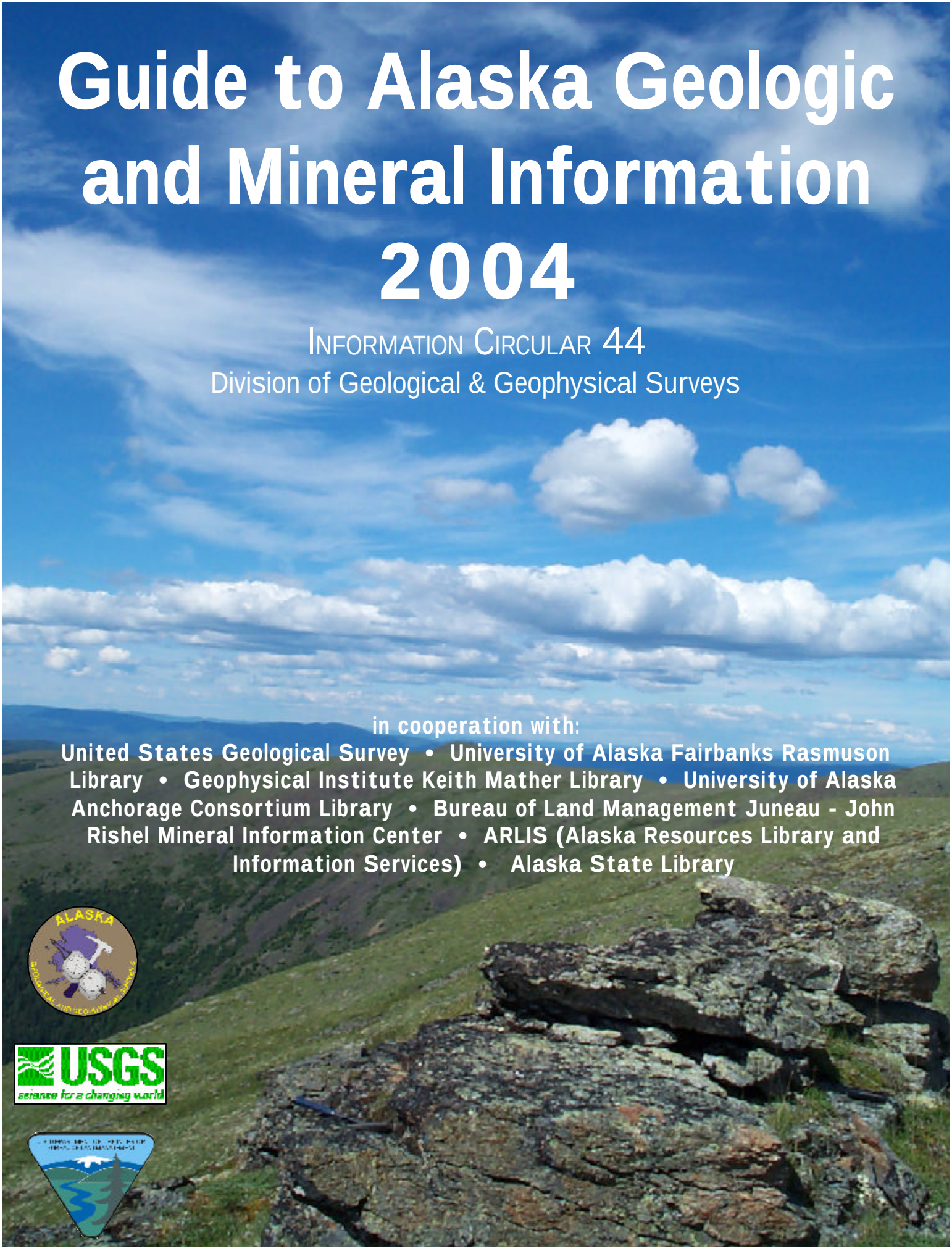
Guide to Alaska Geologic and Mineral Information 2004

INFORMATION CIRCULAR 44
Division of Geological & Geophysical Surveys



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Guide to Alaska Geologic and Mineral Information 2004

E. Ellen Daley Ph.D., Editor

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- University of Alaska Fairbanks Rasmuson Library
- University of Alaska Fairbanks 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 Almost 20 years later, Ed Cobb's maps, bibliographies, and publications, outdated as they have become in some ways, remain a mainstay of Alaska geology, land planning, and mineral exploration.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.

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

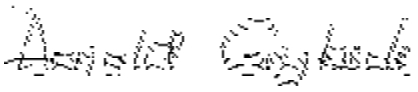
- Cathy Vitale (ARLIS)
- Jane Albrecht (BLM Juneau - John Rishel Mineral Information Center)
- Ellen Daley, Ph.D., Editor
- Dawn Roberts (DGGS)
- Julia Triplehorn (UAF GI Library)
- John Kawula (UAF Rasmuson Library)
- Jill Schneider (USGS)
- Kay Shelton (Alaska State Library)

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.

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

*Formal name: Minerals Data and Information Rescue in Alaska (MDIRA) Program.
**This foreword was written for the November 1998 completion of the first edition of this report. Donald Grybeck currently is retired from USGS.

STATE OF ALASKA
Frank H. Murkowski, Governor

DEPARTMENT OF NATURAL RESOURCES
Tom Irwin, Commissioner

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
Rodney A. Combellick, Acting Director

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
3354 College Road
Fairbanks, Alaska 99709-3707

Juneau - John Rishel Mineral Information Center
Bureau of Land Management
100 Savikko Road
Douglas, Alaska 99824

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

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

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 or the Federal government.

Front cover: Quartz–feldspar–biotite–cordierite paragneiss outcrops beneath interesting cloud formations in the Big Delta C-4 Quadrangle near the South Fork and Salcha rivers. Typical Interior Alaska topography, and a nice summer day for conducting fieldwork. Photo by D.J. Szumigala.

Inside front cover: Looking west over the Salcha River toward The Splits in the Big Delta Quadrangle. Photo by D.J. Szumigala.

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Surveyor at work. Earl Beistline Collection, Accession no. 85-093-514N, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

Field notes taken by C.G. Mull, western Brooks Range, 1987.

GUIDE TO ALASKA GEOLOGIC AND MINERAL INFORMATION

This Guide is intended to be a jumping-off point for basic and specialized research into the geology of Alaska, and the resources and issues involved in exploration for metallic mineral deposits in Alaska. It is designed to give users a broad overview of the many resources available to them—from library facilities and holdings to State and Federal agencies that publish research and oversee mining and exploration activities to online databases, publications, and catalogs.

The resources described in this Guide are largely in the public sector—Federal and State government entities and universities—whose diverse roles range from basic and applied research to regulatory oversight. The resources themselves also are diverse—published reports, field notes and photographs, core and hand samples, agency contacts, Web sites, bibliographies, and of course the vast holdings of research libraries and the professional research assistance they provide.

This guide was prepared as 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 research libraries and special reference collections in Alaska:

- Alaska Resources Library and Information Services in Anchorage
- Consortium Library at University of Alaska Anchorage
- U.S. Geological Survey Alaska Technical Data Unit in Anchorage
- Elmer E. Rasmuson Library at University of Alaska Fairbanks
- Keith B. Mather Library at the Geophysical Institute in Fairbanks
- Bureau of Land Management Juneau - John Rishel Mineral Information Center
- Alaska State Library

SCOPE AND PURPOSE OF THIS PUBLICATION

This publication is designed to expedite searches for public-domain information about Alaska geology and mining, and is intended for a wide variety of users. Its main focus is to identify and describe resources for general geology and minerals, and for topics directly or indirectly related to metallic and industrial mineral exploration in Alaska. It also serves as a guide to libraries and special research collections in Alaska that have significant geology holdings.

Resources discussed in this Guide for the general geology of Alaska include published agency reports, theses and dissertations, agency and university contacts, and geologic tools such as topographic maps, geologic maps, aerial photographs, and remote sensing data. More specialized topics for metallic mineral deposits and mineral exploration in Alaska range from sources of land use and mining claim information, to regulatory and permitting resources, to historical mining records. Only limited sources of specialized information were included 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. Research published in scientific journals and books is not addressed here, but these resources can be identified using the bibliographic tools described in Section 3 of this Guide.

Geologic and minerals data generated by the private sector often remain proprietary. Although this Guide does not seek to identify sources of proprietary data, resources contained herein—such as claims records and yearly exploration summaries—can help identify companies that have worked in specific areas of the state. For land controlled by regional Native corporations, past data gathered by mining companies may be accessible through agreement with the individual Native corporation.

Note

Although information in this Guide is current as of its publication date, physical and electronic addresses can change, agencies take on new roles, and sources of online information come and go. For updated addresses and contact information, check agency Web sites and telephone directories, and ask for assistance at any of the research libraries. This guide is available on the Internet (http://www.dggs.dnr.state.ak.us/) both as a downloadable PDF file, and as an HTML-based Web site. Contact information and Web site addresses listed on the HTML-based Web site may be updated periodically, and consequently information there should be more current.

Tuluvak Formation fluvial conglomerate and pebble sandstone at May Creek syncline, east-central Chandler Lake Quadrangle, North Slope. This Upper Cretaceous fluvial and shallow marine unit is predominantly chert with lesser quartz, and rare quartzite and siliceous carbonate. This unit is a subsurface target for North Slope oil and gas exploration. Photo by R.R. Reifenstuhl.

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/
http://www.akgeology./

The IMCG was formed to promote interagency cooperation, and to coordinate mineral activities in Alaska among its member State and Federal agencies (BLM, USGS, Forest Service, and DGGS). It has no information gathering, jurisdictional, or regulatory role over lands in Alaska. One IMCG goal is to enhance the availability of geologic and minerals information and data for Alaska. To further this goal, IMCG is developing a portal to online geology and minerals information and data, and land records for the state – http://www.akgeology.info/. Although currently a collection of links, IMCG plans to develop this site into an integrated system that will allow users to combine information in ways that can promote minerals exploration in Alaska. The IMCG can be reached through its member organizations, and through the IMCG Web site.

FEDERAL AGENCIES

http://www.usgs.gov/
http://alaskaminerals.wr.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 lands or resources. The 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 USGS research in Alaska involves 1:250,000-scale geologic mapping. The USGS also produces and distributes topographic maps for the United States. When the U.S. Bureau of Mines (USBM) was defunded as a Federal agency 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 more than 100 commodities from 190 countries. In Alaska, the minerals research and mapping functions of the USBM transferred to the Bureau of Land Management (BLM).

Reports, maps, and other USGS publications are offered for sale through the Earth Science Information Centers (ESIC). The USGS also maintains a vast network of informational resources on the Internet. In addition, the USGS Alaska Technical Data Unit in Anchorage houses USGS field records and project files for Alaska. The USGS is a partner in the Alaska Resources Library and Information Services (ARLIS) in Anchorage. See Section 6 for more information about these research collections.

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

Bureau of Land Management (BLM)

The 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 on Federal lands is available for the location of mining claims and mineral leases.

Some of BLM's responsibilities include:

- Recording and maintaining official actions, including Federal mining claims.
- Monitoring mining operations to protect 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 (including for lands where another Federal agency manages the surface use).
- 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 the sale of sand, gravel, and stone.

The Anchorage and Juneau Mineral Assessment Teams (formerly the Alaska staff of USBM, and now part of the BLM) emphasize field programs focused toward identifying the type, amount, and distribution of mineral deposits in Alaska. The field research is augmented by other activities that provide information on beneficiation technologies, economic feasibility studies, and the economic 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.

The Bureau of Land Management maintains a reference library at the Juneau - John Rishel Mineral Information Center, and is a partner in the ARLIS facility in Anchorage. BLM has public information offices in Anchorage (BLM Public Information Center), Fairbanks and Glennallen (BLM Public Rooms), and Juneau (Juneau - John Rishel Mineral Information Center) to provide information about land status, land use, and mining claims on Federal lands. See Section 6 for information about these facilities.

Fall colors in Denali National Park. Looking east from the hills above Eielson visitor center, mile 66 of the Denali Park Road. Photo by E.E. Daley.

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. The NPS is a partner in the ARLIS facility in Anchorage. See Section 6 for information about ARLIS.

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

United States Fish and Wildlife Service (FWS)

The U.S. Fish and Wildlife Service manages and regulates 16 National Wildlife Refuges in Alaska, which encompass about 92 million acres of land. Except for valid rights that existed at the time the refuge was established, all of these lands are closed to mineral entry. The 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 operations. The FWS is a partner in the ARLIS facility (see Section 6) in Anchorage.

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

Minerals Management Service (MMS)

The 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 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). The 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, the MMS collects royalties, bonuses, and rents from onshore mining activities on Federal and certain Native lands. The MMS is a partner in the ARLIS facility (see Section 6) in Anchorage.

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

United States Forest Service

The 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 Forest Service lands while minimizing any adverse environmental impacts to surface and cultural features. The Forest Service also provides research information and technology to help with post-mining reclamation.

http://
www.poa.usace.army.mil/hm/

United States Army Corps of Engineers (COE)

The primary role of the U.S. Army Corps of Engineers with respect to mining activities is regulatory. The COE regulates and issues permits for structures or work in navigable waters of the United States, and for work that will affect waters, streams, and wetlands—such as the

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 upon submittal of a permit application or operation plan, the COE will make a determination of its jurisdiction over the affected areas. The COE then will specify the types of permits required for those activities that fall under its jurisdiction, and will provide application materials. See the discussion of COE permits under Permitting in Section 5.

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

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. The EPA also maintains regulatory and review authority over issues related to wetlands and National Environmental Protection Agency (NEPA) Environmental Impact Statements (EIS). See the discussion of EPA permits under Permitting in Section 5.

ALASKA STATE AGENCIES

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

Department of Natural Resources (DNR)

The Department of Natural Resources is the primary steward of Alaska state lands and natural resources through the divisions of Agriculture; Forestry; Geological & Geophysical Surveys; Mining, Land & Water; 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 6, or contact the offices at the addresses listed in Appendix B.

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

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 lands in Alaska. DGGS conducts geological and geophysical research to determine the potential of Alaska lands 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 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 publications are available online at http://www.dggs.dnr.state.ak.us/pubs.html and are searchable by quadrangle, publication series, and key word. These publications, including maps, can be downloaded in their entirety at no charge. Most publications can be purchased from the DGGS office in Fairbanks, and are available at the research libraries in Alaska. DGGS also 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 6 for more information about these collections.

http://www.dnr.state.ak.us/mlw/

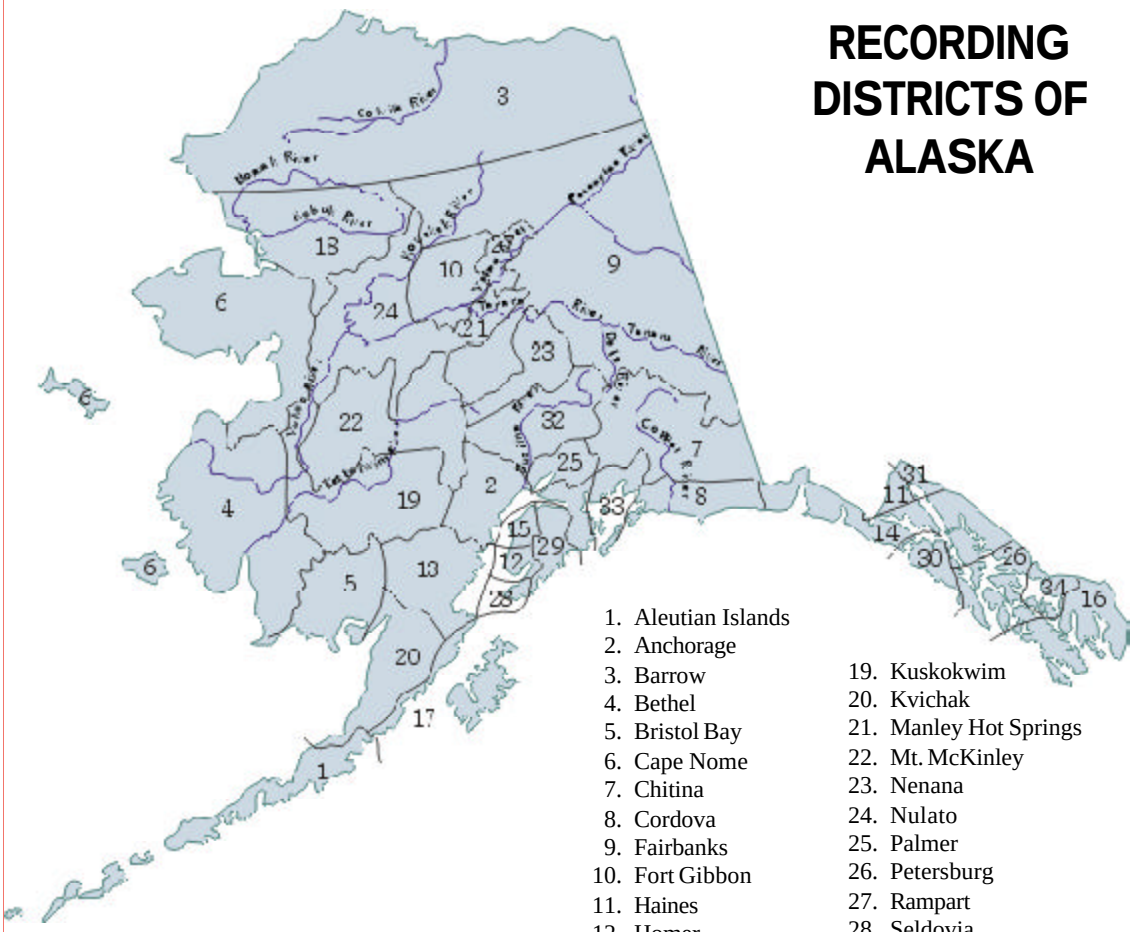
DIVISION OF MINING, LAND & WATER (DMLW)

The Division of Mining, Land & Water manages all State-owned land except trust property and units of the Alaska State Parks system. When all land conveyances under the Alaska Statehood Act are complete, the division will be responsible for managing more than 100 million acres of uplands and their non-petroleum minerals. The DMLW also manages Alaska's 65 million acres of tidelands, shorelands, and submerged lands, and has jurisdiction over all of the state's water resources. The Division's functions include:

- collecting all rents and royalties from state-owned resources (except oil, gas, and geothermal)
- maintaining the state mining claim and upland leasing records
- developing land-use plans
- overseeing the Abandoned Mine Lands (AML) program
- authorizing and administering mining claims, coal and mineral leases, access, and plans of operation for mineral development
- granting easements for temporary use of state land and access roads.

