

Guide to Alaska Geologic and Mineral Information

E. Ellen Daley, Editor

Information Circular 44

Alaska Division of Geological & Geophysical Surveys

in cooperation with

- United States Geological Survey
- Bureau of Land Management
Juneau Minerals Information
Center
- ARLIS (Alaska Resources Library
and Information Services)
- University of Alaska Anchorage
Consortium Library
- University of Alaska Fairbanks
Rasmuson Library
- Geophysical Institute Keith Mather
Library

Foreword

Until his death in 1983, Edward H. Cobb of the U.S. Geological Survey maintained a truly exceptional database on the geology and mineral deposits of Alaska—manifested in hundreds of published mineral locality maps, bibliographies, and compilations of Alaska references. His work anticipated a fundamental need to define the mineral endowment of Alaska during the long process that culminated in the Alaska National Interest Lands Conservation Act of 1981 (ANILCA). Almost 20 years later, Ed Cobb's maps, bibliographies, and publications, outdated as they have become in some ways, remain a mainstay of Alaska geology, land planning, and mineral exploration. Geology is a cumulative science built on the work of our predecessors. No one produced a better regional geologic information database for others to build on than did Ed Cobb in Alaska.

Ed Cobb lived in a simpler age. In his day, the Alaska geologic literature was relatively limited compared to the present. Almost all of it was published by three agencies: the U.S. Geological Survey, the U.S. Bureau of Mines, and the Alaska Division of Mines and Geology (now the Division of Geological & Geophysical Surveys). The last 20 years have seen tremendous growth in Alaska geologic and mineral information both volumetrically and in the number of organizations that collect and maintain it. Traditional geologic and minerals agencies have increased their activities, generating more data with more powerful tools. With the enactment of ANILCA, more government agencies are generating diverse earth science information including economic and environmental data. The mining and petroleum industries have come of age in Alaska, generating a huge amount of information. At one time, theses about Alaska geology numbered in the low double digits. Now not only has the University of Alaska become a strong participant in Alaska earth science research, Alaska also has attracted universities researchers from throughout the nation, all of whom are publishing widely in a host of scientific and professional journals, foreign and domestic. In recent years, increasing amounts of information are published directly on the Internet and this trend will accelerate. The job of keeping track of Alaska's geologic and minerals information now is far beyond the capabilities of one man, however talented or dedicated.

As the amount and diversity of information increased so did the vital need for such information in mineral exploration, in managing state and federal land, in protecting the environment, in guiding Native corporations in the use of their land, and in ensuring the economic well being and quality of life of Alaskans and all Americans. The combination of an expanding body of increasingly more compli-

cated geologic and minerals information and the broad need for it poses a major challenge to the geologic and minerals community. We need to organize our information better, we need to ensure that it is not lost, and we need to make it more conveniently accessible.

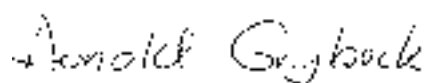
This publication is designed to make Alaska's organized geologic and minerals information more accessible, to acquaint potential users

with its diverse sources, and to provide information about what is available and how to use it effectively. As should be obvious from the title page, this is a team effort. This effort demonstrates that the magnitude of the task of organizing and disseminating Alaska geologic and minerals information is not only beyond one man, it is beyond one organization. It also illustrates that we can accomplish a complex task better, more efficiently, and cheaper as a team than can any individual person or organization. This Guide provides a model of how, in the future, Alaska libraries and earth science organizations can collaborate to help you using modern information tools. Their plan is that contact with any of them is a door to all of them.

The following people were instrumental in gathering information for this publication:

- Cathy Vitale (ARLIS)
- Jane Albrecht (BLM Juneau Minerals Information Center)
- Ellen Daley (DGGG)
- Martha Murphree (DGGG)
- Barbara Sokolov (UAA Consortium Library)
- Julia Triplehorn (UAF GI Library)
- Earl Shumaker (UAF Rasmuson Library)
- Bruce Gamble (USGS)
- Donald Grybeck (USGS)
- Jill Schneider (USGS)

This publication is part of a larger effort to organize, protect, and disseminate Alaska geologic and minerals information. This effort, funded by Congress in 1998, is known informally as the "Minerals at Risk" program. Much unpublished Alaska information needs to be made available in databases and collections accessible to the public and the library community. Other data needs to be saved from being lost as companies move on to other activities or disappear from the Alaska scene. A large body of Alaska sample material collected at great cost needs to be preserved and cataloged. All these efforts undoubtedly will be facilitated by the power of modern technology. However, there still is no substitute for conscientious scientists like Ed Cobb who can organize the large and growing body of raw geologic and minerals information into publications, databases, sample collections, and Web pages in a form useful to the public, government agencies, private organizations, and industry.



Donald Grybeck
U.S. Geological Survey



Tony Knowles, Governor

DEPARTMENT OF NATURAL RESOURCES

John T. Shively, Commissioner

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

Milton A. Wiltse, Director and State Geologist

This publication may be inspected at the following locations. Address mail orders to the Fairbanks office of the Division of Geological & Geophysical Surveys.

Alaska Division of Geological
& Geophysical Surveys
ATTN: Geologic Communications
794 University Avenue, Suite 200
Fairbanks, Alaska 99709-3645

University of Alaska Anchorage
Library
3211 Providence Drive
Anchorage, Alaska 99508

Alaska State Library
State Office Building, 8th Floor
333 Willoughby Avenue
Juneau, Alaska 99811-0571

ARLIS (Alaska Resource Library
and Information Services)
3150 C Street, Suite 100
Anchorage, Alaska 99503

Elmer E. Rasmuson Library
University of Alaska Fairbanks
Fairbanks, Alaska 99775-1005

Publication of this report is required by Alaska Statute 41 "to determine the potential of Alaska land for production of metals, minerals, fuels, and geothermal resources; the location and supplies of groundwater and construction materials; the potential geologic hazards to buildings, roads, bridges, and other installations and structures; and shall conduct such other surveys and investigations as will advance knowledge of the geology of Alaska."

NOTE: Mention of any company or brand name does not constitute endorsement by any branch or employee of the State of Alaska.

Inside front cover: Majestic limestone cliffs dwarf hikers in the Upper Itkillik Valley, Brooks Range.
Photo by C.G. Mull.

CONTENTS

SECTION 1	GUIDE TO ALASKA GEOLOGIC AND MINERAL INFORMATION	1
SECTION 2	ROLES OF GOVERNMENT AGENCIES AND REGIONAL NATIVE CORPORATIONS IN ALASKA MINING AND GEOLOGY	5
SECTION 3	PUBLISHED INFORMATION AND BIBLIOGRAPHIES	19
SECTION 4	UNPUBLISHED INFORMATION AND WHERE TO FIND IT	33
SECTION 5	LIBRARIES, ARCHIVES, INFORMATION CENTERS, AND AGENCIES	53
SECTION 6	SOURCES OF INFORMATION ON THE INTERNET	67
SECTION 7	GEOLOGIC AND MINERAL INFORMATION OUTSIDE OF ALASKA	77
APPENDIX A	79
APPENDIX B	81
INDEX	87

CONTENTS

FOREWORD II

SECTION 1

GUIDE TO ALASKA GEOLOGIC AND MINERAL INFORMATION-INTRODUCTION 1

- Scope and Purpose of this Publication 1
- Intended Uses and Users 2
- How this Publication is Organized 2

SECTION 2

ROLES OF GOVERNMENT AGENCIES AND REGIONAL NATIVE CORPORATIONS IN ALASKA MINING AND GEOLOGY 5

- Interagency Minerals Coordinating Group (IMCG) 5
- Federal Agencies 5
 - United States Geological Survey (USGS) 5
 - United States Bureau of Land Management (BLM) 5
 - National Park Service (NPS) 7
 - United States Forest Service (USFS) 7
 - United States Fish and Wildlife Service (FWS) 7
 - United States Minerals Management Service (MMS) 7
 - United States Army Corps of Engineers (COE) 8
 - United States Environmental Protection Agency (EPA) 8
- State Agencies 8
 - Department of Natural Resources (DNR) 8
 - Division of Geological & Geophysical Surveys (DGGS) 8
 - Division of Mining & Water Management (DMWM) 9
 - Division of Land 9
 - Support Services Division - Recorders' Offices 9
 - Support Services Division - Land Records Information Section (LRIS) 10
 - Department of Fish and Game 11
 - Department of Environmental Conservation (DEC) 11
- University of Alaska 11
 - UAF Department of Geology and Geophysics 11
 - UAF School of Mineral Engineering 11
 - UAF Mineral Industry Research Laboratory (MIRL) 11
 - UAF Geophysical Institute 12
- Regional Native Corporations 12
 - Use of Corporation Land 12
 - Mineral Resource Information 12
 - Ahtna Inc. 13
 - Aleut Corporation 14
 - Arctic Slope Regional Corporation (ASRC) 14
 - Bering Straits Native Corporation (BSNC) 14
 - Bristol Bay Native Corporation (BBNC) 14
 - Calista Corporation 15
 - Chugach Alaska Corporation 15
 - Cook Inlet Regional Corporation (CIRI) 16
 - Doyon, Limited 16
 - Koniag, Incorporated 17
 - NANA Regional Corporation 18
 - Sealaska Corporation 18

SECTION 3

PUBLISHED INFORMATION AND BIBLIOGRAPHIES 19

Keeping Current	21
Annual Reports	21
Weekly/Monthly/Quarterly Newsletters	21
Federal Agency Geologic Report and Map Series	22
U.S. Geological Survey Publications	22
U.S. Bureau of Mines Publications	25
Alaska State Agency Geologic Report and Map Series	26
Alaska Division of Geological & Geophysical Surveys Publications	26
Other Notable Reports and Report Series	28
Mineral Industry Research Laboratory (MIRL) Reports	28
Decade of North American Geology, Volume G-1	28
Bibliographies and Databases	28
General Geoscience Bibliographies	28
Alaska Geology Bibliographies	30
Alaska Minerals/Mining Bibliographies	30

SECTION 4

UNPUBLISHED INFORMATION AND WHERE TO FIND IT 33

Topographic Maps	33
Geologic Maps	34
Aerial Photographs	34
Remote Sensing Data	34
Geophysical/Aeromagnetic Data and Maps	35
Geochemical Data	36
Geologic Information by Quadrangle	37
Environmental Information	38
Water Information	39
Geotechnical Engineering and Permafrost	39
Wetlands and Floodplains	39
Geologic Hazards	40
Land-Use Plans	41
Protected Habitats and Sensitive Wildlife Areas	41
Land Status	42
Mineral Potential Information	43
Existing Mining Claims	44
Filing and Maintaining Mining Claims	44
Mining Rents and Royalties	46
Exploration Incentives	46
Permitting for Mining and Exploration	46
Mining Law and Mining Law and Regulations	49
General Mining District Information	49
Historic Mining Claims and Activities	49
Recreational Geology	50
Recreational Mining and Gold Panning	50
Field Trip Guides	52
Mineral Collecting Localities	52

SECTION 5

LIBRARIES, ARCHIVES, INFORMATION CENTERS, AND AGENCIES 53

Research Libraries	53
Alaska Resources Library and Information Services (ARLIS)	54
Consortium Library—University of Alaska Anchorage	55
Keith B. Mather Library, Geophysical Institute, UAF	56
Elmer E. Rasmuson Library—University of Alaska Fairbanks	57
Juneau Minerals Information Center—Bureau of Land Management	59
Special Reference Collections	60
Technical Data Unit—U.S. Geological Survey	60
Alaska Division of Geological & Geophysical Surveys (DGGG)	61
Geologic Materials Center (GMC)	62
National and Alaska State Archives	63
Public Information Centers	64
Alaska Department of Natural Resources Public Information Centers	64
U.S. Bureau of Land Management Public Information Offices	64
Earth Science Information Centers (ESIC)—U.S. Geological Survey	65
Alaska Division of Geological & Geophysical Surveys (DGGG)	65
The National Technical Information Service (NTIS)	65
Where to Buy Maps and Aerial Photos	65
Professional Organizations	65
Alaska Miners Association (AMA)	65
Alaska Geological Society (AGS)	66
Northwest Mining Association (NWMA)	66

SECTION 6

SOURCES OF INFORMATION ON THE INTERNET 67

Interagency Minerals Coordinating Group (IMCG)	68
United States Geological Survey (USGS)	68
Bureau of Land Management (BLM)	71
Additional Federal Agencies	71
State of Alaska Department of Natural Resources (DNR)	72
Professional Organizations and Mining News	72
Universities, Libraries, and Archives	74
Alaska Regional Native Corporations	74
Regulatory and Legal Information	75

SECTION 7

GEOLOGIC AND MINERAL INFORMATION OUTSIDE OF ALASKA 77

International Archive of Economic Geology (IAEG)	77
USGS Libraries	78
USGS Photographic Library	78

APPENDIX A

SELECTED BASIC REFERENCES FOR GEOLOGY AND MINING IN ALASKA 79

APPENDIX B

DIRECTORY OF AGENCIES AND OTHER ENTITIES 81

INDEX 87

GUIDE TO ALASKA GEOLOGIC AND MINERAL INFORMATION

SCOPE AND PURPOSE OF THIS PUBLICATION

The quest for information about the geology of Alaska and issues related to the minerals industry in Alaska can be a challenge. Numerous agencies and institutions are involved in generating and distributing reports, and in overseeing land use, mining claims, and permitting of exploration activities. This Guide to Alaska Geologic and Mineral Information is designed as a tool to help geologists, the minerals industry, students, librarians, agencies, and government representatives identify and locate such resources.

Preparation of this guide has been part of an ongoing cooperative effort by the Alaska Division of Geological & Geophysical Surveys, the United States Geological Survey, the Bureau of Land Management, and the following seven research libraries and special reference collections in Alaska:

- Alaska Resources Library and Information Service in Anchorage
- Consortium Library at University of Alaska Anchorage
- U.S. Geological Survey Technical Data Unit in Anchorage
- Elmer Rasmuson Library at University of Alaska Fairbanks
- Keith Mather Library at the Geophysical Institute in Fairbanks
- Bureau of Land Management Juneau Minerals Information Center

The need for this guide initially was identified by the Alaska Minerals Information Working Group, a constituency group that is concerned about long-term archiving and access to geologic data and materials.

This publication is designed to expedite searches for Alaska geology and mining information by a wide variety of users. It identifies locations, agencies, etc. where the public can access published and unpublished information about general geology and minerals geology, and about topics directly or indirectly related to metallic and industrial mineral exploration in Alaska. It also serves as a guide to the libraries and special research collections in Alaska that have significant geology holdings.

Resources for the general geology of Alaska discussed in this guide include published agency reports, theses and dissertations, agency and university contacts, and geologic tools such as topographic maps, geologic maps, aerial photos, and remote sensing data. Research that has been published in scientific journals and books can be identified and located using the bibliographic tools described in Section 3 of this guide, but such national and international publications are not addressed here.

Sources of information about metallic mineral deposits and exploration in Alaska cover a broad range of topics in addition to those described above for general geology. These include land use and mining claim information sources, regulatory and permitting resources, historical mining data, etc.

A large body of geologic and minerals data has been generated by the private sector. This includes stratigraphic and structural data and

interpretation from oil and water well logs, and stratigraphic, structural, and geochemical data and interpretation from previous mining or mineral exploration by private industry. Much of this information is proprietary. Although this guide does not identify sources of proprietary information, claims information or yearly exploration summaries described in this guide will help identify companies that have worked in specific areas. In some cases proprietary data gathered by mining companies on land controlled by regional Native corporations can be accessed by agreement with the individual corporation. Arrangements to access proprietary information may sometimes be reached with previous mining companies for properties on state, federal, or private land.

INTENDED USES AND USERS

This Guide is designed to give a geologist or mining company new to Alaska the means to rapidly find basic and specialized information. It also is designed to identify resources that may be unknown to geologists and companies that have been working in Alaska for years. As described above, the target users of this guide are people involved in general geology, and the geology of and exploration for metallic and industrial minerals. The publication contains limited sources of specialized information about subareas of geology other than those directly related to metallic minerals. Resources for mine development or engineering are not included, except as these issues relate to unique environmental challenges of Alaska such as permafrost.

HOW THIS PUBLICATION IS ORGANIZED

The information in this Guide is organized using several different approaches. The first is an institutional approach where major entities such as libraries and state and federal government agencies are described according to their roles in geology and mining in Alaska (Sections 2, 5, and 7). The second approach is by the type of information sought (Section 4). This approach seeks to answer the question, "Where do I find information about specific topics such as land use, existing mining claims, geologic hazards, etc.?" The guide also includes references to Internet resources and downloadable electronic data, especially maps (Section 6). The individual sections of this Guide are described in more detail below.

Section 2 identifies the principal federal and state agencies and other organizations, such as regional Native corporations, that have a role in geology or mineral exploration in Alaska. This section briefly describes each agency's scope and function related to geology and mining such as information gathering, information disseminating, land management, or regulatory/oversight.

Section 3 lists the major publication series printed by the USGS, the former U.S. Bureau of Mines, and the Alaska Division of Geological & Geophysical Surveys. As part of this section, *Keeping Current* highlights annual summaries of the state of the mineral industry in Alaska, and trade and professional newsletters about the minerals industry in Alaska.

Section 4 points out sources of generally unpublished information about the many scientific, technical, and procedural aspects of Alaska geology and mineral exploration. This section is organized by topic.

Section 5 lists and describes the libraries and reference collections that are the major repositories of published reports and maps of Alaska geology and minerals, and of original field materials. This section also lists state and federal public information centers that have current land status data and can direct questions to the appropriate contact within each agency.

Section 6 compiles some of the many sources of geologic and minerals information on the Internet, including agency home pages; databases, bibliographies, and on-line library catalogs; sources of downloadable maps and data, etc.

Section 7 describes several significant collections of materials about Alaska geology that are housed outside of Alaska, including the USGS library system, the International Archives of Economic Geology and the USGS Photographic Library.

Appendix A is an annotated list of specific sources of information about the minerals geology of Alaska. Publications and other sources described will give a person unfamiliar with the geology or mineral industry in Alaska a broad overview.

Appendix B is a directory of the agencies, bureaus, offices, libraries, and other resources that are mentioned or described in this publication. Many of these addresses also are included in Sections 2 and 5, but are repeated here.

An **Index** cross references the many resources in this publication by subject or topic and by agency.



View to the southeast at the Yukon River bridge, which supports the trans-Alaska pipeline beneath the roadway. Photo by K.H. Clautice.

NOTE

Information in this Guide is current as of the publication date. However, addresses and phone numbers of agencies and agency contacts, and Internet site addresses may change. For the updated address and contact phone numbers and e-mail addresses, ask any of the research libraries listed here, and check agency web sites and telephone directories. This guide is also available on the Internet (<http://www.dggs.dnr.state.ak.us>). Addresses and contacts listed on the web site will be updated periodically, and consequently the information on the web site will be more current.



Bucket line on a gold dredge near Candle in the Fairhaven mining district, northeastern Seward Peninsula. Photo by K.H. Clautice.

ROLES OF STATE AND FEDERAL AGENCIES AND REGIONAL NATIVE CORPORATIONS IN ALASKA MINING AND GEOLOGY

INTERAGENCY MINERALS COORDINATING GROUP (IMCG)

<http://imcg.wr.usgs.gov>

In 1996, Bureau of Land Management (BLM), U.S. Geological Survey (USGS), U.S. Forest Service (USFS), and the Division of Geological & Geophysical Surveys (DGGS) formed the Interagency Minerals Coordinating Group (IMCG) to increase cooperation and coordination of mineral activities in Alaska. IMCG began meeting in 1996 with the goal of developing a statewide plan for coordinated mineral resource assessments and related activities. This group also is addressing ways to enhance the availability of geologic and minerals information and data for the state. IMCG's role is interagency coordination and guidance for the agencies involved. It has no information gathering, jurisdictional, or regulatory role over lands in Alaska. The IMCG can be reached through any of the member organizations, or through the IMCG web site.

FEDERAL AGENCIES

<http://www.usgs.gov>

United States Geological Survey (USGS)

The U.S. Geological Survey is a scientific, information-gathering agency, and has no administrative role over federal land or resources. USGS investigates and reports on the occurrence, quality, quantity, and environmental characteristics of mineral resources, the processes that create and modify them, models for assessing mineral endowment, and the potential impacts of mineral development. A major emphasis of this research in Alaska involves 1:250,000-scale geologic mapping. USGS also produces and distributes topographic maps for the United States. When the Bureau of Mines was disbanded in 1996, some of the information-gathering functions of that agency were continued by the USGS on a national level. These include collecting, assessing, and analyzing the production, consumption, and materials flow of over 100 commodities from 190 countries. In Alaska the minerals research and mapping functions of the Bureau of Mines were assimilated into the Bureau of Land Management (BLM).

USGS offers reports, maps, and other publications for sale through the Earth Science Information Centers (ESIC). USGS also maintains the Technical Data Unit in Anchorage, which has a collection of unpublished USGS materials and files for Alaska. USGS also is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage. See Section 5 for more information about these research collections.

<http://www.ak.blm.gov>

United States Bureau of Land Management (BLM)

The U.S. Bureau of Land Management is a multiple-use federal land and resource management agency, managing approximately 90 million acres of federal surface estate and nearly 200 million acres of federal mineral estate in Alaska. BLM's roles in Alaska include gathering and disseminating resource information as well as managing and regulating activities on federal lands. Based on land-use planning documents, some of the mineral estate is available for the location of mining claims and mineral leasing.

Some of BLM's responsibilities include:

- Recording and maintaining official actions including federal mining claims.
- Monitoring mining operations to ensure protection of surface resources.
- Maintaining land-status plats, processing federal mining claim patent applications, and issuing patents.
- Collecting location and annual assessment affidavits or rental fees for all federal mining claims (even on lands where the surface use is managed by another federal agency).
- Issuing leases for all federal leasable minerals including oil and gas, coal, phosphates, and oil shale.
- Issuing right-of-way and special-use permits.
- Arranging for sale of sand, gravel, or stone.

The Anchorage and Juneau Mineral Assessment Teams (formerly the Alaska staff of the Bureau of Mines, and now part of BLM) aid development of a viable mineral industry in Alaska with emphasis on field programs focused toward the identification of the type, amount, and distribution of mineral deposits in Alaska. The field information is augmented by other activities that provide information on beneficiation technologies, economic feasibility studies, and economic



Head frame at the Omilak mine, eastern Seward Peninsula, where silver-lead ore was mined between 1881 and 1890. Photo by K.H. Clautice.

and environmental effects of mineral development. This information is provided to other government agencies to aid land planning and land-use decisions, and to the private sector to identify targets of opportunity for further exploration and/or development.

BLM maintains a reference library at the Juneau Minerals Information Center. BLM also is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage. BLM has public information offices in Anchorage (BLM Public Information Center), Fairbanks and Glennallen (BLM Public Rooms), and Juneau (Juneau Minerals Information Center) to provide the public with information about land status, land use, and mining claims on federal lands. See Section 5 for information about these facilities.

<http://www.nps.gov>

National Park Service (NPS)

The National Park Service fulfills an administrative role for approximately 51 million acres of lands within the national park system in Alaska. Park Service land is closed to new mineral entry; however, mining operations with prior existing rights can continue if operations are “conducted so as to prevent or minimize damage to the environment and other resource values.” The NPS manages oil and gas operations and pre-existing mining-related activities within national parks through plans of operation under the Mining in Parks Act, National Park Service regulations, and other applicable federal and state laws and regulations. National Park Service is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage. See Section 5 for information about ARLIS.

<http://www.fs.fed.us/r10>

United States Forest Service (USFS)

The U.S. Forest Service manages activities on more than 22 million acres in the Chugach and Tongass National Forests in Alaska. Its role is to encourage, facilitate, and administer the orderly exploration, development, and production of mineral and energy resources on USFS lands while minimizing any adverse environmental impacts to surface and cultural features. USFS also provides research information and technology to help with post-mining reclamation.

<http://www.r7.fws.gov>

United States Fish and Wildlife Service (FWS)

The U.S. Fish and Wildlife Service has a managerial and regulatory role on some federal lands in Alaska. FWS manages 16 National Wildlife Refuges in Alaska, which encompass about 92 million acres of land. Except for valid rights existing at the time of establishment, all of these lands are closed to new mineral entry. FWS provides leadership for the protection and improvement of land and water environments, including environmental impact assessments for such activities as hydroelectric dams, nuclear power sites, stream channelization, and dredge-and-fill permits. FWS is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage.

<http://www.mms.gov/alaska>

United States Minerals Management Service (MMS)

The U.S. Minerals Management Service is charged with ensuring that mineral exploration and development on the Outer Continental Shelf (OCS) is conducted in a manner that protects the public interest and

<http://www.usace.army.mil/alaska>

<http://www.epa.gov/region10>

STATE AGENCIES

<http://www.dnr.state.ak.us>

<http://www.dggs.dnr.state.ak.us>

is environmentally safe. The OCS of Alaska is the submerged area of U.S. lands that extends approximately 200 miles offshore beyond the limit of State of Alaska waters (3 miles offshore). MMS investigates the mineral potential of the OCS, predominantly for oil and gas, and awards oil and gas leases to private firms through a competitive bidding process. In addition, MMS collects royalties, bonuses, and rents from onshore mining activities on Federal and certain Native lands. MMS is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage.

United States Army Corps of Engineers (COE)

The role of the U.S. Army Corps of Engineers with respect to mining activities is primarily regulatory. COE regulates and issues permits for structures or work in navigable waters of the U.S. and work that will affect waters, streams, and wetlands such as placement of dredged or fill material. Examples of regulated mining activities include construction of berms, dikes, diversions, ponds, overburden stripping, stockpiling, and reclamation activities. Upon request, or submittal of a permit application or operation plan, COE will make a determination of its jurisdiction over the affected areas. The Corps will then specify the types of permits required and provide application materials. See the discussion of COE permits under *Permitting* in Section 4.

United States Environmental Protection Agency (EPA)

The U.S. Environmental Protection Agency in Alaska (Region 10) issues National Pollutant Discharge Elimination System (NPDES) permits under the Clean Water Act to regulate effluent discharges, and implements a compliance enforcement program. EPA also maintains regulatory and review authority over wetland and NEPA/EIS-related issues. See the discussion of EPA permits under *Permitting* in Section 4.

Department of Natural Resources (DNR)

The Department of Natural Resources is the primary steward of Alaska state lands and natural resources. The Department consists of the divisions of Agriculture, Forestry, Geological & Geophysical Surveys, Land, Mining & Water Management, Oil & Gas, Parks & Outdoor Recreation, and Support Services. The DNR Public Information Centers in Anchorage, Fairbanks, and Juneau serve as the primary public contact for general and technical information on department programs including land, mining, parks, forestry, and oil and gas. For more information about the Public Information Centers, see Section 5, or contact the offices at the addresses listed in Appendix B.

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS (DGGS)

The Division of Geological & Geophysical Surveys is a scientific, information-gathering agency, and has no administrative role over state land in Alaska. DGGS conducts geological and geophysical research to determine the potential of Alaska land for production of metals, minerals, fuels, and geothermal resources; for locations and supplies of construction materials; and for potential geologic hazards to buildings, roads, bridges, and other installations and structures. DGGS also

http://www.dnr.state.ak.us/mine_wat/index.htm

<http://www.dnr.state.ak.us/land/index.htm>

Photo at left. Sluice box cleanup circa 1958. Earl Beistline Collection, Accession no. 85-93-369, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

conducts other surveys and investigations to advance knowledge of the geology of Alaska. Investigation results are published in a variety of reports. DGGS also advises the public and government agencies on geologic issues.

DGGS has an in-house reference collection of geologic bulletins, reports, and periodicals, and offers DGGS publications for sale or distribution. DGGS also maintains the Geologic Materials Center (GMC) in Eagle River, which is a drill-core storage facility. See Section 5 for more information about these collections.

DIVISION OF MINING & WATER MANAGEMENT (DMWM)

Division of Mining & Water Management's primary role in mining in Alaska is in permitting and recording. The division consists of four sections. The Mine Permitting Section issues permits on all exploration, development, and extraction of state-owned placer and lode mineral resources; provides expert technical assistance to the mining industry; and conducts field inspections to ensure that state mining laws, regulations, and any special permit terms and conditions are being met. The section also has regulatory authority over mining activity on privately-owned land through the Reclamation Act. The Mineral Property Management Section collects all rents and royalties from state-owned resources except oil and gas and geothermal. This section maintains and adjudicates the state mining claim and upland leasing records, issues and administers offshore mineral prospecting permits, offshore mineral leases, and coal leases. The Surface Coal Mining Section implements the Alaska Surface Coal Mining Program and the Abandoned Mine Lands (AML) Program. The Water Resources Section collects, distributes, and maintains water records and data, and adjudicates the use and ownership of Alaska's surface and ground water resources.

