the heritage of the Native people by preserving arts and crafts has been encouraged by the Division of Parks.

Interior District

Superintendent: Harold A. Woodham

The Interior District is responsible for operation of the Chena River and Harding Lake State Recreation Areas. This district is also responsible for the state waysides along the highway from Fairbanks to the Canadian Border.

Alaska Conservation Action Corps

Supervisor: William G. Wright

Also included in the Maintenance and Operations Section is the Alaska Conservation Action Corps. The supervisor of this program is located in the Director's Office in Anchorage.



A.C.A.C. group installing the entrance sign at Bonanza Creek Camp

Two camps were operated by the Alaska Conservation Action Corps in 1976, one at Bonanza Creek near Fairbanks, and the other at Sunny Knik Camp near Wasilla. Forty enrollees attended each camp program on a resident basis. The youths, fifteen-eighteen years of age, came from as far south as Ketchikan, and as far north as Little Diomed Island. The work projects included trail construction, reforestation, road repair, boundary surveys, as well as maintenance projects. This program seeks to recruit a cross section of residents, including both sexes and includes a spectrum of economic classes. The results can be measured in development of a positive attitude toward youth activities and gives constructive meaning to their efforts.



Archaeologist Greg Dixon testing a house pit site at the confluence of the Kenai River and the Moose River on the Kenai Peninsula

Each project is treated as an environmental exercise and is justified on the merits of the analysis by the team. It is anticipated that a non-resident program will be added in Haines during 1977. This will provide a challenge in type of program and enlarge the scope of opportunity for the enrollment of additional youths.

HISTORY, ARCHAEOLOGY, AND GRANT ADMINISTRATION

Chief: William S. Hanable

State Archaeologist: Douglas R. Reger
State Historian: Michael S. Kennedy

This section is responsible for the identification and protection of state historic and archaeological resources. While some of these resources are contained within areas of the Alaska State Park System, most are not. Thus, the responsibilities of this group in the Division of Parks are quite extensive. Duties of this section include maintenance of the statewide Heritage Resource Survey, monitoring of public construction projects which may destroy or damage heritage resources, conducting historic and archaeological surveys on a contract basis, and administration of historic preservation funds and activities.