The DMLW also has regulatory authority over mining activity on privately owned land through the Reclamation Act.

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.dnr.state.ak.us/ssd/recoff/

SUPPORT SERVICES DIVISION—RECORDERS OFFICES

The Recorders 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 above), which record at 14 offices statewide. For addresses and contact telephone numbers of the recording offices, refer to Appendix B.

http://www.dnr.state.us/ssd/lris/

http://www.asgdc.state.ak.us

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 DNR Public Information Centers (PICs) in Anchorage, Juneau, and Fairbanks. Online, searchable land records are available through the Alaska State Geospatial Data Clearinghouse (ASGDC) at the URL at the left. This electronic clearinghouse provides public access to a wide variety of Alaska geospatial data and maps, and combines documentation for GIS information from all State agencies. On the ASGDC Web site, the public can access State Status Plats and Surveys, Mining Claims Information, and links to a wealth of GIS-related sites for State and Federal agencies.

http://www.state.ak.us/adfg/adfghome.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 issues permits for work that involves any of the following: 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 ARLIS facility (see Section 6) in Anchorage.

http://www.state.ak.us/dec/home.htm

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.

UNIVERSITY OF ALASKA

http://info.alaska.edu/
http://www.uaf.edu/
http://www.uaa.alaska.edu/

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 6 for more information about these two libraries.

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

UAF Department of Geology and Geophysics

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

http://www.uaf.edu/sme/MinEng.html

UAF School of Mineral Engineering

Provides undergraduate and graduate education programs in geological engineering, mining engineering, mineral preparation engineering, and petroleum engineering. The School of Mineral Engineering conducts laboratory and field research to promote mineral and energy development in Alaska.

http://www.uaf.edu/sme/MIRL.html

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/

UAF Geophysical Institute/International Arctic Research Center

The Geophysical Institute/International Arctic Research Center 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, remote sensing, 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 (Keith B. Mather Library) and the GeoData Center, which houses a variety of geophysical data, satellite, and aerial imagesfor Alaska and, through the Map Office, sells selected USGS maps and other publications. See Section 6 for more information about these facilities.

REGIONAL NATIVE CORPORATIONS

Native corporations are the major private holders of land and subsurface mineral interests in Alaska. Regional corporations 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 area, the Ambler district, and numerous placer gold areas.

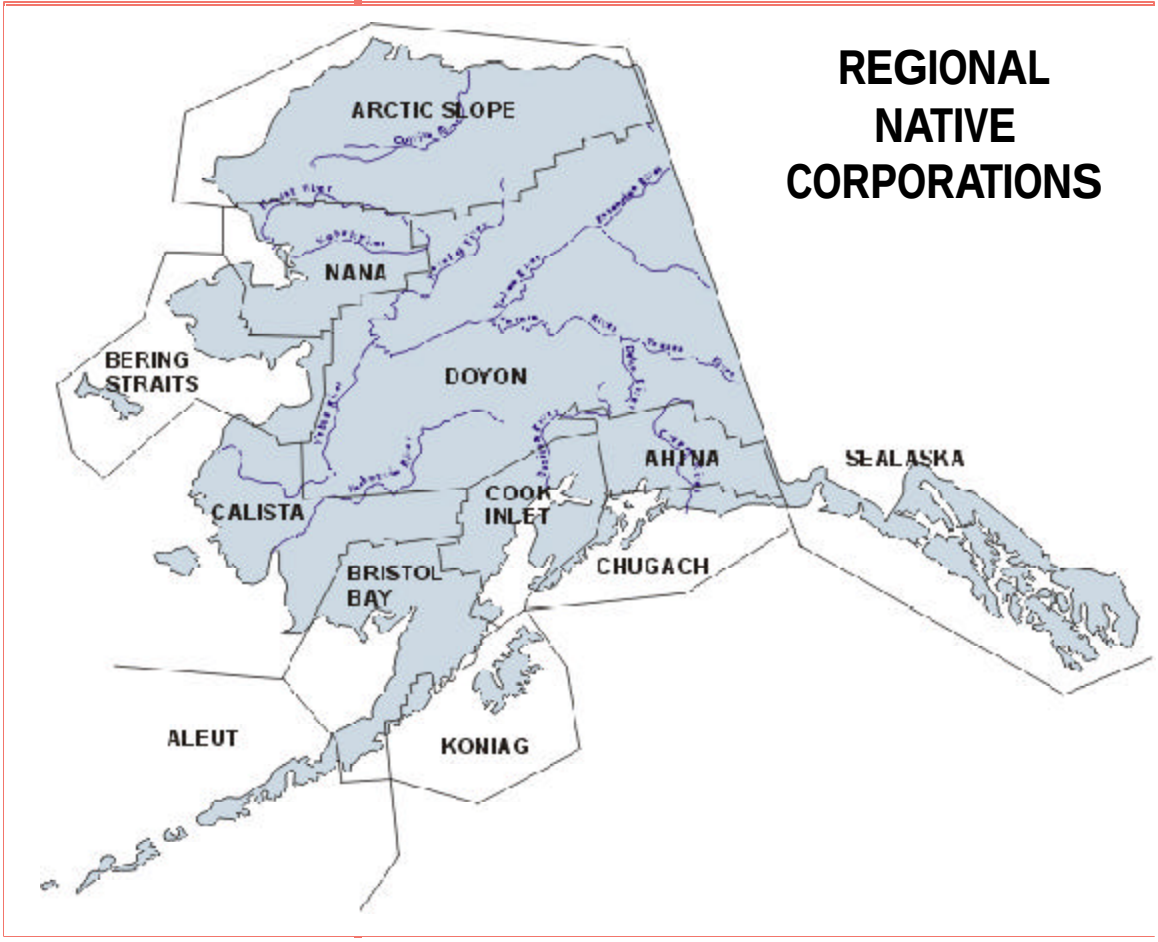
Boundaries of the regional Native corporation areas are shown on the map below. Addresses and contact information for the lands or natural resources department of each regional corporation are included in Appendix B.

Use of Corporation Land

Each regional, village, and urban corporation 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 property ownership information.

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 actively conduct mineral exploration and resource evaluation programs on the lands they con-



trol. 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.

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

Ahtna, Incorporated

Ahtna, Incorporated, 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 has 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 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. An overview of the mineral potential of Ahtna lands is available at http://www.ahtna-inc.com/ldlm.html. For additional information, contact the Ahtna, Incorporated, Land and Resource Group Manager.

http://www.aleutcorp.com/

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 a Mineral Prospectus available for the lands they control. For more information, contact the Aleut Corporation.

http://www.asrc.com/

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.

http://www.beringstraits.com/

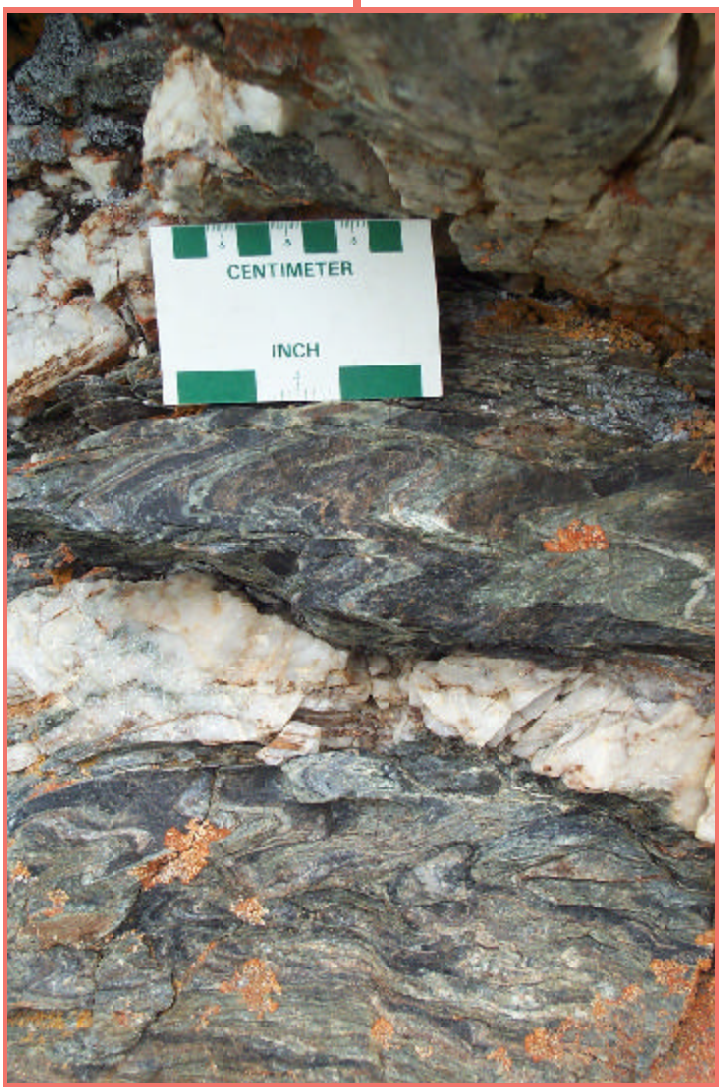
Bering Straits Native Corporation (BSNC)

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.

http://www.bbnc.net/

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, Limited, 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 mineral 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.



White quartz veins cut the highly deformed schist that commonly is found throughout the interior of Alaska. Photo by D.J. Szumigala.

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 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.

The "China Hut" ore haulage and storage facility at Teck Cominco's Red Dog Mine in northwestern Alaska—the world's largest zinc mine. Photo by D.J. Szumigala.

http://www.ciri.com/

Cook Inlet Region, Incorporated (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, CIRI is interested in leasing or joint ventures and has proprietary information about mineral potential and prospects for business partners. For further information, contact the CIRI Manager of Land Entitlement.

http://www.doyon.com/

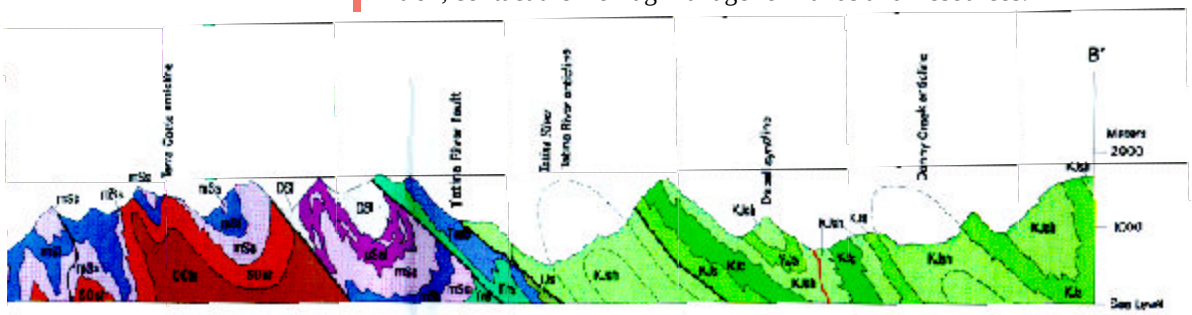
Doyon, Limited

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 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.

http://www.koniag.com/

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.



Sample of cross-section (Bundtzen, T.K., Harris, E.E., and Gilbert, W.G., 1997, Geologic map of the eastern half of the McGrath Quadrangle, Alaska, Alaska Division of Geological & Geophysical Surveys Report of Investigations 97-14a, 34 p., 1 sheet, scale 1:125,000.)

http://www.NANA.com/

NANA Regional Corporation

NANA Regional Corporation has 2.3 million acres of land in northwestern Alaska, including the world-class Red Dog zinc mine. The regional corporation owns both the surface and subsurface estates for the bulk of these lands. 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 agreements. 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.

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

MAJOR REPORTS AND PUBLICATIONS

This section is an overview of information published about the geology of Alaska and the Alaska mineral industry, and of some of the bibliographic tools that can be used to locate references for specific areas or topics. The published literature encompasses weekly and monthly mining newsletters, yearly mining industry summary reports, and 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.

Several 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. Newsletters that have frequent Alaska news are identified under the heading Keeping Current in this section. Keeping Current also identifies annual reports that contain detailed summaries and analyses of 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 Alaska 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.

The matrix on the following 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. In addition, check the library catalogs, which can be accessed at the libraries or via the Internet as described in Section 7. For more information about these libraries and collections, please refer to Section 6.

Bibliographic tools can be helpful 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 some of these bibliographies, whose emphases range from general geology to topics in Alaska geology or mining.

KEEPING CURRENT

Annual Reports

Currently, two yearly summaries are published about mining and mineral exploration activities in Alaska.

- *Alaska's Mineral Industry*—Division of Geological & Geophysical Surveys—This annual report is part of DGGS's Special Report (SR) Series, and is published cooperatively by DGGS, DMLW, and

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

	AK Resource Lib. and Info. Svc. (ARLIS)	Alaska State Library	BLM Juneau - John Rishel Mnrl Info Cntr	Div. of Geological & Geophysical Surveys	UAA Consortium Library	UAF Geophysical Inst. Library	UAF Rasmuson Library
U.S. GEOLOGICAL SURVEY PUBLICATION SERIES							
Annual Reports	5	4	3	1	4	4	5
Bulletins	5	4	5	5	5	4	5
Circulars	5	3	5	5	4	4	5
Coal Investigations Maps	5	5	4	5	-	5	4
Digital Data Series	-	-	-	1	5	1	-
Geologic Quadrangle Maps	5	4	5	5	-	5	4
Geophysical Investigation Maps	5	3	5	5	-	5	4
Hydrologic Atlases	5	4	4	4	-	5	4
Mineral Commodity Summaries	5	5	-	-	-	-	5
Mineral Resources of the U.S.	5	5	5	-	3	-	5
Minerals Yearbook	5	3	-	-	5	-	5
Miscellaneous Field Studies Maps	5	4	5	5	-	5	5
Miscellaneous Investigations Maps	5	3	4	4	-	5	4
Oil & Gas Investigations Charts	3	-	3	-	-	5	5
Oil & Gas Investigations Maps	3	1	4	5	-	5	5
Open-File Reports	5	4	4	5	5	4	4
Professional Papers	5	3	5	5	5	4	5
Topographic Maps	5	5	5	4	5	5	5
Vegetation and Land Cover	4	-	4	-	-	5	4
U.S. BUREAU OF MINES PUBLICATION SERIES							
Information Circulars	5	5	5	5	5	1	5
Mineral Commodity Summaries	5	-	5	4	4	-	5
Minerals Facts and Problems	5	-	5	4	5	-	5
Minerals Yearbooks	5	5	5	4	5	-	5
Open-File Reports	5	3	5	4	3	1	4
Reports of Investigations	5	3	5	5	5	1	5
ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS PUBLICATION SERIES							
Alaska Open-File Reports	5	5	5	5	4	5	4
AK Territorial Dep't of Mines Reports	5	5	5	5	-	5	3
Geochemical Reports	5	5	5	5	5	4	4
Geological Reports	5	5	5	5	5	5	-
Guidebooks	5	4	3	5	5	5	3
Information Circulars	5	5	3	5	4	5	5
Professional Reports	5	5	4	5	3	5	-
Public-Data Files	5	3	1	5	-	5	-
Reports of Investigations	5	3	5	5	2	5	5
Special Reports	5	5	5	5	5	5	5
MIRL PUBLICATIONS	5	-	-	2	-		3

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

the Department of Community & Economic Development's Division of Trade and Development. 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 (IC) in the spring. Both the annual minerals report and the summary are distributed free of charge while supplies last, and can be downloaded from the DGGS Web site (http://www.dggs.dnr.state.ak.us/).

