

INFORMATION
CIRCULAR 53

AKGEOLOGY.INFO:
AN ONLINE PORTAL FOR ALASKA GEOLOGIC
AND MINERAL RESOURCES INFORMATION

by Larry K. Freeman

Photo courtesy of DNR/DMLW.

AKGeology.info

Minerals
Data
Information
Rescue in
Alaska



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STATE OF ALASKA
Department of Natural Resources
Division of Geological & Geophysical Surveys



AKGEOLOGY.INFO: AN ONLINE PORTAL FOR ALASKA GEOLOGIC AND MINERAL RESOURCES INFORMATION

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Lawrence K. Freeman¹

BACKGROUND

The website AKGeology.info is an internet portal for geologic and minerals resources information for Alaska, bringing together data from multiple State and Federal agencies (fig. 1). It is the culmination of the federally funded Minerals Data and Information Rescue in Alaska (MDIRA) program, a five-year program mandated by Congress in 1998 and managed by the U.S Bureau of Land Management (BLM) and the U.S. Geological Survey (USGS). Upon initiation of the MDIRA program in 1998 five goals of the program were identified (MDIRA Liaison Committee, 2005):

1. Network the existing libraries; prepare a guide to geologic and minerals information; and catalog all the major collections of geology and minerals information.
2. Develop up-to-date digital databases of Alaska mineral deposits, geologic literature, and geochemistry data.
3. Provide for the physical preservation of core and other physical samples collected in the field; in particular, ensure the continued existence of the Geologic Materials Center.
4. Develop an authoritative digital claim information system to include both State and Federal claims, including a business process that would keep it up to date.
5. Provide for development, archiving, management, and dissemination of new geologic maps and minerals information. This proposed component of the program was not funded.

The AKGeology.info portal delivers the products of the MDIRA program, including library collections of geologic information, updated digital geologic databases, an interactive mining claim database, and an interagency bibliography through links and individual search engines that are available on the main page. Within the next two years additional databases will be updated, geologic materials will be cataloged, and all the information will be integrated into a single map-based search utility that delivers the data in a consistent format.

LIBRARY COLLECTIONS

Publications and library collections of historical records are frequently used by geologists and prospectors as the primary source of mineral resource information. Much of this information is scattered among multiple agencies, libraries, and private entities. The MDIRA program produced a guide to the diverse collections of mineral resource information (Daley, 2004). Many older publications have been lost or damaged, so a major effort is underway to create a digital archive of these historic maps and reports, and to produce an index of the geologic mapping in the state. Mining industry data and reports have never been indexed or made available.

Legacy agency publications

Publications of the USGS, BLM, U.S. Bureau of Mines (USBOM), and the Alaska Division of Geological & Geophysical Surveys (DGGS) that contain geologic and mineral resource information about Alaska are being scanned and will eventually all be available to the public online. USGS publications on Alaska and all DGGS publications can be viewed or downloaded (fig. 2) as Adobe Portable Document

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AKGeology.info - Minerals Data Information Rescue In Alaska - Netscape

USGS BLM DGGG DNR USFS Recorder's Office Natural Resources find

AKGeology.info

Minerals Data Information Rescue in Alaska

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

ALASKA DEPARTMENT OF NATURAL RESOURCES

FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

Welcome to MDIRA Portal Home page. This new site will evolve from a collection of links pertaining to geology, minerals, and land records in Alaska into a integrated system which allows the user to combine this information in ways which promote minerals exploration in Alaska. Please note that not all of the links on this page are part of the MDIRA program, but are directly related and thus are included here.

Land Records

- › [plats.LandRecords.info](#)
BLM and DNR Plats & Surveys
- › [las.LandRecords.info](#)
Live DNR Case-file information
- › [www.gloreCORDS.blm.gov](#)
BLM General Land Office
- › [Recorder's Office](#)
State Recorder's Office documents
- › [akmining.info](#)
Federal and State mining claims via an interactive map

Payments/Compliance

- › [dnrpayment.LandRecords.info](#)
Make a State mining claim payment
- › <http://www.dnr.state.ak.us/mlw/mining>
DNR DML&W Mining Section
- › <http://www.dnr.state.ak.us/mlw/forms/>
State Mining claim-related forms
- › <http://www.ak.blm.gov/ak940/index.html>
BLM Division of Energy & Solid Minerals
- › <http://www.ak.blm.gov/ak940/forms/forms.html>
BLM Mining-Related Forms

Maps/Publications

- › [Guide to Alaska Geologic and Mineral Information](#)
All known sources geologic and minerals information. 13MB download.
- › [Alaska Geology Map Indexer](#)
Downloadable maps
- › [Alaska Interagency Bibliography](#)
Downloadable publications
- › [DGGG Publications On-Line](#)
Downloadable publications
- › [DNR Map Library](#)
More downloadable maps
- › [Alaska Resource Data Files](#)
Summary descriptions of known mineral occurrences
- › [USGS Publications](#)

Geology/Data

- › [RASS, PLUTO Geochemistry](#)
Summary of non-rock USGS geo-chemistry
- › [DGGG Geochemical Data](#)
WebGeochem: DGGG geochemical sample analysis search
- › [Alaska Paleontological Database](#)
Detailed information on fossils and fossil localities

Libraries/Archives

- › [AKMIDI](#)
Alaska Mineral Industry Data Index
- › [ARLIS Minerals Library Catalog](#)
Print copies of minerals information
- › [UAF Library Catalog](#)
Print copies of minerals information
- › [Alaska Historical Collections](#)
They have donations of mining materials
- › [John Rishel Mineral Information Center](#)
BLM Mining and Minerals Collection
- › [USGS Alaska Tech Data Unit](#)
Index of unpublished USGS materials on Alaska

Figure 1. AKGeology.info portal provides a collection of public sector links pertaining to geology, minerals resources, and land records (<http://akgeology.info>). The links provide access to all the individual digital products generated under the Minerals Data and Information Rescue in Alaska Program <<http://akgeology.info>>.