DIVISION OF LAND

The Division of Land is the primary manager of Alaska's 150+ million acres of land holdings, which include 88 million acres of upland, 34,000 miles of coastline, and 65 million acres of tide, shore, and submerged lands. The division develops plans for the use of state lands, and classifies the land for various uses, including sale and lease of land to the public; lease and issuance of permits to use land for recreation, commercial, and industrial purposes; the sale of sand and gravel and other materials; and easements for temporary use of state land and access roads.

SUPPORT SERVICES DIVISION - RECORDERS' OFFICES

The Recorder's Office System receives, files, records, and processes all real and personal property transactions, including mining claims, on a statewide basis. The public can access information for mining claims filed after 1972 through a computerized Public Access System. Records for claims filed before 1972 are available in record books. There are 34 recording districts in Alaska (see map on following page), which record at 15 offices statewide. For addresses and contact telephone numbers of the recording offices, refer to Appendix B.

RECORDING DISTRICTS OF ALASKA



<http://www.dnr.state.ak.us/ssd/gisdata/index.htm>

SUPPORT SERVICES DIVISION - LAND RECORDS INFORMATION SECTION (LRIS)

The Land Records Information Section maintains the land records repository of the Department of Natural Resources and oversees its computer systems and networks services. LRIS provides accurate, up-to-date land records in various formats, including textual, tabular, graphic, photographic, and micrographic displays using both manual and automated media. Maps and information maintained and generated by LRIS can be accessed through the Public Information Centers (PICs) in Anchorage, Juneau, and Fairbanks. A catalog of digital base map information (the GIS Database Summary) is available on the Internet at the address at left, or in paper copy from the DNR Public Information Centers.

<http://www.state.ak.us/local/akpages/FISH.GAME/adfghome.htm>

<http://www.state.ak.us/local/akpages/ENV.CONSERV/home.htm>

UNIVERSITY OF ALASKA

<http://info.alaska.edu>

<http://www.uaf.edu>

<http://www.uaa.alaska.edu>

<http://www.uaf.edu/geology>

<http://mineral.uafsmc.alaska.edu>

<http://mineral.uafsmc.alaska.edu/minge/mirl.htm>

Department of Fish and Game

The Department of Fish and Game protects habitat in fish-bearing fresh waters and manages refuges, sanctuaries, and critical habitats. The department requires permits for any work involving: the blockage of fish passage; equipment crossings or operation in fresh waters used by anadromous fish; use, diversion, or pollution of streams containing anadromous fish; construction, exploration, or development work in state game refuges, game sanctuaries, and critical habitat areas. Alaska Fish and Game is a partner in the Alaska Resources Library and Information Service (ARLIS) in Anchorage.

Department of Environmental Conservation (DEC)

The Department of Environmental Conservation issues permits for activities (including mining) that affect air or water quality or involve land disposal of wastes in Alaska. The agency sets air- and water-quality standards; inspects, monitors, and enforces state environmental quality statutes, regulations, and permits; and reviews all federal permits.

The University of Alaska has a scientific and educational role in geology and mining in Alaska. The University has main campuses in Fairbanks and Anchorage, with additional campuses and programs in Juneau and other communities. The University of Alaska Fairbanks (UAF) has geoscience and mineral engineering programs, and also houses several research facilities in fields related to geology and mining. These are described below. The UAF Rasmuson Library and the UAA Consortium Library house large collections of geology reference material and government documents. See Section 5 for more information about these two libraries.

UAF Department of Geology and Geophysics

Provides undergraduate and graduate education in geology and geophysics and conducts basic and applied research in geologic sciences. Offers B.S., M.S., and Ph.D. program options in general geology, economic geology, petroleum geology, geophysics, and ice-snow-permafrost geophysics.

UAF School of Mineral Engineering

Provides undergraduate and graduate education programs in geological engineering, mining engineering, mineral preparation engineering, and petroleum engineering. Through research programs conducts laboratory and field studies to promote mineral and energy development.

UAF Mineral Industry Research Laboratory (MIRL)

The Mineral Industry Research Laboratory was established in 1963 to conduct basic and applied research to aid in developing Alaska's mineral and energy resources. The unit conducts studies concerning beneficiation, hydrometallurgy of Alaskan ores, geology and mineral deposits of the state, placer mining and gold recovery, coal mining, mining in frozen ground and related problems, and environmental concerns of mining activities. MIRL publishes reports of research results and provides general information and assistance to the mineral industry.

<http://www.gi.alaska.edu>

REGIONAL NATIVE CORPORATIONS

UAF Geophysical Institute

The Geophysical Institute is dedicated to the study of the Earth and its physical environment at high latitudes. Faculty, staff, and graduate student research contributes to a global understanding of the Earth and the forces that shape the environment. Principal fields of research at the Geophysical Institute are space physics, aeronomy, atmospheric sciences, seismology, volcanology, glaciology (including sea ice and permafrost), geology, and geophysics. The Geophysical Institute does not publish report series, but results of research at the Geophysical Institute are published in scholarly journals, and in some cases as unpublished theses and dissertations.

The Geophysical Institute maintains a reference library (the Keith B. Mather Library) and houses the GeoData Center/Map Office—the Fairbanks branch of the Earth Science Information Center (ESIC)—which sells USGS publications, maps, and data compilations. See Section 5 for more information about these facilities.

Regional Native corporations are the major private holders of land and subsurface mineral interests in Alaska. Corporations also administer claims and prospecting sites on Native lands. The Alaska Native Claims Settlement Act (ANCSA) of 1971 created regional, village, and urban Native corporations to receive title to approximately 12 percent (43.7 million acres) of the land in Alaska as part of the settlement of certain aboriginal land claims. Surface rights to much of this land belong to 220 individual village and urban Native corporations, and the mineral rights to all corporation lands and additional surface rights are controlled by 12 regional business corporations. Much of the land selected by the Native corporations has significant mineral potential, including a number of historic mining districts such as the Kennecott mine, the Ambler district, and numerous placer gold areas.

Boundaries of the regional Native corporation areas are shown on the map. Addresses and contact names and numbers for the lands or natural resources department of each regional corporation are included in Appendix B.

Use of Corporation Land

Each of the regional, village, and urban corporations has its own policies with respect to use of its lands. Persons wishing to gain access to Native lands should contact the lands or natural resources department of the appropriate regional Native corporation. The regional corporation can advise of the appropriate contact if surface rights to the land are owned by a village or urban corporation, and can set access terms and conditions for land that the regional corporation controls. Because the land conveyance process is ongoing for many corporations, it is advisable to contact the regional corporation or local Native landowners for the most up-to-date information about property ownership.

Mineral Resource Information

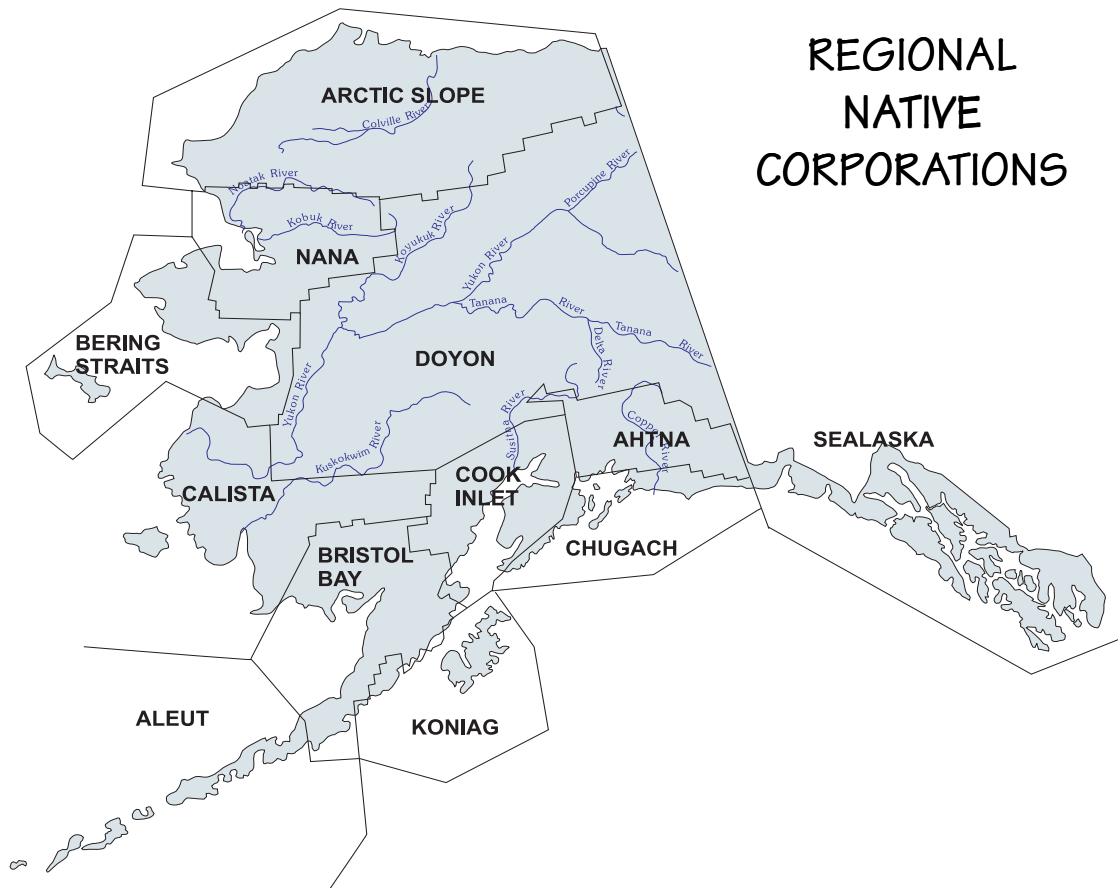
Many regional corporations have a significant amount of unpublished information about the mineral potential and past mineral exploration activity on their lands. Some corporations conduct mineral exploration

<http://www.ahtna-inc.com>

and resource evaluation programs on the lands they control. The accessibility of this information to mining companies and other entities varies, but many corporations will make information available to parties willing to enter into a business relationship. The 12 regional corporations are identified below, followed by a brief description of the types of information each corporation maintains.

Ahtna Inc.

Ahtna, Inc. has 1.8 million acres in the Copper River and Cantwell/Broad Pass areas of east-central Alaska. The area includes or is adjacent to the original Kennicott copper deposits, the Valdez Creek and Nabesna gold mines, and the Healy coal fields. Ahtna's lands contain gold, copper, and base metals, platinum and tungsten mineralization, coal deposits, and indications of oil and gas. During the 1970s Ahtna completed a grassroots exploration and mineral inventory program, which identified several promising mineral prospects for further exploration. Reports from this effort are available, as are core and assay data from subsequent exploration. BLM recently released reports about the mineral potential of some Ahtna land selections that are within or border national park lands. Ahtna will allow competent interested parties to sample prospects and review its data for the cost



<http://www.aleutcorp.com>

<http://www.asrc.com>

<http://www.beringstraits.com>

<http://www.touchngo.com/>
BBNC

of a trespass permit and copies of data resulting from sampling. Beyond this, exclusive exploration agreements and/or mining leases requiring confidentiality of data can be negotiated. For additional information, contact the Ahtna, Inc. Resource Development Manager.

Aleut Corporation

Aleut Corporation has 1.2 million acres of land in the Aleutian Islands/Aleutian Peninsula area from Port Moller to Umnak Island. Past exploration has shown potential for copper, gold, oil, and gas reserves. The Aleut Corporation has compiled a Mineral Prospectus—an updated version is expected to be available in fall 1998. A CD-ROM of data from mineral prospects on Aleut land is under development in cooperation with the USGS, and also is expected to be available in fall 1998. For more information, contact the Aleut Corporation.

Arctic Slope Regional Corporation (ASRC)

Arctic Slope Regional Corporation has 5.5 million acres of land on the North Slope of Alaska. The area has shown potential for oil, gas, coal, and base metals. ASRC has a large number of internal and published reports and other information on coal reserves and potential on the North Slope, much of which has been catalogued and compiled. ASRC also has internal and published reports on base metal sulfide deposits, reserves, and potential on ASRC land. For more information, contact ASRC.

Bering Straits Native Corporation (BSNC)

Bering Straits Native Corporation has 2.2 million acres of land on the Seward Peninsula. This area has historic placer and lode gold deposits, and base metal prospects and advanced deposits. BSNC has summaries of advanced prospects on BSNC land, and other unpublished information. BSNC is interested in forming exploration agreements with lease options for hard rock mineral prospects. For more information, contact the BSNC Land & Resource Manager.

Bristol Bay Native Corporation (BBNC)

Bristol Bay Native Corporation controls 3 million acres of mineral estate, including 102,000 acres of fee simple land, in southwestern Alaska around Bristol Bay and the Alaska Peninsula. Historically, the area has produced coal, gold, mercury, and copper from relatively small-scale mining operations. The Bristol Bay province has long been recognized as a highly favorable area for the discovery of oil and gas. The Pebble Copper property, held by Cominco Ltd. on state mining claims, lies within the region and provides a model for the existence of very large-scale bulk mineable copper-gold porphyries on BBNC land. Other metallic metal potential includes epithermal and mesothermal gold deposits, titanium and iron, and the possibility of platinum-group elements associated with ultramafic intrusives. Reconnaissance-level geologic mapping and geochemistry have been completed for a number of the prospects in the region. Prospect reports and regional data are available from the BBNC library in Anchorage. Interested parties should contact the Land Manager.

<http://www.calistacorp.com>

Calista Corporation

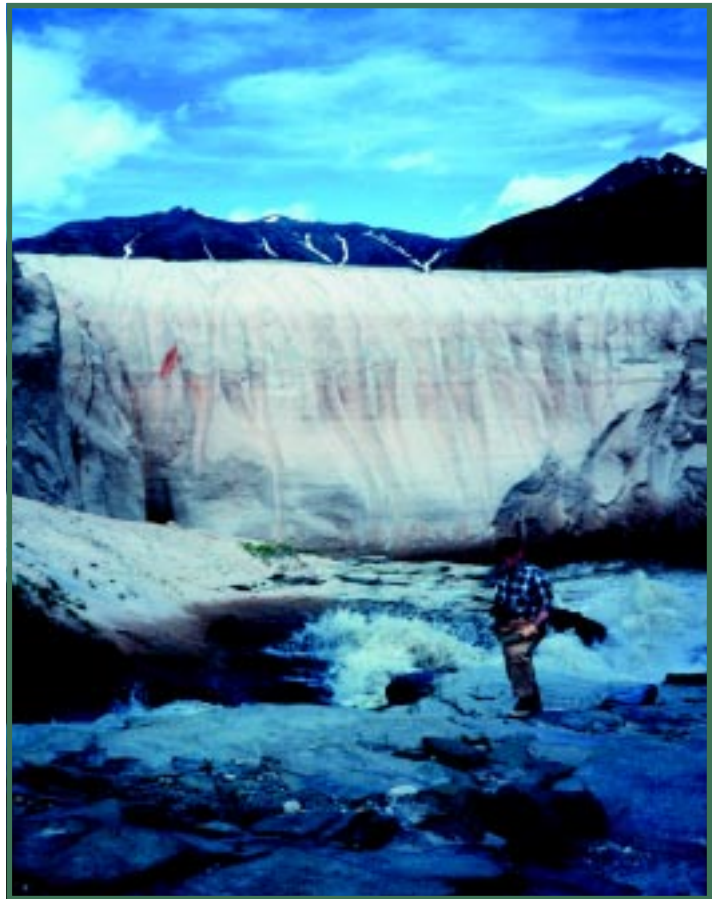
Calista Corporation has mineral rights to almost 6.5 million acres in southwestern Alaska. This region includes the Kuskokwim Mineral Belt, which is notable for placer gold and platinum deposits, and lode precious and base metal deposits. The region also contains hydrocarbon potential and reserves of construction materials. Calista has numerous unpublished reports and summaries of regional mineral reconnaissance studies and prospect-level mineral exploration activities. In addition, a large volume of unpublished geochemical and geophysical data and mapping are compiled both on paper and in a GIS database. The Calista Department of Lands and Natural Resources also has information about land status on Corporation land. For further information, contact the Department of Lands and Natural Resources.

<http://www.chugach-ak.com>

Chugach Alaska Corporation

Chugach Alaska Corporation has more than 900,000 acres of subsurface estate in southcentral Alaska around Prince William Sound. This district historically produced gold, silver, copper, and oil. In addition to these, the area has indications of potential for manganese, chromium, and anthracite coal. Chugach Alaska has no active development program in place at this time, however, they have compiled a bibliography of in-house and public information, and are in the process of

A cataclysmic eruption at Katmai in 1912 deposited these thick ashflow deposits exposed along Ukak River in the lower Valley of Ten Thousand Smokes, Alaska Peninsula, Alaska. Photo by D.S. Pinney.





Mining copper at the DeHaven claim on Nugget Creek, Alaska. VF-Mining, Nugget Creek, Accession no. 73-66-84, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

<http://www.ciri.com>

<http://www.doyon.com>

developing a digital database. Chugach Alaska Corporation is interested in forming exploration agreements throughout its holdings. Interested parties may contact the Lands and Resources Department.

Cook Inlet Regional Corporation (CIRI)

CIRI's landholdings are concentrated around Cook Inlet in southcentral Alaska. This area includes several metallic mineral prospects once held by Anaconda. Although CIRI does not make information on past activity and mineral potential available to the public, its mining subsidiary, North Pacific Mining Company, is interested in joint ventures and has proprietary information about mineral potential and prospects for business partners. For further information, contact the CIRI Manager of Land Entitlement.

Doyon, Limited

Doyon, Limited has approximately 12.5 million acres of subsurface estate in central and east-central Alaska. Much of Doyon's land was selected for its resource potential, which includes gold, silver, lead, zinc, copper, and antimony as well as coal, coalbed methane, and oil and gas energy resources. Doyon has extensive information from past and ongoing exploration on its land. The collection ranges from geologists' field notes to completed exploration reports, and encompasses printed material, core and pulverized rock samples, and a Geographic Information System (GIS) database. The electronic database includes geological, geochemical, geophysical, and land status data

<http://www.koniag.com>

from Doyon's conveyed and selected lands as well as surrounding state and federal land. Doyon, Limited has exploration agreements with a number of mining companies, and is actively promoting additional ventures. For more information, contact the Vice President of Lands and Resources.

Koniag, Incorporated

Koniag, Incorporated has subsurface/mineral rights to approximately 350,000 acres on Afognak, Whale, and Raspberry Islands, approximately 100,000 acres in the northeastern Kodiak Island, and all of Spruce Island. On the Alaska Peninsula, Koniag has approximately 152,000 acres of subsurface rights within the Aniakchak National Preserve. In the Alaska Peninsula and Becharof National Wildlife Refuges (NWR) north of Aniakchak, Koniag also has approximately 123,000 acres of oil and gas rights together with the right to the sand, rock, and gravel necessary to develop any oil and gas prospects. The Alaska Peninsula acreage is *in lieu* acreage because of the statutory prohibition against receiving subsurface rights within the pre-ANCSA Kodiak NWR. For information about mineral, oil, and gas exploration, contact the Koniag Manager of Lands and Resources.



Eastward view of Lisburne Group (Mississippian-Lower Pennsylvanian) limestone thrust over Echooka Formation (Permian), south side of Porcupine Valley near the headwaters of the Canning River, Arctic National Wildlife Refuge. Photo by C.G. Mull.

<http://www.NANA-online.com>

NANA Regional Corporation

NANA Regional Corporation has 2.3 million acres of land in north-western Alaska, including the world-class Red Dog zinc mine. The regional corporation owns both the surface and subsurface estates for the bulk of these land. The area has known potential for zinc, lead, copper, and gold resources, in addition to coal and jade. Companies interested in forming business agreements for exploration on NANA land should contact the Vice President of Resources.

<http://www.sealaska.com>

Sealaska Corporation

Sealaska Corporation has 600,000 acres of land in southeastern Alaska. This land has potential reserves of precious and strategic metals, and limestone. Sealaska runs a resource evaluation program, and has numerous unpublished reports on metallic and non-metallic mineral resources, and general geology on Corporation land. Sealaska also has recent aerial geophysical surveys and geochemical data, and maintains much of this information on a GIS. Reports and data are made available to interested mining companies through several types of business agreements including confidentiality agreements and trespass agree-

ments. Arrangements can be made to review information at their Juneau office. In addition, brief technical summaries for marketing purposes have been prepared for several mineral prospects. For further information, contact the Senior Vice President, Natural Resources.



Lapland Rosebay (*Rhododendron lapponicum*) growing near Lake Iliamna. Photo by K.H. Clautice.

PUBLISHED INFORMATION AND BIBLIOGRAPHIES

This section is an overview of information published about the geology of Alaska and the Alaska mineral industry, and some of the bibliographic tools that can be used to help identify and locate specific references. The published literature ranges from weekly and monthly mining newsletters to yearly mining industry summary reports to a large body of scientific and technical papers, reports, and maps published in government agency report series and in national and international scientific journals and books. This Guide concentrates on the government report series, but the bibliographic tools described in this section can be used to find sources of information in scientific journals and other non-government publications.

A number of professional and trade organizations publish newsletters about ongoing mining activity in Alaska. These newsletters have relatively up-to-date information on the ever-changing landscape of the Alaska minerals industry. Several publications that have frequent Alaska news are identified under the heading *Keeping Current* in this section. A matrix is included to show which major Alaska research libraries and collections have current subscriptions. *Keeping Current* also identifies annual reports that contain detailed information and analysis on the minerals industry in Alaska.

The principal state and federal government agencies that publish geologic reports and maps for Alaska are the U.S. Geological Survey (USGS), the former U.S. Bureau of Mines (USBM), and the Division of Geological & Geophysical Surveys (DGGS). Major report series that these agencies publish are described in this section under *Federal Agency Geologic Report and Map Series* and *State Agency Geologic Report and Map Series*.

Amawuk Thrust at the base of the Endicott Mountains Allochthon along Amawuk Creek, north flank of the Doonerak fenster, central Brooks Range. Hunt Fork Shale (Upper Devonian) at the base of the allochthon (left) is in thrust contact with underlying Lisburne Group limestone (Mississippian-Lower Pennsylvanian). Photo by C.G. Mull.



HOLDINGS OF MAJOR GEOLOGY AND MINING PUBLICATION SERIES AT ALASKA RESEARCH LIBRARIES

U.S. GEOLOGICAL SURVEY PUBLICATION SERIES

		AK Resource Lib. and Info. Svc. (ARLIS)	BLM Juneau Mineral Info Center	Div. of Geological & Geophysical Surveys	UAF Geophysical Inet. Library	UAF Rasmuson Library
Annual Reports	5	3	1	4	4	5
Bulletins	5	5	5	5	4	5
Circulars	5	5	5	4	4	5
Coal Investigations Maps	5	5	5	-	5	5
Digital Data Series	-	-	1	5	1	-
Geologic Quadrangle Maps	5	5	5	-	5	5
Geophysical Investigation Maps	5	5	5	-	5	4
Hydrologic Atlases	5	5	4	-	5	5
Mineral Commodity Summaries	5	-	-	-	-	5
Mineral Resources of the U.S.	5	5	-	3	-	5
Minerals Yearbook	5	-	-	5	-	-
Miscellaneous Field Studies Maps	5	5	5	-	5	5
Miscellaneous Investigations Maps	5	4	4	-	5	4
Oil & Gas Investigations Charts	3	3	-	-	5	5
Oil & Gas Investigations Maps	3	5	5	-	5	5
Open-File Reports	5	4	5	5	4	4
Professional Papers	5	5	5	5	4	5
Topographic Maps	5	5	4	5	5	5
Vegetation and Land Cover	4	5	-	-	5	2

U.S. BUREAU OF MINES PUBLICATION SERIES

Information Circulars	5	5	5	5	-	5
Mineral Commodity Summaries	5	5	4	4	-	5
Minerals Facts and Problems	5	5	4	5	-	5
Minerals Yearbooks	5	5	4	5	-	-
Open-File Reports	5	5	4	3	1	4
Reports of Investigations	5	5	5	5	-	5

ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS PUBLICATION SERIES

Alaska Open-File Reports	5	5	5	4	5	4
AK Territorial Dep't of Mines Reports	5	5	5	-	5	3
Geochemical Reports	5	5	5	5	4	4
Geological Reports	5	5	5	5	5	-
Guidebooks	5	3	5	5	5	3
Information Circulars	5	3	5	4	5	5
Professional Papers	5	4	5	3	5	-
Public-Data Files	5	1	5	-	5	-
Reports of Investigations	5	5	5	2	5	5
Special Reports	5	5	5	5	5	5

The numbers indicate the library's holdings of titles on Alaska in each series.

5 Comprehensive (>90% of Alaska titles in the series)

4 Extensive (75 to 89% of Alaska titles in the series)

3 Good (50 to 74% of Alaska titles in the series)

2 Fair (25 to 49% of Alaska titles in the series)

1 Limited (<25% of Alaska titles in the series)

- No current holdings in this series

KEEPING CURRENT

The matrix on the facing page illustrates the availability of these report series at the reference libraries and collections in Alaska. The reference staff at each library can help identify whether a specific report, paper, or map is available in their collection. Also check the library catalogs, which can be accessed at the libraries or via the Internet as described in Section 6. For more information about these libraries and collections, please refer to Section 5.

Bibliographic tools can be of help in identifying literature of interest, and in locating publications at a library. These tools range from hard-copy bibliographies to searchable electronic databases, and are available at libraries or agencies, and on the Internet. The last part of this section—*Bibliographies*—describes bibliographic tools that range from general geology to very specific bibliographies about Alaska geology or mining.

Annual Reports

Three yearly summaries are published about mining and mineral exploration activities in Alaska.

- *Alaska's Mineral Industry*—Division of Geological & Geophysical Surveys—This report series is published cooperatively by the State of Alaska Department of Natural Resources' Divisions of Geological & Geophysical Surveys and Division of Mining & Water Management, and the Department of Commerce & Economic Development's Division of Trade and Development as part of the Division of Geological & Geophysical Surveys' Special Report Series. Each report summarizes exploration, development, and production activities over the previous year, based largely on information provided voluntarily by individual miners, mining companies, Native corporations, and government entities. This report typically is issued in the fall of the subsequent year. An advance summary is published as an information circular in the spring. Both the annual minerals report and the summary are distributed free of charge while supplies last.
- *Annual Report on Alaska's Mineral Resources*—U.S. Geological Survey—These reports, published as part of the USGS Circular series, are yearly summaries of public information relating to minerals (including fuel and non-fuel minerals) in Alaska gathered by the U.S. Geological Survey and other federal agencies. Reports contain production statistics and mineral resource activities by the mining and energy industries and federal agencies for the previous year, as mandated by Section 1011 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA).
- *Minerals Yearbook, Volume II*—U.S. Geological Survey—This volume of the annual Minerals Yearbook contains a chapter on the minerals industry of each state, including Alaska. Prior to 1996, the U.S. Bureau of Mines published this series under the same title.

Weekly/Monthly/Quarterly Newsletters

Several monthly or weekly newsletters regularly include information about current exploration and mining activities in Alaska. The Alaska Miners Association publishes a monthly newsletter—*The Alaska Miner*—that contains current news about the minerals industry in

Alaska. The Society of Economic Geologists Quarterly (Jan., Apr., Jul., Oct.) also publishes a monthly newsletter—the *SEG Newsletter*. This publication contains a section titled “Exploration Review” that summarizes activities by companies in different regions of Alaska. Two periodicals, *The Northern Miner* and *The Mining Journal, London*, are published weekly and often include articles describing mineral exploration, development, and production operations in Alaska. The *Mining Record* is published weekly by The Mining Record Company in Englewood, Colorado. *Petroleum News Alaska* publishes a monthly insert, “Mining News Alaska,” that contains information about exploration, mining, and regulatory issues. The matrix below identifies which research libraries in Alaska have current subscriptions to each of these publications.

KEEPING CURRENT WITH MINING NEWS IN ALASKA— WHERE TO FIND MINING NEWSLETTERS

ANCHORAGE

ARLIS ✓
Consortium Library - UAA ✓
USGS Tech. Data Unit Reading Room ✓

FAIRBANKS

Geophysical Institute Library, UAF ✓
Rasmuson Library, UAF ✓
Div. of Geological & Geophysical Surveys ✓

JUNEAU

BLM Juneau Mineral Information Center ✓

	The Alaska Miner	Canadian Mining and Metallurgical Bull.	The Mining Journal - London	Mining Voice	SEG Newsletter/Quarterly	The Mining Record	Petroleum News Alaska	Northern Miner
ARLIS	✓	✓	✓	✓				✓
Consortium Library - UAA	✓					✓		✓
USGS Tech. Data Unit Reading Room	✓							✓
Geophysical Institute Library, UAF	✓	✓	✓	✓	✓	✓	✓	✓
Rasmuson Library, UAF	✓			✓		✓	✓	✓
Div. of Geological & Geophysical Surveys	✓			✓		✓	✓	✓
BLM Juneau Mineral Information Center	✓	✓		✓	✓	✓		✓

<http://www.newswire.ca>

At least one available web site (NewsWire, Canada) offers a free service that posts news releases from companies (including a large number of mining companies) to users' e-mail accounts.