- *Minerals Yearbook, Volume II*—U.S. Geological Survey—Volume II of the USGS 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 publishes a quarterly newsletter (January, April, July, October)—the SEG Newsletter, which contains an *"Exploration Review"* that summarizes activities by companies in different regions of Alaska. Two weekly periodicals, *The Northern Miner* and *The Mining Journal*, London, 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. *"Mining News Alaska,"* a monthly insert in Petroleum News Alaska, contains information about exploration, mining, and regulatory issues. The matrix (page 20) shows which Alaska research libraries currently subscribe to each of these publications.

A reminder of Alaska's storied placer gold mining history. Photo by D.J. Szumigala.

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.

http://www.newswire.ca/

At least one available Web site (NewsWire, Canada; http://www.newswire.ca/) offers a free service that posts news releases from companies (including a large number of mining companies) to users' e-mail accounts.

FEDERAL AGENCY GEOLOGIC REPORT AND MAP SERIES

U.S. Geological Survey Publications

The following is an annotated list of major USGS 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 USGS Publications Catalogs. Note: DGGS currently is scanning many USGS publications that focus on Alaska. These downloadable files will be available through the DGGS Web site. For more information, contact DGGS.

http://pubs.usgs.gov/publications/index.shtml

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 1982–2000. Interim quarterly catalogs have been issued for 2001–2002. The monthly "New Publications of the U.S. Geological Survey" listings for 1995 to the present are available on the Internet at the address listed to the left.

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

	The Alaska Miner	Canadian Mining & Metallurgical Bulletin	The Mining Journal - London	The Mining Record	Mining News Alaska	Northern Miner
ANCHORAGE						
ARLIS		✍			✍	
Consortium Library - UAA					✍	
USGS Tech. Data Unit Reading Room					✍	
FAIRBANKS						
Rasmuson Library, UAF					✍	
Div. of Geological & Geophysical Surveys					✍	
JUNEAU						
BLM Juneau - John Rishel Mineral		✍		✍	✍	

✍ Information Centee

Major Report and Map Series

Listed in alphabetical order

Bulletins—Bulletins report significant data and interpretations that are of lasting scientific interest, but generally 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 to the public at no cost. Circulars are designed to disseminate administrative information or important scientific information of a short-lived nature.

Digital Data Series—The Digital Data Series encompasses a wide range of digital data, including computer programs, results of investigations, databases, spatial data sets, digital images and animation, and multimedia presentations, which are intended primarily for viewing, processing, and (or) analyzing by computer. Releases cover a broad spectrum of USGS investigations and research, and are distributed on CD-ROMs that are produced in accordance with the ISO 9660 Standard.

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

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,

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

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

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—These are multicolor or black-and-white maps of quadrangles or irregular areas. They are on topographic or planimetric bases, and are 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.

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 issued its own Open-File Reports from 1943 to 1974.

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 single 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.

The following additional USGS publication series focus on topics other than metallic mineral exploration, and may contain relevant information about the general geology of the focus areas. These series are no longer published, but maps relating to these topics are currently being published in the Geological Investigations Series.

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

Geophysical Investigations Maps—These maps, on topographic or planimetric bases, show the results of geophysical surveys such as gravity, magnetism, seismicity, or radioactivity. Many maps correlate the geophysics with the geology of the mapped area.

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

U.S. Bureau of Mines Publications

The U.S. Bureau of Mines published reports and maps from 1910 until it was defunded as a Federal agency in 1996. The former USBM in Alaska then became a part of the Bureau of Land Management-Alaska, and has continued its mineral assessment work under the BLM. The former USBM Open File Report series was continued as the BLM-Alaska Open File Report series and the Technical Report series. Several other Bureau of Mines publication series are being continued by the USGS—the Minerals 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 - John Rishel Mineral 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 were prepared after completion of all laboratory and fieldwork, but sometimes reported 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.

Information Circulars—Information Circulars are concerned primarily with Bureau economic reviews and analyses and with Bureau projects that were 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 is continued by the USGS under the same title. 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

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—This series is continued by the USGS under the same title. 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 above) 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 STATE AGENCY GEOLOGIC REPORT AND MAP SERIES

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

Alaska Division of Geological & Geophysical Surveys Publications

The following is an annotated list of the major DGGS publication series. 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 site. Virtually all DGGS reports and maps, including those from DGGS's predecessors such as the Territorial Department of Mines, can be viewed and downloaded through the DGGS Web site. These publications can be searched online by quadrangle, publication series, or keyword. DGGS currently is in the process of

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

scanning publications on Alaska geology from the USGS Bulletin and Professional Paper series, and these will be made available online in the future through the DGGS Web site.

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 and updated periodically) is available in libraries, from DGGS, and through the DGGS Web site. 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 *Reports of Investigations* 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 collection includes reports, notes, photographs, and maps produced before Alaska statehood. Individual series include *Itinerary Reports, Mineral Investigations, Miscellaneous Reports,* and *Prospect Evaluations.* All Territorial Department of Mines reports are out of print, but some are available at libraries, and most are available in electronic form through DGGS's Web site.

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 *Reports of Investigations* series.

Geologic Reports—The name of this series changed in 1984 to the *Professional Report* series (see series description below).

Guidebooks—This series includes "field trip guides" that contain general and technical information to help geologists and non-geologists identify and 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. Several characteristics distinguish the PRs from other series: PRs are the completed product of original research and analysis, use professional cartography, and undergo rigorous peer review, editing, and revision to ensure accuracy.

Geophysical Reports—This series includes geophysical maps, contractors' geophysical reports, and short interpretive reports on

geophysical modeling. DGGS staff interpretations of the geophysical data are published in one of the other DGGS report series.

Miscellaneous Papers—This series encompasses reports that are difficult to classify in any other category. These include layered reports that consist of previously published, reviewed, and edited data such as geological or geophysical maps or summary reports of symposia or meetings.

Preliminary Interpretive Reports—This series provides a venue for timely release of maps and reports with preliminary interpretation of geologic or analytical data. It includes preliminary geologic field maps and draft geologic reports of investigations. It is expected that reports published in this category will be followed by a Report of Investigations or Professional Report in which the interpretations are finalized. PIRs are reviewed by at least one additional subject matter expert; and the report is given a thorough technical edit.

Raw Data Files—This series supercedes the Public-Data File series, and provides for the timely release of raw analytical and field data. These reports contain no interpretations.

Public-Data Files—The objective of this series was to make project and field data available to the public as soon as possible. PDFs were not reviewed or edited. This series was discontinued in 1999, and has been replaced by the Raw Data File series.

Reports of Investigations—Reports in this series are final reports of research on topical problems or specific map areas. They receive peer reviews and a technical edit by DGGS staff. In terms of peer review and editorial attention, this series falls between the Preliminary Interpretive Report series and the Professional Report series.

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, 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).

OTHER NOTABLE REPORTS AND REPORT SERIES

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

Several available 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).

DGGS geologists' camp along the South Fork of the Fortymile River in the middle of a 200-square-mile forest fire. Photo by D.J. Szumigala.

GeoRef can be searched at the ARLIS facility in Anchorage, and at the Mather and Rasmuson libraries in Fairbanks.

http://library.usgs.gov/

U.S. GEOLOGICAL SURVEY LIBRARY CATALOG

The Catalog of the USGS Libraries in Reston, Denver, Menlo Park, and Flagstaff is available via the Internet. A link and instructions for using this catalog are provided on the USGS 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 geological and related earth science publications. More information about the USGS catalog Web site is included in Section 7.

http://ngmdb.usgs.gov/

U.S. GEOLOGICAL SURVEY MAPPING DATABASE

The USGS Mapping Project maintains a National Geologic Map Database, which references all published USGS maps, as well as many published by state geological surveys and related organizations. 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.

http://usgs-georef.cos.com/

U.S. GEOLOGICAL SURVEY BIBLIOGRAPHY

A complete bibliography of all publications by USGS authors—including both USGS and non-USGS publications, abstracts, etc. is available at the Web site address at the left. This database is updated 24 times per year.

Alaska Geology Bibliographies

U.S. GEOLOGICAL SURVEY BIBLIOGRAPHIES OF ALASKA GEOLOGY

The USGS has published numerous bibliographies of Alaska publications. These 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.

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

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 keyword or SQL statement at http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi.

BIBLIOGRAPHY OF ALASKAN GEOLOGY

This bibliographic series lists reports, maps, and articles published from 1831 to 1972 on a variety of geologic venues in and around Alaska. It consists of six volumes compiled by Crawford E. Fritts,

which were published as DGGS Special Reports 21–26. They are available online through the DGGS Web site, and also are held at various libraries.

http://www.gi.alaska.edu/services/library/

Alaska Thesis & Dissertation Bibliography

The staff at Keith B. Mather Library at the UAF Geophysical Institute has compiled a bibliography of master's theses and doctoral dissertations written about the geology and mineral deposits of Alaska. The bibliography is indexed by quadrangle, and includes theses/dissertations from UAF and from other universities. This bibliography is available from the library and can be accessed through the GI library's Web site.

http://www.gi.alaska.edu/services/library/

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. This list is available from the library, and through the library's 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 from BLM's Web site, or contact BLM.

Alaska Minerals/Mining Bibliographies

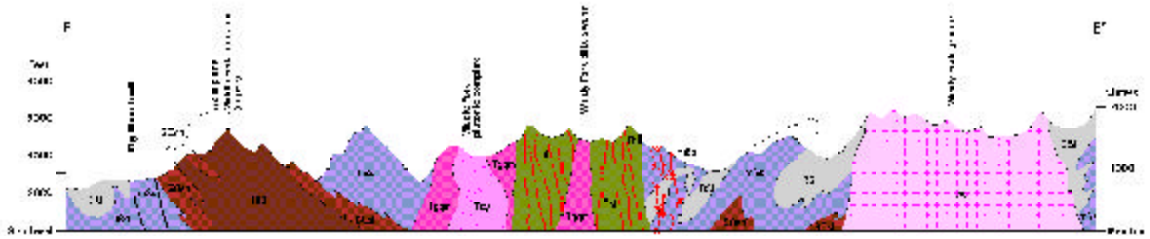
http://ardf.wr.usgs.gov/

Alaska Resource Data Files

A database of minerals information for Alaska, based on the compilations by E.H. Cobb, 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 for each quadrangle in Alaska. The goal is to complete the initial updates of all quadrangles in Alaska within the next year. 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 6 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



Sample of cross-section (Bundtzen, T.K., Harris, E.E., and Gilbert, W.G., 1997, Geologic map of the eastern half of the McGrath Quadrangle, Alaska, Alaska Division of Geological & Geophysical Surveys Report of Investigations 97-14a, 34 p., 1 sheet, scale 1:125,000.)

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, and ARDF includes more recent citations.

MAS/MILS

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

The Minerals Availability System (MAS)/Mineral Industry Location System (MILS) is a database that contains information on individual Alaska mineral deposits. The MAS/MILS database 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.

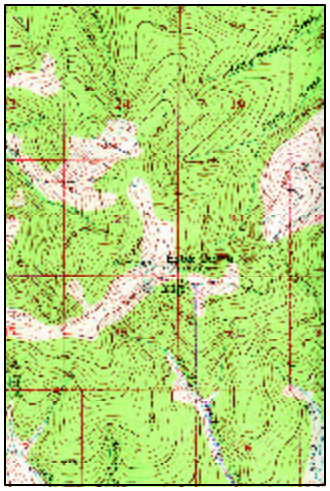
Much of the information collected for the database can be found in the Mineral Property Files housed at the Juneau - John Rishel Mineral Information Center. See Section 6 for further information.

A raven perches at the edge of a precipice overlooking Atigun Gorge (below, right) and the Philip Smith Mountains (background). The view, looking east, is a few miles east of the Dalton Highway and Trans-Alaska pipeline, about 15 miles south of Slope Mountain. The raven holds an important position in Alaska's Native culture. Photo by C.G. Mull.

MAPS AND DIGITAL DATA SETS

This section identifies sources of maps and aerial photographs, and digital data sets of interest to geology and mineral exploration in Alaska. It also offers resources to help identify maps for specific areas and uses. The sources described in this section primarily are government agencies and public information centers. Some of the information they provide may be unpublished and not generally available in libraries. Bibliographic databases and library catalogs described elsewhere in this Guide can help identify and locate published maps. Addresses and contact numbers for the agencies or offices mentioned in this section are listed in Appendix B.

TOPOGRAPHIC MAPS

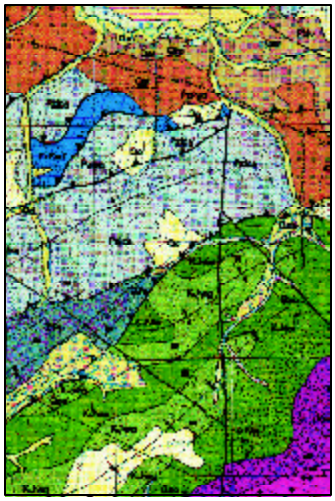


Topographic maps of the United States are published and distributed by U.S. Geological Survey (USGS) through the Earth Science Information Centers (ESIC) at branch offices in Anchorage and Fairbanks. A list of Alaska businesses that sell USGS topographic maps can be found on the Internet following the "Services" link on the USGS National Map Web site at http://mapping.usgs.gov/.

Digital Mapping Data

The availability of digital mapping data for a specific area can be researched on the USGS National Map 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/to_geo.html. Digital mapping data also are available on CD-ROM, and can be purchased through ESICs. The following Web page lists digital data that are available from the USGS on CD-ROM: http://mapping.usgs.gov/esic/cdrom/cdlist.html#A4.

GEOLOGIC MAPS



The USGS and 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). Some areas of Alaska have not been mapped at either scale. Good places to search for DGGS and USGS geologic maps are:

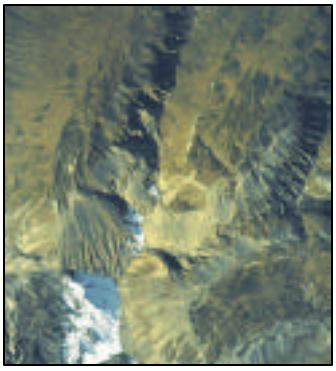
- Catalogs of the research libraries listed in Section 6
- GeoRef (see Section 3)
- Interagency Minerals Coordinating Group (IMCG) and DGGS Web sites at http://imcg.wr.usgs.gov/digi.html and http://www.dggs.dnr.state.ak.us/
- The USGS National Geologic Mapping Database at http://ngmdb.usgs.gov/
- The USGS library catalog at http://library.usgs.gov/

In addition, theses and dissertations often include unpublished maps. The Keith B. Mather Library at the UAF Geophysical Institute has a bibliography of dissertations and theses about Alaska geology. See Sections 3 and 6 for more information about bibliographies and the libraries in Alaska, respectively.

Digital Geologic Maps

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/elecdata.html, and data sets can be purchased from DGGS.

AERIAL PHOTOGRAPHS



The USGS has a collection of aerial photographs obtained 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 copies. 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://mac.usgs.gov/mac/isb/pubs/factsheets/fs08199.html for further information about ordering USGS air photos.

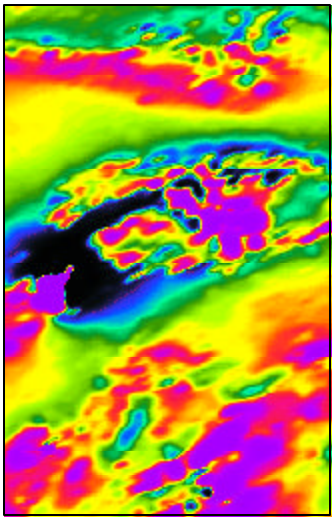
The UAF Geophysical Institute GeoData Center has aerial photos for most of Alaska on hand for review, although none is more recent than the mid 1980s. Orders for reproductions take approximately 3 to 5 working days, and low-, medium-, and high-resolution digital files also are available.

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://edc.usgs.gov/.

Also contact the EROS Alaska field office for information about remote sensing imagery of Alaska at the address in Appendix B, or visit the Alaska Geospatial Data Clearinghouse Web site at http://agdc.usgs.gov/.

GEOPHYSICAL/AEROMAGNETIC DATA AND MAPS



Detailed (1:63,360 scale or greater) geologic mapping has not been completed for most 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 data collected by 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://wwwdggs.dnr.state.ak.us/geophys.html.