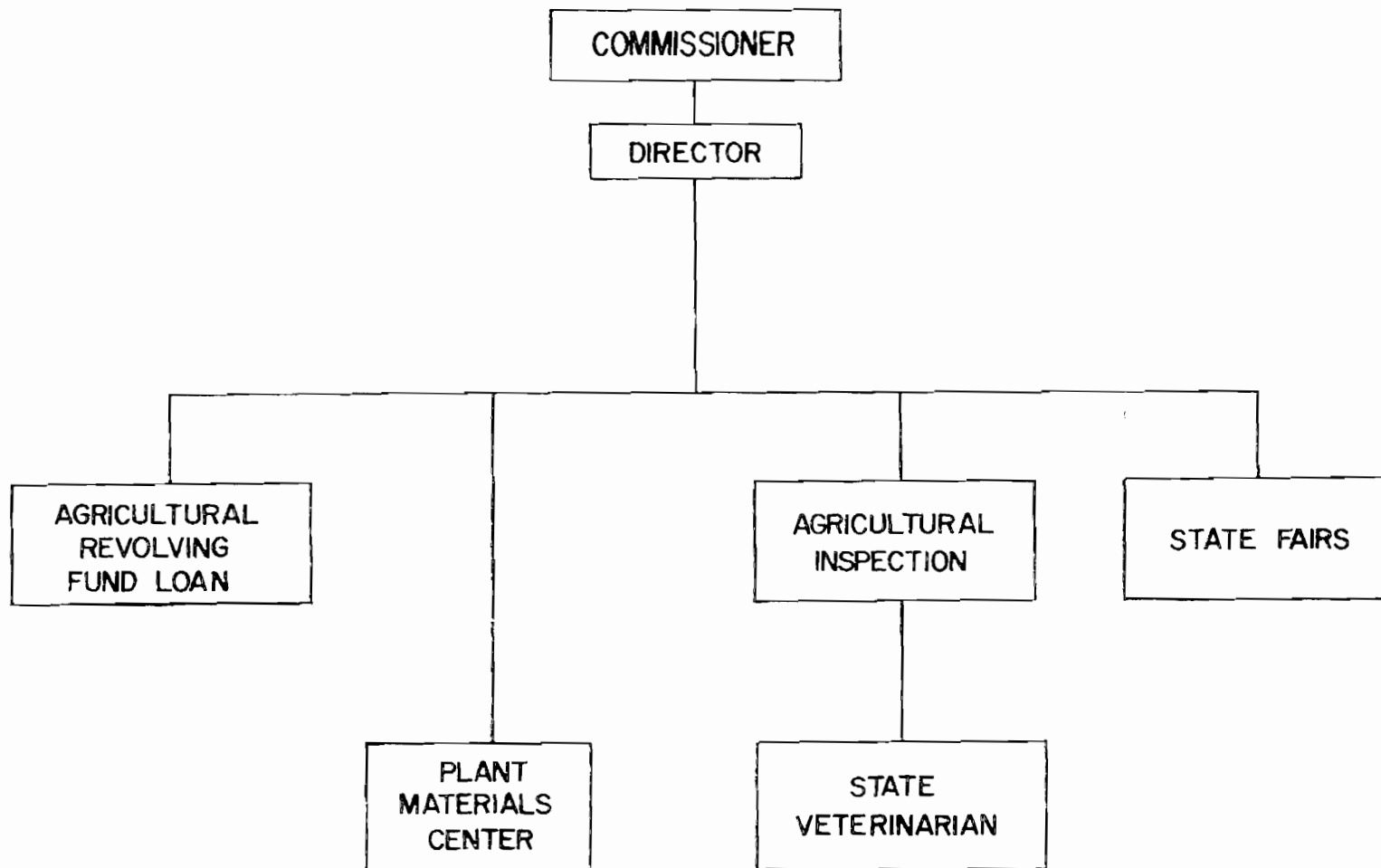
Also included within this organization is the administration of Land and Water Conservation Fund projects. This fund provides matching money to local governments as well as state agencies involved in providing outdoor recreation areas and facilities.

A total of 5000 historic sites are now included in the state inventory of historic places. Of these, sixty-three are now on the National Register. During the year approximately 2,550 public projects were reviewed for their effect on the historic sites and were investigated at the request of federal, state, and private development agencies for such impact. The effect of these studies and investigations is to create an atmosphere within which the proposed projects can be carried out with reduced or no adverse impact on the area.

This section has also initiated an historical marker program in several areas and the National Register nomination studies prepared for historic site nominations are providing good foundations for interpretive considerations. Past publications by the History and Archaeology Section such as the Abandoned Town Study and the Historic Roadhouse Study as well as the Alaska Railroad Study all contributed to a bank of information.



Alaska Division of Agriculture
P.O. Box 1088
Palmer, Alaska 99645



Director: Allan K. Linn

The Alaska Division of Agriculture directs, administers, and cooperates in certain experimental work for promoting and developing the agricultural industry in Alaska. It procures, preserves, and disseminates information concerning agriculture to the general public. The Division is charged with the prevention of the spread of pests, disease, and toxic substances through the regulation of transportation of agricultural products. This is accomplished through animal and plant quarantine and inspection, rabies and weed control, and animal testing. This division administers the Agriculture Revolving Loan Fund and the Pest and Disease Fund, along with administering the soil conservation laws of Alaska. It is also obligated to promulgate milk labeling and grading regulations; administer grants to fair associations; provide meat inspection under the Federal Wholesome Meat Act; and maintain a plant materials center.

To accomplish these tasks, the Division is grouped into five sections: Agricultural Inspection, Plant Materials Center, Agricultural Revolving Loan Fund, State Fairs, and Administration and Support.