In addition to the trade and professional publications listed above, two business periodicals publish occasional articles about the mining industry in Alaska and about specific mines or companies. These are the *Alaska Business Monthly* and the weekly *Journal of Alaska Business*. Both are available at most local libraries.

FEDERAL AGENCY GEOLOGIC REPORT AND MAP SERIES

U.S. Geological Survey Publications

The following is an annotated list of the major publication series of the USGS that include information about Alaska geology and minerals. A more comprehensive list of publication series and a listing of individual report titles can be found in the USGS Publications Catalogs.

<http://www.usgs.gov/publications/index.html>



USGS Publications Catalogs—The USGS distributes “Publications of the U.S. Geological Survey” catalogs that summarize its most recently issued books and maps. Publications issued prior to 1982 are contained in three permanent catalogs for the intervals 1879-1961, 1962-1970, and 1971-1981, and annual supplements have been issued for the years 1982-1997. Interim quarterly catalogs were also issued for 1997. The monthly “New Publications of the U.S. Geological Survey” listings for 1995-1998 are available on the Internet at the address listed on the left.

MAJOR REPORT AND MAP SERIES

Bulletins—Bulletins report significant data and interpretations of lasting scientific interest but that generally are more limited in scope or geographic coverage than results reported in Professional Papers. This series includes results of resource studies and geologic and topographic investigations, as well as collections of short papers related to a specific topic.

Circulars—Circulars present technical or non-technical information of wide popular interest in a format designed for distribution at no cost to the public. They are designed to disseminate administrative information or important scientific information of a short-lived nature.

Coal Investigations Maps—Coal Investigations Maps are geologic maps on topographic or planimetric bases at various scales. These maps show bedrock geology, stratigraphy, and structural relations in certain coal-resource areas.

Digital Data Series—These publications distribute large amounts of digital data on CD-ROM, which takes advantage of the latest technological advances in digital mass-storage and uses internationally recognized standards (ISO-9660) for CD-ROMs. A Digital Data Series CD was first issued in 1991.

Geologic Investigations Series—In 1996, the name of the Miscellaneous Investigations was changed to Geologic Investigations Series. The series definition remains the same (see above).



Phreatomagmatic eruption column rising from the east Ukinrek maar crater at about 5:00 pm on April 6, 1977. View is to the southeast. Photo by R. Russell.



Mine shaft cribbing from earlier mining exposed by hydraulic giants in the Dalton Gulch placer mine, Tofty area, central Alaska. Photo by D.S. Pinney.

Geophysical Investigations Maps—This series includes maps on topographic or planimetric bases that show the results of surveys using geophysical techniques such as gravity, magnetism, seismicity, or radioactivity to reveal subsurface structures of economic or geologic significance. Many are correlated with the geology of the area.

Mineral Commodity Summaries—Mineral Commodity Summaries are published annually, and are the earliest government publication to furnish estimates covering non-fuel mineral industry data. Data sheets contain information on the domestic industry structure, government programs, tariffs, and 5-year salient statistics for over 90 individual minerals and materials.

Minerals Yearbook—Minerals Yearbooks discuss the performance of the worldwide minerals and materials industry during a calendar year, and provide background information to assist in interpretation. Each yearbook is issued in three volumes: Volume I (Metals and Minerals) discusses virtually all metallic and industrial mineral commodities important to the U.S. economy. Volume II (Area Reports—Domestic) contains a chapter on the minerals industry of each state, Puerto Rico, and the Administered Islands. Volume III (Area Reports—International) contains the latest available mineral data for more than 190 foreign countries and discusses the importance of minerals to the economies of these nations and the United States.

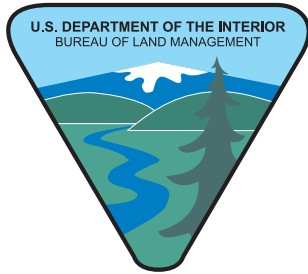
Miscellaneous Field Studies Maps—Multicolor or black-and-white maps on topographic or planimetric bases for quadrangles or irregular areas, published at various scales. Pre-1971 maps show bedrock geology in relation to specific mining or mineral-deposit problems; post-1971 maps typically are black-and-white maps produced for various purposes such as environmental studies or wilderness mineral investigations. This series was first published in 1951.

Miscellaneous Investigations Series Maps—This series includes maps on topographic or planimetric bases for regular or irregular areas, presented for a wide variety of formats and subject matter and published at various scales. The series also includes 7.5-minute quadrangle photogeologic maps on planimetric bases that show geology interpreted from aerial photographs.

Oil and Gas Investigations Charts—These charts show stratigraphic information for certain oil and gas fields and other areas having hydrocarbon potential.

Open-File Reports—These are unpublished manuscript reports, maps, and other material made available for public consultation at depositories. Reports in this series are a nonpermanent form of publication that may be cited in other publications as sources of information. However, they are not considered part of the formal literature. The Alaska Branch of the USGS has issued its own Open-File Reports since 1938.

Professional Papers—Professional Papers are comprehensive scientific reports of wide and lasting interest and importance to professional scientists and engineers. They report results of resource studies, and topographic, hydrologic, and geologic investigations. This series also includes collections of related papers on a scientific topic.



Topographic Maps—These are standard topographic maps typically published at scales of 1:250,000 and 1:63,360. They show topographic contours, geographic features, roads, towns and cities, and major political boundaries.

U.S. Bureau of Mines Publications

The U.S. Bureau of Mines published reports and maps from 1910 until it was disbanded in 1996. Several Bureau of Mines publication series are being continued by the USGS—the Mineral Yearbooks, the Mineral Industry Surveys, the Mineral Commodity Summaries, and Special Publications. The following is an annotated list of the major Bureau of Mines publication series that include information about Alaska. A more comprehensive list of publication series and a listing of individual report titles can be found in the bibliography *Bureau of Mines Publications on Alaska*.

Bureau of Mines Publications on Alaska: A Bibliography—This bibliography (published in 1996 as BLM Alaska Open File Report 63) is available at the Juneau Minerals Information Center and from the BLM Alaska State Office. Copies also may be available at other research libraries and collections.

MAJOR REPORT SERIES

Bulletins—This series reports the results of broad and significant projects or programs of scientific, historical, or economic research or other investigations, including comprehensive and important mineral resource studies and compilations. These reports typically are prepared after completion of all laboratory and field work, but sometimes report a major phase of a larger or continuing investigation. Bulletins rarely represent the first public report on the subject. As a rule, Bulletins encompass published work and essential unpublished data and details.

Handbooks—Handbooks are instruction or information manuals that cover a broad range of topics and are designed to improve efficiency in the mineral industry or to promote the wise use of mineral resources. Their content is based on the research and practical experience of Bureau and contract personnel.

Information Circulars—Information Circulars are concerned primarily with Bureau economic reviews and analyses and with Bureau projects that are not process research. Reports also cover surveys of mineral resources and related mining and operating activities, guides to marketing of mineral commodities, compilations of economic data on minerals, meeting summaries, bibliographies, new instrumentation and techniques, and descriptions of new industry methods.

Mineral Commodity Summaries—This series provides an annual summary of approximately 85 non-fuel mineral commodities. It contains information on the domestic industry structure, government programs, tariffs, and 5-year salient statistics. This series is continued by the USGS under the same title. For more information, see the description under *USGS Publication Series* above.

Mineral Facts and Problems—Mineral Facts and Problems was the Bureau's only periodic bulletin (issued every 5 years). It contains

ALASKA STATE AGENCY GEOLOGIC REPORT AND MAP SERIES

[http://
www.dggs.dnr.state.ak.us](http://www.dggs.dnr.state.ak.us)

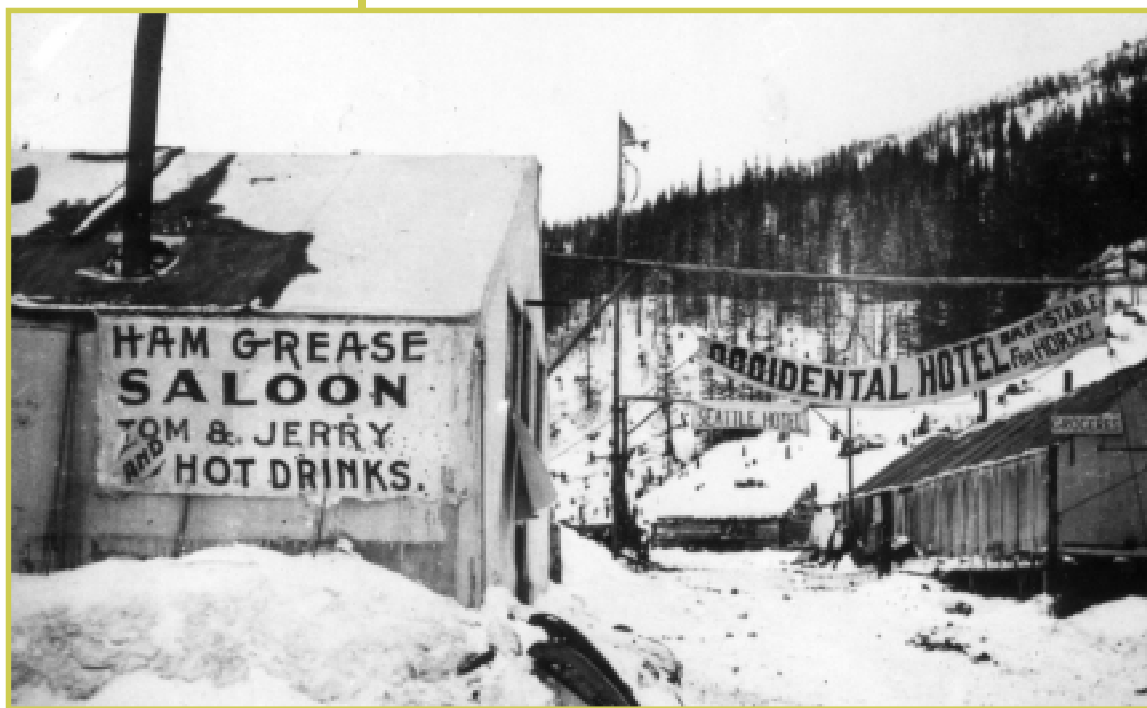
comprehensive information on all important metals and minerals, and covers industry patterns, technology, reserves, supply-demand relationships, and future uses of commodities. Updates, when necessary within the 5-year cycle, appeared as Mineral Commodity Profiles. This series was last published in 1985.

Mineral Yearbooks—These publications summarize the significant economic and technologic developments in the domestic and international mineral industries for each calendar year. This series is continued by the USGS under the same title. For more information, see the description under *USGS Publication Series* above.

Reports of Investigations—Publications in this series report results of process research and investigations conducted by the Bureau at its research centers or laboratories, or in mines, quarries, smelters, plants, and other non-Bureau properties. Reports of Investigations differ from Bulletins (described below) in that RIs describe the principal features and results of individual experiments, minor research projects, or a significant coordinated phase of a major research project or program.

Alaska Division of Geological & Geophysical Surveys Publications

The following is an annotated list of the major DGGS publication series that include information about Alaska geology and minerals. A more comprehensive list of publication series and a listing of individual report titles can be found in the Publications Catalog or on the Division web page.



Good eats at the Ham Grease Saloon, somewhere in Alaska! Charles Bunnell Collection, Accession no. 58-1026-1748N, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.



Publications Catalog of the Division of Geological & Geophysical Surveys—This publications catalog (published in 1996 as Alaska Division of Geological & Geophysical Surveys Information Circular 11) is available in libraries and from DGGS in Fairbanks. An updated electronic version of this catalog is available on disk from DGGS. Lists of publications for quadrangles in Alaska are available on the Division web page.

A version of this bibliography that also includes Bureau of Mines and some USGS publications can be accessed on the Internet. To view this bibliography by quadrangle visit <http://imcg.wr.usgs.gov/digi.html>. To search this bibliography go to <http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi>.

MAJOR REPORT AND MAP SERIES

Alaska Open File Reports—This series was discontinued in 1982, and superseded by the Report of Investigation Series. It contains reports of research by DGGS personnel. Its objective was to make information available to the public as soon as possible, and therefore reports of this series were not subjected to rigorous critical review and formal editing, and did not use professional cartographic services.

Alaska Territorial Department of Mines Reports—This series includes reports, notes, photographs, and maps produced before Alaska statehood. Series include Itinerary Reports, Mineral Investigations, Miscellaneous Reports, and Prospect Evaluations. All Territorial Department of Mines reports are out of print, but are available at libraries.

Geochemical Reports—Reports of this series show sample localities and chemical analyses of stream sediment and rock samples. The series was discontinued in 1973, and information of this type is currently included in the Professional Report and Report of Investigation series.

Geologic Reports—The name of this series changed in 1984 to the Professional Report series. See the Professional Report series description above.

Guidebooks—This series includes “Field trip guides” that contain general and technical information to help visitors understand the geologic conditions they observe along some of the major transportation corridors of Alaska.

Information Circulars—Information Circulars (such as this Guide) include a variety of publications (brochures, pamphlets, maps) that are designed to provide specific information in a brief, usable form.

Professional Reports—Professional Reports communicate new data and original ideas to other earth scientists. Two characteristics separate the PRs from other series: A PR is the completed product of original research and analysis, and PRs use professional cartography, and undergo rigorous peer review, editing, and revision to ensure accuracy.

Public-Data Files—The objective of this series is to make project and field data available to the public as soon as possible. PDFs are not reviewed or edited.

OTHER NOTABLE REPORTS AND REPORT SERIES

Reports of Investigations—Reports in this series usually are written by DGGs staff from field notes and observations. The objective of this series is to provide information to the public as quickly as possible, and therefore editing and review are limited.

Special Reports—Reports in this series summarize or compile existing information on matters of current relevance related to earth science in Alaska. These publications are written for the general public, and are given both internal and external review and are edited thoroughly. This series includes the annual report on Alaska's mineral industry (see *Keeping Current* in this section for a description).

Mineral Industry Research Laboratory (MIRL) Reports

The Mineral Industry Research Laboratory at the University of Alaska publishes reports of research on beneficiation, hydrometallurgy of Alaskan ores, geology and mineral deposits of the state, placer mining and gold recovery, coal mining, mining in frozen ground, and related problems, and environmental concerns of mining activities.

Decade of North American Geology, Volume G-1

The Decade of North American Geology (DNAG) series was published in 1996 by the Geological Society of America. Volume G-1 of this series is a good summary of general geology and mineral deposits in Alaska.

BIBLIOGRAPHIES AND DATABASES

A number of bibliographic databases and bibliographies can be helpful in finding published information about geology and mining in Alaska. These range from comprehensive geologic bibliographies such as GEOREF, to topical or regional bibliographies. Many are in electronic form and are searchable, while others are available only in paper copy. The bibliographies listed here may be particularly useful. The annotated list that follows briefly identifies general geologic bibliographies, general Alaska geologic bibliographies, and bibliographies about Alaska minerals and mining, and indicates where they may be found or used.

General Geoscience Bibliographies

GEOREF

The Geological References database (GEOREF), produced by the American Geological Institute (AGI), provides bibliographic citations to the geologic literature, which can then be located in libraries. The database contains geoscience references to international journal articles, reports, conference papers, books and individual book chapters, maps, and U.S. and Canadian Masters theses and Ph.D. dissertations. It includes citations from the following printed indexes: Bibliography of North American Geology (1785-1970), Bibliography and Index of Geology Exclusive of North America (1933-1968), Geophysical Abstracts (1966-1971) and Bibliography and Index of Geology (1969-present).

GEOREF can be searched at the Alaska Resources Library and Information Services (ARLIS) in Anchorage and at the Keith B. Mather Library at the Geophysical Institute in Fairbanks.

[http://library.usgs.gov/
online.html#Begin](http://library.usgs.gov/online.html#Begin)

U.S. GEOLOGICAL SURVEY LIBRARY CATALOG

The Catalog of the USGS Libraries in Reston, Denver, Menlo Park, and Flagstaff is available via Telnet. A link and instructions for using this catalog are provided on the USGS catalog web site at the address to the left. This catalog also is a useful searchable bibliographic reference. In addition to a complete set of USGS publications, the USGS library system has one of the world's most comprehensive collections of non-USGS publications. More information about the USGS catalog web site is included in Section 6.

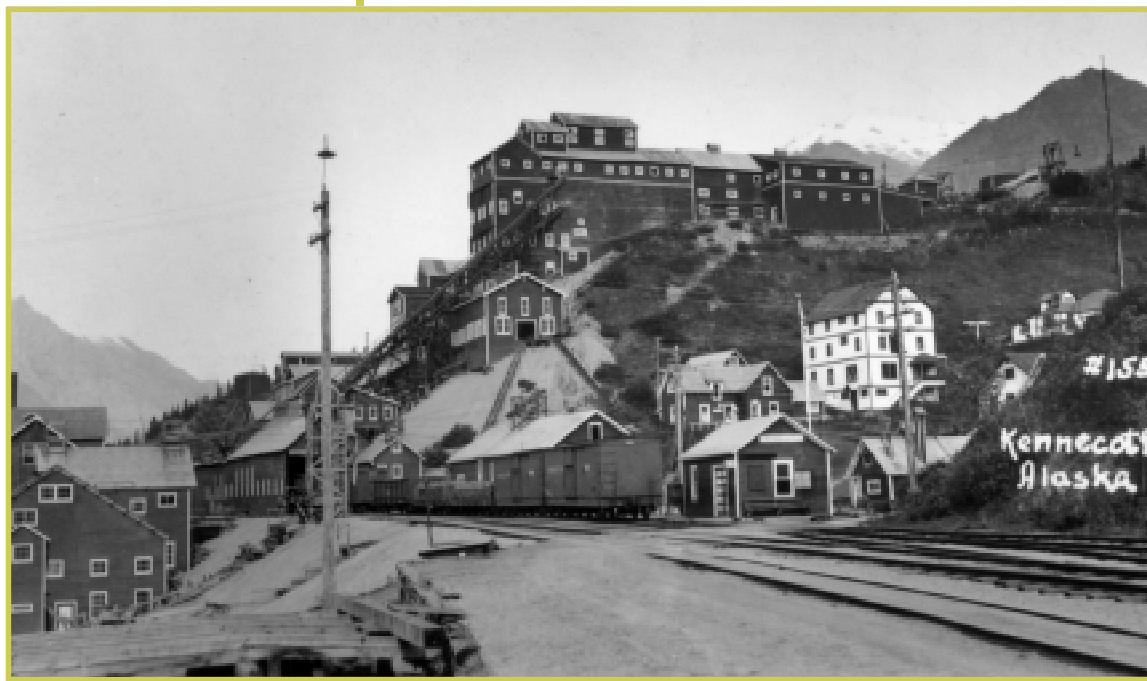
<http://ngmsvr.wr.usgs.gov>

U.S. GEOLOGICAL SURVEY MAPPING DATABASES

The USGS Mapping Project maintains a National Geologic Map Database, which references all published USGS maps. This searchable database has information about existing maps and mapping in progress and can be searched by state, quadrangle, type of map, etc., on the National Geological Map Database web site.

U.S. GEOLOGICAL SURVEY BIBLIOGRAPHY AT THE EARTH SCIENCE INFORMATION CENTERS

The Earth Science Information Centers (ESICs) have a searchable database of all publications by USGS authors—including both USGS and non-USGS publications, abstracts, etc. This database is updated quarterly, and can be searched at the ESICs in Anchorage and in Fairbanks. The database is not available for sale.



Mill, offices, and living quarters, Kennecott Copper Mine, near McCarthy, Alaska. Earl Beistline Collection, Accession no. 85-93-161, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

Alaska Geology Bibliographies

U.S. GEOLOGICAL SURVEY BIBLIOGRAPHIES OF ALASKA GEOLOGY

The USGS has published numerous additional bibliographies of Alaska publications. These bibliographies cover many topics from general geology, to minerals, to water resources. Individual citations are too numerous to list here; however, library catalogs including those searchable over the Internet are good ways to find these. For bibliographies specific to mineral deposits in Alaska see the Cobb Bibliographies described below under *Alaska Mining/Minerals Bibliographies*. Also see the following publication *List of U.S. Geological Survey Geologic and Water-Supply Reports and Maps for Alaska and Publications of the Geological Survey, 1986, U.S. Department of the Interior*. Available in libraries and from the USGS Earth Science Information Center, 4230 University Drive, Room 101, Anchorage, Alaska 99513.

DIGITAL INDEX OF GEOLOGIC INFORMATION ON ALASKA

A comprehensive electronic bibliography on the mineral resources of Alaska, this database includes all DGGS and Bureau of Mines publications on Alaska, and many USGS publications. A list of publications by quadrangle is available on the Internet at <http://imcg.wr.usgs.gov/digi.html>, and the bibliography is searchable by key word or SQL statement at <http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi>.

ALASKA THESIS & DISSERTATION BIBLIOGRAPHY

The Keith B. Mather Library at the UAF Geophysical Institute is compiling a bibliography of master's theses and doctoral dissertations written about the geology and mineral deposits of Alaska. This will include theses/dissertations from UAF and also from other universities. This bibliography is available from the library.

<http://www.gi.alaska.edu>

ALASKA FIELD TRIP GUIDE BIBLIOGRAPHY

The Keith B. Mather Library at the UAF Geophysical Institute has a reference list of field trip guides that includes field trips along Alaska's highways and in more remote areas, with various themes such as hard rock and placer mining, coal, structural geology, engineering geology, fossils, geomorphology, etc. This list is available from the library, and will be added to the Geophysical Institute Library web site.

http://www.ak.blm.gov/affairs/sci_rpts.html

BIBLIOGRAPHY OF BLM ALASKA SCIENTIFIC REPORTS

This bibliography lists technical, open file, or general scientific reports published by the Bureau of Land Management in Alaska. These include reports on geology, mining, wildlife, habitat, and other management issues. This list is available on the Internet, or contact BLM.

Alaska Minerals/Mining Bibliographies

ALASKA RESOURCE DATA FILES

A database of minerals information for Alaska, which is based on the compilations by E.H. Cobb, currently is being revised by the USGS and the Interagency Minerals Coordinating Group (IMCG). This database lists references and other information for mineral prospects and localities by quadrangle. The goal is to complete updates of all

<http://www-mrs-ak.wr.usgs.gov:80/ardf/quadmap.html>

<http://imcg.wr.usgs.gov/dem.html>

quadrangles in Alaska within the next several years. The status of the quadrangle updates is illustrated on the ARDF web site.

THE USGS COBB BIBLIOGRAPHIES

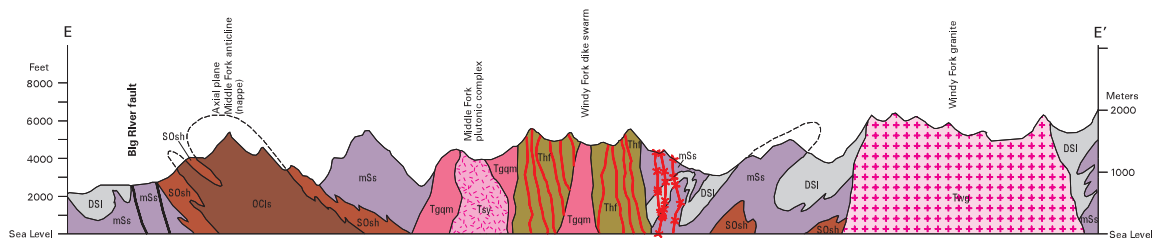
This series of bibliographies by Edward Huntington Cobb of the USGS lists minerals-related references for each quadrangle in Alaska. These were published by the USGS as Open File Reports from 1970 through 1983. Check the libraries listed in Section 5 or searchable bibliographies listed in this section for the citation for a specific quadrangle (there are 298 citations for E.H. Cobb in the USGS Library catalog!). The Cobb bibliographies are the basis for the Alaska Resource Data Files (ARDF), although not all information in the Cobb bibliographies is reproduced in the ARDF.

MAS/MILS

The Minerals Availability System (MAS)/ Minerals Industry Locator System (MILS), a database containing information on individual Alaska mineral deposits, is available at the BLM Minerals Information Center in Juneau, and from BLM offices in Anchorage.

An electronic version is searchable by commodity, type, etc., at <http://imcg.wr.usgs.gov/cgi-bin/qalaska3.cgi>. Shape files can be downloaded by quadrangle or mining district at <http://imcg.wr.usgs.gov/shapegen.html>.

Much of the information collected for the database can be found in the Mineral Property Files housed at the Juneau Minerals Information Center. See Section 4 for further information.



Sample of cross-section (DGGs Report of Investigations 97-14a, Bundtzen and others).



Deformed medial moraines and ogives (darker bands of glacial ice) in the Art Lewis Glacier, St. Elias Range, north of Yakutat. Photo by C.G. Mull.

UNPUBLISHED INFORMATION AND WHERE TO FIND IT

See the
Guide web site at
<http://www.dggs.dnr.state.ak.us>
for the most current
information.

This section identifies sources of information about many topics of interest to geology and mineral exploration in Alaska. The sources described in this section are primarily government agencies and public information centers, and the information they provide is largely unpublished and not generally available in libraries. Topics range from those of general geologic interest (such as geologic map coverage and availability) to topics of specific relevance to exploration for and development of metallic mineral resources in Alaska (e.g., land status information). Categories reflect questions asked frequently about geology and mining at libraries and information centers, and discussions with persons involved in the geology of mineral deposits and mineral exploration in Alaska. Information about geologic specialties other than minerals geology are included only if these specialties are in broad use in the mining industry.

In some cases, an overview of a topic is included (for example, see *Land Status*). These overviews are designed to give the reader an insight into aspects of geologic information and the minerals industry that may be unique to Alaska, and are not intended to be comprehensive. Also, please note that these overviews and the sources are current as of the date of publication of this Guide, but some will likely change in the future. For the most current information, see the Guide web site at <http://www.dggs.dnr.state.ak.us> or contact the appropriate agency.

Addresses and contact numbers for the agencies or offices mentioned in this section are listed in Appendix B. The Index to this publication can help locate additional sources for many of these topics elsewhere in this Guide. Sections 2 and 5 describe roles of many agencies and other entities mentioned in this section.

TOPOGRAPHIC MAPS



Topographic maps of the United States are published and distributed by U.S. Geological Survey (USGS) through the Earth Science Information Center (ESIC), which has branch offices in Anchorage and Fairbanks. A list of Alaska businesses that sell USGS topographic maps is posted on the Internet at <http://mapping.usgs.gov/esic/usimage/test/ak.html>.

Digital Mapping Data: The availability of digital mapping data for a specific area can be searched on the USGS National Mapping Information web page at <http://mapping.usgs.gov>. Digital Line Graphics (DLG), Digital Raster Graphics (DRG), and Digital Elevation Model (DEM) data for some parts of Alaska can be downloaded from <http://agdc.usgs.gov/data/usgs/geodata/>. DRG files listed by quadrangle can be accessed at <http://imcg.wr.usgs.gov/drg/index.html>. Digital mapping data also are available on CD-ROM, and can be purchased through ESICs. The following web page lists digital data available from USGS on CD-ROM: <http://mapping.usgs.gov/esic/cdrom/cdlist.html#A4>.

GEOLOGIC MAPS



The USGS and the Alaska Division of Geological & Geophysical Surveys (DGGS) publish the majority of available geologic maps of Alaska. Most USGS geologic maps for Alaska are 1:250,000 scale, and most DGGS geologic maps are larger scale (1:63,360). Large areas of Alaska have not been mapped at either scale. Good places to search for DGGS and USGS geologic maps are:

- Catalogs of the research libraries listed in Section 5
- GEOREF (see Section 3)
- USGS Alaska Section Geologic Mapping page:
<http://tundra.wr.usgs.gov/wrmrsAK/webmap.htm#pe>
- Interagency Minerals Coordinating Group (IMCG) and DGGS web sites at <http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi> and <http://www.dggs.dnr.state.ak.us>
- The USGS library catalog at <http://library.usgs.gov/onlinext.html#Begin>

In addition, theses and dissertations often include unpublished maps. The UAF Geophysical Institute has a bibliography of dissertations and theses about Alaska geology. See Sections 3 and 5 for more information about bibliographies and the libraries in Alaska, respectively.

DIGITAL GEOLOGIC MAP DATA

Several digital data sets derived from published geologic and thematic maps of Alaska are available from USGS and DGGS. USGS data sets can be downloaded in Arc/Info format at <http://agdc.usgs.gov/data/usgs/geology/index.html>. A list of available DGGS electronic coverages can be found at <http://www.dggs.dnr.state.ak.us>, and data sets can be purchased from DGGS.

Aerial photographs have been obtained by the USGS in connection with its geologic and topographic mapping activities. The ESIC has an index of USGS aerial photography for Alaska, and can assist in ordering them. Most of Alaska has one-inch-to-one-mile-scale color infrared photo coverage, although none is more recent than the mid 1980s. Contact ESIC or see the fact sheet on the Internet at <http://mapping.usgs.gov/esic/aphowto.html> for further information about ordering USGS air photos.