Results of an older series of geophysical 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, search the DGGS online publications at http://www.dggs.dnr.state.ak.us/ or contact DGGS.

Bibliographies

Several bibliographies of aeromagnetic data are 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), hard copy, or from the DGGS Web site.

Alaska Airborne Index, a bibliography of aeromagnetic data and reports on Alaska modified from USGS Open-File Report 91-370-E, includes data and reports from the USGS, DGGS, and other sources. This bibliography is available online 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:

http://agdc.usgs.gov/

USGS 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.

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

DGGS Geophysical Reports and maps can be downloaded from DGGS's web site. Available reports can be located under Geophysics Information, or searched by quadrangle or other user-defined criteria.

http://edc.usgs.gov/

EROS Data Center is the gateway to the extensive digital 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.

http://pubs.usgs.gov/of/1997/ofr-97-0520/alaskamag.html

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.

http://geology.wr.usgs.gov/docs/gump/morin/alaska/gravity/gravity.html

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

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

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

GEOCHEMICAL 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,

http://imcg.wr.usgs.gov/nuredata.html

http://wrgis.wr.usgs.gov/open-file/of99-433/

stream sediment, and panned concentrate samples—are available in many of the publications of these agencies (see Section 3). The 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 more than 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-scale 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 from 55 quadrangles in Alaska at http://wrgis.wr.usgs.gov/open-file/of99-433/.

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 Mountains
Seward	Solomon	Survey Pass
Taku River	Tanacross	Valdez
Wiseman		

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

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/. 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. See Section 2 for more information about Native corporations.

GEOLOGIC INFORMATION BY QUADRANGLE

The Alaska Division of Geological & Geophysical Surveys (DGGS) lists reports by quadrangle in the Publications Catalog (DGGS Information Circular 11) and on the DGGS Web page, http://www.dggs.dnr.state.ak.us/. Printouts for specific quadrangles can also 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.

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

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 check 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.

Student intern Mackenzie Johnson takes notes while DGGS geologist De Anne Stevens reads a gravitometer for measuring fluctuations in the Earth's gravity field. Photo by D.J. Szumigala.

Two Alaskan workhorses—a Hughes 500 D helicopter slings an all-terrain vehicle (ATV) to a remote campsite. Photo by D.J. Szumigala.

LEGAL ISSUES IN MINING: PERMITTING, LANDS, AND ENVIRONMENTAL INFORMATION

Mining and mineral exploration in Alaska (and elsewhere, of course) require much more than geologic knowledge. Those interested in pursuing these activities must be able to find information about the legal and regulatory framework in Alaska, the jurisdiction of State and Federal entities, land ownership and associated issues, and the restrictions and challenges posed by environmental conditions. This Guide provides some basic information about these issues and points the reader to sources for further clarification.

Visit http://www.akgeology.info/ for links to online land status information

An overview is provided for selected topics (for example, see Land Status) to give the reader an insight into aspects of geologic information and the minerals industry that may be unique to Alaska. These overviews are not intended to be comprehensive, and further research by the reader generally will be warranted. Also, please note that these overviews and the sources are current as of the date this Guide was published, 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 6 describe the roles of many agencies and other entities mentioned in this section.

LAND STATUS

The State of Alaska and the Federal government are the major landholders in Alaska, controlling approximately 25 and 65 percent of the state, respectively. Native corporations are the major private landowners, collectively holding title to approximately 10 percent of land in Alaska. Less than 1 percent of Alaska's land is owned by private entities other than Native corporations.

Both the State and some 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 in Section 5).

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 plans 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 (BLM only), and Juneau—see descriptions in Section 6 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. In addition, the Alaska State Geospatial Data Clearinghouse (ASGDC; http://www.asgdc.state.ak.us/) has electronic State and Federal land status data, including DNR State Status Plats, State Surveys, and Historical Indices; the BLM Master Title Plats (MTP) and Federal survey information; and offers access to the DNR Land Administration System (LAS).

MINERAL POTENTIAL 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 the 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. There also are several commercially published books that include detailed or summary descriptions of past mining activities and mineral potential in Alaska. For assistance locating such materials, search the library catalogs and contact the reference staff at the libraries listed in Section 6, or contact your local library.

EXISTING MINING CLAIMS

State Land

Information about existing and past mining claims on State land is available from the DNR Public Information Centers, and online at http://www.dnr.state.ak.us/mcis/. The Public Information 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. Claim information can be found through the name of the claimholder, legal description of the claim, or the claim name.

DNR State Status Plats, State Surveys, and Historical Indices can be searched at http://www.dnr.state.ak.us/cgi-bin/lris/landrecords/. The BLM's Master Title Plats (MTP) and Federal survey information are also available through this site. In addition, it offers access to the DNR Land Administration System (LAS) to provide case file summaries and case file abstracts of information depicted on the State Status Plat.

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

An older card file-based mining claim information system, called KARDEX, includes State and Federal mining claim information through about 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 Public Information Center in Fairbanks, and is available for public use during business hours.

There are 34 State recording districts and 14 associated Recorders Offices for mining claims on State and Federal land in Alaska. These districts are shown on the map on page 8. In addition to recording and processing real property transactions including mining claims, these 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 the State recording offices are listed in Appendix B.

Federal Land

The U.S. Bureau of Land Management–Alaska has a database of land status information and mining claims on Federal lands—currently the Alaska Land Information System (ALIS). This database can be searched at http://www.ak.blm.gov/alis/, at Mining Claims On-line (http://www.dnr.state.ak.us/mcis/), 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 Public Information Center in Anchorage has patent surveys for patents and case files for southcentral and southeast Alaska, and the Fairbanks Public Room houses the files for northern Alaska.

FILING AND MAINTAINING MINING CLAIMS

Claims on State Land

Mining claims on State land must be recorded at the appropriate Recorder's Office within 45 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, Land, and Water (DMLW) 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/mlw/. The map on page 8 shows the Recording Districts and Recorder's Office locations. Addresses and contact information for the Recorder's Offices, Public Information Centers, and DMLW 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.

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.

Claims on State-Selected Land

State-selected and Native-selected lands (see the explanation of these terms under Land Status, above) 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 Alaska 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. Fact sheets available from the DNR Public Information Centers and the Division of Mining, Land, and Water Web site (http://www.dnr.state.ak.us/mlw/) outline the issues involved in mining and in converting Federal claims to State claims on State-selected land. Contact the Division of Mining, Land, and Water for further information.

Claims on Federal Land

Mining claims on Federal land in Alaska must be recorded with the Bureau of Land Management within 90 days of posting. The BLM Alaska State Office in Anchorage is the recording office for all claims on Federal land except claims 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 45 days of posting (see Claims on State Land above). A brochure titled "Mining on Public Lands in Alaska" is available from the BLM Public Information Centers. Contact the BLM public information offices listed in Appendix B for more information and detailed information about requirements, procedures, and fees for recording claims on Federal land, and about annual rental and labor on Federal claims.

MINING RENTS AND ROYALTIES

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/mlw/. For further information, contact the DMLW 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.

EXPLORATION INCENTIVES

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–

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/mlw/. For further information, contact DMLW at the address listed in Appendix B.

PERMITTING FOR MINING AND EXPLORATION

The DNR Public Information Centers have fact sheets that cover many aspects of permitting for exploration and mining in Alaska. The Alaska Miners Association includes a section on permitting in its Annual Handbook and Service Directory. Section 2 of this Guide briefly describes 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 Division of Mining, Land & Water. Some can be found on the Internet at http://www.dnr.state.ak.us/mlw/:

- 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 that anticipate a future need to permit a large mine on State land in Alaska should contact the DMLW Large Mine Project Manager (for contact information see http://www.dnr.state.ak.us/mlw/mining/lg_mine.htm). 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 to accommodate the long lead time required for many permits. For more information contact the DMLW in Anchorage at the address in Appendix B.

Annual Placer Mining Application

The Annual Placer Mining Application (APMA) was designed to assist in the permitting process for selected mining activities in Alaska, including placer mining, placer and hard-rock exploration, and transportation of equipment. The APMA form is available from DNR Public Information Centers or the DMLW, and can be downloaded from the Internet (http://www.dnr.state.ak.us/mlw/). Completed applications for mining on State land are submitted to DMLW for review and, upon approval, are forwarded to other State, Federal, and local agencies involved in the permitting process. Operators on Federal land are 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 DMLW.

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 EPA in Anchorage (1-800-781-0983 within Alaska or 907-271-6561).

The U.S. Army Corps of Engineers (USACE) regulates the placement of fill material into streams and wetlands. A general USACE 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 hard-rock exploration activities. Advanced hard-rock 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.

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 7 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 that had a role in regulating mining activities. This role has now been taken over by State and Federal agencies; however, there are several remaining mining districts that function as political and informational organizations. Addresses and contacts for these organized mining districts are 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 Alaska Land Information System (ALIS), and the Alaska DNR Public Information Centers for information about historic (and current) claims on State and Federal land.

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

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.

Triassic Otuk Formation organic-rich siltstone, in a north-vergent fold near the headwaters of Akmagolik Creek, 6 miles (10 km) north of Anaktuvuk Pass, north-central Brooks Range. The Mississippian-age Lisburne Limestone and Permian Siksikpuk Formation (upper left of photo) overlie this overturned stratigraphic section. The Otuk Formation is a rich petroleum source rock for many of the North Slope oil fields. Photo by R.R. Reifenstuhl.

BLM Mineral Property Files consist of more than 7,000 files on individual Alaska mines, prospects, and mineral occurrences, both current and historic. Information included in individual 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 - John Rishel Mineral 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 UAF, the Anchorage Museum of History and Art, the Last Chance Mining Museum, the Juneau-Douglas City Museum, and the Alaska State Museum in Juneau.

ENVIRONMENTAL CONSIDERATIONS

U.S. Environmental Protection Agency (EPA) publications, which include 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 - John Rishel Mineral Information Center collect EPA publications, Environmental Impact Statements (EISs), and State planning documents related to mining, but do not systematically collect entire 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 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; and 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 - John Rishel Mineral 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, respectively. These are published annually and can be accessed at most of the research libraries listed in Section 6, 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 7 under the heading "Regulatory and Legal Information."

http://mine-drainage.usgs.gov/

Mine Drainage

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.

Water Bodies

The following agencies can provide technical, regulatory, and jurisdictional information about Alaska's 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 DNR Division of Mining, Land, and Water
- U.S. Bureau of Land Management
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency, Region 10
- Alaska Department of Environmental Conservation

Steve Personius (USGS) taking scarp profile measurement across a stream that was diverted by fault movement resulting from the magnitude 7.9 Denali Fault earthquake of 2002. Photo by P.A. Craw.

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 at no charge. Copies can be ordered through the USGS ESIC 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/MSC/. 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.

GEOTECHNICAL ENGINEERING AND PERMAFROST

Tree split horizontally by surface movement resulting from the magnitude 7.9 Denali Fault earthquake of 2002. Milepost 215.71 Richardson Highway. Photo by P.A. Craw.

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. For further information contact the UAF Geological Engineering Department at the address in Appendix B.

UAF Mineral Industry Research Laboratory (MIRL) provides general information and assistance to the mineral industry. MIRL publishes reports of results from studies concerning mining in frozen ground and related problems, and environmental concerns about 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/).

GEOLOGIC HAZARDS

Geologic hazards in Alaska include those that result 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.

Road surface at Milepost 78 along the Tok Cutoff, showing damage from the magnitude 7.9 Denali Fault earthquake of November 3, 2002—the world's largest earthquake of that year. View looking north towards Mentasta Lodge on the east (right) side of road shows approximately 4 feet of vertical and 6 feet of horizontal displacement across the road. Photo provided by Shannon & Wilson Inc. from Web site (http://clients.shanwil.net/project.php?projectid=Fairbanks_ Quake_2002).

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.aeic.alaska.edu/

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://wcatwc.gov/
http://wcatwc.arh.noaa.gov/

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.

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 Web site http://geohazards.cr.usgs.gov/.

LAND-USE PLANS

The DNR Division of Mining, Land, and Water 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 Mining, Land, and Water regional offices in Fairbanks and Juneau also have plans available for review. ARLIS and the BLM Juneau - John Rishel Mineral Information Center have copies of many area and land-use plans, and other research and municipal libraries may also have copies. A listing of DMLW plans that are completed, under review, or pending is available at http://www.dnr.state.ak.us/mlw/planning/index.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 6, the local library catalog, or online 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. In general, these areas are closed to 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.

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 streams containing anadromous fish. These can be viewed at the Fish & Game offices at the addresses in Appendix B.

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

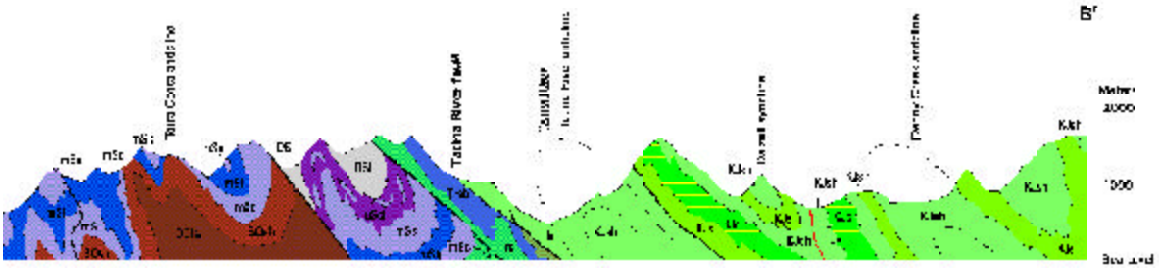
This section describes reference collections of publications, maps, and other documents about mining and geology in Alaska. These collections include major research libraries that catalog and circulate material, and special collections and archives whose collections generally do not circulate. The description of each facility includes an address and map, a summary 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 DNR 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 DGGS. Also included is advice about how to find commercial vendors of topographic maps and aerial photographs.

RESEARCH LIBRARIES

The six libraries described below have large collections of geoscience information. Most of their collections are cataloged, and they have full-time reference staff who can assist in identifying references and finding other resources. The catalog of each library is available on the library's Web site. In addition, most of the libraries' digital bibliographic resources can be reached on the Internet via SLED (http://sled.alaska.edu/). The "Statewide Library Electronic Doorway," or SLED, provides online 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 Mather, Consortium, and Rasmuson libraries are part of the Goldmine Catalog.

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 (Bundtzen, T.K., Harris, E.E., and Gilbert, W.G., 1997, Geologic map of the eastern half of the McGrath Quadrangle, Alaska, Alaska Division of Geological & Geophysical Surveys Report of Investigations 97-14a, 34 p., 1 sheet, scale 1:125,000.)

Alaska Resources Library and Information Services (ARLIS)

After August 2004
3211 Providence Drive
Anchorage, AK 99508
Phone: 907-272-7547
Fax: 907-271-4542
E-mail: ref@arlis.org

Until August 2004
3150 C Street, Suite 100
Anchorage, AK 99503
Phone: 907-272-7547
Fax: 907-271-4542
E-mail: ref@arlis.org

After August, 2004, ARLIS will be moving to a new location adjoining Consortium Library on the UAA campus (see map on the facing page). Users of ARLIS can have their parking validated for the Consortium Library parking garage. Parking cannot be validated for other campus parking facilities.

ARLIS HOURS
Monday–Friday
8:00 a.m.–5:00 p.m.

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 literature on pollution, and the geology of water from 1967 to present.
- The library circulates Federal and State publications about all aspects of Alaska's natural resources.

CATALOGING SYSTEM/ONLINE CATALOG ACCESS

ARLIS's catalog is available on the Internet at http://www.arlis.org/. It also can be accessed through the Statewide Library Electronic Doorway (SLED) at http://sled.alaska.edu/library.html.

CIRCULATION

ARLIS shares book circulation with Anchorage Municipal Libraries, and University of Alaska Anchorage. Geology materials will circulate for three weeks to cardholders from either of these institutions. Those who do not have a library card from either institution may obtain an ARLIS card with a valid Alaska driver's license or other suitable identification. Geology materials circulate two weeks on an ARLIS card. If you are outside of Anchorage, ARLIS will lend materials on Interlibrary Loan to any library that requests service.

Consortium Library—University of Alaska Anchorage

3211 Providence Drive
Anchorage, AK 99508
Phone: 907-786-1848
Fax: 907-786-6050
E-mail ayref@uaa.alaska.edu

Consortium Library Hours
During the academic year:
Monday–Thursday
7:30 a.m.–11:00 p.m.

Friday
7:30 a.m.–8:00 p.m.

Saturday
10:00 a.m.–6:00 p.m.

Sunday
Noon–11:00 p.m.
Contact the library for hours during the summer and between semesters.

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.