AGRICULTURAL INSPECTION SECTION

Chief: Dr. Fred S. Honsinger, State Veterinarian

The Agricultural Inspection Section, under the direction of the State Veterinarian, is the largest section in this division, and has employees in Juneau, Anchorage, Palmer, and Fairbanks. This section is responsible for protecting human health and for fostering economical production by inspecting plant and animal food destined for consumers. Agricultural Inspection is also responsible for preventing diseases of animals (such as dog and cat rabies) and plants. A cooperative agreement with the Animal and Plant Health Inspection Services of the U. S. Department of Agriculture enables the



Agronomist Pat Mulligan examining beach wild rye, a native grass found along the south central coastal region, which shows promise for erosion control on sterile sites

Division to maintain a high level of services at a low cost.

There were 1,775 compliance and evaluation inspection reviews conducted in 1976. In 1,833 livestock-slaughter inspections of nearly six million pounds of processed meat, 23,393 pounds of meat were detained; of this, 5,835 pounds was condemned. Field and plant inspections related to the milk and frozen dessert sanitation program numbered 226. Under the Animal Health Program, 6,890 animal laboratory and field tests were carried out.

Produce inspection certificates, totaling 1,200, were issued on 988 tons of produce and 158 tests of seed and grain were conducted. The acreage of potatoes, grain, and grass inspected for certification totaled 321.



Biologist Richard Barrett examining slides at the Division's Animal Health Laboratory, near Palmer

PLANT MATERIALS CENTER

Chief: James R. Stroh

The Plant Materials Center is a working farm that serves as a plant laboratory. In it, basic plant stocks ranging from grass and cereal seed to tree plants, are germinated, grown, and harvested in a continuing program of evaluation to optimize Alaska's agricultural potential. The Center is also charged with providing storage and processing of seed in cooperation with the U.S.D.A. Soil Conservation Service and the University of Alaska Agricultural Experimental Station.

The Plant Materials Center now has 25 acres in foundation grain seed production, five acres in foundation grass seed, and 1200 raspberry and currant seedlings for distribution to other state agencies and the public.

The Plant Materials Center is located near Bodenbug Butte, southeast of Palmer.

AGRICULTURAL REVOLVING LOAN FUND

Chief: Douglas L. Jacobson

The Agricultural Revolving Loan Fund is primarily charged with loaning available funds to farm operations or associated entities for developing agriculture as an industry. The limited funds, the lack of infusion of funds from other agencies, and a rapidly escalating investment in operating needs have placed heavy loads on this section. Many important priorities must be established before commitments of capital can be made.

Fifty-one loans totaling \$605,000 were made in 1976. On the credit side, 41 loans were paid in full during the year; and 25 loans totaling \$381,000 were rewritten or reamortized into 12 new loans. Ten loans were assumed by different clients; no loans were written off.

STATE FAIRS

Chief: Edward D. Kern

State Fairs is essentially a "pass-through operation." Funding varies by locality and year for both operational and capital funds. Because no staffing is devoted to this item, the program has not retained a very consistent pattern for

development. The Section is funded to provide support to fairs for encouraging the display of Alaskan products, both agricultural and cultural, and to provide assistance for upgrading and maintaining their facilities.

In Fiscal Year 1976, ten fairs received \$112,000 under the State Aid to Fairs Program. Capital improvement funds delivered to three fairs totaled an additional \$141,700.

ADMINISTRATION AND SUPPORT SECTION

The Administration and Support Section, under the supervision of the Director, provides the necessary administrative services for the Division involving personnel, budget supervision and procedures. It maintains liaison and works with other agencies and the general public to see that the Division is meeting their needs.