The ESIC at the UAF Geophysical Institute GeoData Center has aerial photos for most of Alaska on hand for review, although none is more recent than the mid 1980s. Orders for photo-quality copies take approximately two weeks, and lower-resolution scanned copies also are available.

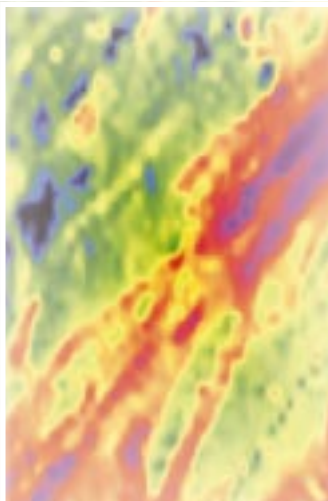
REMOTE SENSING DATA



The USGS Earth Resource Observation Systems (EROS) Data Center home page lists remote sensing data and information available electronically and in hard copy at <http://edcwww.cr.usgs.gov>

Also contact the EROS Alaska field office for information about remote sensing imagery of Alaska at the address in Appendix B or at <http://www-eros-afo.wr.usgs.gov>

GEOPHYSICAL/ AEROMAGNETIC DATA AND MAPS



Detailed geologic mapping has not been completed for many areas of Alaska. Regional geophysical information can be very useful for filling in gaps in detailed geologic mapping, and in identifying prospective areas for exploration.

DGGS currently is creating and producing aeromagnetic maps and reports for many regions in the state. One series focuses on mining districts using helicopter-borne geophysical instrumentation. The final product typically includes aeromagnetic data, grids, profiles, and various maps depicting the geophysical data. Geologic mapping completed in concert with the geophysics also is available for selected areas. A second series of aeromagnetic data at a coarser scale is collected using fixed-wing aircraft. A list of these geophysical releases can be found at <http://www.dggs.dnr.state.ak.us/geophys.html>.

Results of an older series of surveys were published in the 1970s and 1980s. See DGGS Information Circular 20 for a list of the quadrangles included in this series. DGGS also has published results of magnetometer, gravity, radiometric, resistivity, seismic, and other surveys for selected areas in Alaska. For more information about these surveys and the areas covered, contact DGGS.

BIBLIOGRAPHIES

There are several bibliographies of aeromagnetic data available. Also, see Section 2 for additional bibliographic tools.

Bibliography and Index of Alaska Aeromagnetic Data, 1986, Alaska Division of Geological & Geophysical Surveys PDF 86-100, available on disk (ASCII or dBase format) or hard copy.

Bibliography of Aeromagnetic Data and Reports on Alaska including those from the USGS, the Alaska Division of Geological & Geophysical Surveys and other sources at <http://wrgis.wr.usgs.gov/docs/gump/morin/alaska/akmagindex>

GEOPHYSICAL DATA ON THE INTERNET

The following web sites provide access to geophysical data and maps, most of which can be downloaded and printed:

<http://agdc.usgs.gov>

<http://edcwww.cr.usgs.gov/>

<http://minerals.cr.usgs.gov/publications/ofr/97-520/alaskamag.html>

<http://wrgis.wr.usgs.gov/docs/gump/morin/alaska/gravity/gravity.html>

Alaska Geospatial Data Clearinghouse contains links to a wealth of data sets supplied by a number of state and federal agencies operating in Alaska. A number of georeferenced theme maps are available that can serve as base maps for various environmental or resource evaluation studies.

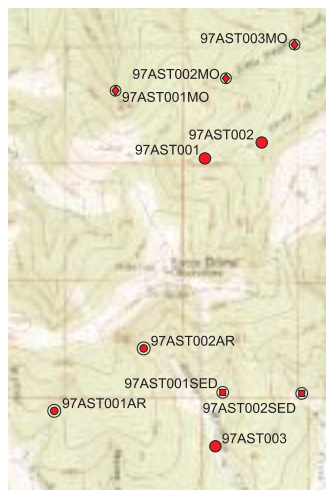
EROS Data Center is the gateway to the extensive data holdings administered by the USGS EROS data center. Use this site to learn about satellite data coverage, and raw data from the National Uranium Resource Evaluation (NURE) program.

Alaska Aeromagnetic Compilation allows viewing and data retrieval for a compilation of the best publicly-available aeromagnetic data spanning much of the state of Alaska. Plot files (at 1:2,500,000 and 1:500,000 scale) as well as binary data files may be downloaded.

Alaska Gravity Data Compilation allows viewing and data retrieval for USGS-compiled gravity data spanning much of Alaska.

<http://www.ngdc.noaa.gov/ngdc.html>

GEOCHEMICAL DATA



National Geophysical Data Center has a number of data sets that cover Alaska including extensive sets of marine bathymetric data.

The U.S. Geological Survey, U.S. Bureau of Mines, and DGGS have collected the majority of geochemical samples in Alaska for which data are available to the public. Geochemical data—chiefly for rock, stream sediment, and panned concentrate samples—are available in many of the publications of these agencies (see Section 3). USGS is in the process of making some of its data available in electronic databases as described below.

USGS Databases

The **USGS National Geochemical Database** contains over 2 million records of geochemical data from samples collected by USGS and other federal agencies. Most of these data were generated for the USGS's Mineral Resources Program and predecessors, and by the Department of Energy's National Uranium Resource Evaluation Hydrogeochemical and Stream Sediment Reconnaissance (NURE HSSR) Program. Data currently are stored in three databases: NURE-HSSR, RASS, and PLUTO.

The **NURE HSSR database** contains NURE data from mid 1970s to early 1980s, mostly from stream-, lake-, or pond-sediment and water samples. NURE HSSR contains data for approximately 137,000 samples in 104 quadrangles in Alaska. The database (for the entire U.S.) is available for purchase on CD-ROM (as USGS Digital Data Series DDS-18-B) from the Earth Science Information Center (ESIC) at the addresses listed in Appendix B. It also can be downloaded by Alaska 1:250,000 quadrangle at <http://imcg.wr.usgs.gov/nuredata.html>.

The **RASS database** contains USGS data from the 1960s to late 1980s. RASS primarily contains geochemical exploration data for stream-sediment samples. Data are included from approximately 175,000 samples in 55 quadrangles in Alaska. This electronic database currently is not available for purchase, but is expected to be soon (see below).

The **PLUTO database** contains USGS data from the 1970s to 1990s, primarily topical research data from lithochemical (rock) samples. PLUTO contains data from approximately 500,000 samples. This database currently is not available for purchase, but may be in the future (see below).

The USGS Mineral Resources Program currently is in the process of editing, verifying sample media designations and sample locations, and adding missing data to RASS on a 1:250,000-scale quadrangle-by-quadrangle basis. The first 20 of these "cleaned-up" quadrangles will be published on CD-ROM and in a downloadable format on the Internet by 1999. The remaining RASS data and the PLUTO database will undergo similar verification and will be published as funding permits.

DGGS has published raw, unedited RASS data for 28 of the 1:250,000-scale quadrangles in Alaska as Public-Data Files

(PDF 93-39a through 39cc). Data for the following quadrangles can be purchased on disk from DGGs:

Ambler River	Anchorage	Baird Mountains
Bendeleben	Bethel	Big Delta
Bradfield Canal	Chandalar	Chandler Lake
Circle	Goodnews Bay	Healy
Iditarod	Juneau	Killik River
Livengood	Medfra	Mount Hayes
Nabesna	Petersburg	Philip Smith Mtns
Seward	Solomon	Survey Pass
Taku River	Tanacross	Valdez
Wiseman		

Additional Sources

Many USGS and DGGs reports contain geochemical data, as do many theses and dissertations. Some DGGs geochemical data are available in electronic form, and more are expected to be available in the future. Check the DGGs Publications Catalog—available from DGGs, at libraries, and at <http://www.dggs.dnr.state.ak.us>—and the USGS Library catalog at <http://library.usgs.gov/onlinext.html#Begin>. Also check the UAF Geophysical Institute Library for a bibliography of theses and dissertations on Alaska. Proprietary data owned by regional Native corporations or mining companies can sometimes be made available to individuals or companies willing to enter into a business relationship with the owner of the information.

GEOLOGIC INFORMATION BY QUADRANGLE

<http://imcg.wr.usgs.gov>

The Alaska Division of Geological & Geophysical Surveys (DGGs) lists reports by quadrangle in the Publications Catalog (DGGs Information Circular 11) and on the DGGs Internet web page. Print-outs for specific quadrangles can be requested from DGGs in Fairbanks. Additional bibliographies arranged by quadrangle include the Digital Index of Geologic Information on the Interagency Minerals Coordinating Group (IMCG) web page (see address in the following paragraph), which has DGGs, Territorial Department of Mines, and Bureau of Mines publications, and some USGS publications. Also search the USGS Library catalog and the USGS publications database at the ESICs.

Minerals information and references by quadrangle can be found in the Alaska Resource Data Files (ARDF) and in the Mineral Industry Location System (MILS) database. Links to both of these are on the IMCG web site. Also see the Cobb bibliographies (see description in Section 3).

For references to geologic, geophysical, and topographic maps, and geophysical and geochemical data by quadrangle see these topics elsewhere in this section.

ENVIRONMENTAL INFORMATION

U.S. Environmental Protection Agency (EPA) Publications, including case studies, guidance documents, and general information publications are available from UAA Consortium Library, and UAF Rasmuson Library. The Alaska State Library, ARLIS, and Juneau Minerals Information Center collect EPA publications, Environmental Impact Statements (EISs), and state planning documents related to mining, but do not systematically collect whole EPA series. The EPA

Region 10 library in Seattle serves Alaska and will lend documents that are not available locally.

Alaska Department of Environmental Conservation (DEC) Publications are available in Alaska state depository libraries, including UAA Consortium Library, and UAF Rasmuson Library. In Southeast Alaska, DEC publications are available at the Alaska State Library. DEC publications primarily are case studies; several examine the effects of placer mining on streams.

Published Environmental Impact Statements (EISs) for various projects in Alaska also are available at the above libraries. These documents can be of use in identifying environmental issues and concerns in specific areas, and as examples of the types of information required in EISs. Juneau Minerals Information Center has a collection of background studies for environmental impact statements on various mine projects in Alaska.

Air and Water Quality Standards

Air and water quality standards that are established by state and federal statute can be obtained from the Alaska Administrative Code or the U.S. Code of Federal Regulations. These are published annually

and can be accessed at most of the research libraries listed in Section 5, or at EPA or DEC offices (addresses are given in Appendix B). The full searchable text of these statutes also is available on the Internet. Internet addresses for these codes can be found in Section 6 under the heading "*Regulatory and Legal Information.*"

Water Quality/Environmental Issues for Mining

The interdisciplinary USGS Mine Drainage Interest Group promotes communication, cooperation, and collaboration among USGS and other scientists working on problems related to mining and the environment. The Group's web site has reports and contacts for projects and information about mine drainage.



Bear Flower (*Boykinia richardsonii*) growing along a small stream near the Golden Zone mine in the Chulitna mining district in southcentral Alaska.
Photo by K.H. Clautice.

<http://water.wr.usgs.gov/mine/index.html>

WATER INFORMATION

The following agencies can provide technical, regulatory, and jurisdictional information about Alaska streams, rivers, and other water bodies:

- Alaska Department of Natural Resources (DNR) Public Information Centers
- U.S. Geological Survey Water Resources Division
- Alaska Department of Fish & Game
- Alaska Department of Natural Resources Division of Mining and Water Management
- U.S. Bureau of Land Management
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency, Region 10
- Alaska Department of Environmental Conservation

GEOTECHNICAL ENGINEERING AND PERMAFROST

Alaska has physical phenomena or conditions that are uncommon elsewhere in the United States—permafrost, for example. These conditions can pose unique engineering and logistical challenges for activities in some parts of the state. In addition to the agency contacts listed below, check the holdings of the libraries listed in this Guide and the bibliographies listed in Section 3 to find reports published by DGGs, USGS, Bureau of Mines, and other entities about engineering geology and permafrost in Alaska.

UAF Permafrost and Ice Laboratory publishes reports in scientific journals and has no in-house publications. However, staff will answer questions, and can help identify relevant literature. Contact Tom Osterkamp or Vladimir Romanovsky at (907) 474-7459.

UAF Geological Engineering Department faculty will answer questions about geotechnical engineering in Alaska and can help identify sources of information.

UAF Mineral Industry Research Laboratory (MIRL) provides general information and assistance to the mineral industry and publishes reports of research results from studies concerning mining in frozen ground and related problems, and environmental concerns of mining activities. Many MIRL reports are available at the UAF Geophysical Institute Library. For further information contact MIRL at the address listed in Appendix B.

U.S. Army Corps of Engineers Cold Regions Research & Engineering Laboratory (CRREL) publishes the results of research into many aspects of construction and logistics in cold regions. CRREL maintains an Alaskan Projects Office at Fort Wainwright and a field station in Fairbanks. For more information, contact CRREL at the address in Appendix B, or visit the CRREL web site.

[http://
www.crrel.usace.army.mil/](http://www.crrel.usace.army.mil/)

WETLANDS AND FLOODPLAINS

The U.S. Fish & Wildlife Service has National Wetlands Inventory maps for approximately 30 percent of Alaska at 1:40,000 and 1:63,360 scales (approximately 900 maps). These maps can be viewed at the Fish & Wildlife Service office in Anchorage, and limited numbers of copies are available for free. Copies can be ordered

GEOLOGIC HAZARDS

through the USGS Earth Science Information Center in Anchorage. Information about the coverage of specific areas is available on the Internet at <http://www.nwi.fws.gov>, and some maps can be downloaded from that site. Please note that the U.S. Army Corps of Engineers makes final determination of wetland status for jurisdictional and permitting purposes (see Section 2).

Floodplain maps for the Fairbanks North Star Borough can be seen at the Fairbanks North Star Borough Community Planning Department, but maps must be ordered from the Federal Emergency Management Agency office in Jessup, Maryland (address in Appendix B) or from <http://www.fema.gov/MSO>. Other city and borough planning offices also should have existing floodplain maps for their communities; however, it is unlikely that such maps are available for remote and uninhabited areas.

Geologic hazards in Alaska include those resulting from earthquakes (possible in most of the state), volcanic eruptions (in southwestern and southcentral Alaska), and tsunamis (in coastal areas of Alaska, specifically the Pacific coast). Slope stability also is a severe problem in some parts of Alaska. The following agencies can provide general and specific information about volcanic, earthquake, tsunami, and landslide hazards in Alaska. In addition, DGGs, USGS, and other government agencies have published reports about geologic hazards in several areas of Alaska. Check the holdings of libraries listed in this Guide and bibliographies listed in Section 3 for these reports.

<http://www.avo.alaska.edu/>

Alaska Volcano Observatory (AVO) has published reports on the hazards associated with several Alaska volcanoes. AVO also monitors many of the state's volcanoes for signs of activity, and posts information on its web site. Contact AVO, or visit the AVO web site.

<http://www.giseis.alaska.edu/Seis/seis.html>

The Alaska Earthquake Information Center (AEIC) monitors seismicity within Alaska and surrounding regions using a network of 180 seismograph stations. The center records and analyzes Alaska earthquake data and disseminates information to the public and government agencies. Contact AEIC or visit the Geophysical Institute Seismology home page.

<http://www.alaska.net/~atwc>

The West Coast and Alaska Tsunami Warning Center (WC/ATWC) serves as the tsunami warning center for Alaska, British Columbia, Washington, Oregon, and California. WC/ATWC personnel process and disseminate collected seismic and tide data, work to improve the present system for issuing tsunami warnings, and promote community tsunami preparedness. For more information, visit the WC/ATWC web site. For general tsunami information see <http://www.geophys.washington.edu/tsunami/intro.html>.

<http://www.usgs.gov/themes/hazard.html>

Information about landslides is available from the Division of Geological & Geophysical Surveys, and from USGS. For general information contact the Landslide Information Center in Golden, Colorado (phone number 1-800-654-4966), and the USGS Hazards home page.

LAND-USE PLANS

The Development Section of DNR's Division of Land develops area and land-use plans to determine where important resources are and how Alaska state land can be used for the maximum public benefit. Resource plans are not required by statute before mining claims can be staked; however, existing plans may include useful ecological, demographic, and land-use information for areas of interest. Existing plans generally are available for review and/or purchase at the DNR Public Information Center in Anchorage. Division of Land regional offices in Fairbanks and Juneau also have plans available for review. ARLIS and the BLM Juneau Minerals Information Center have copies of many area and land-use plans, and other research and municipal libraries may also have copies. Division of Land plans completed, under review, and pending are listed at <http://www.dnr.state.ak.us/land/plan.htm>.

Land-use plans also have been written by various state and federal agencies for boroughs, regions, and special-use areas. These documents may be useful in identifying the ecological, demographic, and land-use framework for an area of interest. Check the research libraries listed in Section 5, the local library catalog, or on-line catalogs that can be accessed via SLED at <http://sled.alaska.edu/Library.html>.

PROTECTED HABITATS AND SENSITIVE WILDLIFE AREAS

Certain state and federal lands are set aside as special-use areas for the protection of wildlife habitat and species. These areas generally are closed to new mineral entry. The Alaska DNR Public Information Centers and the BLM public information offices have general land status maps that identify these areas. Similar information may be available in libraries in the form of maps and map atlases, or land-use planning documents.



Bringing in supplies—Yukon dog team freighting through Canyon, Alaska. Charles Bunnell Collection, Accession no. 58-1026-1677N, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

LAND STATUS

The Alaska Department of Fish & Game Division of Habitat and Wildlife Conservation has atlases of maps that catalog sensitive wildlife areas including those used for denning, nesting, migration, calving, etc., and anadromous streams. These can be viewed at the Fish & Game offices at the addresses in Appendix B.

The state of Alaska and the federal government are the major land-owners in Alaska, owning approximately 25 and 65 percent of the state, respectively. Regional Native corporations, which collectively own 10 percent of land in Alaska, are the major private landowners. Less than 1 percent of Alaska's land is owned by private entities other than Native corporations.

Both the state and the Native corporations will receive title to additional federal lands in Alaska under the Statehood Act of 1958, the Alaska Native Claims Settlement Act (ANCSA) of 1971, and the Alaska National Interest Lands Conservation Act (ANILCA) of 1980. Lands that the state and Native corporations have selected but for which title has not yet been conveyed are commonly referred to as "state-selected" and "Native-selected" land. Although these lands currently belong to the federal government, their "selected" status complicates staking of mineral claims and other mining activities (see *Filing and Maintaining Mining Claims*).



Searching the pan for gold. VF-Mining, U.S. Mining and Development Co., Accession no. 831-7, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

MINERAL POTENTIAL INFORMATION

GENERAL LAND STATUS

Two available maps give an overall picture of land ownership in Alaska. The State of Alaska General Land Status Map is available for sale from DNR Public Information Centers (PICs). The Bureau of Land Management (BLM) also sells a general status map at its public information offices. These maps are useful for determining where to go for detailed land status information (i.e., to state or federal information offices or Native corporations). More specific regionalized information for some areas is available in Department of Natural Resources area and land-use plans.

DETAILED LAND STATUS

The DNR Public Information Centers and BLM public information offices have status plats and can provide answers to land-status questions for state-owned land and federal land, respectively. Offices are located in Anchorage, Fairbanks, Glennallen, and Juneau—see descriptions in Section 5 and addresses in Appendix B. Land status questions for Native corporation lands must be addressed to the respective corporation. See Appendix B for regional Native corporation addresses and contact telephone numbers.

ALMRS DATABASE

BLM is in the process of consolidating lands and minerals records into a single, comprehensive database, called ALMRS (Automated Land and Mineral Record System). The first phase of ALMRS is expected to be available in BLM's public information offices during fiscal year 1999, and later phases will be available over the Internet. Contact BLM public information offices for more information.

The bibliographies and databases listed in Section 3 contain a wealth of information about the mineral potential of Alaska. Of note are the Alaska Resource Data Files (ARDF), the Cobb bibliographies, and the MAS/MILS database. Yearly summaries of mineral activity in Alaska are published by USGS and DGGS (see Section 3 under "Keeping Current"). Many of the regional Native corporations have information about the mineral potential of corporation land. For more information, see Section 2.

The following series by R.L. Lampright describes gold placer occurrences on numerous creeks in Alaska based on past mining and prospecting activity:

- *Gold Placer Deposits near Anchorage, Alaska*, 2nd edition, 1995
- *Gold Placer Deposits in East Central, Alaska*, 1996
- *Gold Placer Deposits near Talkeetna, Alaska*, 1996
- *Gold Placer Deposits near Fairbanks, Alaska*, 1996
- *Gold Placer Deposits in Northwest Alaska (Dalton Highway)*, 1997
- *Gold Placer Deposits near Nome, Alaska*, 1998
- *Gold Placer Deposits in Southeast Alaska*, 1998

This series is published by Iron Fire Publications, Nederland, Colorado (303) 258-0363, and is available in some Alaska libraries and bookstores. Most of the information in these publications was compiled from Alaska and U.S. government sources.

EXISTING MINING CLAIMS

State Land

Information about existing and past mining claims on state land is available from the DNR Public Information Centers. These centers have searchable databases as well as printed records of recent claims. In addition, the state recording district offices described below have data for existing state mining claims in their districts, and often for neighboring districts. This information can be found through the name of the claimholder, legal description of the claim, and the claim name.

An older card files mining claim information system, called KARDEX, includes state and federal mining claim information through approximately 1982. Claim information is filed by quadrangle and claim number; the level of detail in the records varies. Although much of the information included in KARDEX is now out of date, it can be useful for research into past activity in an area of interest. KARDEX is housed at the DNR PIC in Fairbanks, and is available for use by the public during business hours.

There are 34 state recording districts and 15 associated Recorder's Offices for mining claims on state and federal land in Alaska. These districts are shown on the map on page 10. In addition to recording and processing real property transactions including mining claims, the recording offices maintain files of existing mining claims in their district and often in neighboring districts. The public can access information for mining claims filed after 1972 through a computerized Public Access System. Records for claims filed before 1972 are available in record books. The addresses and contact numbers for all state recording offices are listed in Appendix B.

Federal Land

The U.S. Bureau of Land Management (BLM) has a database of land status information and mining claims on federal lands—currently the Land Information System (LIS). This database can be searched at the Juneau Minerals Information Center, and at the BLM Public Information Center in Anchorage and Public Rooms in Fairbanks and Glennallen. This system also includes historic information for all Alaska lands before they were conveyed to the state or Native corporations. The BLM information centers listed above have patent surveys for patented mining claims and case files for mining claims on BLM land in their district.

FILING AND MAINTAINING MINING CLAIMS

Claims on State Land

Mining claims on state land must be recorded at the appropriate Recorder's Office within 90 days of the date the claim is posted. At that time, the annual rental payment for the new state claim also must be paid. The DNR Recorder's Offices and the Public Information Centers and Division of Mining & Water Management (DMWM) offices have information about posting and filing requirements, annual rental and labor requirements, and location certificate recording forms for state claims. Fact sheets that outline the requirements and critical dates also can be found on the Internet at http://www.dnr.state.ak.us/mine_wat. The map on page 10 shows the Recording Districts and

Recorder's Office locations. Addresses and contact information for the Recorder's Offices, Public Information Centers, and DMWM offices are included in Appendix B. The Annual Service Directory and Handbook published by the Alaska Miners Association includes information about mining claims, permits, and key dates for miners (for paying assessments, license fees, etc.) for state and federal lands.

Claims on State-Selected Land

State-selected and Native-selected lands (see the explanation of these terms under *Land Status*) are closed to *federal* mining claims; however, these lands remain the property of the federal government until they are conveyed to the state or Native corporation. State mining claims can be staked on state-selected land, and pre-existing federal claims can be converted to state claims, but the claimant's right to possess and extract locatable minerals under state law does not begin until the state receives title to the land. To complicate matters further, the state was allowed to select 25 percent more land than it will ultimately receive title to, and some lands have been selected by more than one entity. The DNR Public Information Centers have fact sheets that outline the issues involved in mining and in converting federal

Claim post, Nome, Alaska, 1906. VF-Mining, Seward Peninsula, Accession no. 64-11-25, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.



MINING RENTS AND ROYALTIES

EXPLORATION INCENTIVES

PERMITTING FOR MINING AND EXPLORATION

claims to state claims on state-selected land. Contact the Division of Mining & Water Management for further information.

Claims on Federal Land

Mining claims on federal land in Alaska must be recorded within 90 days of posting with the Bureau of Land Management at the Alaska State Office in Anchorage unless the claim is located in the Northern District. Northern District claims must be recorded at the BLM Northern Field Office in Fairbanks. In addition, all claims on federal land in Alaska also must be recorded at the appropriate state Recorder's Office within the same 90-day period (see *Claims on State Land* above). A brochure titled "Mining Claims and Sites on Federal Lands" is available from the BLM Public Information Center in Anchorage. This brochure has detailed information about requirements, procedures, and fees for recording claims on federal land, and about annual rental and labor on federal claims. This brochure also is available on the Internet at <http://imcg.wr.usgs.gov/usbmak/mngindex.html>. Contact the BLM public information offices listed in Appendix B for more information.

Informational fact sheets about rents, royalties, and annual labor for mining claims and activities on state land are available at the Alaska DNR public information centers (see Appendix B for addresses), and some are available on the Internet at http://www.dnr.state.ak.us/mine_wat. For further information, contact the DMWM Property Management Section at the address listed in Appendix B. The BLM brochure "Mining Claims and Sites on Federal Lands" described above under *Claims on Federal Land* contains some information about annual labor for federal mining claims. For further information, contact BLM at the address listed in Appendix B.

The state of Alaska has established a program designed to stimulate new mineral exploration in Alaska. The Exploration Incentive Credit Program was authorized in 1995 under Alaska Statute AS27.30.010–27.30.099. Under this program, approved expenditures from certain exploration activities can be applied against future state mining license tax, corporate income tax, or state royalties for mine production resulting from the exploration activities. The DNR Public Information Centers have a fact sheet about this program, and a summary of credits accepted under this program can be found on the Internet at http://www.dnr.state.ak.us/mine_wat. For further information, contact DMWM at the address listed in Appendix B.

The DNR Public Information Centers have fact sheets that cover many aspects of permits for exploration and mining in Alaska. The Alaska Miners Association includes a section on permitting in its Annual Handbook and Service Directory. Section 2 includes a brief description of the agencies that issue some of the major permits for mining and exploration activities in Alaska.

The following fact sheets on permitting are available from the DNR Public Information Centers and from the DMWM. Some can be found on the Internet at http://www.dnr.state.ak.us/mine_wat:

- Federal Permits Required for Your Mining Activities
- Mining Permits Through the Annual Placer Mining Application
- Key Dates for Miners on State Land
- State and Federal Agencies that You May Need to Contact
- Placer Fact Sheet
- Settling Ponds
- Structures on Mining Locations
- Suction Dredging

Companies anticipating a future need to permit a large mine on state land in Alaska should contact the DMWM Large Mine Project Manager, Bob Loeffler. The position of Large Mine Project Manager was created in 1996 to help coordinate and expedite the permitting process. Companies are encouraged to begin this process early due to the long lead time required for many permits. For more information contact the DMWM in Anchorage at the address included in Appendix B.

Annual Placer Mining Application

The Annual Placer Mining Application (APMA) was designed to assist in the permitting process for mining activity in Alaska, including

placer mining, placer and hardrock exploration, and transportation of equipment. The APMA form is available from DNR Public Information Centers or the DMWM, and can be downloaded from the Internet. http://www.dnr.state.ak.us/mine_wat. Completed applications for mining on state land are submitted to DMWM for review and, upon approval, are forwarded to other state, federal, and local agencies involved in the permitting process. Operators on federal land are



Diamond core exploration drilling at Donlin Creek, Kuskokwim region, Alaska. Photo by D.J. Szumigala.

requested to have plans reviewed by the appropriate federal land management agency before submitting the APMA to the state. Many agencies will issue permits based on this application; however, separate application or notification may be required for certain agencies, such as the Army Corps of Engineers and EPA. For further information, contact the DMWM.

General Permits for Placer Mining and Exploration

The U.S. Environmental Protection Agency (EPA) and the Army Corps of Engineers have existing general permits that may be used for certain placer mining and exploration activities in Alaska. Obtaining coverage under one or more of these permits, if applicable, will require less time and paperwork than an individual permit. In some cases the permit may be issued on the basis of the Annual Placer Mining Application, although separate notification of the agency is required. These general permits are outlined below. Contact the appropriate agency for further information and to determine what permit, if any, is required for a specific operation.