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

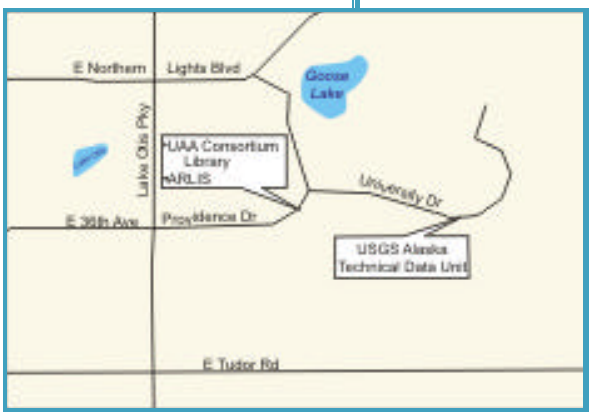
- Photocopiers are available for a variety of formats (paper, microfiche, microfilm)
- Reference assistance is available
- Public Internet access
- Searchable dissertation abstracts database
- GeoBase, which indexes worldwide literature on geography, geology, and ecology.
- GeoRef database, which indexes North American geologic literature from 1785 to present.

Cataloging System/Online Catalog Access

The UAA catalog is available on the Internet at http://www.lib.uaa.alaska.edu/. It can also be accessed through the Statewide Library Electronic Doorway (SLED) at http://www.sled.alaska.edu/ under Library Catalogs & Resources.

Circulation

UAA shares book circulation with Anchorage Municipal Libraries, and ARLIS. Geology materials will circulate for three weeks to cardholders from either of these institutions. Geology materials circulate 4 weeks to undergraduates. If you are outside of Anchorage, UAA will lend materials on Interlibrary Loan to any library that requests service.



Keith B. Mather Library, GI/IARC
University of Alaska Fairbanks

930 Koyukuk Drive
P.O. Box 757320
Fairbanks, AK 99775-7320
Phone: 907-474-7512
Fax: 907-474-7290
http://www.gi.alaska.edu/services/library/

KEITH B. MATHER LIBRARY HOURS
Monday–Friday
8:00 a.m.–5:00 p.m.

The Geophysical Institute/International Arctic Research Institute (GI/IARC) is in the northwestern part of the University of Alaska Fairbanks (UAF) campus. Visitor parking is available in the Elvey parking lot behind GI/IARC. In addition, UAF runs a free shuttle bus around campus during the spring and fall semesters, with stops at the GI/IARC and in outlying parking lots.

GENERAL DESCRIPTION

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

SERVICES

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

CATALOGING SYSTEM/ONLINE ACCESS

The catalog of the Keith B. Mather Library is available on LASERCAT, Goldmine, and SLED. The Internet address for SLED is http://sled.alaska.edu/, and Goldmine can be accessed at the library, through SLED, or through the UAF Rasmuson Library Web site at http://www.uaf.edu/library/.

CIRCULATION

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

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: fyref@uaf.edu
http://www.uaf.edu/library/

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

RASMUSON LIBRARY HOURS
(Regular Academic Calendar)
Monday–Thursday
7:30 a.m.–10:00 p.m.

Friday
7:30 a.m.–7:00 p.m.

Saturday
11:00 a.m.–7:00 p.m.

Sunday
1:00 p.m.–10:00 p.m.

Abbreviated hours during holidays and intersession—please call in advance.

The location of the Rasmuson Library is shown on the map on page 52.

GENERAL DESCRIPTION

Rasmuson Library is the largest academic library in Alaska. It has a research-oriented collection that serves the UAF faculty and students, and the general public. The Library includes the Alaska and Polar Regions Department and the Government Documents and Maps Division, both of which have significant collections pertaining to mining and geology.

The Alaska and Polar Regions Department (APR) houses books, manuscripts, maps, archives, oral histories, and films relating to Alaska, northern Canada, and the Arctic and Antarctic regions. The Department reviews more than 500 journals received by the library to produce the *Alaska & Polar Periodical Index*—one of the most comprehensive indexes to journal articles pertaining to Alaska and the Polar regions. This index is available from the library's homepage (http://www.uaf.edu/library/). For further information about APR's collections, call 907-474-7261.

The Government Documents/Maps Division is part of the Federal Depository Library Program, and receives 46 percent of the items that the program distributes. The collection includes the major research-oriented material from the USGS, U.S. Bureau of Mines, NOAA, and the U.S. Army Cold Regions Research Laboratory (CRREL). The Documents Division also receives reports distributed by the National Technical Information Service (NTIS) that pertain to northern latitude topics such as permafrost and cold-weather engineering. The map and atlas collection is worldwide in scope with an emphasis on Alaska and northern Canada. Older editions of nautical charts and USGS quadrangle maps for Alaska are retained.

Most of the government documents and maps are listed in Goldmine—the library's catalog. Goldmine, the Government Printing Office (GPO) database, GeoRef, and other bibliographic databases are available from the library's homepage (http://www.uaf.edu/library/). For questions about the Government Documents and Maps Division, call 907-474-7624 or 907-474-6730.

SERVICES

- Reference assistance
- Photocopying is available at self-service copiers
- Access to a wide variety of electronic bibliographic databases including GeoRef, NTIS, Science Citation Index.
- Interlibrary loan is available for most materials.
- Assistance from the Government Documents staff is available Monday–Friday 8:00 a.m.–5:00 p.m. Most of the collection is in open stacks and available for self-retrieval during all hours that the library is open.

CATALOGING SYSTEM/ONLINE CATALOG ACCESS

The library is part of the OCLC cataloging utility. The library holdings can be found in the Goldmine catalog, which is available from the library's homepage (http://www.uaf.edu/library/).

CIRCULATION

Materials can be checked out with a Polar Express Card from the University of Alaska, or with a Fairbanks North Star Borough library card.

Two "future miners" rest on the blade of a Caterpillar bulldozer at Usibelli Coal Mine near Healy. Photo by D.J. Szumigala.

Juneau - John Rishel Mineral Information Center—Bureau of Land Management (JRMIC)

100 Savikko Road
Mayflower Island
Douglas, AK 99824
Phone: 907-364-1553
Fax: 907-364-1574
http://juneau.ak.blm.gov/

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

JUNEAU - JOHN RISHEL MINERAL INFORMATION CENTER HOURS
Monday–Friday
8:30 a.m.–4:00 p.m.
(closed noon–1:00 p.m.)

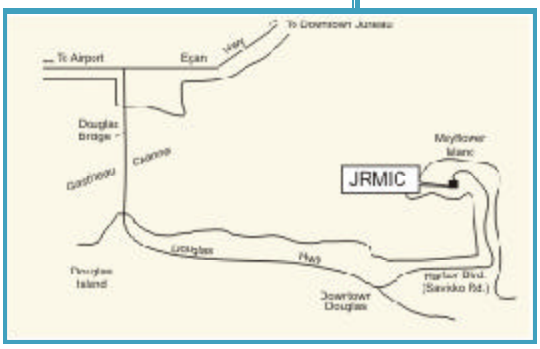
GENERAL DESCRIPTION

The Juneau - John Rishel Mineral 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 public-access Internet computer and technical help are available for the Alaska Land Information System (ALIS), which contains current and historical information about mining claims, patent applications, and conveyances on Federal land; and historical records for State, State-selected, and Native lands. The Center also has land status maps that reference the information available in the MAS/MILS and ALIS databases.

SERVICES

- Land status information via Alaska Land Information System (ALIS)
- 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/ONLINE CATALOG ACCESS

The catalog can be accessed online at http://jmic-cat.ak.blm.gov/.

CIRCULATION

Most monographs and books circulate, and may be checked out for 3 weeks. Government documents and microfilm do not circulate. Identification and a local contact address/telephone number generally are required to check material out of the Center.

Alaska State Library and Historical Collections (Juneau)

333 Willoughby Avenue
P.O. Box 110571
Juneau, AK 99811-0571
Phone: 907-465-2921 Reference
Phone: 907-465-2925 Historical Collections
Fax: 907-465-2665
E-mail: asl@eed.state.ak.us
http://www.library.state.ak.us/

The Alaska State Library is located in Juneau, at 333 Willoughby Avenue, on the 8th Floor of the State Office Building. Visitor parking is available on the first level of the State Office Building as well as on Willoughby Avenue or near the State Capitol on Main Street. The Library also has an Anchorage Office, which houses the Talking Book Center at the Ship Creek Center (old Post Office Mall) at the 3rd Street entrance.

ALASKA STATE LIBRARY AND HISTORICAL COLLECTIONS (JUNEAU) HOURS

Reference Services
Monday–Friday
9:00 a.m.–5:00 p.m.

Historical Collections
Monday–Friday
9:00 a.m.–5:00 p.m.
and by appointment

Closed for all Alaska State holidays

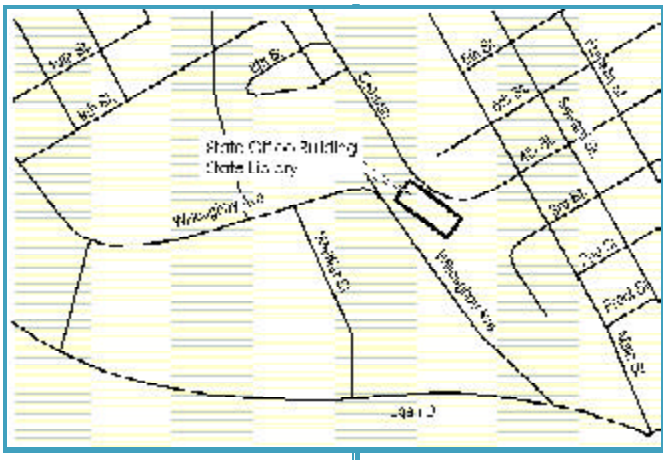
GENERAL DESCRIPTION

The Alaska State Library (ASL) was established as the Territorial Library Service Department in 1955 to "...undertake library service functions which will benefit the Territory and its citizens..." Since statehood in 1959, the Library's statutory mandate has grown to include the Historical Library and the Alaska State Publications Program. Programs include the Historical Collections; Information Services, which concentrates on delivering current and up-to-date information and materials focusing on state government; and Government Publications, which is part of the Federal Depository Library Program and administers the State Publication Program.

The Alaska Historical Collections, established in 1900, is mandated by Alaska Statute 14.56.080 to serve as a reference and research collection for materials on or related to Alaska. It maintains an additional selective emphasis on the Arctic and surrounding regions outside Alaska. The collection includes materials concerning Alaska's past, present, and future, with particular attention to Southeast Alaska. The library holds historic photographs and images, print and manuscript materials, and a limited selection of visual and audio materials. The collection includes both State and Federal government maps on Alaska, as well as other selected maps. The library is the first copy depository for Alaska State publications and includes a research collection of publications by the USGS, U.S. Bureau of Mines, NOAA and CRREL. (Fax: 907-465-2990; phone: 907-465-2925)

SERVICES

- Reference/bibliographic assistance: 9:00 a.m.–5:00 p.m., Monday–Friday
- Photocopying
- Interlibrary loan
- Public Internet access to a wide variety of electronic bibliographic databases
- Historical research staff assistance: 1:00 p.m.–5:00 p.m., Monday–Friday or by appointment



Cataloging System/Online Catalog Access

All Alaska State Library collections can be found on the Capital City Libraries online catalog (CCLIC). http://www.ccl.lib.ak.us. The library is part of the OCLC cataloging utility.

Circulation

Most materials in the Information Services collection may be checked out with a Capital Cities Library Card or obtained through interlibrary loan. Materials included in the Historical Collections do not circulate.

SPECIAL REFERENCE COLLECTIONS

The following three reference collections are not managed or cataloged 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) in Fairbanks, a collection of core samples and related information at the DGGS Geologic Materials Center in Eagle River, and a collection of maps, reports, and field notes at the USGS Alaska Technical Data Unit in Anchorage.

Alaska Technical Data Unit—USGS

Alaska Technical Data

Unit Hours
By appointment only.

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

The Alaska 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; there is additional free parking behind the building near the Earth Science Information Center.

The location of the Alaska Technical Data Unit is shown on the map on page 51.

General Description

The Alaska Technical Data Unit (ATDU) 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 ATDU.

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.

Alaska Division of Geological & Geophysical Surveys (DGGS)

3354 College Road
Fairbanks, AK 99709-3707
Phone: 907-451-5010
Fax: 907-451-5050
E-mail: dggspubs@dnr.state.ak.us
http://www.dggs.dnr.state.ak.us/

DGGS HOURS
Monday–Friday
8:00 a.m.–5:00 p.m.

The Alaska Division of Geological & Geophysical Surveys (DGGS) office is on College Road east of the UAF campus. Free parking is available in the lot in front of the building.

GENERAL DESCRIPTION

DGGS maintains a reference library that is open to the public during normal working hours. The collection 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/ONLINE CATALOG ACCESS

The reference collection holdings are cataloged in 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 can be searched by quadrangle, publication series, or keyword).

The location of the DGGS office is shown on the map on page 52.

Circulation

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

Geologic Materials Center (GMC)

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

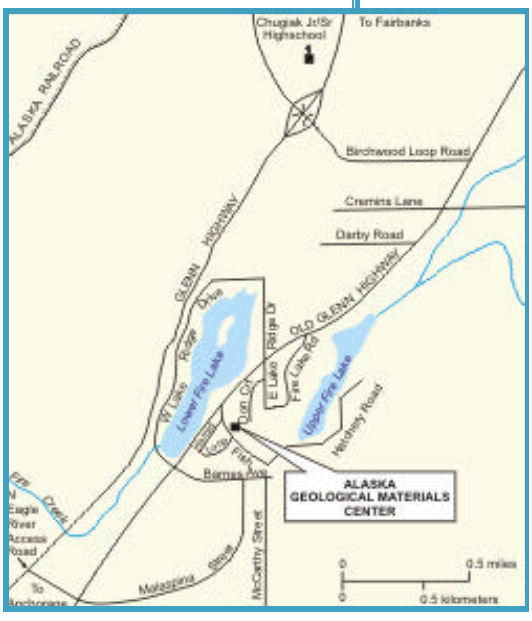
GMC Hours
Monday–Friday
8:00 a.m.–4:30 p.m.
(except State of Alaska holidays)

The GMC is 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, Incorporated, Marathon Oil, OXY USA, Incorporated, Phillips Petroleum Company, and Shell Oil Company) 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 a listing of new 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

The National Archives and Records Administration (NARA) and the Alaska State Government maintain archives in Alaska to preserve and make available for reference historically valuable records of Federal and State agencies in Alaska. In general, these archives do not have much information on geology or 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, AK 99501
Phone: 907-271-2441
Fax: 907-271-2442
E-mail: archives@alaska.nara.gov
http://www.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 Avenue
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.

Outcrop of the Mississippian-age Lisburne Limestone near the headwaters of Akmagolik Creek, 6 miles (10 km) north of Anaktuvuk Pass, north-central Brooks Range. The entire stratigraphic section is overturned in this area, with outcrops of the Permian Siksikpuk Formation and the Triassic Otuk Formation structurally below. The Lisburne Limestone is a target for gas and oil exploration, and the Otuk Formation is an organic-rich, petroleum source rock in the Brooks Range foothills belt and North Slope. Photo by R.R. Reifenstuhl.

PUBLIC INFORMATION CENTERS

The USGS, BLM, Alaska DNR, and DGGS have public information centers 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 initial contact point for general information, and for referrals to specialists within the agency.

Alaska Department of Natural Resources Public Information Centers

The DNR 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.

ATWOOD BUILDING
550 West 7th Avenue, Suite 1260
Anchorage, AK 99501
Phone: 907-269-8400
Fax: 907-269-8901
TDD: 907-269-8411
E-mail: pic@dnr.state.ak.us
Hours: Monday–Friday
10:00 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
fbx-pic@dnr.state.ak.us
Monday–Friday
9:00 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 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
http://www.ak.blm.gov/

NORTHERN FIELD OFFICE
Public Room
1150 University Avenue
Fairbanks, AK 99709-3844
Phone: 907-474-2251

GLENNALLEN FIELD OFFICE
Public Room
P.O. Box 147
Glennallen, AK 99588
Phone: 907-822-3217

JUNEAU - JOHN RISHELMINERAL INFORMATION CENTER
100 Savikko Road
Mayflower Island
Douglas, AK 99824
Phone: 907-364-1553

Earth Science Information Centers (ESIC)—U.S. Geological Survey

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 GEODATA CENTER/MAP OFFICE
930 Koyukuk Drive, Room 204
Fairbanks, AK 99775-7320
Phone: 907-474-7487/474-6960
Fax: 907-474-2645
http://www.gi.alaska.edu/services/geodata

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

Alaska Division of Geological & Geophysical Surveys

The DGGS office in Fairbanks has 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, http://www.ntis.gov/, or contact the NTIS sales desk at 1-800-553-6847. To order via fax: 703-605-6900.