Agricultural Extent

Of the 375 million acres of land in Alaska, about 70,000 acres are devoted to farm land, 25 percent of which is in crops for harvest and the rest in pasture and uncleared lands. Although farms are scattered from Ketchikan to Kotzebue, agricultural production is confined to relatively small areas, chief of which is the Matanuska Valley. Growing conditions in this southcentral region are optimum for Alaska: moderate temperatures, lengthy daylight, and adequate precipitation. Other agricultural areas are the Tanana Valley, near Fairbanks, which has a short but warm growing season punctuated by a little darkness; the Kenai Peninsula, which has a maritime environment with considerable precipitation; and Kodiak Island and Southeastern Alaska, which have maritime climates accompanied by cloudy weather and frequent rains.



Division of Agriculture inspection team examining a potato harvest in the Matanuska Valley

Crops

Grass hay, grain hay, and silage crops are the chief agricultural crops of the state. Grass hay accounts for approximately 42 percent of the total harvested acres of the state; grain hay approximately ten percent; and silage crops approximately 26 percent. Oats and barley constitute 17 percent of the product, and potatoes and other vegetables the remaining 6 percent. These figures are based on averages over the prior 15 years.

The actual crop values and figures for the 1976 growing season in Alaska will be available from the Department of Natural Resources in June of 1977.

Livestock and Poultry

Dairy

There were 2,100 head of cattle and calves on January 1, 1976. The inventory value was in excess of one million dollars. Mature milk cows numbered 1,600, the same as the preceding January 1. The value of all dairy cows and replacement heifers was about \$95,000 less than that of 1975. The number of grade "A" dairies continued to decline; there are now 12 active dairies in the Matanuska Valley and one in the Tanana Valley near Fairbanks. In 1969 there were 35 active dairies in Alaska.

Beef

Beef stock numbers, which is all cattle and calves less milk cows and replacement heifers, totaled 6,400 head, 700 less than the previous year. The total value of all beef stock on hand January 1, 1976 was approximately \$2,100,000. The main herds are located on Kodiak Island, the Aleutian Islands, and the Kenai Peninsula.

Sheep

The number of sheep stock in lambs on hand January 1, 1976 continued to drop: the total of 7,600 head was a startling 4,800 less than a year earlier and 6,400 less than that on January 1, 1974. The inventory of sheep was estimated at \$360,000. Wool production was the smallest on record: the 6,500 head shorn was 4,500 less than in 1974. Almost all of the sheep in Alaska are located in the Aleutian islands, about 750 air miles southwest of Anchorage.

Hogs

The number of hogs in Alaska has also dropped considerably. The total value of 700 hogs, which was 400 less than a year before, was \$76,000. The main production occurs in the Delta Junction and Fairbanks area. Overhead is high because of the small number slaughtered in each plant.

Poultry

Chickens on farms and commercial laying hens increased. Egg production has increased during 1976 due to imports of new laying hens. There are about thirty thousand laying hens in the state, an increase of fifty percent over the previous year.

Reindeer

Most of the reindeer are located on the Seward Peninsula and on Nunivak Island. The herders must keep the wide-ranging herd together; then round up and corral the herd one or more times per year for counting, marketing, and other management chores. Most of the slaughter occurs during the months from October to February in field kill operations. Modern slaughter houses are located in Nome and on Nunivak Island. Revenue from the reindeer stems mainly from the sale of meat and by-products.

1976 Publications

ALASKA DIVISION OF LANDS

Alaska Land Lines

A monthly publication highlighting month-to-month activities of the Division of Lands. - No charge.

Alaska Land Lines Index

An index of all subject matter discussed in Alaska Land Lines in the sixteen years of publication. - No charge.

Geodetic Positions of the Protracted System of Rectangular Surveys

This publication lists all protracted township corners in the state by latitude and longitude. - \$10.

Index to United States Special Surveys

This publication lists all numbered United States Special surveys by U.S.G.S. quadrangle and township and range. - \$10.

Index to United States Minerals Surveys

This publication lists all numbered United States mineral surveys by U.S.G.S. quadrangle and township and range. - \$10.

Facts About Alaska Lands

A pamphlet describing the available methods of obtaining state-owned lands. - No charge.

How Land is Described

A pamphlet describing the state's rectangular survey system and aliquot part descriptions. - No charge.