The EPA has three General NPDES (National Pollutant Discharge Elimination System) Permits for Placer Mining Activities within Alaska. These include permits for small suction dredges (up to 4 inches in diameter), for medium suction dredges (between 4 and 8 inches in diameter), and for operators using traditional placer mining methods such as settling ponds and sluice boxes. Large suction dredge operations, types of mining activities not covered under general permits, and all placer mining activities in certain protected areas require individual permits. The small suction dredge permit can be obtained by filing a notice of intent with EPA or with the Department of Fish & Game. For information about these EPA permits, contact Cindi Godsey at EPA in Anchorage (1-800-781-0983 within Alaska or 907-271-6561).

The Army Corps of Engineers (COE) regulates the placement of fill material into streams and wetlands. Note that according to a 1998 court decision, suction dredging may no longer be regulated by COE, please contact the Corps for current information. A general COE permit for Alaska covers small-scale placer mining activities (typically less than 10 acres of total disturbance). A nationwide general permit may cover relatively low impact hardrock exploration activities. Advanced hardrock exploration, large placer mining operations, and activities that do not fall under either of these permit categories may require an individual permit. Placer miners and companies conducting exploration in and around wetlands and streams must notify the Corps of Engineers in writing that they wish to be authorized under the general or nationwide permit, and should submit a detailed plan of operations or copy of the completed APMA. The Corps may require additional detail. For further information, contact the Corps of Engineers at the address in Appendix B or call 1-800-478-2712 in Alaska.

Photo at right. Waiting outside the Mining Recorder's office at 27° below. Lulu Fairbanks Collection, Accession number 68-64-1562N, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

**MINING LAW AND
REGULATIONS**

Fact sheets about state and federal mining laws and regulations are available at the Alaska DNR and BLM public information offices (see Appendix B for addresses). For more in-depth information including complete up-to-date U.S. Code of Federal Regulations, Alaska Statutes, and the Alaska Administrative Code, check the Alaska Court System Law Libraries in Juneau, Anchorage, and Fairbanks, and ARLIS in Anchorage. See Section 6 for Internet sources of legal or regulatory information including searchable versions of state and federal codes and statutes.

**GENERAL MINING
DISTRICT
INFORMATION**

Historically, mining areas in Alaska were organized into formal mining districts, which had a role in regulating mining activities. This role has now been taken over by state and federal agencies; however, there are 12 remaining mining districts that function as political and informational organizations. Addresses and contact persons for the organized mining districts are given in Appendix B.

**HISTORIC MINING
CLAIMS AND
ACTIVITIES**

The State of Alaska Mining Claims KARDEX files at the DNR Public Information Center in Fairbanks have mining claim data for claims on state and federal land through the early 1980s. Recent records are incomplete. Also see the State Recorders' offices, the BLM's Land Information System (LIS), and the Alaska DNR Public Information Centers for information about historic (and current) claims on state and federal land.

Territorial Department of Mines Reports have personal narrative accounts of visits to active mining sites during Territorial days.



RECREATIONAL GEOLOGY



The Cobb indexes describe and reference the metallic and nonmetallic mineral resources of Alaska by quadrangle. These indexes are USGS Open File Reports written in the early 1980s; they formed the original basis of the Alaska Resource Data Files.

BLM Mineral Property Files consist of more than 7,000 files on individual Alaska mines, prospects, and mineral occurrences, both current and historic. Information in the files varies widely, and may consist of log books, original maps, reports, newspaper articles and press releases, correspondence, receipts and invoices, etc. The original files are housed at the Juneau Minerals Information Center, and a partial copy is housed at the BLM office in Anchorage. The public may not browse these files, but assistance is provided to locate information about a specific prospect or area. The numbering system for the files, and some of the information in them corresponds to the MAS/MILS database.

Alaska Mining History: A Source Document written by Virginia Doyle Heiner, contains an annotated bibliography on Alaska mining, and a section on Alaska mining communities. It is available at most libraries in Alaska.

Archives, Libraries, and Museums also are potential sources of historical information about mining. The major archives and museums in Alaska include the National Archives in Anchorage, the Historical Library at the Alaska State Library in Juneau, the Archives section of the Rasmuson Library at the University of Alaska Fairbanks, the Anchorage Museum of History and Art, the Last Chance Mining Museum, the Juneau-Douglas City Museum, and the Alaska State Museum in Juneau.

Recreational Mining and Gold Panning

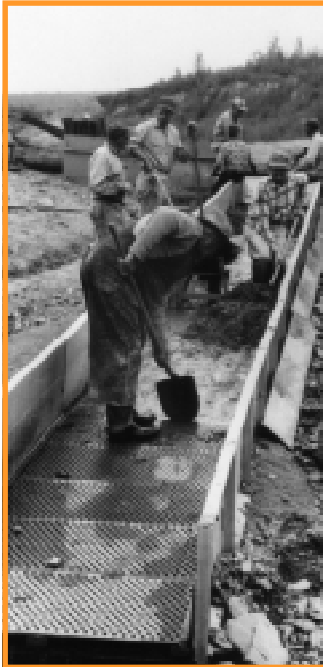
“Recreational mining” is defined for the purposes of this publication as amateur, casual, short-term mining for placer gold using non-mechanized equipment such as a gold pan or small backpackable sluice box or rocker box. In specific areas, small suction dredges may be allowed, but permits may be required depending on the site and the diameter of the suction hose.

All recreational mining activities must conform to applicable state and federal regulations and must respect established mining claims, private land ownership, and other restrictions. Note that there are many inholdings of private land and valid mining claims in national parks, recreational areas, and other federal and state special-use

Photo at left. Coarse gold from Ganes Creek, southwestern Alaska. Photo by D.J. Szumigala.

Photo upper right. Sluice box cleanup circa 1958. Earl Beistline Collection, Accession no. 85-93-369, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

Photo lower right. Sluice box cleanup at Colorado Creek, Ophir Quadrangle, Alaska. Photo by D.J. Szumigala.



lands. The best locations for the recreational miner or prospector are on public land set aside specifically for that purpose. Persons intending to mine, whether for recreation or as a profession, on land NOT specifically set aside for such purposes must be prepared to do extensive research to identify land ownership and existing claims, and specific restrictions, permits, or licenses required in the area of interest.

The following paragraphs identify sources of information about established recreational mining sites on state and federal land in Alaska.

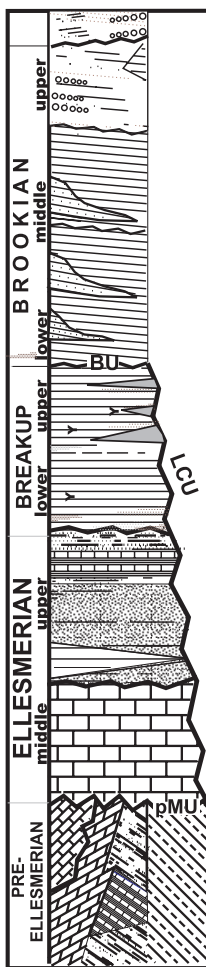
STATE LAND

Several sites on state lands in Alaska are set aside for public recreational mining use. There are legislatively designated Recreational Mining Areas at Caribou Creek along the Glenn Highway, and at Petersville along the Petersville Road west of Talkeetna. In addition, recreational gold panning is allowed in certain areas of Chugach State Park, Kenai State Parks, and Independence Mine State Historical Park. The DNR Public Information Centers have fact sheets that describe these areas and outline restrictions and permissible activities.

FEDERAL LAND

There is one site specifically set aside for recreational mining on land managed by BLM in Alaska. This four-mile stretch of Nome Creek in the White Mountains National Recreation Area northeast of Fairbanks is described in a pamphlet available from BLM. The Northern Field Office of BLM in Fairbanks also has a pamphlet describing sites for recreational mineral collection along the Dalton Highway. For more information about these sites, contact the BLM Field office in





Sample of stratigraphic column (DGGG Professional Report 118, A.C. Banet and T.C. Mowatt).

Fairbanks. A pamphlet identifying recreational mining sites in Chugach National Forest is available from the Alaska Miners Association, and on the Internet at <http://imcg.wr.usgs.gov/panning/index.html>. For further information about recreational mining in national forests, contact the forest headquarters.

RECREATIONAL MINING GUIDES

There are many published books and guides to Alaska recreational mining sites. Alaska bookstores and libraries generally have copies of several of these. Recreational miners who use the sites described in such publications must ensure that they do not trespass on valid mining claims or private property without the permission of the claimholder or landowner, and must make sure that their mining activities conform to state and federal regulations.

PROSPECTING AND PLACER MINING METHODS

The following are only a few of the many books published about prospecting and placer mining methods. They are relatively old, but the recreational or amateur prospector might find the information useful. Local libraries will likely have copies of these or similar books. To find additional resources, check with any of the libraries listed in this Guide, the local library or bookstore, or on-line library catalogs.

The Alaskan Prospector's Short Course in Introductory Prospecting and Mining, 7th Revised Edition, 1982, Leo Mark Anthony, School of Mineral Industry Publication, University of Alaska Fairbanks.

Handbook for the Alaskan Prospector, 1980, Ernest Wolff, Mineral Industry Research Laboratory, University of Alaska Fairbanks.

Placer Mining in Alaska, 1983, Donald J. Cook, Mineral Industry Research Laboratory, University of Alaska Fairbanks.

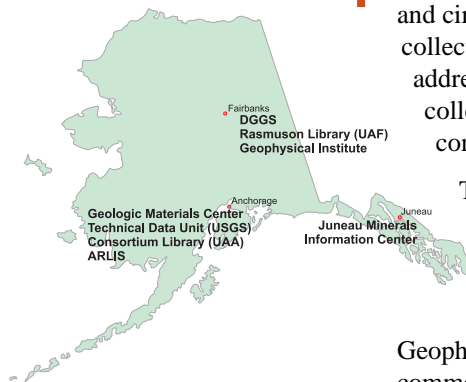
Field Trip Guides

There are a number of published field trip guides for Alaska. These include field trips along Alaska's highways and in remote areas, with themes that range from hardrock and placer mining, to coal, structural geology, engineering geology, fossils, geomorphology, etc. The Keith B. Mather Library at the UAF Geophysical Institute has compiled a bibliography of field trip guides in Alaska. This list is available from the Geophysical Institute Library, and is expected to be added to the Library web site at: <http://www.gi.alaska.edu>. The DGGG office in Fairbanks and the libraries listed in Section 5 also can help locate field trip guides.

Mineral Collecting Localities

The Chugach Gem & Mineral Society has published a guidebook of rock, mineral, and fossil localities in Alaska. This publication, titled *Alaska: A Guidebook for Rockhounds*, can be ordered from the Society at the address listed in Appendix B, or from Glacier House Publications in Anchorage at (907) 272-3286. This publication may be available at local libraries. The Chugach Gem & Mineral Society also arranges field trips throughout Alaska.

LIBRARIES, ARCHIVES, INFORMATION CENTERS, AND AGENCIES (Places to Access Publications, Maps, and Information)



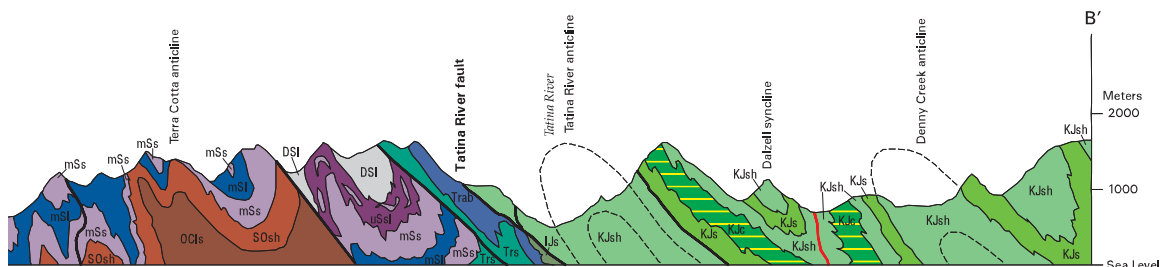
RESEARCH LIBRARIES

This section provides information about reference collections of publications, maps, and other documents about mining and geology in Alaska. These collections include major research libraries that catalog and circulate material, and special collections and archives, whose collections generally do not circulate. The description includes an address and map to help find the collection, a brief description of the collection, the catalog system, the hours and circulation policies, contact addresses, and other useful information.

The latter part of the section identifies USGS, BLM, and Alaska Department of Natural Resources information centers in Alaska where the public can find information about geology, land use, and mining in Alaska, and buy serials and maps published by the USGS and Alaska Division of Geological & Geophysical Surveys. Also included is advice about how to find commercial vendors of topographic maps and air photos.

The five libraries described below have large collections of geoscience information. In addition, most of their collections are cataloged and they have full-time reference staff who can assist in identifying references and finding other resources. The catalogs of these libraries are available on LASERCAT, an index to library holdings in the Pacific Northwest. This index is available at 43 public libraries around Alaska. In addition, most of the libraries can be reached on the Internet via SLED. The "Statewide Library Electronic Doorway," or SLED, provides on-line access to Alaska library, government, local community, and Internet information resources. The menu of library options available on SLED can be found at <http://sled.alaska.edu/Library.html>. ARLIS is part of the Anchorage Municipal Libraries Catalog, and the Geophysical Institute Library, Consortium Library, and Rasmuson Library are part of GNOSIS.

In addition to lending material directly to the public, the holdings of most of these reference libraries can be borrowed through municipal and local libraries via interlibrary loan. Check with the local library for details about interlibrary loan, and for assistance in accessing the catalogs of these libraries.



Sample of cross-section (DGGG Report of Investigations 97-14a, Bundtzen and others).

ARLIS HOURS

Monday–Friday
8:00 a.m.–5:00 p.m.

Alaska Resources Library and Information Services (ARLIS)

3150 C Street, Suite 100
Anchorage, Alaska 99503
Phone: (907) 272-7547
Fax: 271-4542

ARLIS is located in Anchorage on C Street between Benson Boulevard and 36th Street (see map). In the area of the library C Street is one-way southbound. Free public parking is available around the building.

GENERAL DESCRIPTION

ARLIS is a partnership of eight state and federal natural and cultural resource libraries in Anchorage. Under one roof, it houses collections formerly located at BLM, USGS, U.S. Fish & Wildlife Service, Alaska Department of Fish & Game, U.S. Minerals Management Service, National Park Service, Arctic Environmental Information and Data Center libraries, and the Oil Spill Public Information Center. ARLIS offers a comprehensive collection of books, reports, and journals about Alaska natural and cultural resources. It has collections on Alaska geology and mining engineering, a national set of USGS publications and Bureau of Mines publications, as well as two electronic indexes of journals—GEOREF and Water Resources Abstracts.

SERVICES

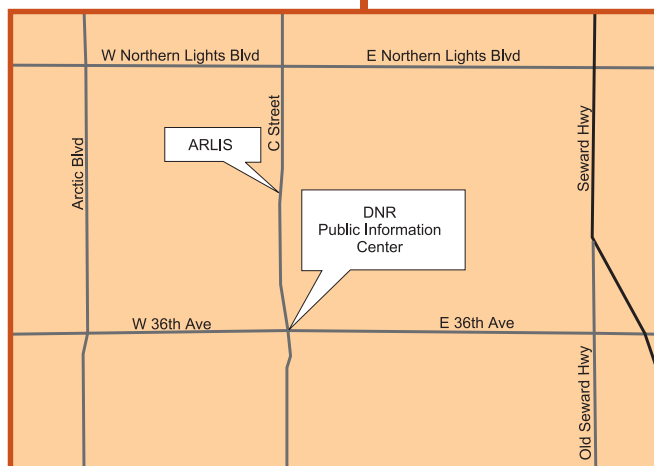
- Public Internet access
- Reference assistance
- GEOREF database, which indexes North American geologic literature from 1785 to present.
- Water Resources Abstracts database, which indexes pollution, and the geology of water from 1967 to present.
- The library circulates federal and state publications about all aspects of Alaska natural resources.

CATALOGING SYSTEM/ON-LINE CATALOG ACCESS

Available on LASERCAT and POLARPAC. ARLIS shares their on-line catalog with Anchorage Municipal Libraries. It can be accessed through the Statewide Library Electronic Doorway (SLED) at <http://sled.alaska.edu/Library.html>. Some holdings are in the process of being cataloged, and citations may not be available in these databases.

CIRCULATION

The library circulates most geology materials for 2 weeks. A valid Alaska driver's license or other suitable identification is required to check out material.



Consortium Library—University of Alaska Anchorage

3211 Providence Drive
 Anchorage, Alaska 99508
 Phone: (907) 786-1848
 Fax: (907) 786-6050

The library is on the campus of the University of Alaska Anchorage across from Providence Hospital. Parking in the lot to the east of the library is free during the summer, and on Fridays and weekends during the academic year. Parking meters are available during other times.

CONSORTIUM LIBRARY HOURS

During the academic year:

Monday–Thursday

7:30 a.m.–10:30 p.m.

Friday

7:30 a.m.–6:00 p.m.

Saturday

10:00 a.m.–6:00 p.m.

Sunday

Noon–6:00 p.m.

Contact the library for hours during the summer and between semesters.

GENERAL DESCRIPTION

The Consortium Library is a medium-sized university library, and contains the geology collections of Alaska Pacific University (APU) and University of Alaska Anchorage (UAA). The university has a minor in Geology and a limited number of upper-division courses, and consequently the geology collection is not comprehensive. The Consortium Library has a national set of USGS and Bureau of Mines publications.

SERVICES

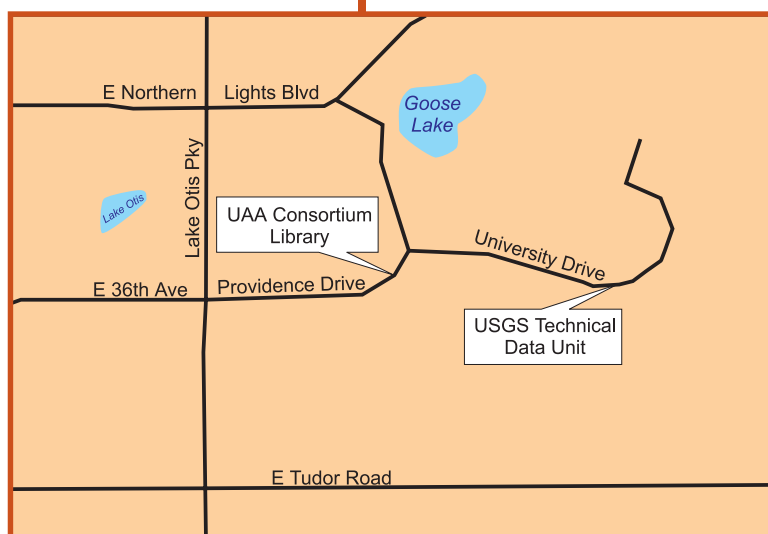
- Photocopiers are available for a variety of formats (paper, microfiche, microfilm)
- Reference assistance is available
- Public Internet access
- Dissertation abstracts database can be searched
- Interlibrary loan is not available

CATALOGING SYSTEM/ON-LINE CATALOG ACCESS

Available on LASERCAT and POLARPAC. In addition, all University of Alaska libraries are part of a statewide catalog system called GNOSIS, which is available to all Alaskans on the Statewide Library Electronic Doorway (SLED) at <http://sled.alaska.edu/Library.html>.

CIRCULATION

Circulation is free, but requires a \$60 fully refundable deposit and identification, such as a valid Alaska driver's license, from users who are not affiliated with APU or UAA. Material can be checked out for 4 weeks.



GEOPHYSICAL INSTITUTE LIBRARY HOURS

Monday–Friday
8:00 a.m.–5:00 p.m.

Keith B. Mather Library, Geophysical Institute, University of Alaska Fairbanks

903 Koyukuk Drive
P.O. Box 757320
Fairbanks, Alaska 99775-7320
Phone: (907) 474-7503
Fax: (907) 474-7290

The Geophysical Institute is in the northwestern part of the University of Alaska Fairbanks (UAF) campus. Visitor parking is available on the street in the mall area immediately in front of the Institute, or in the parking lot west of the museum (at the east end of the mall). In addition, UAF runs a free shuttle bus around campus during the spring and fall semesters, with stops at the Arctic Health Building (across the street from the Geophysical Institute) and in outlying parking lots.

GENERAL DESCRIPTION

The Keith B. Mather library is the support library for the Geophysical Institute at UAF. The Geophysical Institute conducts research in physics, space physics, geophysics, and geology and has graduate programs in these disciplines. The library collection reflects the research interests of these disciplines with emphasis on Alaska geology. The collection includes major holdings of the U.S. Geological Survey (USGS), U.S. Army Cold Regions Research and Engineering Laboratory (CRREL), and Alaska Division of Geological & Geophysical Surveys (DGGs) publications.

SERVICES

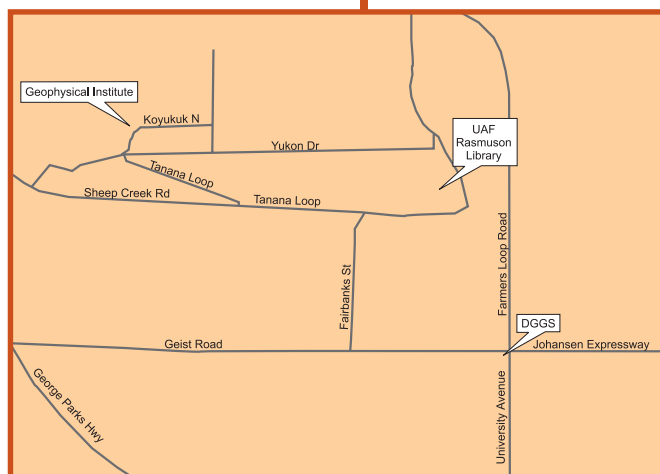
- Bibliographic/Reference assistance
- Access to GEOREF (indexes North American geoscience literature from 1785 to present) and Arctic and Antarctic bibliographies on CD-ROM
- Internet access
- Self-serve photocopying is available
- Assistance with obtaining materials is available for a fee.

CATALOGING SYSTEM/ON-LINE ACCESS

The catalog of the Keith B. Mather Library is available on LASERCAT, GNOSIS, POLARPAC, and SLED. The Internet address for SLED is <http://sled.alaska.edu/Library.html>, and GNOSIS can be accessed at the library, through SLED, or through the UAF Rasmuson Library home page (see address below).

CIRCULATION

Materials can be checked out if the user has a GNOSIS card from the University of Alaska. Material can also be borrowed through other libraries via interlibrary loan.



<http://www.uaf.edu/library/libweb/>

RASMUSON LIBRARY HOURS

Monday–Thursday

7:30 a.m.–10:00 p.m.

Friday

7:30 a.m.–7:00 p.m.

Saturday

10:00 a.m.–6:00 p.m.

Sunday

1:00 p.m.–10:00 p.m.

The location of the Rasmuson Library is shown on the map on page 56.

Elmer E. Rasmuson Library—University of Alaska Fairbanks

P.O. Box 756800

Fairbanks, AK 99775-6800

Phone: (907) 474-7224

Fax: (907) 474-6841

E-mail: fydir@aurora.alaska.edu

The Elmer E. Rasmuson Library is located in the eastern part of the University of Alaska Fairbanks (UAF) campus. Metered visitor parking is available immediately south of the library. A map showing available parking on and near campus can be found on the University of Alaska Fairbanks homepage at: <http://www.uaf.edu/DCC/CampusMap/>. Metered 2-hour visitor parking is available at the Signers' Hall Parking Lot, south of Rasmuson Library. For more information about UAF parking, call (907) 474-7838.

GENERAL DESCRIPTION

Rasmuson Library is the largest academic library in Alaska. It has a research-oriented collection to serve the UAF faculty and students, and the citizens of Alaska. In addition to books and periodicals, Rasmuson Library houses the Alaska and Polar Regions Department and the Government Documents/Maps Division, both of which have significant collections pertaining to mining and geology.

The Alaska and Polar Regions Department houses books, manuscripts, maps, archives, oral histories, and films, which document the past and present of Alaska and the polar regions. The Department also publishes an index of articles about Alaska from over 500 magazines and journals received by the library. For further information about the collection, call (907) 474-7261.

The Government Documents/Maps Division is part of the Federal Depository Library Program, and receives 58 percent of the documents that are available under this program. The collection is focused on natural resources and includes U.S. Geological Survey Bulletins, Open File Reports, and other USGS publications; U.S. Bureau of Mines publications; and U.S. Army Cold Regions Research Engineering Laboratory (CRREL) reports and publications. In addition, the Division has a large collection of geological and mineral maps. The collection from 1987 to the present is cataloged on GNOSIS. In addition, government documents bibliographic citations can be accessed on the Government Printing Office database, which is available on the Internet-based FirstSearch service. The FirstSearch service can be accessed by the public at the library. For further information about the collection, call (907) 474-7624.

SERVICES

- Reference assistance
- Photocopying is available at self-service copiers
- Electronic access to Compendex, Science Citation Index, Academic Abstracts, GEOREF, and Applied Science and Technology Index.

- Internet access
- Interlibrary loan is available for holdings that circulate. Periodicals and maps are not available for interlibrary loan.
- Assistance from specially-trained staff in the Government Documents office Monday–Friday 8:00 a.m.–5:00 p.m.

CATALOGING SYSTEM/ON-LINE CATALOG ACCESS

The library is part of the WLN cataloging utility. The library holdings can be found on LASERCAT, POLARPAC, GNOSIS (most complete), and SLED. The catalog can be accessed through the UAF Library web site at the address given above.

CIRCULATION

Materials can be checked out if the user has a GNOSIS card from the University of Alaska or a Fairbanks North Star Borough library card.

Many items can also be borrowed through other libraries via interlibrary loan.



Middle Devonian granite in Arrigetch Peaks, Schatka Mountains, Gates of the Arctic National Park. Photo by C.G. Mull.

<http://www.ndo.ak.blm.gov/juneau>

JUNEAU MINERALS INFORMATION CENTER HOURS

Monday–Friday
8:30 a.m.–4:00 p.m.
(closed noon–1:00 p.m.)

Juneau Minerals Information Center—Bureau of Land Management

100 Savikko Road
Mayflower Island
Douglas, Alaska 99824
Phone: (907) 364-1553
Fax: (907) 364-1574

The Minerals Information Center is located on Mayflower Island across Gastineau Channel from Juneau (see map). Free public parking is available in front of the building.

GENERAL DESCRIPTION

The Juneau Minerals Information Center, formerly the U.S. Bureau of Mines Library, is a specialized federal government information center under the U.S. Department of the Interior, Bureau of Land Management. It has collections on Alaska geology, mineral deposits and mining, mining engineering, and U.S. Bureau of Mines publications. It subscribes to a number of journals of interest to mining, and acquires new books on topics related to mining and minerals.

A terminal and technical help are available for the Land Information System (LIS), which contains current and historical information about claims and patent applications and conveyances on Federal land, and historical information about state, state-selected, and Native land. The Center also has land status maps that reference the information available in the MAS/MILS and LIS databases.

SERVICES

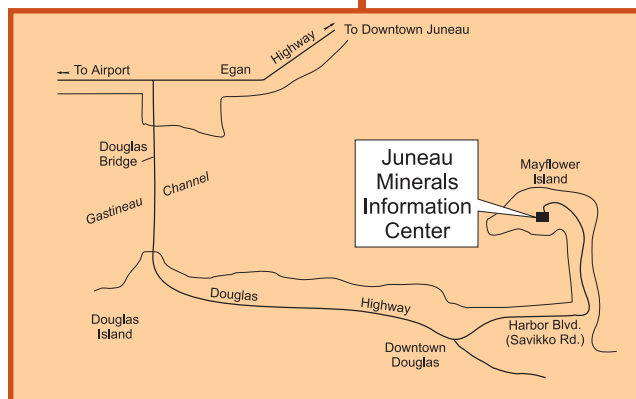
- Land status information via Land Information System (LIS)
- Access to mineral property files
- Access to Master Title Plats and Mineral Surveys for federal lands
- Terminal available for Internet access
- Interlibrary loans
- Reference assistance
- Professional geologic assistance
- Federal and state publications on Alaska
- Limited photocopying available at no charge

CATALOGING SYSTEM/ON-LINE CATALOG ACCESS

The library is cataloged using the Library of Congress Classification System with access through a card catalog and WLN (85 percent of the collection is cataloged, not including the government documents).

CIRCULATION

Most monographs and books are circulating and may be checked out for 3 weeks. Government documents and microfilm are non-circulating. Identification and a local contact address/telephone number generally are required to check material out.



SPECIAL REFERENCE COLLECTIONS

TECHNICAL DATA UNIT HOURS

By appointment only.

The location of the
Technical Data Unit is
shown on the map on
page 55.

The following three reference collections are not managed or catalogued in the same manner as the research libraries, and the collections do not circulate. However, these collections contain a wealth of information that may not be available elsewhere. The collections include: the reference collection at the Alaska Division of Geological & Geophysical Surveys (DGGS) offices in Fairbanks and a collection of core samples and related information at the DGGS Geological Materials Center in Eagle River; and a largely unpublished collection of maps, reports, and field notes at the U.S. Geological Survey's Technical Data Unit in Anchorage.