WHERE TO BUY USGS MAPS, AERIAL PHOTOS, AND OTHER PRODUCTS

In addition to the USGS Earth Science Information Centers described above, topographic maps and other USGS products such as aerial photographs, digital cartographic data, and digital satellite data 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 that sell USGS topographic maps and other USGS products can be found through the ESIC Web site at http://

mapping.usgs.gov/esic/esic2.html or through the U.S. National Mapping Information Web site at http://rockyweb.cr.usgs.gov/acis-bin/querypartner.cgi.

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 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.

A 20-foot-thick, gold-bearing quartz vein exposed in the Pogo project drift (underground mine workings). Photo by D.J. Szumigala.

Alaska Miners Association
3305 Arctic Boulevard, Suite 105
Anchorage, AK 99503
Phone: 907-563-9229
Fax: 907-563-9225
http://www.alaskaminers.org/

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 visit the AGS Web site or contact:

Alaska Geological Society
P.O. Box 101288
Anchorage AK 99510
Phone: 907-564-5311
http://www.alaskageology.org/

Northwest Mining Association (NWMA)

The Northwest Mining Association supports and advances the mineral resource industry 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 220
Spokane, WA 99201-0772
Phone: 509-624-1158
Fax: 509-623-1241
E-mail: nwma@nwma.org
http://www.nwma.org/

SOURCES OF INFORMATION ON THE INTERNET

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

A significant amount of information about geology and mining in Alaska is available on the Internet, and new information is added daily. Because the Internet can be accessed from virtually anywhere, it is a vital resource for remote (and not-so-remote) areas of Alaska. Many Alaska libraries, including the research libraries listed in Section 6, offer free Internet access and assistance to the public.

This section lists a small fraction of the many Internet sites of potential interest to persons involved in 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 offer some information and links at no charge. Listing of commercial sites in this publication does not imply endorsement of their paid services.

Usibelli Coal Mine's Ace in the Hole dragline exposes a coal seam at Alaska's only operating coal mine. Photo by D.J. Szumigala.

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 location
Minerals Data Information Rescue in Alaska (MDIRA)	http://www.akgeology.info/ The MDIRA Portal, currently a collection of links to online agency information about Alaska geology, minerals, and land records. IMCG intendss to develop this site into a integrated system to allow users to combine this information in ways that can promote minerals exploration in Alaska.
Alaska Resource Data Files (ARDF)	http://ardf.wr.usgs.gov/quadmap.html Descriptions of mines, prospects, and mineral occurrences in Alaska compiled by quadrangle
Digital Index of Geologic Information on Alaska	http://imcg.wr.usgs.gov/digi.html Comprehensive bibliography of the mineral resources of Alaska. Quadrangle lists of DGGS and Bureau of Mines publications on Alaska, and many USGS publications.
	http://imcg.wr.usgs.gov/cgi-bin/qbibs.cgi The same bibliography as above, searchable by keywords or SQL statement.
Alaska Mineral Locations Database	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/cgi Same database as above, searchable by commodity or type.
	http://imcg.wr.usgs.gov/shapegen.html Downloadable shape files by quadrangle or by mining district.
Gold Panning in the Chugach National Forest	http://imcg.wr.usgs.gov/panning/index.html A Forest Service brochure with suggested sites for gold panning in the Chugach National Forest on the Kenai Peninsula.

ALASKA VOLCANO OBSERVATORY (AVO)

AVO Home Page	http://www.avo.alaska.edu/ Current and historical information about volcanic activity and risks. Downloadable PDF files of volcanic hazard reports and other AVO publications.

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.
USGS Library Catalog	http://library.usgs.gov/ Catalog of the holdings of USGS regional libraries, which have extensive collections of geologic literature. Includes all material acquired since 1979.

USGS Alaska Geologic Mapping	http://mapping-ak.wr.usgs.gov/research.html http://ngmsvr.wr.usgs.gov/ngmdb/ngm_catalog.ora.html Lists searchable database of all geologic mapping for Alaska (and the U.S.) by quadrangle. Includes USGS and DGGS maps, and maps published in journals, by universities, etc. Searches can be conducted using various criteria including theme, geographic location, bounding coordinates, author, publisher, and publication date.
USGS Current Alaska Research	http://alaskaminerals.wr.usgs.gov/projects.html Overviews of current USGS projects in Alaska.
Alaska Resource Data Files (ARDFs)	http://ardf.wr.usgs.gov/ A quadrangle-by-quadrangle update of the ARDFs is underway. Completed quads are available for use, and additional quads are under revision. Site indicates the status of individual quadrangles.
USGS Minerals Program	http://minerals.usgs.gov/ Links to downloadable USGS publications including aeromagnetic mapping of Alaska.
USGS Mineral Commodity Information	http://minerals.usgs.gov/minerals/pubs/commodity/ Also: http://minerals.usgs.gov/minerals/pubs/mcs/ USGS Mineral Commodity Information database http://minerals.usgs.gov/minerals/pubs/commodity/mis.html Mineral Industry Surveys monthly/quarterly updates.

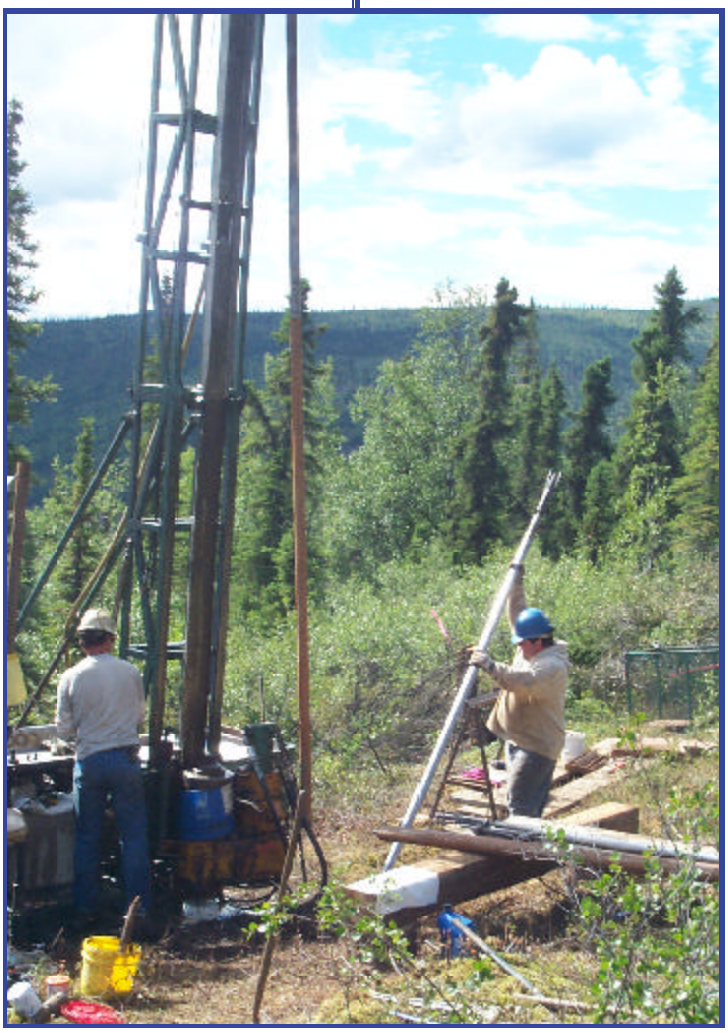
Incline hoist and pit at No. 15 Ophir, Wild Goose Mining Co., Seward Peninsula. VF Mining, Wild Goose, Accession no. 66-60-14, Archives, Alaska and Polar Regions Department, University of Alaska Fairbanks.

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.
U.S. GeoData for Alaska	http://agdc.usgs.gov/data/usgs/geodata/ 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 data sets 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 Geographic Names Information System	http://geonames.usgs.gov/ The Nation's official repository of domestic geographic names information. This database contains coordinates, official and alternate names, and other data for almost 2 million physical and cultural geographic features in the United States.
USGS National Geologic Map Database	http://ngmdb.usgs.gov/ Database of all published USGS maps, as well as maps published by state geological surveys and other entitiesFrom the Geologic Map Catalog link on this page, this database c. Can be searched by many different criteria, including state, quadrangle, type of map, etc.
Geography – The National Map	http://mapping.usgs.gov/ Information about geographic map availability and mapping programs.
Earth Resource Observation Systems (EROS) Data Center	http://edc.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.
Alaska Aeromagnetic Data	http://pubs.usgs.gov/of/1997/ofr-97-0520/alaskamag.html Allows graphical 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) and binary data files may be downloaded. http://geology.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 Gravity Data	http://geology.wr.usgs.gov/docs/gump/morin/alaska/gravity/gravity.html USGS-compiled gravity data that spans much of Alaska is available for viewing and retrieval.

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 (Mineral 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.
Juneau - John Rishel Mineral Information Center (JRMIC)	http://juneau.ak.blm.gov/ Information about JRMIC programs, mining district studies, and library services and features.
BLM Minerals Programs	http://www.ak.blm.gov/ak940/ Outlines BLM Division of Energy and Solid Minerals programs and research in Alaska.
Former Bureau of Mines Programs	http://www.ak.blm.gov/amrt/ Describes the past, present, and future of offices, staff, and programs transferred from the former Bureau of Mines in Alaska (last updated in 1997).
BLM Alaska Reports	http://www.ak.blm.gov/affairs/sci_rpts.html Bibliography of BLM technical, open file, and general scientific reports pertaining to Alaska. Includes reports on geology, mining, wildlife, habitat, and other management issues.



Core drilling near the Goodpaster River during a mineral exploration program. Photo by D.J. Szumigala.

ADDITIONAL FEDERAL AGENCIES

U.S. Army Corps of Engineers	http://www.poa.usace.army.mil/ Alaska District home page.
U.S. Forest Service	http://www.fs.fed.us/r10/ Alaska Region home page.
U.S. Fish & Wildlife Service	http://alaska.fws.gov/ Alaska Region home page.
National Park Service	http://www.nps.gov/ Mostly general information about national parks and monuments.
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, online publications, etc.
U.S. Environmental Protection Agency	http://www.epa.gov/region10/ EPA Region 10 home page.
National Geophysical Data Center	http://www.ngdc.noaa.gov/ The National Geophysical Data Center (NGDC) distributes a number of data sets that cover Alaska. In particular NGDC has extensive marine data sets, including bathymetry.
USDA Natural Resources Conservation Service	http://www.ak.nrcs.usda.gov/ Formerly the Soil Conservation Service. Information about Alaska soil surveys, NRCS programs, etc.
National Geodetic Survey	http://www.ngs.noaa.gov/ Survey control points and other spatial reference data.
FEMA Floodplain Maps	http://www.msc.fema.gov/ Federal Emergency Management Agency Map Service Center.

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/ General program and contact information, and access to downloadable DGGS publications, which are searchable by quadrangle, publication series, or keyword.
Division of Mining, Land and Water (DMLW)	http://www.dnr.state.ak.us/mlw/ 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. Links to many fact sheets about mining in Alaska and other related subjects.
Public Information Center (PIC)	http://www.dnr.state.ak.us/pic/ Current address and phone numbers of the Center in Anchorage.
Division of Oil & Gas	http://www.dog.dnr.state.ak.us/oil/ General program and contact information.

Land-use Planning	http://www.dnr.state.ak.us/mlw/planning/ Lists area and management plans available for Alaska. Explains what they are and how to find them. Some plans can be downloaded from this Web site.
Alaska State GeoSpatial Data Clearinghouse (ASGDC)	http://www.asgdc.state.ak.us/ The ASGDC provides an electronic pathway for the public to access a wide variety of information about Alaska geospatial data in the form of maps, images, and descriptions. This site offers access to the DNR State Status Plats, State Surveys and Historical Indices, as well as the BLM Master Title Plats (MTP) and Federal survey information. It also offers access to the DNR Land Administration System (LAS) to provide case file summaries and case file abstracts of information depicted on the State Status Plat. Future plans include providing more access to the DNR Land Administration System (LAS) for detailed case file information and pending parcel information requiring notation to the State Status Plat, and, eventually, links to the State Recorder's Office index and images.
Public Access to Geographic Data	http://www.asgdc.state.ak.us/homehtml/pubaccess.html GIS Database Summary. An online 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 metadata.

PROFESSIONAL ORGANIZATIONS AND MINING NEWS

Alaska Geological Society (AGS)	http://www.alaskageology.org/ General information about AGS, downloadable newsletter, meeting information, and links to geology-related sites.
Society of Economic Geologists (SEG)	http://www.segweb.org/ SEG membership and meeting information. Links to numerous geology-related Web sites.

Glacial cirque on the north side of the Susitna Glacier. The slab avalanche in the lower left corner of the photo probably resulted from the November 3, 2002, magnitude 7.9 Denali Fault earthquake. Photo by P.A. Craw.

Geological Society of America (GSA)	http://www.geosociety.org/ General information about GSA.
Society of Mining Engineers (SME)	http://www.smenet.org/ Subscription and meeting information, links to related sites.
American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME)	http://www.aimeny.org/ 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 online newsletter that also has some free information including links to mining company Web sites.
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 & Yukon Chamber of Mines	http://www.bc-mining-house.com/ Information about mining and geology in B.C. and the Yukon, Canadian mining issues, as well as links to the B.C. Geological Survey and publications and many other informational and educational sites of geologic and mining interest.
British Columbia Geological Survey	http://www.em.gov.bc.ca/Mining/Geolsurv/default.htm The home page for the B.C. Geological Survey. Describes past and ongoing research, publications, interests of the BCGS, mineral occurrences in B.C., and contains links to related sites.
Yukon Geological Survey	http://www.geology.gov.yk.ca/ Describes the activities and publications of the Yukon Geological Survey. Many links to Web sites related to the geology, mineral deposits, and economics of mining in the Yukon Territory.

UNIVERSITIES, LIBRARIES, AND ARCHIVES

SLED (Statewide Library Electronic Doorway)	http://sled.alaska.edu/ Online access to Alaska library, government, local community, and Internet information resources.
UAF Geophysical Institute/International Arctic Research Center (GI/IARC)	http://www.gi.alaska.edu/ Describes GI programs, research, and publications. Includes links to other UAF sites.
Keith B. Mather Library (GI/IARC)	http://www.gi.alaska.edu/services/library/ The library Web site's homepage, which describes the library and its collections.
UAF Rasmuson Library	http://www.uaf.edu/library/ The library Web site's homepage includes links to various online catalogs and indexes.
UAF Geology and Geophysics	http://www.uaf.edu/geology/ Describes UAF geology and geophysics programs, faculty, and research.

UAF School of Mineral Engineering	http://www.uaf.edu/sme/MinEng.html Describes UAF mining and geological engineering, and petroleum engineering programs, faculty, research.
Mineral Industry Research Laboratory (MIRL)	http://www.uaf.edu/sme/MIRL.html Includes contact names and phone numbers for MIRL faculty and a bibliography of MIRL publications.
UAA Consortium Library	http://www.uaa.alaska.edu/lib/ The library Web site's homepage includes links to various online catalogs and indexes.
BLM Juneau - John Rishel Mineral Information Center	http://juneau.ak.blm.gov/LIBRARY/library.htm General description of the JRMIC collections and services.
Alaska State Library	http://www.library.state.ak.us/ General data about the library and its collections, link to the library's catalog.
Geology Archives of University of Wyoming	http://ahc.uwyo.edu/ Home page of the American Heritage Center at University of Wyoming, which houses the Anaconda Collection and other mining company and related professional collections.
	http://ahc.uwyo.edu/depts/reference/Anaconda.htm Website for the extensive Anaconda Geologic Documents Collection, which spans 90 years of Anaconda's exploration worldwide.
National Archives	http://www.nara.gov/ Describes the collections and services of the National Archives and Records Administration, including the Anchorage Branch.

Looking northward down a U-shaped glacial valley from the Owhat prospect, Russian Mountains, southwestern Alaska. Photo by D.J. Szumigala.