Researching Mineral Information on Division of Lands Records

This pamphlet explains the state land records for the researching of subsurface state mineral related leases and

permits. - No charge.

Researching Land Information on Division of Lands Records

This pamphlet explains the state land records for the researching of state land surface ownerships and transactions. - No charge.

ALASKA DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEY

Geologic Reports: Geologic reports serve to communicate new data and original ideas to professional peers. It is a summary of original work on a geologic problem and the degree of peer review, editing, and revision is exhaustive to insure the highest level of accuracy.

No. 44, "Uranium Investigations in Southeastern Alaska," by G. R. Eakins. - \$1.00.

No. 47, "The Teklanika Formation - a New Paleocene Volcanic Formation in the Central Alaska Range," by W. G. Gilbert, V. M. Ferrell, and D. L. Turner. - \$1.00.

No. 51, "Short Notes on Alaskan Geology - 1976," an assortment of articles on recent geologic findings in Alaska. - \$2.00.

No. 52, "Clay Mineralogy and Petrology of the Coal Bearing Group Near Healy, Alaska," by D. M. Triplehorn. - \$1.00.

Special Reports: The special report is a summary or overview of current or anticipated geologic problems that are of statewide significance. The report is designed to make cogent geological information available to a large spectrum of audiences.

No. 9, "Mordenite Deposits and Zeolite Zonation in the Horne Mountains Area, Southcentral Alaska," by D. B. Hawkins. - \$1.00.

No. 11. "Commercial Grade Mordenite Deposits in the Horne Mountains, Southcentral Alaska," by D. B. Hawkins. - \$1.00.

No. 12, "Alaska's Uranium Potential," by G. R. Eakins and R. B. Forbes. - \$10.00.

No. 13, "Mineral Occurrences Near Cantwell, Alaska," by R. G. Hickman and Campbell Craddock. - \$1.00.

No. 14, "Mineral Occurrences in the Upper Wood River, Edgar Creek, and Westfork Glacier Areas, Central Alaska Range," by K. W. Sherwood, Campbell Craddock, and T. E. Smith. - \$1.00.

Information Circulars: Information on a variety of subjects from mining laws and how to stake a claim to the dangers of old mine openings are discussed in this series of pamphlets. The following information circulars were issued or updated in 1976.

No. 6, "Alaskan Prospecting Information." - No charge.

No. 11, "List of Reports Issued by the Division of Geological and Geophysical Surveys." - No charge.

No. 14, "Mining Laws Applicable in Alaska." - No charge.

No. 20, "Aeromagnetic Maps of Alaska Quadrangles." - No charge.

No. 21, "Open-File Reports." - No charge.

No. 22, "Progress and Prospects in Marine Mining." - No charge.

Mines and Geology Bulletin

A quarterly publication highlighting topical Alaskan geological news. - No charge.

Open-File Reports: The open-file report serves the immediate functions of providing the public with a timely summary of research and inviting reader feedback of errors of thought or fact so that corrective steps will be taken before additional funds are expended for more refined publications.

During 1976 the following reports were published.

No. 29, "Geologic Map of the Western Clearwater Mountains," by T. E. Smith.

No. 71, "Geochemistry of Stream-Sediment Samples, Mt. Hayes B-6 Quadrangle, Southcentral Alaska," by G. H. Pessel.

No. 88, "Geochemistry of Stream-Sediment Samples of the Southeastern Baird Mountains Quadrangle, Alaska," by G. H. Pessel.

No. 93, "Stratigraphic Study of the Gulf of Alaska Tertiary Province, Northern Gulf of Alaska," by W. M. Lyle and I. F. Palmer.

No. 95, "Geologic Map of the Central Healy Quadrangle, Alaska," by R. G. Hickman and Campbell Craddock.

No. 96, "Geologic Map of South Augustine Island, Lower Cook Inlet, Alaska," by R. T. Buffler.

No. 97, "Preliminary Geochemical Report on the Western Healy D-1 Quadrangle and Vicinity, Alaska," by W. G. Gilbert and J. T. Kline.