Technical Data Unit—U.S. Geological Survey

4200 University Drive, Room 46
Anchorage, AK 99508-4667
Phone: (907) 786-7457
Fax: (907) 786-7401
Contact: Jill Schneider (jschnidr@usgs.gov)

The Technical Data Unit is in the USGS building on the Alaska Pacific University campus. Limited free parking is available on the street directly in front of the building, and there is additional free parking behind the building near the Earth Science Information Center.

GENERAL DESCRIPTION

The Alaska Technical Data Unit (TDU) is a working archive of original geologic materials created by USGS and military personnel working in Alaska from 1891 to the present. A small reading room is an adjunct facility to TDU.

MAJOR COLLECTIONS

The Project History Files contain the geologic field notebooks, field maps and compilations, fossil identifications, and petrographic thin sections for completed USGS mapping projects in Alaska. The Subject Files contain unpublished reports, correspondence, and USGS historical materials. The Economic Mineral Files contain information pertaining to mineral commodities and strategic mineral resources in Alaska. Reference materials include Alaska topographic maps, geologic and thematic maps, and USGS Open File Reports (texts, maps, and reproducible figures).

The USGS Reading Room contains USGS and Alaska Division of Geological & Geophysical Surveys publications, unpublished dissertations on Alaska geology, periodicals and journals of local geologic interest and the Geological Society of America Decade of North American Geology (DNAG) series.

SERVICES

- Limited photocopying available
- Professional geologic assistance
- Research and reference assistance by appointment

CIRCULATION

The collection is non-circulating. Requests for extensive reproduction are handled by a commercial copy service.

[http://
www.dggs.dnr.state.ak.us](http://www.dggs.dnr.state.ak.us)

DGGS HOURS

Monday–Friday
8:00 a.m.–5:00 p.m.

The location of the
DGGS office is shown
on the map on page
56.

Alaska Division of Geological & Geophysical Surveys (DGGS)

794 University Avenue, Suite 200
Fairbanks, Alaska 99709-3645
Phone: (907) 451-5010
Fax: (907) 451-5050
E-mail: dggspubs@dnr.state.ak.us

The Alaska Division of Geological & Geophysical Surveys (DGGS) office is on the upper floor of the National Bank of Alaska building at the corner of Geist Road and University Avenue. Free parking is available in the parking lot surrounding the building.

GENERAL DESCRIPTION

DGGS maintains a reference library that is open to the public during normal working hours. It contains U.S. Geological Survey, U.S. Bureau of Mines, and DGGS publications, as well as books, journals, periodicals, theses, and reports on geology, geophysics, water resources, mining, and related topics.

SERVICES

- Limited photocopying is available
- DGGS publications available for purchase or in-house use
- Lists of DGGS publications by quadrangle, author, or subject
- Reference assistance
- Professional geologic assistance

CATALOGING SYSTEM/ON-LINE CATALOG ACCESS

The reference collection holdings are cataloged on a card file. Lists of specialized library collections are available for minerals, coal, and engineering. A bibliographic database of DGGS publications is available on site, and can be accessed on the Internet at <http://www.dggs.dnr.state.ak.us> (references are listed by quadrangle, and a searchable version can be downloaded), and can be searched by keyword at <http://imcg.wr.usgs.gov/cgi-bin/qbib5.cgi>.

CIRCULATION

The collection is available for use at DGGS, and does not circulate.



Redoubt Volcano, 3,108 m (10,197 ft) high, is one of the active volcanoes of the Cook Inlet region. Steam and volcanic gas rise above the summit crater of the volcano following the 1989 to 1990 eruptions. Iliamna Volcano, 55 km (34 mi) south, is on the skyline at left. View is to the southwest. Photograph by C. Neal.

GMC HOURS

Monday–Friday
8:00 a.m.–4:30 p.m.
(except State of Alaska
holidays)

Geologic Materials Center (GMC)

18205 Fish Hatchery Road
(P.O. Box 772805)
Eagle River, Alaska 99577-2805
Phone: (907) 696-0079
Fax: (907) 696-0078
E-mail: gmc@Alaska.NET
Contact: Dr. John W. Reeder, Curator

The GMC is located north of Anchorage in Eagle River.

GENERAL DESCRIPTION

The Geologic Materials Center is the rock library for Alaska. The collection includes core, cuttings, and surface rock samples from oil/gas wells and mineral prospects. The collection also includes slides (petrographic, vitrinite, and microfossil) and geochemical data derived from these samples.

The GMC is operated by the Alaska Division of Geological & Geophysical Surveys in cooperation with the U.S. Geological Survey, the U.S. Bureau of Land Management, the U.S. Minerals Management Service, and the Alaska Oil and Gas Conservation Commission. The GMC has most of the Alaska rock collections of these government agencies including the entire U.S. Bureau of Mines collection for Alaska. It also has collections donated by the oil industry (Forcenergy, Inc., Marathon Oil, OXY USA Inc., Phillips Petroleum Co., and Shell Oil Co.) and the metallic mineral industry (Anaconda, Battle Mountain Exploration, Cominco Exploration, and Kennecott Exploration).

SERVICES

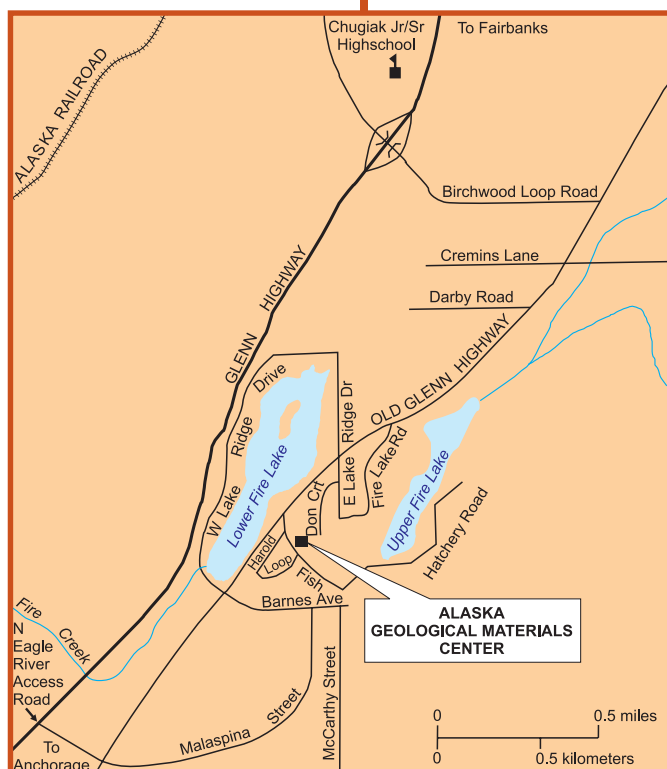
The collection is available for examination at the GMC Eagle River complex. Limited sampling for additional processing is possible with prior approval from the GMC Curator. GMC Data Reports and inventory files are available upon request. The Geologic Materials Center prints a monthly report that includes the listing of materials received at the GMC. This report is available upon request from the GMC, and is mailed to persons on the GMC mailing list.

CATALOGING SYSTEM

An inventory of the collection is available from the GMC. The collection has not been cataloged.

CIRCULATION

This is a non-circulating collection.



NATIONAL AND ALASKA STATE ARCHIVES

<http://www.nara.gov>

The National Archives and Records Administration (NARA) and the Alaska State Government maintain archives in Alaska to preserve and make available for reference the historically valuable records of federal and state agencies in Alaska. In general, these archives do not have much information on mining. However, some records may be useful in researching site history that may have resulted in environmental impacts (such as site drawings or as-builts), especially of federal installations. Some historical information about the mining industry in Alaska also may be available. Contact the archivists at the individual archives for further information.

U.S. National Archives and Records Administration— Alaska Region

654 West 3rd Avenue
Anchorage, Alaska 99501
Phone: (907) 271-2441
Fax: (907) 271-2442
E-mail: archives@alaska.nara.gov

Hours: Monday–Friday, 8:00 a.m.–4:00 p.m.
2nd Saturday of the month, 8:00 a.m.–4:00 p.m.

Alaska State Archives and Records Management

141 Willoughby Ave.
Juneau, AK 99801-1720
Phone: (907) 465-2270
Fax: (907) 465-2465
E-mail: archives@muskox.alaska.edu

Hours: Monday–Friday, 9:00 a.m.–5:00 p.m.



Incline hoist and pit at No. 15 Ophir, Wild Goose Mining Co., Seward Peninsula. VF Mining, Wild Goose, Accession no. 66-60-14, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

PUBLIC INFORMATION CENTERS

The location of the DNR Public Information Center in Anchorage is shown on the map on page 54.

The U.S. Geological Survey, U.S. Bureau of Land Management, Alaska Department of Natural Resources, and Division of Geological & Geophysical Surveys have information centers that are open to the public and are staffed with personnel trained to help the public access the information and services the agency provides. In most cases these information centers are the best places to contact for initial information and for referrals to specialists within the agency.

Alaska Department of Natural Resources Public Information Centers

The Alaska Department of Natural Resources Public Information Centers (PICs) have many fact sheets on land, land use, and mining and minerals in Alaska, and provide public access to databases of information about land status and mining claims on state lands. The PICs also have limited information about federal lands. Land status maps can be viewed and purchased at the PICs, and the staff can direct specific inquiries to the appropriate personnel within DNR.

FRONTIER BUILDING

3601 C Street, Suite 200
Anchorage 99503
Phone: (907) 269-8400
Fax: (907) 269-8901
TDD: (907) 269-8411
Hours: Monday–Friday
11:00 a.m.–5:00 p.m.

DNR BUILDING

3700 Airport Way
Fairbanks, AK 99709-4699
Phone: (907) 451-2705
Fax: (907) 451-2706
TDD: (907) 451-2770
Monday–Friday
8:00 a.m.–5:00 p.m.

In Juneau, the DNR Public Information Office has much of the same information available at the PICs, and can direct questions to the appropriate local office.

400 WILLOUGHBY AVENUE, 4TH FLOOR

Juneau, AK 99801
Phone: (907) 465-3400
Hours: Monday–Friday, 8:00 a.m.–5:00 p.m.

Bureau of Land Management Public Information Offices

The BLM public information offices have pamphlets, maps, and brochures about federal land and activities on federal land in Alaska. They also serve as the filing offices for federal mining claims in their districts and they maintain the mining claim case files. These offices provide access to and assistance with land status and mining claim searches, and can refer patrons with specific questions to the appropriate BLM personnel.

ALASKA STATE OFFICE

Public Information Center
222 West 7th Avenue, #13
Anchorage, AK 99513-7599
Phone: (907) 271-5960

FAIRBANKS SUPPORT CENTER

Public Room
1150 University Avenue
Fairbanks, AK 99709-3844
Phone: (907) 474-2251

<http://www.ak.blm.gov>

GLENNALLEN FIELD OFFICE

Public Room
P.O. Box 147
Glennallen, AK 99588
Phone: (907) 822-3217

JUNEAU MINERALS INFO CENTER

100 Savikko Road
Mayflower Island
Douglas, AK 99824
Phone: (907) 364-1553

Earth Science Information Centers (ESIC)—U.S. Geological Survey (Anchorage) and State of Alaska (Fairbanks)

The Earth Science Information Centers sell many USGS publications, including topographic maps, geologic and other thematic maps, publications, and reports. These locations also will accept mail orders.

4230 UNIVERSITY DRIVE

Anchorage, AK 99508-4664
Phone: 1-800-USA-MAPS
(from Alaska only)
Phone: (907) 786-7011
Fax: (907) 786-7050

GEOPHYSICAL INSTITUTE

GEO DATA CENTER/MAP OFFICE
903 Koyukuk Drive, Room 208
Fairbanks, Alaska 99775
Phone: (907) 474-6960
Fax: (907) 474-7290

Hours: Monday–Friday, 8:00 a.m.–5:00 p.m., except University holidays.

Alaska Division of Geological & Geophysical Surveys (DGGS)

The Division of Geological & Geophysical Surveys office in Fairbanks has all in-print DGGS publications and maps available for sale or free to the public. Photocopies are available for out-of-print publications, Territorial Department of Mines publications, and some USGS publications. Please note that DGGS does not have USGS topographic maps available for sale. The Division of Geological & Geophysical Surveys address and hours can be found in this section under *Special Collections*, and in Appendix B.

The National Technical Information Service (NTIS)

NTIS is the official source for government-sponsored U.S. and worldwide scientific, technical, engineering, and business-related information. Some publications of the former U.S. Bureau of Mines, and of the USGS can be ordered through the NTIS. See the NTIS web site, or contact the NTIS sales desk at 1-800-553-6847. To order via fax: (703) 605-6900.

<http://www.ntis.gov>

**WHERE TO BUY MAPS
AND AERIAL PHOTOS**

In addition to the USGS Earth Science Information Centers described above, topographic maps and some aerial photographs may be available from commercial vendors. Check the local yellow pages for “MAPS” or “PHOTOGRAPHERS, AERIAL.” Many outdoor sporting goods stores sell topographic maps—see “SPORTING GOODS.”

A list of businesses in Alaska that sell USGS topographic maps can be found on the U.S. National Mapping Information web site at <http://mapping.usgs.gov/esic/usimage/test/ak.html>.

**PROFESSIONAL
ORGANIZATIONS****Alaska Miners Association (AMA)**

The Alaska Miners Association promotes mining in Alaska and advocates the development and use of Alaska’s resources to provide an economic base for the state. AMA holds an annual convention in

Anchorage in the late fall, and regional conventions in Juneau and Fairbanks in alternate springs. The AMA publishes the Alaska Miner Journal, a monthly newsletter, and an annual Handbook and Service Directory that contains a wealth of current information about mining in the state. The AMA office in Anchorage has publications, pamphlets, and other general information about mining in Alaska. For more information, contact the Anchorage office at the address below, or the regional contacts in Fairbanks, Juneau, Kenai–Homer, Nome, or Denali at the addresses listed in Appendix B.

ALASKA MINERS ASSOCIATION
 3305 Arctic Boulevard, Suite 202
 Anchorage, AK 99503
 Phone: (907) 563-9229
 Fax: (907) 563-9225

<http://209.165.166.2/ags>

Alaska Geological Society (AGS)

The Alaska Geological Society (AGS) promotes interest in and understanding of geology and the related earth sciences, and provides a common organization for those individuals interested in the earth sciences. AGS publishes a monthly newsletter, holds monthly luncheons with speakers in Anchorage, sponsors short courses and symposia in the geosciences, publishes field guides, and provides community education.

For more information contact the AGS web site or:

Bob Swenson, AGS President
 P.O. Box 101288
 Anchorage AK 99510
 Phone: (907) 265-6808
 Fax: (907) 265-1608
 E-mail: ags@seclabs.com

<http://www.nwma.org>

Northwest Mining Association (NWMA)

The Northwest Mining Association supports and advances the mineral resource and related industries; represents and informs members on technical, legislative, and regulatory issues; disseminates educational materials related to mining; and fosters and promotes economic opportunity and environmentally responsible mining. NWMA publishes the Northwest Mining Association Bulletin, a monthly newsletter that consists of current mineral/mining industry affairs. The Northwest Mining Association Annual Convention and Exposition is held in early December in Spokane, WA.

For more information visit the NWMA web site or contact:

Northwest Mining Association
 10 North Post Street, Suite 414
 Spokane, WA 99201-0772
 Phone: (509) 624-1158
 Fax: (509) 623-1241
 E-mail: nwma@nwma.org

SOURCES OF INFORMATION ON THE INTERNET

See the Internet version of this Guide at <http://www.dggs.dnr.state.ak.us> for active links to these and other sites.

A significant amount of information about geology and mining in Alaska can be found on the Internet, and new information is added daily. Information on the Internet can be accessed from virtually anywhere, making it a vital resource for remote (and not-so-remote) areas of Alaska. Many Alaska libraries, including the research libraries listed in Section 5, offer free Internet access and assistance to the public.

This section lists a small fraction of the many Internet sites of interest to geology and mining in Alaska. Additional sites can be accessed through links from the sites listed here, or can be found through the various search engines on the Internet. In deciding which of the many available sites to list in this section, precedence was given to the following:

- sites of federal and state agencies that generate or distribute geologic or mining information
- sites of geologic and mining professional organizations
- sites that have many links to other geology/mining sites
- sites that have legal or regulatory information related to natural resources.

A limited number of commercial sites are included. While some of these sites charge for services, they also have information and links available at no charge. Listing of commercial sites in this publication does not imply endorsement of their paid services.



Cross-bedded, fluvial sandstone of the Lower Cretaceous Nanushuk Group. Dugout Syncline, DeLong Mountains Quadrangle, north-western Alaska. Photo by R.R. Reifensstuhl.

INTERAGENCY MINERALS COORDINATING GROUP (IMCG)

Public Minerals Data for Alaska	http://imcg.wr.usgs.gov IMCG Home Page—Links to searchable Alaska mineral information and databases by quadrangle and by mineral locations, digital raster graphics files for Alaska, and the Alaska Resource Data Files (ARDF).
Digital Index of Geologic Information on Alaska	http://imcg.wr.usgs.gov/digi.html Comprehensive bibliography of the mineral resources of Alaska. Lists DGGs and U.S. Bureau of Mines publications on Alaska and many U.S. Geological Survey publications by quadrangle.
Alaska Mineral Locations Database	http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi The same bibliography searchable by key words or SQL statement.
	http://imcg.wr.usgs.gov/dem.html Based on the U.S. Bureau of Mines' Minerals Availability System (MAS) and Minerals Industry Locator System (MILS). Displays MILS locations by quadrangle, and contains a link to a Mineral Location Report for each location.
	http://imcg.wr.usgs.gov/cgi-bin/qalaska3.cgi Searchable by commodity or type.
	http://imcg.wr.usgs.gov/shapegen.html Downloadable shape files by quadrangle, mining district.
Mining Claims and Sites on Federal Land	http://imcg.wr.usgs.gov/usbmak/mngindex.html Pamphlet of general information about locating, claiming, and maintaining claims on Federal land (published by BLM).
Gold Panning in the Chugach National Forest	http://imcg.wr.usgs.gov/panning/index.html A U.S. Forest Service brochure with suggested sites for gold panning in the Chugach National Forest on the Kenai Peninsula.

UNITED STATES GEOLOGICAL SURVEY (USGS)

USGS Home Page	http://www.usgs.gov General gateway to USGS activities and publications. A wealth of information about USGS publications, including some publications that can be downloaded.
USGS Web Servers	http://geology.usgs.gov/gdservers.html Has links USGS web servers, which are too numerous to list here. Also includes a link to a search engine for searching the servers.
USGS Library Catalog	http://library.usgs.gov/onlinext.html#Begin Provides access to the catalog of USGS regional libraries and includes all material acquired since 1979. These libraries have extensive collections of geologic literature. Access is by Telnet, and instructions are provided for establishing a Telnet session, searching the database, and requesting information about pre-1979 holdings. A graphical interface is planned for the future.
USGS Alaska Geologic Mapping	http://tundra.wr.usgs.gov/wrmrsAK/webmap.htm#pe Lists all geologic mapping for Alaska by quadrangle. Includes USGS and DGGs maps and maps published in journals, etc.

USGS Current
Alaska Research

<http://tundra.wr.usgs.gov/wrmrsAK/bintro.htm#a6>

Since 1988, USGS's Alaska Section has produced a yearly publication on current research. Site contains a list and abstracts of articles in these publications.

Alaska Resource
Data Files (ARDFs)

<http://www-mrs-ak.wr.usgs.gov/ardf>

ARDFs are currently being updated quadrangle by quadrangle. Completed quads are available for use, and additional quads are under revision and will be available shortly.

USGS Minerals Program

<http://minerals.er.usgs.gov>

Links to downloadable USGS publications including aeromagnetic mapping of Alaska.

USGS Mineral
Commodity Information

<http://minerals.er.usgs.gov/minerals>

USGS Mineral Commodity Information database.

<http://minerals.er.usgs.gov:80/minerals/pubs/mcs/>

Yearly Mineral Commodity Summary.

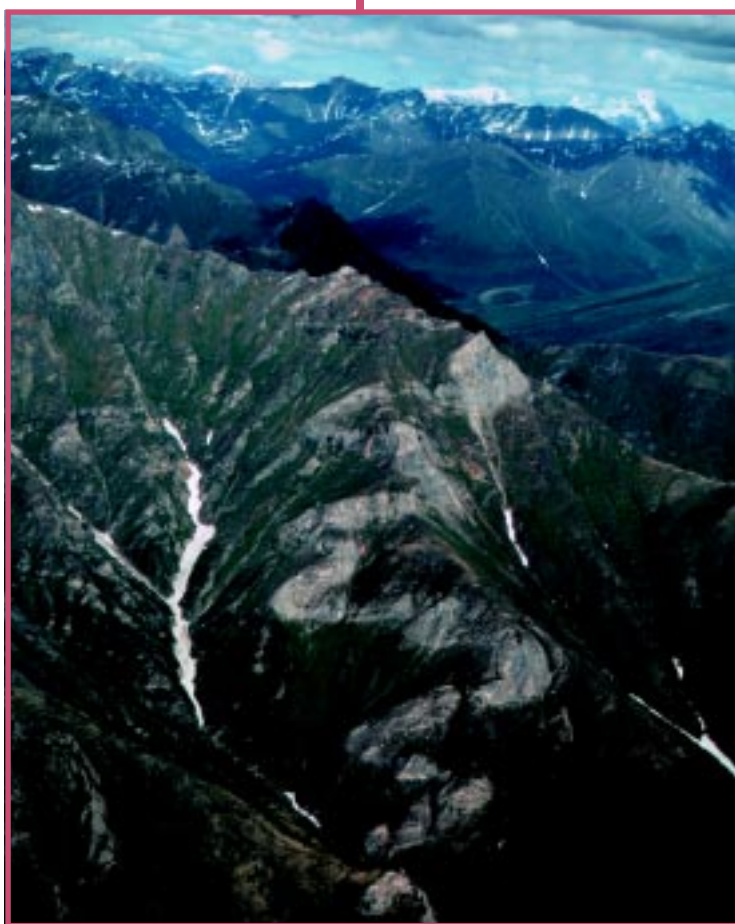
<http://minerals.er.usgs.gov/minerals/pubs/commodity/mis.html>

Monthly/quarterly updates.

USGS New Publications list

<http://pubs.usgs.gov/publications/index.html>

List of recent serials published by the USGS. Updated monthly. Also available in paper copy.



Isoclinal folds in Lower Paleozoic limestone, southern Brooks Range schist belt. The cliffs are about 1,500 ft high. Photo by C.G. Mull.

USGS Digital Raster
Graphics files for Alaska

<http://imcg.wr.usgs.gov/drg/index.html>

Lists and links by quadrangle to DRG files available from the Alaska Geospatial Data Clearinghouse.

Alaska Geospatial
Data Clearinghouse

<http://agdc.usgs.gov>

Links to a wealth of datasets supplied by a number of state and federal agencies operating in Alaska. Georeferenced theme maps are available that can serve as base maps for various environmental or resource evaluation studies.

USGS National Geologic
Map Database

<http://ngmsvr.wr.usgs.gov>

Database of all published USGS maps. Can be searched by state, quadrangle, type of map, etc.

USGS National
Mapping Information

<http://mapping.usgs.gov>

Information about map availability and mapping programs.

Earth Resource Observation
Systems (EROS) Data Center

<http://edcwww.cr.usgs.gov>

Gateway to the extensive data holdings administered by the USGS EROS data center. Lists remote sensing data and information available electronically and in hard copy. Also contains information about raw data from the National Uranium Resource Evaluation (NURE) program. Searchable.

AK Remote Sensing Imagery

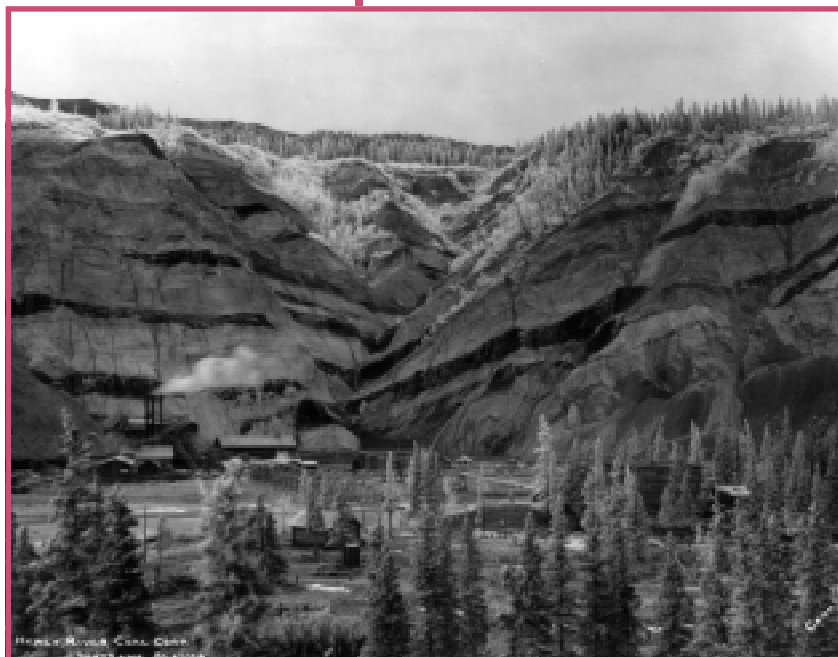
<http://www-eros-afo.wr.usgs.gov>

Earth Resource Observation Systems (EROS) Alaska field office.

USGS Mines FaxBack System

<http://minerals.er.usgs.gov/minerals/pubs/faxback.html>

This automated fax system makes most USGS Minerals Information publications available to the public as soon as they are released and sent to the printer. The web site explains how to use the system.



Coal seams and workings, Healy River Coal Company, Suntrana, Alaska. VF-Mining, Healy R. Coal, Accession no. 68-50-166, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

Alaska Aeromagnetic Data	http://minerals.cr.usgs.gov/publications/ofr/97-520/alaskamag.html Allows viewing and data retrieval for a compilation of the best publicly available aeromagnetic data spanning much of the state of Alaska. Plot files (at 1:2,500,000 and 1:500,000 scale) may be downloaded as well as binary data files.
	http://wrgis.wr.usgs.gov/docs/gump/morin/alaska/akmagindex Bibliography of aeromagnetic data and reports on Alaska including those from the USGS, DGGs, and other sources.
Alaska GravityData	http://wrgis.wr.usgs.gov/docs/gump/morin/alaska/gravity/gravity.html Allows viewing and data retrieval for USGS-compiled gravity data spanning much of Alaska.

BUREAU OF LAND MANAGEMENT (BLM)

BLM Alaska Home Page	http://www.ak.blm.gov Links to web pages for the Alaska State Office, and field offices in Fairbanks, Anchorage, Glennallen, and Juneau (Minerals Information Center), which describe past and ongoing BLM activities and other information.
BLM Northern Field Office	http://aurora.ak.blm.gov Information about management areas and programs of BLM's Northern Field Office in Fairbanks.
Federal Mining Claims	http://imcg.wr.usgs.gov/usbmak/mngindex.html Brochure contains information about establishing and maintaining mining claims on federal land.
BLM Minerals & Programs	http://www.ak.blm.gov/ak930/minrals.html Information about minerals programs and research in Alaska.
Former Bureau of Mines Programs	http://www.ak.blm.gov/amrt/index.html Describes the past, present, and future of offices, staff, and programs transferred from the former Bureau of Mines in Alaska.
BLM Alaska Reports	http://www.ak.blm.gov/affairs/sci_rpts.html Bibliography of technical, open file, or general scientific reports of the Bureau of Land Management in Alaska. Includes reports on geology, mining, wildlife, habitat, and other management issues.

ADDITIONAL FEDERAL AGENCIES

U.S. Army Corps of Engineers	http://www.usace.army.mil/alaska Alaska District home page. General information.
U.S. Forest Service	http://www.fs.fed.us/r10 Alaska Region home page. General information.
U.S. Fish & Wildlife Service	http://www.r7.fws.gov Alaska Region home page. General information.
National Park Service	http://www.nps.gov Mostly general information about national parks and monuments.
U.S. Minerals Management Service	http://www.mms.gov/alaska Steward of the mineral resources on the Outer Continental Shelf (OCS), specifically oil and gas. Site contains general information about MMS, on-line publications, etc.

U.S. Environmental
Protection Agency

<http://www.epa.gov/region10>

EPA Region 10 home page. General information and contacts.

National Geophysical
Data Center

<http://www.ngdc.noaa.gov/ngdc.html>

The National Geophysical Data Center (NGDC) distributes data spanning the globe, but they have a number of data sets that cover Alaska. In particular they have extensive holdings of marine data sets including bathymetry.

USDA Natural Resources
Conservation Service

<http://ak.nrcs.usda.gov>

Formerly the Soil Conservation Service. Information about Alaska soil surveys, NRCS programs, etc.

National Spatial
Reference System

http://www.ngs.noaa.gov/products_services.html

Survey control points and other spatial reference data.