ALASKA REGIONAL NATIVE CORPORATIONS

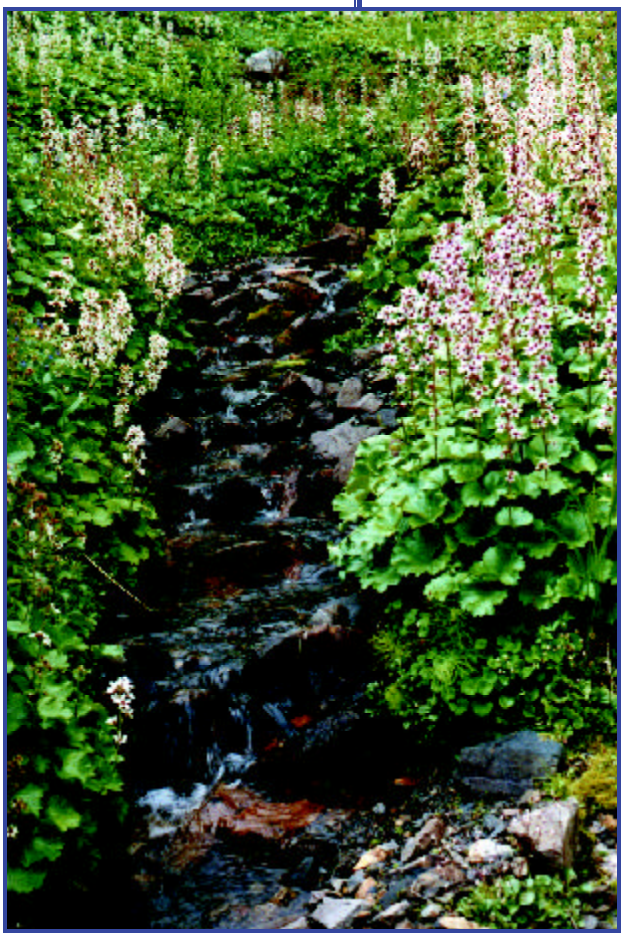
Ahtna, Incorporated	http://www.ahtna-inc.com/ General description of Ahtna, Incorporated, and its subsidiaries. Includes a summary of known mineral exploration targets, and Ahtna's general requirements for Exploration and Option to Lease Agreements (under Land Department and Ahtna Minerals at http://www.ahtna-inc.com/ldlm.html).
Aleut Corporation	http://www.aleutcorp.com/ At this time, this site mainly has shareholder and subsidiary information.
Arctic Slope Regional Corporation	http://www.asrc.com/ At this time, this site mainly has shareholder information, but also has contact information for ASRC Lands Department 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.bbnc.net/ At this time, this site mainly has general information and contact names.
Calista Corporation	http://www.calistacorp.com/ The Land and Natural Resources section of this site has general overviews of mineral and other natural resource potential, and for advanced mineral prospects. Reports and maps are available to download. Also includes general Calista Corporation information and contacts.
Chugach Alaska Corporation	http://www.chugach-ak.com/ Overview of mineral potential in the Minerals section of the Lands department pages, as well as general location maps and other images of Chugach Alaska Corporation lands.
Cook Inlet Region, Incorporated	http://www.ciri.com/ At this time, this site mainly has shareholder, and contact information, with brief general descriptions of natural resources on CIRI lands.
Doyon, Limited	http://www.doyon.com/ Doyon's Web site includes overviews of its Lands and Natural Resources programs, and brief summaries of several metallic mineral prospects.
Koniag, Incorporated	http://www.koniag.com/ At this time, this site mainly has shareholder information, but also has contact information for Lands and Natural Resources personnel.
NANA Regional Corporation	http://www.NANA.com/ At this time, this site mainly has general corporation, subsidiary, and contact information.
Sealaska Corporation	http://www.sealaska.com/ At this time, this site mainly has general corporation, shareholder, subsidiary, 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) titles are downloadable, and searchable by keyword and citation number. Updated yearly.
Alaska State Government	http://www.state.ak.us/ Links to state agencies, state statutes, government news, and general information about Alaska.
Alaska State Legislature	http://www.legis.state.ak.us/ Links to Alaska regulations, and texts and information about passed, pending, and proposed legislation.
Alaska Administrative Code	http://old-www.legis.state.ak.us/cgi-bin/folioisa.dll/aac/ Alaska Administrative Code (AAC) complete text, which can be searched by keyword, phrase, etc.
Alaska State Law	http://www.state.ak.us/courts/aklegal.htm Alaska Court System page. This site covers Alaska law, regulation, and court cases, and has numerous related links.
Alaska Mining Statutes	http://www.dnr.state.ak.us/mlw/mining/ DMLW Mining Section Web site. Links to mining-related fact sheets including one of the 2002 Alaska mining statutes.
Mining/Resources Law	http://www.rmmlf.org/ Rocky Mountain Mineral Law Foundation Web site. Links to sites connected to mining and natural resources law; listing of available related positions; text from recent book.

A polydeformed, quartz-veined gneiss outcrop in Interior Alaska. Photo by D.J. Szumigala.

Federal Law – Law Library of Congress	http://www.loc.gov/law/public/law-guide.html Law Library of Congress Web site. An "annotated compendium of Internet links" to searchable electronic versions of Federal (and State) laws, including the Code of Federal Regulations (CFR) and Federal statutes.
Federal Law – Court System	http://www.state.ak.us/courts/fedlegal.htm Alaska Court System page. Covers Federal and State law, regulations, and court cases that affect Alaska.
Federal Surface Mining Law	http://www.osmre.gov/regindex.htm Office of Surface Mining and Regulations Web site—has a searchable electronic version of 30 CFR Part 700 to the end.



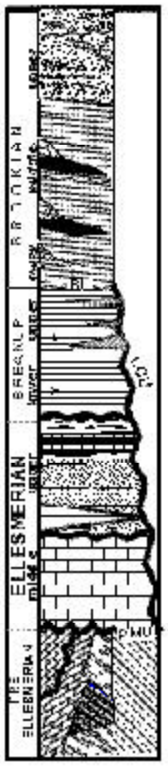
Bear Flower (*Boykinia richardsonii*) growing along a small stream near the Golden Zone mine in the Chulitna mining district in southcentral Alaska. Photo by K.H. Clautice.

GEOLOGIC/MINERALS COLLECTIONS LOCATED OUTSIDE OF ALASKA

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

http://ahc.uwyo.edu/
http://ahc.uwyo.edu/depts/reference/anaconda.htm



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

THE ANACONDA COLLECTION AND OTHER RELEVANT COLLECTIONS

The American Heritage Center (AHC) at the University of Wyoming is a modern archival research facility that collects, preserves, and makes available original papers of individuals and corporations, including many that have contributed to the field of economic geology in Alaska. These collections are primarily original and unpublished geologic maps, field notes, correspondence, reports, stratigraphic analyses, assay results, claim plats, and related material. The AHC houses the extensive Anaconda Geologic Documents Collection, which spans 90 years of Anaconda's exploration worldwide. The Anaconda Collection is self-supporting and subscription-based. A list of the Anaconda Collection's contents is available at the UAF Geophysical Institute Mather Library.

In addition to the Anaconda Collection, the following AHC collections may have information of relevance to mineral exploration in Alaska:

- *Eliot Blackwelder (1880–1969)*
  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 Limited, 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 in 1914
- *Josiah Edward Spurr (1888–1944)*
  USGS geologist, photo album of Alaska

A short description of the contents of each collection can be found using search tools on the AHC Web site. The AHC staff provides a full range of archival reference and research services. Photocopying and scanning services are available. Finding aids and inventories of the collections can be purchased for a nominal fee.

For more information, contact:
American Heritage Center
University of Wyoming
P.O. Box 3924
Laramie, WY 82071
Phone: 307-766-4114
Fax: 307-766-5511

USGS LIBRARIES

http://library.usgs.gov

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. 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.

USGS Library Online Catalog Web site: http://library.usgs.gov/. Contact phone numbers for the USGS libraries are:

Reston: 703-648-4302 Denver: 303-236-1000
Menlo Park: 650-329-5027 Flagstaff: 520-556-7272

USGS PHOTOGRAPHIC LIBRARY

Fruiticose lichen *Masonhalie richardsonii* growing on Alaska's tundra. Photo by R.R. Reifenstuhl.

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 MINERALS AND GEOLOGY IN ALASKA

The following annotated references provide a basic picture of the geology and mineral resources of Alaska. The publications cited below (in alphabetical order) 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 are accessible 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 at the address listed in Appendix B or in Section 6.

Alaska Miners Association [Current Year] Handbook and Service Directory. Alaska Miners Association, Anchorage, Alaska.
Published annually. 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.

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.

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

Alaska's Mineral Industry [Current 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 Statewide Maps, 1982 – 2001, Alaska Division of Geological & Geophysical Surveys: various Special Reports (SR) and Miscellaneous Publications (MP).
A few special interest maps published by DGGS cover the entire state of Alaska and show oil and gas basins, coal resources, mineral areas, geothermal resources, and industrial minerals areas. These can be found on the DGGS website at http://www.dggs.dnr.state.ak.us/statewide.html.

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.

Dictionary of Alaska Place Names: Donald Orth, 1967, USGS Professional Paper 567, 1,084 p.
Lists Alaska place names and locations, and information about the source of each name. This is one of the most frequently requested references at the research libraries, since Alaska place names can be confusing even to those familiar with the state.

Dictionary of Mining, Mineral, and Related Terms: American Geological Institute, 2nd edition, 1997, 646 p.

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.

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

Industrial Rocks and Minerals, 6th Edition: D.D. Carr, editor, 1994, Society of Mining, Metallurgy, and Exploration, 1,196 p.

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.

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. (Also 1997, U.S. Geological Survey, OF 97-0161, 8 sheets.)
An updated version of the Alaska information in the DNAG paper cited above, plus information about mineral belts in areas surrounding Alaska.

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

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

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.

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 outdated, it still contains the only map that shows the major mineral deposits in Alaska (as of 1987).

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

Digital Resources

Alaska Resource Data File (ARDF): U.S. Geological Survey, by quadrangle: http://ardf.wr.usgs.gov/

AKGeology.info - Minerals Data Rescue in Alaska: Interagency Minerals Coordinating Group web portal to geology, minerals, and land record information in Alaska. http://www.AKGeology.info/

GeoRef: American Geological Institute: http://georef.cos.com/ (also refer to the research libraries in Section 6)

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

Division of Community & Business Development
550 W. 7th Ave., Ste. 1770
Anchorage, AK 99501-3510
(907) 269-4580 fax: (907) 269-4539

State Office Building, 9th Fl.
P.O. Box 110804 (mailing)
Juneau, AK 99811-0804
(907) 465-5463
(907) 465-3767

201 Cushman St.
Fairbanks, AK 99701
(907) 451-2738 fax: (907) 451-2742

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
410 Willoughby Ave., Ste. 303
Juneau, AK 99801-1795
(907) 465-5010 fax: (907) 465-5097
(907) 465-5060 Public Information
(907) 465-5040 (TDD/TTY)
Permits/Compliance Assistance
1-800-510-2332

555 Cordova St.
Anchorage, AK 99501-2617
(907) 269-7500 fax: (907) 269-7600
(907) 269-3784 Public Information
(907) 269-7511 (TDD/TTY)
E-mail: compass@envircon.state.ak.us

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

DEPARTMENT OF FISH & GAME
1255 W. 8th St.
P.O. Box 25526 (mailing)
Juneau, AK 99802-5526
(907) 465-4100 fax: (907) 465-4759 fax

Northern Regional Office
1300 College Rd.
Fairbanks, AK 99701-1599
(907) 459-7289 fax: (907) 456-3091 fax

Southcentral Regional Office
333 Raspberry Rd.
Anchorage, AK 99518-1599
(907) 344-0541 fax: (907) 267-2464 fax

Southeastern Regional Office
802 3rd St., 2nd Fl.
P.O. Box 240020 (mailing)
Douglas, AK 99824-0020
(907) 465-4290 fax: (907) 465-4272 fax

DEPARTMENT OF NATURAL RESOURCES
Office of the Commissioner
400 Willoughby Ave., Ste. 500
Juneau, AK 99801-1724
(907) 465-2400 fax: (907) 465-3886
TDD: (907) 465-3888

550 W. 7th Ave., Ste. 1400
Anchorage, AK 99501-3561
(907) 269-8431 fax: (907) 269-8918
http://www.dnr.state.ak.us/

Alaska Coastal Management Program
Juneau Office
302 Gold St., Ste. 202
P.O. Box 110030 (mailing)
Juneau, AK 99811-0030
(907) 465-3562 fax: (907) 465-3075

Southcentral Regional Office
550 W. 7th Ave., Ste. 1660
Anchorage, AK 99501-3568
(907) 269-7470 fax: (907) 269-3981

Alaska Mental Health Trust Land Office
550 W. 7th Ave., Ste. 1430
Anchorage, AK 99501
(907) 269-8658 fax: (907) 269-8905
http://www.dnr.state.ak.us/mhtlo/

Joint Pipeline Office
411 W. 4th Ave., Ste. 2-C
Anchorage, AK 99501-2342
(907) 257-1351 fax: (907) 272-3829

Office of Habitat Management & Permitting
Headquarters & Juneau Area Office
400 Willoughby Ave., 4th Fl.
Juneau, AK 99801-1796
(907) 465-4105 fax: (907) 465-4759

Operations Manager & Fairbanks Area Office
1300 College Rd.
Fairbanks, AK 99701-1551
(907) 459-7289 fax: (907) 456-3091

Anchorage Area Office
333 Raspberry Rd.
Anchorage, AK 99518-1599
(907) 267-2285 fax: (907) 267-2464

Kenai Area Office
514 Funny River Rd.
Soldotna, AK 99669-8255
(907) 260-4882 fax: (907) 260-5992

Mat-Su Area Office
1800 Glenn Highway, Ste. 12
Palmer, AK 99645-6736
(907) 745-7363 fax: (907) 745-7369

Petersburg Area Office
P.O. Box 667
Petersburg, AK 99833-0667
(907) 772-5224 fax: (907) 772-9336

Prince of Wales Area Office
P.O. Box 668
Craig, AK 99921-0668
(907) 826-2560 fax: (907) 826-2562

Division of Forestry
Director's Office
400 Willoughby Ave, Ste 300
Juneau, AK 99801
(907) 465-3379 fax: (907) 586-3113
http://www.dnr.state.ak.us/forestry/

Central Office
550 W. 7th Ave., Ste. 1450
Anchorage, AK 99501-3566
(907) 269-8463 fax: (907) 269-8931

Northern Region Office
3700 Airport Way
Fairbanks, AK 99709-4699
(907) 451-2660 fax: (907) 451-2690

Coastal Region Office
400 Willoughby Ave, Ste. 300
Juneau, AK 99801-1724
(907) 465-5401 fax: (907) 586-3113

Division of Geological & Geophysical Surveys
3354 College Road
Fairbanks, AK 99709-3707
(907) 451-5010 fax: (907) 451-5050
E-mail: dggspubs@dnr.state.ak.us
http://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 fax: (907) 696-0078

Division of Mining, Land & Water
550 W. 7th Ave., Ste. 1070
Anchorage, AK 99501-3579
(907) 269-8600 fax: (907) 269-8904
http://www.dnr.state.ak.us/mlw/

Northern Region Office
3700 Airport Way
Fairbanks, AK 99709-4699
(907) 451-2740 (Land)
(907) 451-2793 (Mining and Water)
(907) 451-2751

Southcentral Region Office
550 W. 7th Ave., Suite 900C
Anchorage, AK 99501-3577
(907) 269-8542 fax: (907) 269-8913

Southeast Region Office
400 Willoughby Ave., Ste. 400
Juneau, AK 99801
(907) 465-3400 fax: (907) 586-2954

Division of Oil & Gas
550 W. 7th Ave., Ste. 800
Anchorage, AK 99501-3560
(907) 269-8800 fax: (907) 269-8938

Division of Parks & Outdoor Recreation
550 W. 7th Ave., Suite 1380
Anchorage, AK 99501-3561
(907) 269-8700 fax: (907) 269-8(907)

Northern Regional Office
3700 Airport Way
Fairbanks, AK 99709-4613
(907) 451-2695 fax: (907) 451-2754

Southeastern Regional Office
400 Willoughby Ave., Ste. 400
Juneau, AK 99801-1724
(907) 465-4563 fax: (907) 465-5330

Office of History & Archaeology
550 W. 7th Ave., Ste. 1310
Anchorage, AK 99501-3565
(907) 269-8721 fax: (907) 269-8908

DNR Public Information Centers
550 W. 7th Ave., Ste. 1260
Anchorage, AK 99501-3557
(907) 269-8400

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

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

Support Services Division
Director's Office
400 Willoughby Ave, Ste 500
Juneau, AK 99801
(907) 465-2406 fax: (907) 465-2102

State Recorder's Office
550 W. 7th Ave, Ste 1210
Anchorage, AK 99501-3564
(907) 269-8882 fax: (907) 269-8912

Uniform Commercial Code
550 W. 7th Ave, Ste 1200A
Anchorage, AK 99501-3564
(907) 269-8873

DEPARTMENT OF PUBLIC SAFETY
450 Whittier St.
P.O. Box 111200 (mailing)
Juneau, AK 99811-1200
(907) 465-4322 fax: (907) 465-4362

Division of Fish & Wildlife Protection
5700 E. Tudor Rd.
Anchorage, AK 99507-1225
(907) 269-5509 fax: (907) 269-5616

DEPARTMENT OF REVENUE
State Office Bldg.
11th Fl., Entrance A
P.O. Box 110400 (mailing)
Juneau, AK 99811-0400
(907) 465-2300 fax: (907) 465-2389
http://www.revenue.state.ak.us/