No. 98, "Geology and Mineral Deposits of the Kantishna

Hills, Alaska," by T. K. Bundtzen, T. E. Smith and R. M. Tosdal.

No. 99, "Lode Claim Groups of the Southwestern Brooks Range Copper Belt, Ambler River and Survey Pass Quadrangles, Alaska (filed prior to January 1976)," by J. T. Kline.

No. 100, "Regional Gravity Survey of Beluga Basin and Adjacent Area, Cook Inlet Region, Southcentral Alaska," By S. W. Hackett.

No. 101, "General Geology and Geochemistry of Healy D-5 and D-6 Quadrangles, Alaska," by W. G. Gilbert and T. K. Bundtzen.

No. 102, "Contributions to Clay Minerology and Petrology, Cook Inlet Basin, Alaska," by D. M. Triplehorn.

Aeromagnetic Maps: Aeromagnetic maps are the result of a continuing long-range cooperative program with the U. S. Geological Survey to acquire extensive geophysical coverage of Alaska. U.S.G.S. 1: 63,360 maps are used as a base, and aeromagnetic survey information, obtained from an airborne magneticometer, is overprinted in red. These maps are available from any Division of Geological and Geophysical Survey Office for \$1.00 (\$1.10 postpaid). A list of these maps are also available from these offices.

Contributions to National Publications:

"Hardrock Mining in Alaska - Some Operations Since 1938," by C. N. Conwell: Western Miner, July 1976. - No charge.

"Reclaiming Mined Lands in Alaska," by C. N. Conwell: Transactions, V. 260. - No charge.

"Preconstruction Terrain Evaluation for the Trans-Alaska Pipeline Project," by R. A. Kreig and R. D. Reger: Geomorphology and Engineering (D. R. Coates, ed.), Dowden, Hutchinson, and Ross, Inc., Stroudsburg, PA, 1976. - No charge.

"Canada's Northern Neighbor Has Long Mining History," by C. N. Conwell: Western Miner, October 1976 - No charge.

Individual Reports: These are reports that are prepared primarily in response to questions from the public at large and from state and federal officials. Copies of these reports may be examined at any Division of Geological and Geophysical Survey mining information office.

"Geological Reconnaissance, Cape Chiniak."

"Geologic Resource Evaluation of Two Areas of the Central Alaska Range" (Kantishna-Teklanika and Savage-Sushana Rivers Areas).

"Geologic Factors Bearing on Development at Icy Bay."

"Preliminary Evaluation of Geologic Factors Bearing on Development at Five Sites in Upper Resurrection Bay."

ALASKA DIVISION OF OIL AND GAS CONSERVATION

Oil and Gas Bulletin

This bulletin is a monthly publication that recounts monthly activities of the Division with regard to hearings, orders, regulations, notices, and news items. It also includes reports of drilling permits issued, recently-released well information, and tabulations of oil and gas production and injection volumes for each well in the state on a

monthly incumulative basis. Well biographical and production data has been made available in digitized form and can be purchased from local data processing firms. - No charge.

1976 Annual Statistical Report

The annual Statistical Report shows the production and injection data which is tabulated by well, by pool, and by field for each month of the year. Other production statistics along with maps and charts of the producing fields are included. Inventories of ditch cuttings and core chips from wells drilled in the state that are available for inspection by the public are listed. Materials specifically prepared from these cuttings and core chips are also available for inspection by the public as listed. - No charge.

Special Reports

During 1976 one special report was completed and made available, "Prediction of Reservoir Fluid Recovery, Sadlerochit Formation, Prudhoe Bay Field," by H. K. van Pollen and Associates, Inc. and the Division of Oil and Gas Conservation. - No charge.

ALASKA DIVISION OF PARKS

Alaska Outdoor Recreation Plan

This is an annual report of the statewide comprehensive outdoor recreation plan. - No charge.

Alaska's Heritage Resources (1973-1983)

A statewide historic preservation plan.