FEMA Floodplain Maps

<http://www.fema.gov/MS>

Federal Emergency Management Agency Map Service Center—
Information about floodplain maps.

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES (DNR)

DNR Home Page

<http://www.dnr.state.ak.us>

Links to DNR division home pages including the following:

Division of Geological &
Geophysical Surveys (DGGS)

<http://www.dggs.dnr.state.ak.us>

DGGS home page. Contains general information, contacts, link to a listing of DGGS publications by quadrangle.

Division of Mining &
Water Management (DMWM)

http://www.dnr.state.ak.us/mine_wat/index.htm

DMWM home page. Contains general information, public notices related to mining, downloadable placer mining application, fact sheets on staking and recording requirements for prospecting sites, mining claim rental fees, royalty payments and requirements, etc.

Public Information
Center (PIC)

<http://www.dnr.state.ak.us/info.htm>

DNR Public Information Center home page. Contains address and phone numbers of the Center in Anchorage.

Division of Oil & Gas

<http://www.dnr.state.ak.us/oil/index.htm>

Division of Oil & Gas home page.

Resource Assessment
and Development Section

<http://www.dnr.state.ak.us/land/plan.htm>

Lists area and management plans available for Alaska. Explains what they are and how to find them.

Land Record
Information Section (LRIS)

<http://www.dnr.state.ak.us/ssd/gisdata/index.htm>

GIS Database Summary. An on-line catalog of commonly requested digital mapping information from the LRIS Geographic Information System. Provides an abstract of where the data originated, significant changes since acquisition, general scale, and other pertinent facts.

PROFESSIONAL ORGANIZATIONS AND MINING NEWS

Alaska Geological
Society (AGS)

<http://209.165.166.2/ags>

General information about AGS, downloadable newsletter, meeting information, and links to geology-related sites.

Society of Economic Geologists (SEG)	http://pangea.stanford.edu/ODEX/EG/econgeol.htm SEG membership and meeting information. Contains links to many geology-related sites.
Geological Society of America (GSA)	http://www.geosociety.org/index.htm General information about GSA.
Society of Mining Engineers (SME)	http://www.smenet.org Subscription and meeting information, links to related sites.
American Institute of Mineral Engineering (AIME)	http://www.idis.com/aime Membership information, newsletter, meeting schedules, etc.
Northwest Mining Association (NWMA)	http://www.nwma.org General, membership, and meeting information, links, etc.
Northern Miner	http://www.northernminer.com Subscription site for an on-line newsletter; but it also has some free information including links to mining companies.
NewsWire (news service)	http://www.newswire.ca Free service that posts news releases from mining companies (and other companies). Can be searched by industry, company name, date, etc., and you can sign up for selected releases to be posted to your e-mail account.
British Columbia Chamber of Commerce	http://www.bc-mining-house.com Information about mining and geology in B.C., Canadian mining issues, as well as links to the B.C. Geological Survey and publications and many other sites of geologic and mining interest.



Ice calving from the face of the surging Hubbard Glacier, Russell Fiord and Disenchantment Bay, St. Elias Range north of Yakutat. Photo by C.G. Mull.

UNIVERSITIES, LIBRARIES, AND ARCHIVES

SLED (Statewide Library Electronic Doorway)	http://sled.alaska.edu/Library.html Offers on-line access to Alaska library, government, local community, and Internet information resources. Also contains instructions to configure your browser to access these resources.
UAF Geophysical Institute (UAFGI)	http://www.gi.alaska.edu Contains information about UAFGI programs, research, and publications, plus links to other UAF geology sites.
UAF Rasmuson Library	http://www.uaf.alaska.edu/library/libweb General information about the library, links to GNOSIS (on line catalog) and SLED.
UAF Geology and Geophysics	http://www.uaf.edu/geology Information about geology and geophysics programs, faculty, and research at UAF.
UAF School of Mineral Engineering	http://mineral.uafsmc.alaska.edu Information about the mining and geological engineering and petroleum engineering programs, faculty, research at UAF, and some related links. Bibliography of MIRL publications—mostly concentrated on coal and oil/gas.
Mineral Industry Research Laboratory (MIRL)	http://mineral.uafsmc.alaska.edu/linge/mirl.htm General information about MIRL and contact names and phone numbers for MIRL faculty.
UAA Consortium Library	http://www.uaa.alaska.edu/lib Information about the library, circulation, hours, links to on-line catalogs, and SLED.
BLM Juneau Minerals Information Center	http://www.ndo.ak.blm.gov/juneau/ General information about Minerals Information Center collections, new acquisitions, land status, services, and directions to the Center.
International Archives of Economic Geology	http://www.uwyo.edu/ahc/iaeg/iaeg.htm Home page of the International Archives of Economic Geology at University of Wyoming, which houses the Anaconda Collection and other mining company and related professional collections. The site lists the collections, and has general and subscription information.
National Archives	http://www.nara.gov National Archives and Records Administration. General information about the National Archives and locations/hours of regional archives.

ALASKA REGIONAL NATIVE CORPORATIONS

Ahtna, Incorporated	http://www.ahtna-inc.com At this time, this site mainly has general information and information about subsidiaries.
Aleut Corporation	http://www.aleutcorp.com At this time, this site mainly has shareholder information.
Arctic Slope Regional Corporation	http://www.asrc.com At this time, this site mainly has shareholder information, and contact information for Lands and Natural Resources personnel.

Bering Straits Native Corporation	http://www.beringstraits.com The BSNC web site Land and Resources page has contact names and addresses, and information about general geology, advanced mineral prospects, and forming exploration agreements for BSNC land.
Bristol Bay Native Corporation	http://www.touchngo.com/BBNC At this time, this site mainly has general information and contact names.
Calista Corporation	http://www.calistacorp.com Home page for the Land and Natural Resources department, with contact names and addresses, and information about advanced mineral prospects on Calista land.
Chugach Alaska Corporation	http://www.chugach-ak.com At this time, this site has contact information and information about business ventures.
Cook Inlet Region, Incorporated	http://www.ciri.com At this time, this site mainly has shareholder information, and contact information for Lands and Natural Resources personnel.
Doyon, Limited	http://www.doyon.com At this time, this site mainly has shareholder and subsidiary information.
Koniag, Incorporated	http://www.koniag.com At this time, this site mainly has shareholder information, and contact information for Lands and Natural Resources personnel.
NANA Regional Corporation	http://www.NANA-online.com At this time, this site mainly has general corporation and contact information.
Sealaska Corporation	http://www.sealaska.com At this time, this site mainly has general corporation, shareholder, and contact information.

REGULATORY AND LEGAL INFORMATION

Code of Federal Regulations	http://www.access.gpo.gov/nara/cfr/cfr-table-search.html Code of Federal Regulations (CFRs) downloadable, and searchable by keyword and citation number. Updated yearly.
Mining Law (Info Mine)	http://www.info-mine.com/technomine/lawmine Regulations page of Info-Mine (a commercial mining resource page). Contains some free information including links to Code of Federal Regulations, MSHA (Mine Safety and Health Administration), and other mining law sites.
Alaska State Government	http://www.state.ak.us Links to state agencies, state statutes, and general information about Alaska.
Alaska State Legislature	http://www.legis.state.ak.us/leghome.htm Links to Alaska regulations, and information about pending and proposed legislation.

Alaska Administrative Code	http://www.legis.state.ak.us/cgi-bin/folioisa.dll/stattx97 Alaska Administrative Code (AAC) text, which can be searched by keyword, phrase, etc.
Alaska State Law	http://www.alaska.net/~akctlib/aklegal.htm Alaska Court System page. This site covers Alaska law, regulation and court cases, and has numerous related links.
Mining/Resources Law	http://www.rmmlf.org/othrsts.htm Rocky Mountain Mineral Law Foundation web site. Links to sites connected to mining and natural resources law.
Federal Law	http://law.house.gov/1.htm U.S. House of Representatives Internet Law Library. Contains links to pages for Federal laws, including the Code of Federal Regulations (CFR) and Federal statutes.
Federal Law	http://www.alaska.net/~akctlib/fedlegal.htm Alaska Court System page. Covers federal law, regulations and court cases that affect Alaska.



Ascending eruption cloud from Redoubt Volcano. View is to the west from the Kenai Peninsula. Photo by J. Warren, used with permission.

GEOLOGIC/MINERALS INFORMATION OUTSIDE OF ALASKA

INTERNATIONAL ARCHIVE OF ECONOMIC GEOLOGY (IAEG)

<http://www.uwyo.edu/ahc/iaeg/iaeg.htm>



Field work in the Endicott Mountains south of Anaktuvuk Pass. Limestone cliffs are composed of Mississippian-Lower Pennsylvanian Lisburne Group. Photo by C.G. Mull.

Several archives and libraries outside of Alaska have significant collections that may be of interest in geologic and mining endeavors in Alaska, and also in historical mining research. Several of these collections are listed below. Libraries at large universities also may have collections of information about Alaska. Catalogs of most major universities can be accessed on the Internet, and some materials can be obtained by interlibrary loan at libraries in Alaska.

American Heritage Center, University of Wyoming

This modern archival research facility collects, preserves, and makes available original papers of individuals and corporations that have contributed to the field of economic geology. Researchers utilize this facility for worldwide historical and scientific material in exploration, environmental science, geology and the extractive mineral industry. The collections are primarily original and unpublished geologic maps, field notes, correspondence, reports, stratigraphic analyses, assay results, claim plats, and related material.

IAEG staff provides a full range of archival reference and research services. Photocopying and scanning services are available. Finding aids and inventories of the collection can be purchased for a nominal fee.

In addition to the extensive Anaconda Geologic Documents Collection (a printout of the Anaconda Collection contents is available at the UAF Geophysical Institute), the following collections may be of relevance to mineral exploration in Alaska:

- *Eliot Blackwelder (1901–1964)*
geologist
- *John E. Burton (1853–1917)*
mining financier and businessman
- *Charles R. Butler (1893–1990)*
geologist and mining consultant
- *William Crawford Douglass (1926–1974)*
mining engineer, Hedley Ltd., authored a History of the Kennecott Mines, Kennicott, Alaska
- *Frederick L. Knouse (1940–)*
mining engineer
- *Robert C. Lafferty (1935–1975)*
geologist, made first map of North Slope
- *E.E. Lonabaugh (1900–1940)*
Alaska–Wyoming Oil Company legal case files
- *Alan Probert (1925–1986)*
mining engineer, mining historian, film footage of Alaska
- *Glen M. Ruby (1903–1953)*
engineer and geologist, exploration work in Naval Petroleum Reserve No. 4 (Northern Alaska)
- *Henry Dewitt Smith (1910–1970)*
managed Kennecott Mine 1914
- *Josiah Edward Spurr (1888–1944)*
USGS geologist, photo album of Alaska

USGS LIBRARIES



USGS PHOTOGRAPHIC LIBRARY

Photo above. These fossils, commonly called "Goof Balls," are a floating hydrozoan (*Heterastriidium conglobatum*) that lived about 200 million years ago. They are an important indicator fossil for the end of the Triassic. Chulitna mining district, Alaska. Photo by K.H. Clautice.

For more information, contact:

IAEG Manager
American Heritage Center
University of Wyoming
P.O. Box 3924
Laramie, WY 82071
Phone: 307-766-3704
Fax: 307-766-5511

The USGS libraries in Reston, VA, Menlo Park, CA, Denver, CO, and Flagstaff, AZ have extensive collections of geologic literature in addition to all USGS publications. All materials acquired since 1979 are included in an electronic catalog. Pre 1979 holdings are cataloged in card files. The electronic catalog can be accessed through the web site listed below via Telnet. Instructions are provided on the web site for establishing a Telnet session, searching the database, and requesting items. A graphical interface is planned for the future. Interlibrary loan of materials from the USGS libraries can be requested through local libraries.

In January 1996 the USGS libraries in Reston and Denver received most of the collections from the former U.S. Bureau of Mines libraries in Washington, DC, and Denver, respectively. The Minerals Information Collection in Reston contains the full run of Bureau of Mines publications issued between 1910 and 1995. The Bureau of Mines collection will be searchable through the USGS Library on-line catalog in 1998.

USGS Library Online Catalog Web Page at <http://library.usgs.gov/onlinext.html#Begin>

Contact phone numbers for the USGS libraries are :

Reston: (703) 648-4302	Denver: (303) 236-1000
Menlo Park: (650) 329-5027	Flagstaff: (520) 556-7008

The USGS Photographic Library, located in Denver, CO, is an archive of still photographs dating from the 1870s and taken by USGS scientists as part of their field studies. The works of pioneer photographers W.H. Jackson, T.H. O'Sullivan, C. Watkins, J.K. Hillers, T. Moran, A.J. Russell, E.O. Beaman, and W. Bell are represented in the collection. Topics include portraits of USGS personnel, earth science subjects, 19th century mining operations, and personnel at work.

Reproductions (prints, transparencies, and negatives) may be ordered from the library at cost. Because the collection consists of more than 300,000 photographs, researchers are encouraged to visit in person to make their selections. Three photo CD-ROMs that provide an overview of the collection are available for purchase. Topics covered include earthquakes, volcanoes, geologic hazards and other phenomena, historical mining operations in Colorado and Utah, and earth science photographs.

Contact phone number for the USGS Photographic Library is:
(303) 236-1010.

APPENDIX A

SELECTED BASIC REFERENCES FOR GEOLOGY AND MINING IN ALASKA

The following annotated references provide a basic picture of the geology and mineral resources of Alaska. The publications cited here are available at most of the Alaska research libraries and collections—some are still in print and can be purchased, and others are in electronic form and can be accessed on the Internet. This list is based on the opinions and experience of a limited number of people, and it is likely that there are omissions. Please make suggestions for improving this list on the Guide web site at <http://www.dggs.dnr.state.ak.us>, or contact the Division of Geological & Geophysical Surveys Geologic Communications Section, 794 University Avenue, Suite 200, Fairbanks, AK 99709-3645.

The Geology of Alaska, v. G-1 of Decade of North American Geology (DNAG), George Plafker and H.C. Berg, editors, 1996, Geological Society of America, 1,055 p., 13 plates.

Not entirely up-to-date but the most authoritative publication on the geology of Alaska including minerals and the geology of Alaska as it relates to minerals.

Alaska North Slope Geology: I.L. Tailleur & P. Weimer, editors, 1987, Society of Economic Paleontologists & Mineralogists Pacific Section, Guidebook 50, 2 volumes.

Significant Metalliferous Lode Deposits and Placer Districts of Alaska: W.J. Nokleberg and others, editors, 1987, USGS Bulletin 1786, 104 p.

Although this is somewhat out-of-date, it still contains the only map that shows the major mineral deposits in Alaska (as of 1987).

Metallogeny and major mineral deposits of Alaska, W.J. Nokleberg and others, 1994, *in* George Plafker and H.C. Berg, editors, *The geology of Alaska: volume G-1 of Decade of North American Geology (DNAG)*, Geological Society of America, p. 855-904.

This paper in the DNAG volume is probably the best current, easily obtainable summary of the mineral deposits of Alaska.

Mineral deposit and metallogenic belt maps of the Russian Far East, Alaska, and the Canadian Cordillera: W.J. Nokleberg and others, 1997, Geological Survey of Canada Open File 3446, 2 sheets, scale 1:5,000,000, 5 sheets, scale 1:10,000,000.

An updated version of the Alaska information in the DNAG paper cited above, plus information about mineral belts in areas surrounding Alaska.

Metalliferous lode deposits of Alaska: H.C. Berg and E.H. Cobb, 1967, USGS Bulletin 1246, 254 p.

Excellent source for information on the metallic minerals of Alaska. Obviously only current to 1967 but still extremely useful for many purposes.

Placer deposits of Alaska: E.H. Cobb, 1979, USGS Survey Bulletin 1374, 213 p.

Still an important reference on the placer deposits of Alaska. It is thorough and definitive, and has much historical information. Since no new placer gold districts have been found in Alaska since the 1920s, much of the information here is still pertinent. It has been reprinted several times commercially.

Quadrangle “Summary of references...” E.H. Cobb, 1970-1983: Various USGS Open-File Reports and Miscellaneous Field Studies (MF) maps.

In the 1970s and early 1980s, Ed Cobb published a series of Open-File Reports and MF maps that summarized for each quadrangle the references to every mineral occurrence, prospect, and mine then described in the (government) literature for Alaska. The citations are too voluminous to list here—there are several hundred—but people concerned with Alaska mineral deposits should be aware of these publications.

Dictionary of Alaska Place Names: Donald Orth, 1967, USGS Professional Paper 567, 1084 p.

Lists Alaska place names and locations, and information about the source of each name. This is one of the most often requested references at the research libraries, since Alaska place names can be confusing even to those familiar with the state.

Bureau of Mines Publications on Alaska—A Bibliography: 1996, BLM-Alaska Open File Report 63, 124 p.

A comprehensive bibliography of all Alaska publications from the U.S. Bureau of Mines.

Indices to U.S. Bureau of Mines Mineral Resources Records: L.M. Kaas, editor, 1996, USBM Special Publication 96-2, 1 CD-ROM.

Mineral Terranes of Alaska: Arctic Environmental Information and Data Center, 1982, U.S. Bureau of Mines Contract Report, Contract No. J0123029, 7 sheets, scale 1:1,000,000.

This map series is somewhat dated, but still useful. A newer GIS version is available in an ArcInfo format. See <ftp://imcg.wr.usgs.gov/pub/mtameta.txt>

Mineral Deposits of Alaska: Goldfarb and Miller, editors, 1997, Economic Geology Publishing Company, 482 p.

Alaska Mining History—A Source Document: V.D. Heiner, 1977, Alaska Division of Parks, History & Archaeology Series No. 17, 462 p.

This reference document has general information about mining communities in Alaska arranged by community name. It also refers to additional sources for more complete historical information.

Industrial Rocks and Minerals, 6th Edition: D.D. Carr, editor, 1994, Society of Mining, Metallurgy, and Exploration, 1196 p.

Society of Mining Engineers (SME) Mining Engineering Handbook: I.A. Given, editor, 1973, American Institute of Mining, Metallurgical, & Petroleum Engineers, 2 volumes.

Mineral Industry Summaries and Directories

Alaska's Mineral Industry [YEAR], Alaska Division of Geological & Geophysical Surveys

Published annually as part of the DGGs Special Report series, this report summarizes activity in the Alaska mineral industry over the calendar year. See Section 3 for more information.

Alaska Miners Association 1998 Handbook and Service Directory. Alaska Miners Association, Anchorage, Alaska, 206 p. (\$15.00)

Published annually (the citation given is for the 1998 edition). This is an excellent source of addresses for individuals, companies, and organizations active in mining in Alaska, as well as a wealth of information about permitting, land use, and other related topics.

Digital Resources

GeoRef: American Geological Institute: <http://georef.cos.com>

Alaska Resource Data File (ARDF): U.S. Geological Survey, by quadrangle: <http://www-mrs-ak.wr.usgs.gov/ardf>

Public Minerals Data for Alaska: Interagency Minerals Coordinating Group: <http://imcg.wr.usgs.gov>

APPENDIX B

DIRECTORY OF AGENCIES AND OTHER ENTITIES

STATE OF ALASKA

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

State Office Building, 9th Fl.
P.O. Box 110800 (mailing)
Juneau, AK 99811-0800
(907) 465-2500
(907) 465-3767 (fax)

Division of Trade & Development

3601 C St., Ste. 700
Anchorage, AK 99503-5934
(907) 269-8110
(907) 269-8125 (fax)

State Office Building, 9th Fl.
P.O. Box 110804 (mailing)
Juneau, AK 99811-0804
(907) 465-2017

751 Old Richardson Hwy., Ste. 205
Fairbanks, AK 99701
(907) 451-3050
(907) 451-3053 (fax)

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

410 Willoughby Ave., Ste. 105
Juneau, AK 99801-1795
(907) 465-5010
(907) 465-5060 Public Information
(907) 465-5097 (fax)
Permits/Compliance Assistance
1-800-510-2332

555 Cordova St.
Anchorage, AK 99501-2617
(907) 269-7500
(907) 269-7600 (fax)
E-mail: compass@envircon.state.ak.us

610 University Ave.
Fairbanks, AK 99709-3643
(907) 451-2360
(907) 451-2184 TTY
(907) 451-2188 (fax)

DEPARTMENT OF FISH & GAME

1255 W. 8th St.
P.O. Box 25526 (mailing)
Juneau, AK 99802-5526
(907) 465-4100
Habitat & Restoration Division
(907) 465-4105

Northern Regional Office
Habitat & Restoration Division
1300 College Rd.

Fairbanks, AK 99701-1599
(907) 459-7289

Southcentral Regional Office
Habitat & Restoration Division
333 Raspberry Rd.
Anchorage, AK 99518-1599
(907) 267-2285

Southeastern Regional Office
Habitat & Restoration Division
802 3rd St., 2nd Fl.
P.O. Box 240020 (mailing)
Douglas, AK 99824-0020
(907) 465-4290

OFFICE OF MANAGEMENT & BUDGET

Division of Governmental Coordination

240 Main St., Ste. 500
P.O. Box 110030 (mailing)
Juneau, AK 99811-0030
(907) 465-3562

Southcentral Regional Office
3601 C St., Ste. 370, Frontier Bldg.
Anchorage, AK 99503-5930
(907) 561-6131
(907) 561-6134 (fax)

Southeastern Regional Office
240 Main St., Ste. 500
P.O. Box 110030 (mailing)
Juneau, AK 99811-0030
(907) 465-3562

DEPARTMENT OF NATURAL RESOURCES

400 Willoughby Ave., 5th Fl.
Juneau, AK 99801-1724
(907) 465-2400
Web site: www.dnr.state.ak.us

Division of Forestry

3601 C St., Ste. 1034, Frontier Bldg.
Anchorage, AK 99503-5937
(907) 269-8463

Interior Regional Office
3700 Airport Way
Fairbanks, AK 99709-4699
(907) 451-2660

Coastal Regional Office
400 Willoughby Ave., 3rd Fl.
Juneau, AK 99801-1724
(907) 465-2491

Division of Geological & Geophysical Surveys

794 University Ave., Ste. 200
Fairbanks, AK 99709-3645
(907) 451-5020
(907) 451-5050 (fax)
E-mail: dggspubs@dnr.state.ak.us
Web site: www.dggs.dnr.state.ak.us

Geologic Materials Center
Mailing Address:
P.O. Box 772805
Eagle River, AK 99577-2805
Physical Address:
18205 Fish Hatchery Rd.
(907) 696-0079
(907) 696-0078 (fax)

Division of Land

3601 C St., Ste. 1122, Frontier Bldg.
Anchorage, AK 99503-5947
(907) 269-8503
(907) 269-8904 (fax)

Northern Regional Office
3700 Airport Way
Fairbanks, AK 99709-4699
(907) 451-2700
(907) 451-2751 (fax)

Southcentral Regional Office
3601 C St., Ste. 1080, Frontier Bldg.
Anchorage, AK 99503-5937
(907) 269-8552
(907) 269-8913 (fax)

Southeastern Regional Office
400 Willoughby Ave. 4th Fl.
Juneau, AK 99801-1724
(907) 465-3400
(907) 586-2954 (fax)

Division of Mining & Water Management

3601 C St., Ste. 800, Frontier Bldg.
Anchorage, AK 99503
(907) 269-8600
Web site: www.dnr.state.ak.us/mine

Northern Regional Office
3700 Airport Way
Fairbanks, AK 99709-4699
(907) 451-2790 (Mining)
(907) 451-2772 (Water)

Southeastern Regional Office
400 Willoughby, 4th Fl.
Juneau, AK 99801
(907) 465-3400

Division of Parks & Outdoor Recreation

3601 C St., Ste. 1200, Frontier Bldg.
Anchorage, AK 99503-5921
(907) 269-8700

Northern Regional Office
3700 Airport Way
Fairbanks, AK 99709-4613
(907) 451-2695

Southeastern Regional Office
400 Willoughby Ave., 4th Fl.
Juneau, AK 99801-1724
(907) 465-4563

Office of History & Archaeology

3601 C St., Ste. 1278, Frontier Bldg.
Anchorage, AK 99503-5921
(907) 269-8721
E-mail: michelej@dnr.state.ak.us

DNR Public Information Centers

3601 C St., Ste. 200
Anchorage, AK 99503
(907) 269-8400

3700 Airport Way
Fairbanks, AK 99709
(907) 451-2705

400 Willoughby Ave., Ste. 400
Juneau, AK 99801
(907) 465-3400

DEPARTMENT OF PUBLIC SAFETY

450 Whittier St.
P.O. Box 111200 (mailing)
Juneau, AK 99811-1200
(907) 465-4322

Division of Fish & Wildlife Protection

5700 East Tudor Rd.
Anchorage, AK 99507-1225
(907) 269-5509

DEPARTMENT OF REVENUE

State Office Bldg.
11th Fl., Entrance A
P.O. Box 110400 (mailing)
Juneau, AK 99811-0400
(907) 465-2300
Web site: www.revenue.state.ak.us

Income & Excise Audit Division

State Office Bldg.
11th Fl., Entrance B
P.O. Box 110420 (mailing)
Juneau, AK 99811-0420
(907) 465-2320
(907) 465-2375 (fax)
E-mail: fish_excise@revenue.state.ak.us
Web site: www.revenue.state.ak.us/iea/

MISCELLANEOUS STATE AND LOCAL AGENCIES**Alaska State Library**

P.O. Box 110571
Juneau, AK 99811-0571
(907) 465-2910

Alaska Court System Law Libraries

303 K St.
Anchorage, AK 99503
Mailing: 820 W. 4th Ave.
Anchorage, AK 99501
(907) 264-0585

604 Barnette St., Room 139
Fairbanks, AK 99701
(907) 452-9241
(907) 452-6240

P.O. Box 114100
Juneau, AK 99811-4100
(907) 463-4761

Fairbanks North Star Borough Community Planning Department

809 Pioneer Rd.
Fairbanks, AK 99701
(907) 459-1260
(907) 459-1255 (fax)

STATE OF ALASKA RECORDING DISTRICTS

Juneau, Haines, and Skagway
Kelly Farmer, Recorder
400 Willoughby Ave., 3rd Fl.
Juneau, AK 99801
(907) 465-3449

Ketchikan, Petersburg, and Wrangell
Elizabeth Farmer, Recorder
415 Main St., Room 320
Ketchikan, AK 99901
(907) 225-3143

Sitka
Diana Stevens, Recorder
210-C Lake St.
Sitka, AK 99853
(907) 747-3275

Cape Nome
Lucinda Wieler, Recorder
P.O. Box 431
Nome, AK 99762
(907) 443-5178

Kotzebue
Jane Blevins, Recorder
1648 S. Cushman St., Ste. 201
Fairbanks, AK 99701-6206
(907) 452-3521

Anchorage, Aleutian Islands, Bristol Bay, Cordova, Iliamna, and Kvichak

Sandra Singer, Recorder
3601 C St., Ste. 1140
Anchorage, AK 99503-5947
(907) 269-8899

Chitina

Magistrate
P.O. Box 86
Glennallen, AK 99588
(907) 822-3405

Homer and Seldovia

Carol Silva, Recorder
195 East Bunnell Ave., Ste. A
Homer, AK 99603
(907) 235-8136

Kenai

Lisa Carlon, Recorder
120 Trading Bay Rd., #230
Kenai, AK 99611
(907) 283-3118

Kodiak

Sandra Tucker, Recorder
204 Mission Rd., Room 16
Kodiak, AK 99615
(907) 486-9432

Palmer and Talkeetna

Edward Barnum, Recorder
836 S. Colony Way
Palmer, AK 99645
(907) 745-3080

Seward

Magistrate
P.O. Box 1929
Seward, AK 99664
(907) 224-3075

Valdez

Magistrate
P.O. Box 127
Valdez, AK 99686
(907) 835-2266

Fairbanks, Barrow, Ft. Gibbon, Manley Hot Springs, Mt. McKinley, Nenana, Nulato, and Rampart

Jane Blevins, Recorder
1648 S. Cushman St., Ste. 201
Fairbanks, AK 99701-6206
(907) 452-3521

Bethel and Kuskokwim

Grace Lieb, Recorder
P.O. Box 426
Bethel, AK 99559
(907) 543-3391

UNIVERSITY OF ALASKA**COLLEGE OF SCIENCE,
ENGINEERING, & MATHEMATICS
Department of Geology**

& Geophysics
308 Natural Sciences Bldg.
900 Yukon Dr.
University of Alaska Fairbanks
Fairbanks, AK 99775-5780
(907) 474-7565
(907) 474-5163 (fax)
E-mail:
geology@zorba.uafadm.alaska.edu
Web site: www.uaf.edu/geology

Geological Engineering Department

P.O. Box 755800
University of Alaska Fairbanks
Fairbanks, AK 99775-5800
(907) 474-7388
(907) 474-6635 (fax)
E-mail: fymines@aurora.alaska.edu
Web site: http://137.229.20.100