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 Energy and Solid Minerals
222 W. 7th Ave., #13
Anchorage, AK 99513-7599
(907) 271-5477
(907) 271-5049 Division of Energy and Solid Minerals
(907) 271-5960 Public Information Center
(907) 271-2454 Branch of Solid Minerals
http://www.ak.blm.gov/

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

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

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

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

Northern Field Office
Fairbanks Support Center
Public Room
1150 University Ave.
Fairbanks, AK 99709-3844
(907) 474-2200
(907) 474-2251 Public Room

Juneau - John Rishel Mineral Information Center (BLM)
Juneau Mineral Resources Team
100 Savikko Rd.
Mayflower Island
Douglas, AK 99824
(907) 364-1553 fax: (907) 364-1574
http://juneau.ak.blm.gov/

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 fax: (907) 456-0208

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

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

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 Dr., Ste. 230
Anchorage, AK 99508-4664
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 fax: (907) 586-7843

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

590 University Ave., Ste. B
Fairbanks, AK 99709
(907) 479-2657 fax: (907) 479-6998
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 6th Ave.
Seattle, Washington 98101
206-553-1289

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

Alaska Operations Office
709 W. 9th St., Rm. 223A
P.O. Box 20370
Juneau, AK 99802-0370
(907) 586-7658

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 fax: (907) 753-2716
800-478-2712 (in Alaska only)
(907) 474-2712 (Fairbanks Field Office)
(907) 790-4490 (Juneau Field Office)
(907) 283-3519 (Kenai Field Office)

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

MISCELLANEOUS FEDERAL AGENCIES

FEDERAL EMERGENCY MANAGEMENT AGENCY—MAP SERVICE CENTER
P.O. Box 1038
Jessup, MD 20794-1038
800-358-9616 fax: 800-358-9620
http://wcatwc.arh.noaa.gov/

WEST COAST & ALASKA TSUNAMI WARNING CENTER (NOAA)
910 Felton St.
Palmer, AK 99645
(907) 745-4212 fax: (907) 745-6071
E-mail: atwc@alaska.net
http://wcatwc.gov/ or http://wcatwc.arh.noaa.gov/

COOPERATIVE STATE–FEDERAL AGENCIES

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

Alaska Resources Library & Information Service (ARLIS)
3150 C St., Ste. 100
Anchorage, AK 99503
(907) 272-7547 fax: (907) 271-4542
http://www.arlis.org/

Alaska Volcano Observatory
3354 College Road
Fairbanks, AK 99709-3707
– or –
903 Koyukuk Dr.
P.O. Box 757320
Fairbanks, AK 99775-7320
(907) 474-5530 fax: (907) 474-5618
Recording of the status of Alaska's volcanoes: (907) 786-7478
http://www.avo.alaska.edu/

Anchorage Office
4200 University Dr.
Anchorage, AK 99508-4667
(907) 786-7443 fax: (907) 786-7450

ORGANIZED MINING DISTRICTS

Circle Mining District
Becky Hendrickson, President
P.O. Box 80674
Fairbanks, AK 99708
(907) 488-6058

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

Haines Mining District
John Schnabel
P.O. Box 149
Haines, AK 99827
(907) 266-2228

Iditarod Mining District
John Miscovich, President
1200 I St., Unit 404
Anchorage, AK 99501-4392

Kantishna Mining District
Valerie Mundt, President
P.O. Box 84608
Fairbanks, AK 99708-4608
E-mail: vmundt@hotmail.com

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

PROFESSIONAL ASSOCIATIONS

ALASKA MINERS ASSOCIATION, INC.
Statewide Office
3305 Arctic Blvd., Ste. 105
Anchorage, AK 99503
(907) 563-9229 fax: (907) 563-9225

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

Fairbanks Branch
P.O. Box 73069
Fairbanks, AK 99707
(907) 490-2206

Juneau Branch
10430 Dock St.
Juneau, AK 99802-1684
(907) 789-6800
(907) 789-3742

Kenai Branch
155 Smith Way
Soldotna, AK 99669
(907) 262-6383

Nome Branch
P.O. Box 1107
Nome, AK 99762
(907) 443-2632

NORTHWEST MINING ASSOCIATION
10 N. Post St., Ste. 414
Spokane, WA 99201
509-624-1158
509-623-1241
E-mail: nwma@nwma.org
http://www.nwma.org/

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

SOCIETY FOR MINING, METALLURGY, & EXPLORATION, INC.
P.O. Box 277002
Littleton, CO 80127
(303)-973-9550 fax: (303)-973-3845

Chair, Robert K. Rodgers
17921 Meadow Creek Dr.
Eagle River, AK 99577
(907) 694-3319

PLACER MINERS OFALASKA
P.O. Box 83151
Fairbanks, AK 99708
(907) 479-3100

CHUGACH GEM & MINERAL SOCIETY
P.O. Box 92027
Anchorage, AK 99509-2027
(907) 243-5425
http://www.akmining.com/mine/cgms.htm

MAT-SU ROCK & MINERAL CLUB
P.O. Box 2534 Palmer
Matanuska Valley, AK 99645 USA
President Jack Taylor
(907) 745-3056
MatSuRockClub@yahoogroups.com
http://groups.yahoo.com/group/MatSuRockClub/

REGIONAL NATIVE CORPORATIONS

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

ALEUT CORPORATION
Sandra Moller, Manager of Resource Development
Melvin Smith, Resource Development Specialist
4000 Old Seward Hwy., Ste. 300
Anchorage, AK 99503-6087
(907) 561-4300 fax: (907) 563-4328
E-mail: msmith@aleutcorp.com
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 fax: (907) 349-5476
http://www.asrc.com/

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

BERING STRAITS NATIVE CORPORATION
Thomas S. Sparks, Land & Resource Manager
P.O. Box 1008
Nome, AK 99762
(907) 443-5252 fax: (907) 443-2985
E-mail: land@beringstraits.com
http://www.beringstraits.com/

BRISTOL BAY NATIVE CORPORATION
Jack Moore, Geologist/Land Planner
800 Cordova St., Ste. 200
Anchorage, AK 99501
(907) 278-3602 fax: (907) 276-3924
http://www.bbnc.net/

CALISTA CORPORATION
June McAtee, VP of Lands & Natural Resources
Jeff Foley, Senior Exploration Geologist
Nick Enos, Exploration Geologist
601 W. 5th Ave, Ste. 200
Anchorage, AK 99501-2226
(907) 279-5516 fax: (907) 272-5060
E-mail: jfoley@Calistacorp.com
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 fax: (907) 563-8402
http://www.chugach-ak.com/

COOK INLET REGION, INCORPORATED
and its subsidiary, North Pacific Mining Corporation
Candace Beery, Manager of Land Entitlement
P.O. Box 93330
Anchorage, AK 99509-3330
(907) 274-8638 fax: (907) 279-8836
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 fax: (907) 459-2060
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 fax: (907) 562-5258
http://www.koniag.com/

NANA REGIONAL CORPORATION
John Rense, VP of Resources
1001 E. Benson Blvd.
Anchorage, AK 99508-4298
(907) 265-4100 fax: (907) 265-4123
http://www.NANA-online.com/

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

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

APPENDIX C
SELECTED RESOURCES FOR RECREATIONAL MINING IN ALASKA

Recreational Mining and Gold Panning

In this publication, "recreational mining" is defined 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, it may also include the use of small suction dredges, 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 lands. The best locations for the casual 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 identifies 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. The DMLW Web site also has electronic copies of these fact sheets at http://www.dnr.state.ak.us/mlw/factsht/.

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 collecting along the Dalton Highway. For more information about these sites, contact the BLM Field office in Fairbanks. A pamphlet identifying recreational mining sites in Chugach National Forest on the Kenai Peninsula 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 online 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.

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.

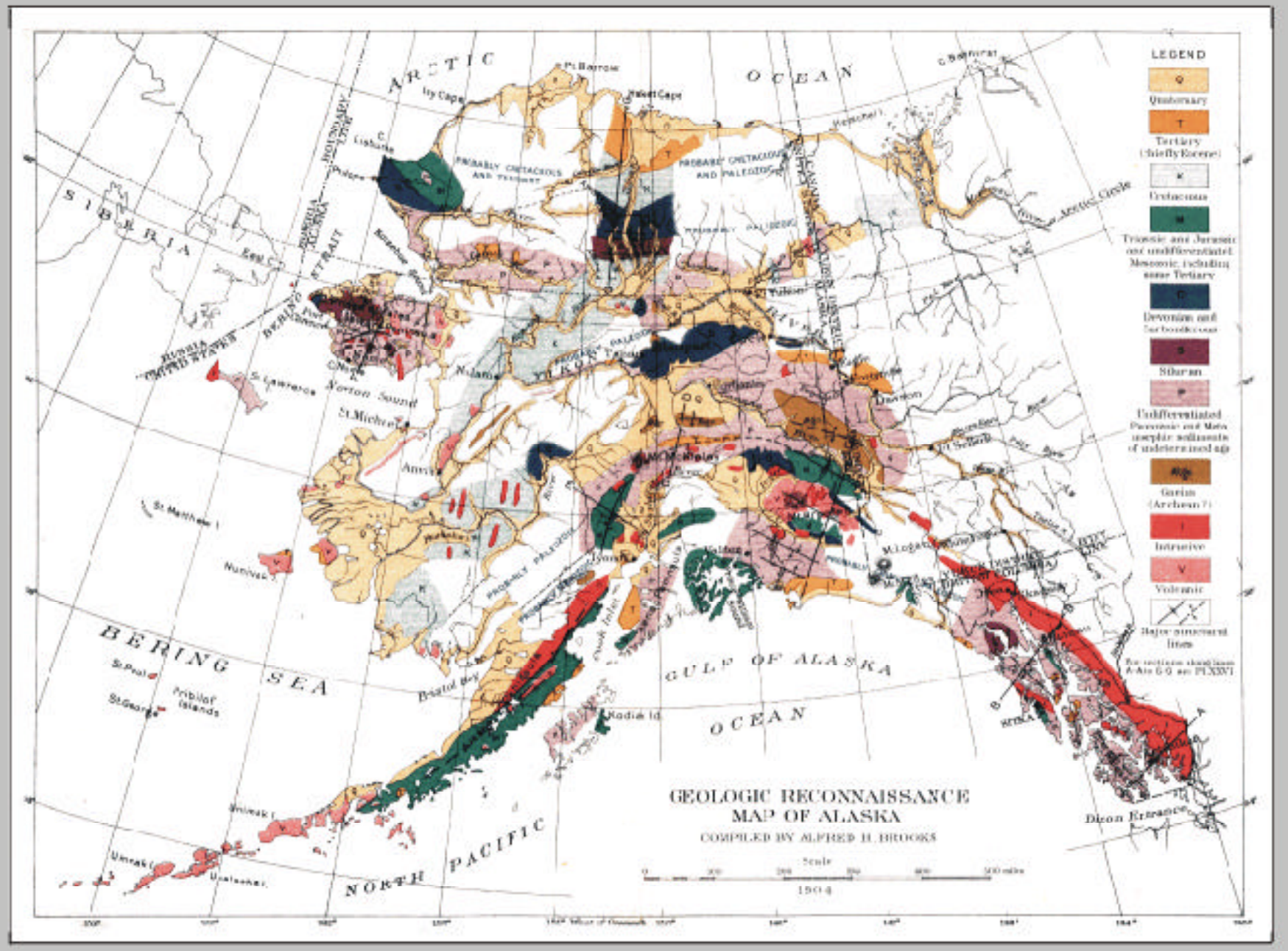
Index
Guide to Alaska Geologic and Minerals Information

Note: Index terms shown in italics are not mentioned specifically in the text, but are agencies for which addresses are provided in Appendix B. Page numbers in boldface indicate primary references. Page numbers in italics refer to the entity's or agency's address in Appendix B.

A

Back cover: Recent page-sized compilation map of the geology of Alaska. Copies are available from the DGGS office in Fairbanks and from the DGGS web site (http://www.dggs.dnr.state.ak.us).

Inside back cover: Alfred H. Brooks' 1904 compilation map of the geology of Alaska - based on reconnaissance mapping by the USGS. USGS Professional Paper 45, plate 21, page 244.



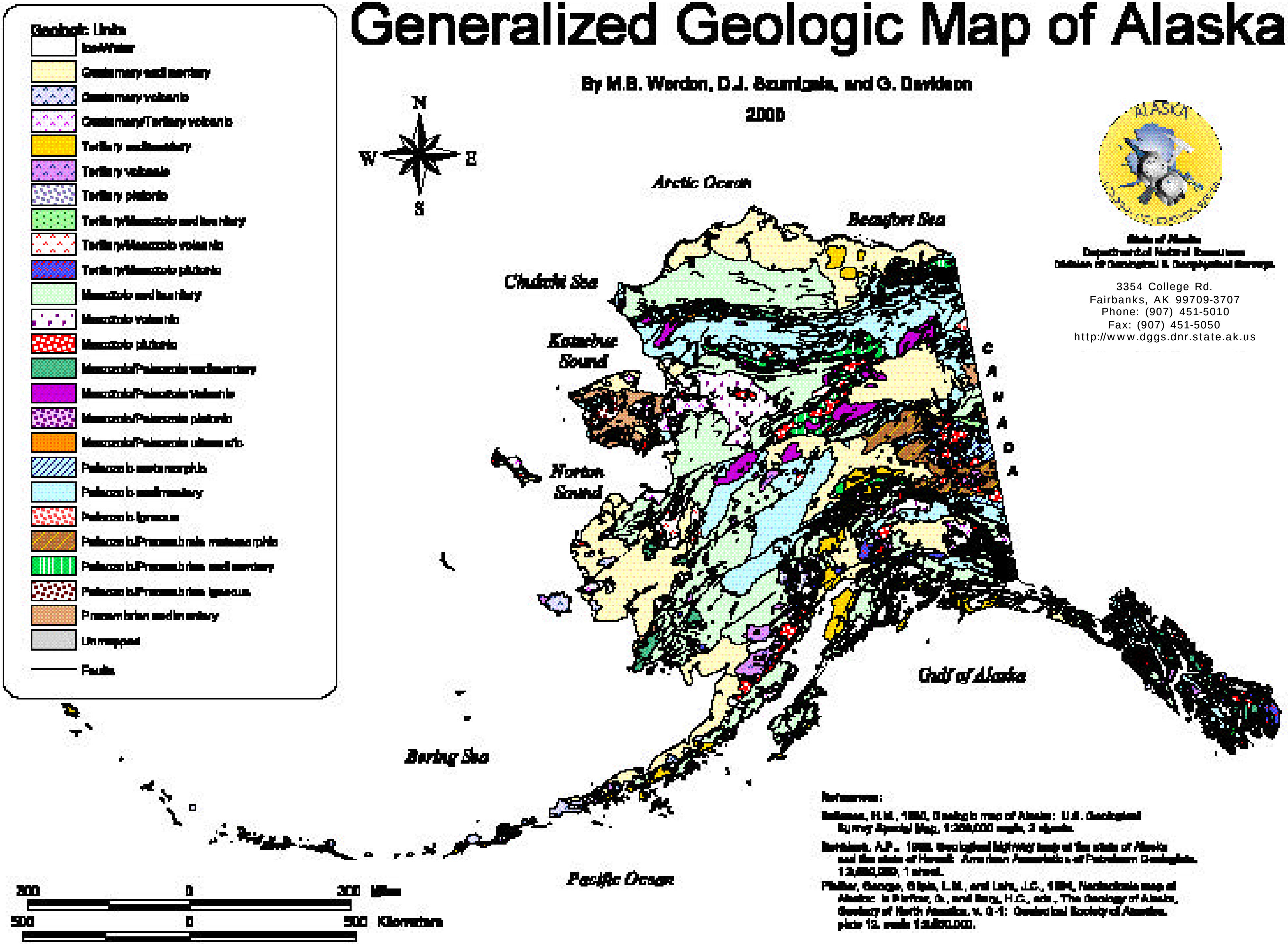
GEOLOGIC RECONNAISSANCE MAP OF ALASKA

COMPILED BY ALFRED H. BROOKS

Generalized Geologic Map of Alaska

By M.B. Wardon, D.J. Szumigala, and G. Davidson

2000



State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys

3354 College Rd.
Fairbanks, AK 99709-3707
Phone: (907) 451-5010
Fax: (907) 451-5050
http://www.dggs.dnr.state.ak.us

References:

Beikman, H.M., [illegible], Geologic map of Alaska: U.S. Geological Survey Special Map, [illegible] scale, 2 sheets.

[illegible], A.P., [illegible], Geological highway map of the state of Alaska and the state of Hawaii: American Association of Petroleum Geologists, [illegible], 1 sheet.

Plafker, George, Gilpin, L.M., and Lahr, J.C., 1994, Neotectonic map of Alaska: in Plafker, G., and Berg, H.C., eds., The Geology of Alaska, Geology of North America, v. G-1: Geological Society of America, plate 12, scale 1:2,500,000.