Volume I - Historical Background

Volume II - The Inventory

Volume III - The Annual Preservation Plan

- No charge.

A Guide to Alaska's Historical Agencies

A joint publication with the Alaska Historical Commission,

the Alaska Historical Library, the Alaska State Museum, and the Office of History and Archaeology. - No Charge.

Coastal Recreation Resources:

West Kenai Peninsula, Alaska

An Alaska coastal Management program prepared by the Division of Parks (limited printing). - No charge.

Coastal Recreation Resources:

Cordova, Alaska

An Alaska coastal management program prepared by the Division of Parks. - No charge.

Alaska State Park System

A brochure describing the availabilities within the Alaska State Park System. - No charge.

Alaska History News

A joint publication with the Alaska Historical Society that is published six times a year. - No charge.

Archaeological Survey Projects - 1976

No. 16 in the history and archaeological series. - No charge.

Pamphlets - No Charge

Nancy Lake State Recreation Area

Hunting in Chugach State Park

Nancy Lake State Recreation Area Winter Trails

Hillside Trail System - Chugach State Park

Denali State Park

Chugach State Park

Winter Guide to Chugach State Park

Planning Briefs - No Charge

Proposed Keystone Canyon State Park

Proposed Wood-Tikchik State Park

Proposed Hatcher Pass State Recreation Area

Proposed Bald Eagle Council Grounds State Park

Addresses

ALASKA DEPARTMENT OF NATURAL RESOURCES
11th Floor
State Office Building
Pouch "M"
Juneau, Alaska 99811

ALASKA DIVISION OF LANDS
323 E. 4th Avenue
Anchorage, Alaska 99501

ALASKA DIVISION OF LAND AND WATER
MANAGEMENT
323 E. 4th Avenue
Anchorage, Alaska 99501

Southcentral District Office
323 E. 4th Avenue
Anchorage, Alaska 99501

Soldotna Resource Area Office
P. O. Box 1130
Soldotna, Alaska 99669

Eagle River Fire Control Center
P. O. Box 650
Eagle River, Alaska 99577

Northcentral District Office
4420 Airport Way
Fairbanks, Alaska 99701

Southeast District Office
11th Floor
State Office Building
Pouch "M"
Juneau, Alaska 99811

Haines Resource Area Office
P. O. Box 263
Haines, Alaska 99827

ALASKA DIVISION OF MINERALS AND ENERGY
MANAGEMENT
323 E. 4th Avenue
Anchorage, Alaska 99501

ALASKA DIVISION OF GEOLOGICAL
AND GEOPHYSICAL SURVEY
3001 Porcupine Drive
Anchorage, Alaska 99501

Mines Information Offices

11th Floor
State Office Building
Pouch "M"
Juneau, Alaska 99811

2nd Floor
State Office Building
P. O. Box 7438
Ketchikan, Alaska 99901

Maintenance Warehouse
University of Alaska
P. O. Box 80007
College, Alaska 99701

323 E. 4th Avenue
Anchorage, Alaska 99501

ALASKA DIVISION OF OIL AND GAS
CONSERVATION

3001 Porcupine Drive
Anchorage, Alaska 99501

ALASKA DIVISION OF PARKS

Suite 210
619 Warehouse Avenue
Anchorage, Alaska 99501

Southeast District
11t Floor
State Office Building
Pouch "M"
Juneau, Alaska 99811

Interior District
4420 Airport Way
Fairbanks, Alaska 99701

Nancy Lake District
P. O. Box 182
Palmer, Alaska 99645

Chugach District
2601 Commercial Drive
Anchorage, Alaska 99501

Kenai-Kodiak District
Box 1247
Soldotna, Alaska 99669

ALASKA DIVISION OF AGRICULTURE

Sims Building
P. O. Box 1088
Palmer, Alaska 99645

State Veteranarian
11th Floor
State Office Building
Pouch "M"
Juneau, Alaska 99811

Agriculture and Meat Inspection
Room 210
1512 Cushman
Fairbanks, Alaska 99701

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