School of Mineral Engineering

P.O. Box 755960
Brooks Building, Rm. 209
University of Alaska Fairbanks
Fairbanks, AK 99775-5960
(907) 474-7366
(907) 474-6994 (fax)
E-mail: FYSME@uaf.edu
Web site: www.uaf.edu

**Mineral Industry Research
Laboratory (MIRL)**

O'Neill Bldg., Rm. 212
P. O. Box 757240
University of Alaska Fairbanks
Fairbanks, AK 99775-7240
(907) 474-7135
(907) 474-6746
(907) 474-5400 (fax)
E-mail: ffdew1@aurora.alaska.edu

MINING EXTENSION PROGRAM

Duckering Bldg., Rm. 401
University of Alaska Fairbanks
Fairbanks, AK 99775-5800
(907) 474-7702

**MINING & PETROLEUM
TRAINING SERVICE**

155 Smithway, Ste. 101
University of Alaska Anchorage
Soldotna, AK 99669
(907) 262-2788

FEDERAL AGENCIES**DEPARTMENT OF THE INTERIOR**

Office of the Secretary
1689 C St., Ste. 100
Anchorage, AK 99501-5151
(907) 271-5485
(907) 271-4102

Bureau of Land Management

Alaska State Office
Public Information Center
Division of Lands, Minerals, & Resources
222 West 7th Ave., #13
Anchorage, AK 99513-7599
(907) 271-5477
(907) 271-5049 Lands & Minerals Group
(907) 271-5960 Public Land Information
Center
(907) 271-2454 Anchorage Mineral
Resources Team
Web site: www.ak.blm.gov

Anchorage Field Office
6881 Abbott Loop Rd.
Anchorage, AK 99507-2599
(907) 267-1246
(907) 267-1267 (fax)

Glennallen Field Office
Public Room
P.O. Box 147
Glennallen, AK 99588
(907) 822-3217
(907) 822-3120 (fax)

Kotzebue Field Office
P.O. Box 1049
Kotzebue, AK 99572
(907) 442-3430
(907) 442-2720 (fax)

Nome Field Office
P.O. Box 925
Nome, AK 99762
(907) 443-2177
(907) 443-3611 (fax)

Northern Field Office
Fairbanks Support Center
Public Room
1150 University Ave.
Fairbanks, AK 99709-3844
(907) 474-2300
(907) 474-2251 Public Lands Information
Center

Juneau Minerals Information Center
(BLM)
Juneau Mineral Resources Team
100 Savikko Rd.
Mayflower Island
Douglas, AK 99824
(907) 364-1553
(907) 364-1574 (fax)

Fish & Wildlife Service

Region 7 Office
1011 East Tudor Rd.
Anchorage, AK 99503
(907) 786-3542

Northern Alaska Ecological Services
101 12th Ave., Rm. 110

Box No. 19
Fairbanks, AK 99701
(907) 456-0327
(907) 456-0208 (fax)

Southeast Alaska Ecological Services
3000 Vintage Blvd., Ste. 201
Juneau, AK 99801-7100
(907) 586-7240
(907) 586- 7154 (fax)

Western Alaska Ecological Services
605 West 4th Ave., Rm. G-62
Anchorage, AK 99501
(907) 271-2888
(907) 271-2786 (fax)

Geological Survey

Geological Division
4200 University Dr.
Anchorage, AK 99508-4663
(907) 561-1181

Water Resources Division
4230 University Dr., Ste. 201
Anchorage, AK 99508
(907) 786-7100

Earth Science Information Center
National Mapping Division
4230 University Dr., Rm. 101
Anchorage, AK 99508-4664
(907) 786-7011

EROS Alaska Field Office
4230 University Drive, Ste. 230
Anchorage, AK 99508-4664
Web site: http://www-eros-
afo.wr.usgs.gov

National Park Service

Alaska Regional Office
2525 Gambell St.
Anchorage, AK 99503
(907) 257-2626

DEPARTMENT OF AGRICULTURE**Forest Service**

Federal Bldg.
P.O. Box 21628
Juneau, AK 99802-1628
(907) 586-7869
(907) 586-7843 (fax)

**Natural Resources Conservation
Service**

949 E. 36th Ave., Ste. 400
Anchorage, AK 99508
(907) 271-2424
(907) 271-3951 (fax)

1760 Westwood Way
Fairbanks, AK 99709
(907) 479-2657
(907) 479-6998 (fax)
Web site: http://usda.nrcs.gov

ENVIRONMENTAL PROTECTION AGENCY

Region 10 Regional Office
1200 6th Ave., MS OW-130
Seattle, WA 98101
(206) 553-1746

Region 10 Library, OMP-104
1200 Sixth Ave.
Seattle, Washington 98101
(206) 553-1289

Alaska Operations Office
222 West 7th Ave., Ste. 19
Anchorage, AK 99513-7588
(907) 271-5083

Alaska Operations Office
410 Willoughby Ave., Ste. 100
Juneau, AK 99801
(907) 586-7619

**DEPARTMENT OF THE ARMY
Army Corps of Engineers**
Regulatory Branch
Attention: CEPOA-CO-R
P.O. Box 898
Anchorage, AK 99506-0898
(907) 753-2712
(800) 478-2712 (in Alaska only)
(907) 753-2716 (fax)

**Army Corps of Engineers Cold
Regions Research & Engineering
Laboratory (CRREL)**
72 Lyme Rd.
Hanover, NH 03755
(603) 646-4338
(603) 646-4712 (fax)
Web site: <http://www.crrel.usace.army.mil/>

MISCELLANEOUS FEDERAL AGENCIES

**Federal Emergency Management
Agency—Map Service Center**
P.O. Box 1038
Jessup, MD 20794-1038
1-800-358-9616
1-800-358-9620 (fax)
Web site: <http://www.fema.gov/MSC>

**National Oceanic & Atmospheric
Administration West Coast & Alaska
Tsunami Warning Center**
910 Felton St.
Palmer, AK 99645
(907) 745-4212
(907) 745-6071 (fax)
E-mail: atwc@alaska.net
Web site: <http://www.alaska.net/~atwc>

COOPERATIVE STATE-FEDERAL AGENCIES

Alaska Earthquake Information Center
Geophysical Institute
903 Koyukuk Drive
P.O. Box 757320
Fairbanks, AK 99775-7320
(907) 474-7320
(907) 474 5618 (fax)
Web site: <http://www.aeic.alaska.edu>

**Alaska Resources Library &
Information Service (ARLIS)**
3150 C St., Ste. 100
Anchorage, AK 99503
(907) 272-7547
(907) 271-4542 (fax)

Alaska Volcano Observatory
794 University Ave., Ste. 200
Fairbanks, AK 99709-3645
or: 903 Koyukuk Drive
P.O. Box 757320
Fairbanks, AK 99775-7320
(907) 474-5530
(907) 474-5618 (fax)
Recording of the status of Alaska's
volcanoes: (907) 786-7478
Web site: <http://www.avo.alaska.edu>
Anchorage AVO: (907) 786-7443

ORGANIZED MINING DISTRICTS

Circle Mining District
Becky Hendrickson, President
General Delivery
Central, AK 99730
(907) 488-6058

Fairbanks Mining District
Don Stein, President
105 Dunbar Ave.
Fairbanks, AK 99701
(907) 456-7642

Forty-Mile Mining District
David Likins, President
Forest Hayden, Vice President
P.O. Box 106
Eagle, AK 99738

Haines Mining District
John Schnabel
P.O. Box 149
Haines, AK 99827
(907) 766-2821

Iditarod-Flat Mining District
John Miscovich, President
Winter Address:
1093 North Greengrove St.
Orange, CA 92667
(714) 532-3943

Summer Address:
General Delivery
Flat, AK 99584
(907) 561-1591

Juneau Mining District
Dr. Roger Eichman, President
P.O. Box 020765
Juneau, AK 99802
(907) 789-2066

Kantishna Mining District
Dan Ashbrook, President
P.O. Box 84608
Fairbanks, AK 99708-4608
(907) 479-2277

Livengood-Tolovana Mining District
Rose Rybachek, President
P.O. Box 55698
North Pole, AK 99705
(907) 488-6453

Valdez Creek Mining District
Kevin Thompson, President
P.O. Box 875534
Wasilla, AK 99687-5534
(907) 733-2351

Yentna Mining District
Carol Young, President
P.O. Box 211
Talkeetna, AK 99676
(907) 733-2351

Ophir Mining District
Ron Rosander, President
P.O. Box 129
McGrath, AK 99627
(907) 524-3929

Koyukuk Mining District
Claudine Nordeen, President
Summer Address:
P.O. Box 9013
Coldfoot, AK 99701
(907) 678-9301 (message)
Winter Address:
887 Bouton Ct.
Fairbanks, AK 99712

PROFESSIONAL ASSOCIATIONS

**ALASKA MINERS
ASSOCIATION, INC.**
Statewide Office
3305 Arctic Blvd., Ste. 202
Anchorage, AK 99503
(907) 563-9229
(907) 563-9225 (fax)

Denali Branch
P.O. Box 1000
Healy, AK 99743
(907) 683-2226, ext. 719

Fairbanks Branch

P.O. Box 73069
Fairbanks, AK 99707
(888) 474-2081

Juneau Branch

P.O. Box 21684
Juneau, AK 99802-1684
(907) 586-4704
(907) 463-5712

Kenai Branch

P.O. Box 242
Sterling, AK 99672
(907) 262-6383

Nome Branch

P.O. Box 1974
Nome, AK 99762
(907) 443-2632

NORTHWEST MINING ASSOCIATION

10 North Post St., Ste. 414
Spokane, WA 99201
(509) 624-1158
(509) 623-1241 (fax)
Email: nwma@nwma.org
Web site: <http://www.nwma.org>

RESOURCE DEVELOPMENT COUNCIL FOR ALASKA, INC.

121 W. Fireweed Ln., Ste. 250
Anchorage, AK 99503
(907) 276-0700
(907) 276-3887 (fax)
E-mail: Resources@akrdc.org

SOCIETY FOR MINING, METALLURGY, & EXPLORATION INC.

P.O. Box 625002
Littleton, CO 80162-5002
(303) 973-9550
(303) 973-3845 (fax)

Secretary Treasurer-John Rishel
1505 Atkinson Dr.
Anchorage, AK 99504
(907) 337-0511

PLACER MINERS OF ALASKA

P.O. Box 81110
Fairbanks, AK 99708
(907) 479-3100

CHUGACH GEM & MINERAL SOCIETY

P.O. Box 92027
Anchorage, AK 99509
(907) 276-3280

REGIONAL NATIVE CORPORATIONS**AHTNA, INCORPORATED**

Ahtna Minerals
Sue Sherman, Manager of Resource Development
P.O. Box 649
Glenallen, AK 99588-0649
(907) 822-3476
(907) 822-3495 (fax)
Web site: <http://www.ahtna-inc.com>

ALEUT CORPORATION

Sandra Moller, Manager of Resource Development
Melvin Smith, Resource Development Specialist
4000 Old Seward Highway, Ste. 300
Anchorage, AK 99503-6087
(907) 561-4300
(907) 563-4328 (fax)
E-mail: msmith@aleutcorp.com
Web site: <http://www.aleutcorp.com>

ARCTIC SLOPE REGIONAL CORPORATION

Teresa Imm, Resource Development Manager
301 Arctic Slope Ave., Ste. 300
Anchorage, AK 99518-3035
(907) 349-3269
(907) 349-5476 (fax)
Web site: <http://www.asrc.com>

Barrow Office

P.O. Box 129
Barrow, AK 99723-0129
(907) 852-8633
(907) 852-5733 (fax)

BERING STRAITS NATIVE CORPORATION

Thomas S. Sparks, Land & Resource Manager
P.O. Box 1008
Nome, AK 99762
(907) 443-5252
(907) 443-2985 (fax)
Email: land@beringstraits.com
Web site: <http://www.beringstraits.com>

BRISTOL BAY NATIVE CORPORATION

Jack Moore, Geologist/Land Planner
800 Cordova St., Ste. 200
Anchorage, AK 99501
(907) 278-3602
(907) 276-3924 (fax)
Web site: <http://www.touchngo.com/BBNC>

CALISTA CORPORATION

June McAtee, VP of Lands & Natural Resources
Jeff Foley, Senior Exploration Geologist

Nick Enos, Exploration Geologist
601 West 5th Ave, Ste. 200
Anchorage, AK 99501-2226
(907) 279-5516
(907) 272-5060 (fax)
E-mail: jfoley@Calistacorp.com
Web site: <http://www.calistacorp.com>

CHUGACH ALASKA CORPORATION

Manager of Lands and Resources
560 E. 32nd Ave., Ste. 200
Anchorage, AK 99503-4196
(907) 563-8866
(907) 563-8402 (fax)
Web site: <http://www.chugach-ak.com>

COOK INLET REGION, INC.

and its subsidiary, North Pacific Mining Corporation
Candace Beery, Manager of Land Entitlement
P.O. Box 93330
Anchorage, AK 99509-3330
(907) 274-8638
(907) 279-8836 (fax)
Web site: <http://www.ciri.com>

DOYON, LIMITED

Jim Mery, Senior VP for Lands and Natural Resources
201 1st Ave., Ste. 300
Fairbanks, AK 99701-4848
(907) 459-2000
(907) 459-2060 (fax)
Web site: <http://www.doyon.com>

KONIAG, INCORPORATED

John Merrick, Manager of Lands and Resources
4300 B St., Ste. 407
Anchorage, AK 99503-5961
(907) 561-2668
(907) 562-5258 (fax)
Web site: <http://www.koniag.com>

NANA REGIONAL CORPORATION

John Rense, VP of Resources
1001 East Benson Blvd.
Anchorage, AK 99508-4298
(907) 265-4100
(907) 265-4123 (fax)
Web site: <http://www.NANA-online.com>

Kotzebue Office:

P.O. Box 49
Kotzebue, AK 99752
(907) 442-3301
(907) 442-2866 (fax)

SEALASKA CORPORATION

Rick Harris, Senior Vice President
1 Sealaska Plaza, Ste. 400
Juneau, AK 99801-1276
(907) 586-1512
(907) 463-3897 (fax)
Web site: <http://www.sealaska.com>

Index

Guide to Alaska Geologic and Minerals Information

Note: entries in italics are not mentioned specifically in the text. Addresses for these agencies are provided in Appendix B.

Page numbers in boldface indicate primary references.

- aerial photographs (see photographs, aerial)
aeromagnetic data and maps **35**, 69, 71
Ahtna, Incorporated **13-14**, 74, 85
air quality standards **11**, **38**
Alaska Administrative Code (AAC) 38, 49, 76
Alaska Court System and Law Libraries 49, 75, 76, 82
Alaska Department of Commerce and Economic Development 21, 75, 81
Alaska Department of Environmental Conservation (DEC) **11**, 38, 39, 81
Alaska Department of Fish and Game **11**, 42, 48, 81
Alaska Department of Natural Resources (DNR) **8**, 43, 64, **72**, 81
Alaska Department of Natural Resources Public Information Center (see Public Information Center, DNR)
Alaska Department of Public Safety 82
Alaska Department of Revenue 82
Alaska Division of Fish and Wildlife Protection 82
Alaska Division of Geological & Geophysical Surveys (DGGs) **8-9**, 19, 22, 26-28, 35, 36, 39, 52, **61**, **65**, 72, 81
Alaska Division of Land **9**, 41, 81
Alaska Division of Mining and Water Management (DMWM) **8**, **9**, 21, 39, 44, 45, 46, 47, 48, 72, 81
Alaska Division of Oil & Gas 8, 72
Alaska Division of Parks and Outdoor Recreation 82
Alaska Division Of Trade and Development 81
Alaska Earthquake Information Center 40, 84
Alaska Geological Society (AGS) **66**, 73
Alaska Geospatial Data Clearinghouse 35, 70
Alaska Income and Excise Audit Division 82
Alaska Miners Association (AMA) 21, 45, 46, 52, **65-66**, 84
Alaska National Interest Lands Conservation Act (ANILCA) 21, 42
Alaska Native Claims Settlement Act (ANCSA) 12, 42
Alaska Office of Management and Budget 81
Alaska Office of History and Archaeology 82
Alaska Pacific University (APU) collection 55
Alaska Resource Data Files (ARDF) **30-31**, 37, 43, 50, 68, 69, 80
Alaska Resources Library and Information Service (ARLIS) 7, 8, 11, 20, 22, 53, **54**, 84
Alaska, State of (See individual Department or Division names)
Alaska State Library 38, 50, 82
Alaska Territorial Department of Mines (see Territorial Department of Mines)
Alaska Tsunami Warning Center 40
Alaska Volcano Observatory (AVO) 40, 84
Aleut Corporation **14**, 74, 85
American Geological Institute (AGI) 28
American Institute of Mineral Engineering (AIME) 73
anadromous streams 11, 41-42
ANCSA (see Alaska Native Claims Settlement Act)
ANILCA (see Alaska National Interest Lands Conservation Act)
annual labor and assessment (mining claims) 6, 44, 45, **46**
Annual Placer Mining Application (APMA) **47-48**, 72
annual reports 19, 20, **21**, 24, 28, 43, 80
archives 50, 57, 60, **63**, 74, 77, 78
Arctic Slope Regional Corporation (ASRC) **14**, 74, 85
ARDF (see Alaska Resource Data Files)
ARLIS (see Alaska Resource Library and Information Center)
Automated Land and Mineral Record System (ALMRS) **43**
-
- Bering Straits Native Corporation (BSNC) **14**, 75, 85
Bibliography **28**
Alaska geology 21, 25, 27, **28-31**, 34, 35, 37, 52, 61, 68, 70, 71
Cobb Bibliographies **30**, 31, 37, 43, 50
general geology 21, **28-30**, 56, 68
mining 25, **30**, 43, 50, 68, 79
BLM (see U.S. Bureau of Land Management)
Bristol Bay Native Corporation **14**, 75, 85
-
- Calista Corporation **15**, 75, 85
Chugach Alaska Corporation **15-16**, 75, 85

Chugach Gem & Mineral Society 52, 85
Clean Water Act 8, 38
Cobb Bibliographies (see Bibliography, Cobb)
Code of Federal Regulations (CFR) 38, 49, 75-76
Consortium Library (see University of Alaska Anchorage)
Cook Inlet Region, Inc. (CIRI) **16**, 75, 85

databases 28, 29, 30, 31, 43, 44, 50, 68, 72
 bibliographic 21, 28, 30, 37, 54, 55, 57, 61, 72, 78
 cartographic 10, 29
 geochemical 16, 18, 36-37
 geophysical 16, 34-35
 land and claim 43, 44, 64
Decade of North American Geology (DNAG) **28**, 60, 79
DGGS (see Alaska Division of Geological & Geophysical Surveys)
digital mapping data 10, 33, **34**, 68, 70, 72
digital raster graphics 33, 68, 69
DMWM (see Alaska Division of Mining & Water Management)
DNR (see Alaska Department of Natural Resources)
Doyon, Ltd. **16-17**, 75, 85
dredges (see suction dredges)

Earth Resource Observation Systems (EROS) 34, 35, 70
Earth Science Information Center (USGS) 5, 12, 29, 30, 33, 34, 36, 37, **65**
earthquake risk 40, 78
Elmer E. Rasmuson Library (see Rasmuson Library)
Environmental Impact Statement (EIS) 7, 8, 38
environmental information **38**
EPA (see U.S. Environmental Protection Agency)
ESIC (see Earth Science Information Center - USGS)
exploration incentives **46**

Fact sheets 34, 44, 45, 46, 47, 49, 51, 64, 72
Fairbanks North Star Borough Community Planning Department 40, 82
Federal agencies (see individual listings)
Federal Emergency Management Agency Map Service Center 40, 72, 84
field notes 28, 60, 72, 77
field trips, guides 27, 30, **52**
floodplains **39-40**, 72

geochemistry, geochemical data 14, 18, 27, **36-37**, 62
GeoData Center 12, 34, 65
geographic information systems (GIS) 10, 15, 16, 18, 72
geologic hazards 8, **40**, 78
geologic maps (see maps, geologic)
Geologic Materials Center (GMC) 9, 60, **62**, 81
Geological Society of America (GSA) 73
Geophysical Institute (see University of Alaska Fairbanks)
Geophysical Institute Library (see University of Alaska Fairbanks)
geophysics 11, 12, 18, **35**, 36, 56, 61, 71, 72
GEOREF 15, 28, 34, 54, 56, 57, 80
geotechnical engineering **39**
GMC (see Geologic Materials Center)
GNOSIS 53, 55, 56, 57, 58, 74
gold panning (see mining, recreational)
gravity data 35, 71

habitat 11, 30, **41-42**, 71
hazards, geologic (see geologic hazards)
historical mining photographs (see photographs, historical)
history, mining 25, 43, 44, **49**, 50, 57, 60, 74, 77

Interagency Minerals Coordinating Group (IMCG) **5**, 30, 34, 37, **68**, 80
interlibrary loan 53, 56, 58, 59, 78
International Archives of Economic Geology (IAEG) 74, **77**
internet access, public 56, 54, 55, 58, 59, 67

journals, mining industry 22
Juneau Minerals Information Center, BLM 22, 25, 31, 44, 50, **59**, 65, 74

KARDEX 44, 49
Keith B. Mather Library (see University of Alaska Fairbanks, Geophysical Institute Library)
Koniag, Incorporated **17**, 75, 85

Land Information System (LIS) 44, 49, 59
land ownership 12, 42-43
Land Records Information Section (LRIS; DNR) **10**, 72
land status 6, 7, 10, 41, **42-43**, 44, 59, 64
Land Use Plans 7, **41**, 64, 72
landslides 40
Large Mine Project Manager (DMWM) 47

- LASERCAT 53
libraries 38, **53-59**, 74
library catalogs 21, 29, 74
-
- magnetism 24, 35, 69, 71
map coverage 29, 33, 34, 70
maps
 base 65, 70
 digital 33, 70
 geologic 5, 14, 19, 23, 24, **34**, 57, 60, 65, 68, 70, 77
 geophysical 20, 24, 35, 70-71,
 topographic 5, 12, 20, 24, **33**, 60, 65, 70
 topographic, availability 33, 65
 topographic, commercial sources 12, 33, **65**
 topographic, coverage and scale 33, 65
MAS/MILS (see Minerals Availability System/
 Minerals Information Location System)
Master Title Plats 59
master's theses 28, 30, 34, 37
Mine Drainage Interest Group (USGS) 38
mineral assessment 5, 43, 72
mineral collecting **52**
mineral commodity information 20, 24, 25, 26, 31,
 68, 69, 70, 77
Mineral Industry Research Laboratory (see
 University of Alaska Fairbanks)
mineral potential 8, 12, 13-18, 37, **43**
Mineral Property Files 31, 50, 59
Minerals Availability System/Minerals Information
 Location System (MAS/MILS) **31**, 37, 43, 50,
 59, 68
mining
 claims 5-6, 9, 12, 42, 44-46, 49, 59, 64, 68, 71,
 72
 claims, existing **44**, 45, 46, 49
 claims, federal 6, 7, 42, 44, 45, **46**, 64, 68, 71
 claims, state 9, 42, **44-45**, 46, 64, 72
 districts 31, 35, **49**, 68, 84
 engineering 11, 54, 59, 74
 history (see history, mining)
 Mining in Parks Act 7
 law **49**, 75, 76
 newsletters (see newsletters, mining)
 patents 6, 44, 59
 recreational **50-52**, 68
 regulations 49, 75-76
 summaries, annual **21**, 24, 25, 26, 80
MIRL (see University of Alaska Fairbanks)
-
- NANA Regional Corporation **18**, 75, 85
National Geochemical Database (USGS) 36
- National Geologic Map Database (USGS) 29, 34, 70
National Geophysical Data Center 36, 72
National Oceanic and Atmospheric Administration
 (NOAA) 84
National Park Service (NPS) **7**, 54, 71, 83
National Spatial Reference System 72
National Technical Information Service (NTIS) **65**
National Uranium Resource Evaluation (NURE)
 35, 36, 70
National Wetlands Inventory 39-40
Native Corporations (see Regional Native Corpora-
 tions) 42-43, 45, 74-75
Natural Resources Conservation Service, USDA
 72, 83
newsletters, mining 19, **21**, 22, 66, 72, 73
Northwest Mining Association (NWMA) **66**, 73,
 85
NURE (see National Uranium Resource Evalua-
 tion)
-
- oil & gas 6, 7, 8, 9, 13, 14, 15, 16, 17, 24, 62, 71,
 72, 74
Outer Continental Shelf (OCS) **7**
-
- patents (see mining patents)
permafrost 11, 12, **39**
permits
 mining 6, 7, 8, 9, 11, **46-48**
 NPDES 8, 48
permitting 9, **46-48**
Ph.D. dissertations 11, 28, 30, 34, 37, 55, 60
photographs
 aerial 24, **34**, 65
 historical 27, 57, 60, 78
Placer Miners of Alaska 85
placer mining 11, 28, 30, 43, 47-48, 50-52, 72
POLARPAC 54, 55, 56, 58
professional organizations 19, **65-66**, **72-73**, 84-85
prospecting 43, 50-52, 72
Public Information Center, BLM 7, 46, **64**, 65, 83
Public Information Center, DNR 8, 10, 44, 43-47,
 49, 51, **64**, 71, 72, 82
Public Room, BLM 7, **64**, 65, 83
publication series
 Bureau of Mines 19, 20, **25**, 27, 57, 59, 61, 68, 71
 DGGs 20, **26**, 27, 28, 30, 56, 57, 61, 68, 72
 other 11, 19, **28**, 38, 56, 57, 73
 USGS 19, 20, **23**, 24, 27, 56, 57, 61, 68, 69
publications, new (lists of) 69
-
- quadrangle, information by 27, 29, 30, 31, 33, 36-
 37, 44, 50, 61, 68, 69, 70, 71, 72

Rasmuson Library (see University of Alaska Fairbanks, Rasmuson Library)
 reclamation 7, 8, 9
 Records' Office (State of Alaska) **9**
 recording (of mining claims) 6, 7, 9, 44-46, 72
 recording districts 9, 10, 44, 46, 82
 Regional Native corporations **12-18, 21, 74-75, 85**
 regulations
 Alaska state 11, 49, **75, 76**
 federal 49, **75, 76**
 remote sensing **34, 70**
 rents and royalties 6, 8, 9, 44, **46, 72**
Resource Development Council for Alaska, Inc. 85

sand and gravel 6, 9, 15
 satellite images and data 35, 70
 Sealaska Corporation **18, 75, 85**
 seismology 12, 24, 35, 40
 SLED (see Statewide Library Electronic Doorway)
Society for Mining, Metallurgy, & Exploration 85
 Society of Economic Geologists (SEG) 22, 73
 Society of Mining Engineers (SME) 73
 State Agencies (see individual Department or Division names)
 Statewide Library Electronic Doorway (SLED) 41, 53, 54, 55, 56, 58, 74
 streams 8, 11, 38, 39, 42, 48
 suction dredges 47, 48, 50

Technical Data Unit (USGS) 5, **60**
 Telnet 29
 Territorial Department of Mines (TDM) 27, 37, 49, 65
 topographic maps (see maps, topographic)
 Tsunami Warning Center (NOAA, West Coast and Alaska) 40
 tsunamis 40

U.S. Army Corps of Engineers **8, 39, 40, 48, 71, 84**

U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory (CRREL) 39, 56, 57, 84
 U.S. Bureau of Land Management (BLM) **5-7, 19, 20, 21, 25, 43, 44, 46, 50, 51, 59, 62, 64, 71, 83**
 U.S. Bureau of Mines 5, 6, 19, 21, 25, 30, 57, 59, 61, 65, 71
U.S. Department of the Interior 83
 U.S. Environmental Protection Agency **8, 38, 39, 48, 72, 84**
 U.S. Fish and Wildlife Service (FWS) **7, 39, 54, 71, 83**
 U.S. Forest Service **7, 71**
 U.S. Geological Survey (USGS) **5, 19, 21, 22-24, 50, 60, 62, 64, 65, 68-71, 83**
 USGS Libraries 29, 60, 68, **78**
 USGS Photographic Library **78**
 U.S. Minerals Management Service **7, 8, 54, 62, 71**
 University of Alaska Anchorage (UAA) **11, 55, 74**
 Consortium Library 20, 22, 38, **55, 74**
 University of Alaska Fairbanks (UAF) **11, 50, 52, 56, 57, 74, 83**
 Department of Geology and Geophysics 11
 Geophysical Institute **12, 20, 22, 28, 30, 34, 53, 56, 74**
 Geophysical Institute Library, 28, 30, **56, 74**
 Mineral Industry Research Laboratory (MIRL) **11, 28, 39, 74**
 Rasmuson Library 11, 20, 22, 53, **57, 74**
 School of Mineral Engineering 11
 USGS (see U.S. Geological Survey)

volcanic hazards 40, 78

water 8, 9, 11, 38, **39, 54**
 water quality standards 11, **38**
 wetlands 8, **39-40, 48**
 wildlife refuge 7, 11, 41-42

yearly reports (see annual reports)