Files (PDF) or, for some maps, as Lizardtech MrSID files (Davidson and others, 2002) from <http://www.dggs.dnr.state.ak.us/pubs/pubs>.

Alaska Geologic Map Index

An interactive index of geologic mapping in Alaska combines map-based display with tabular listing of geologic maps of Alaska (fig. 3) published by DGGS at <http://maps.akgeology.info/>. The map-based display portrays coverage areas of geologic maps, while links in the tabular display lead to those maps that are available online. Maps are also classified by standard thematic categories. The index was

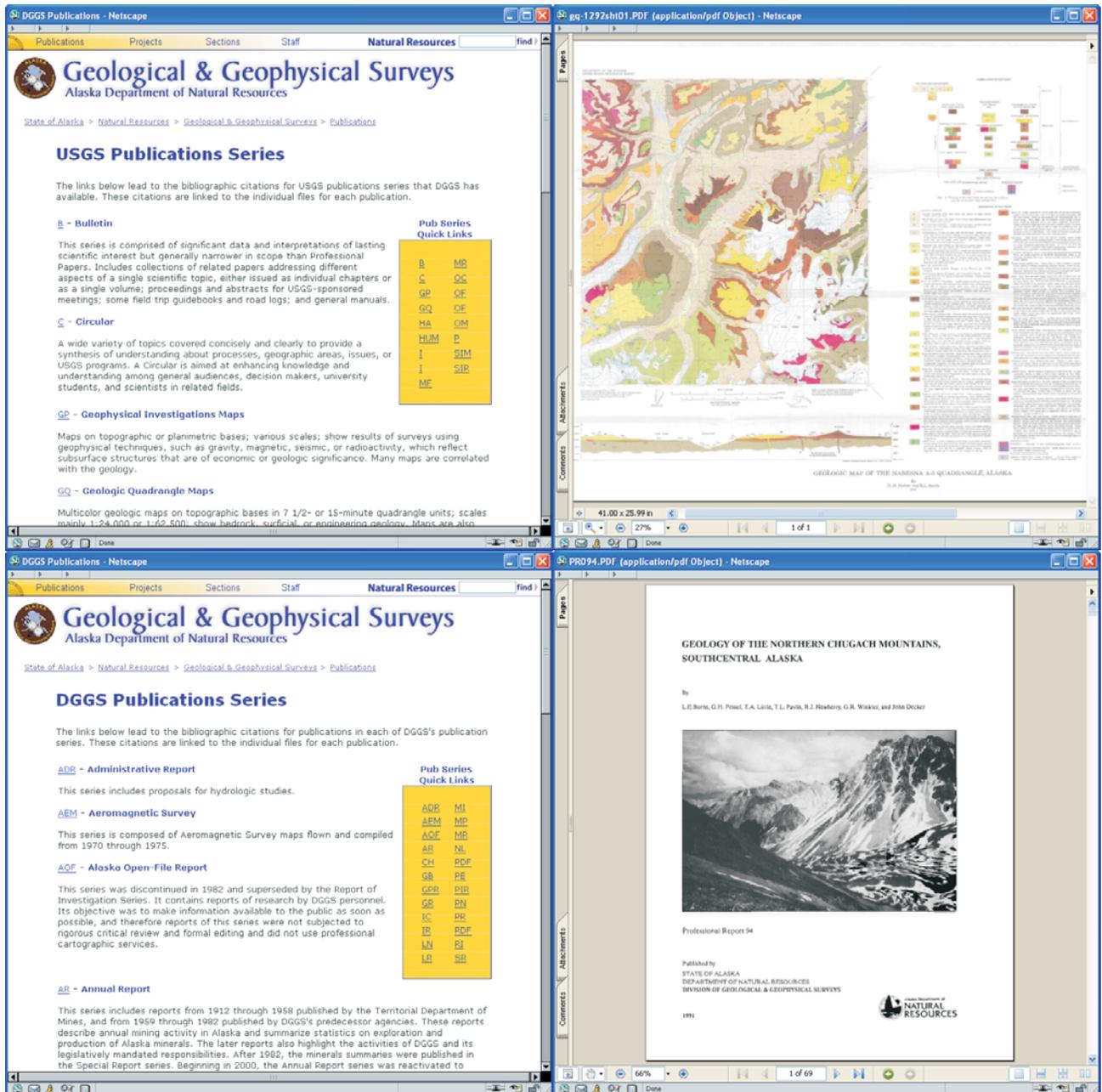


Figure 2. Legacy agency publications have been scanned and are made available on the web. The Division of Geological & Geophysical Surveys is an online repository <<http://www.dggs.dnr.state.ak.us/pubs/pubs>> for legacy U.S. Geological Survey publications (top) and Alaska Division of Geological & Geophysical Surveys publications (bottom).

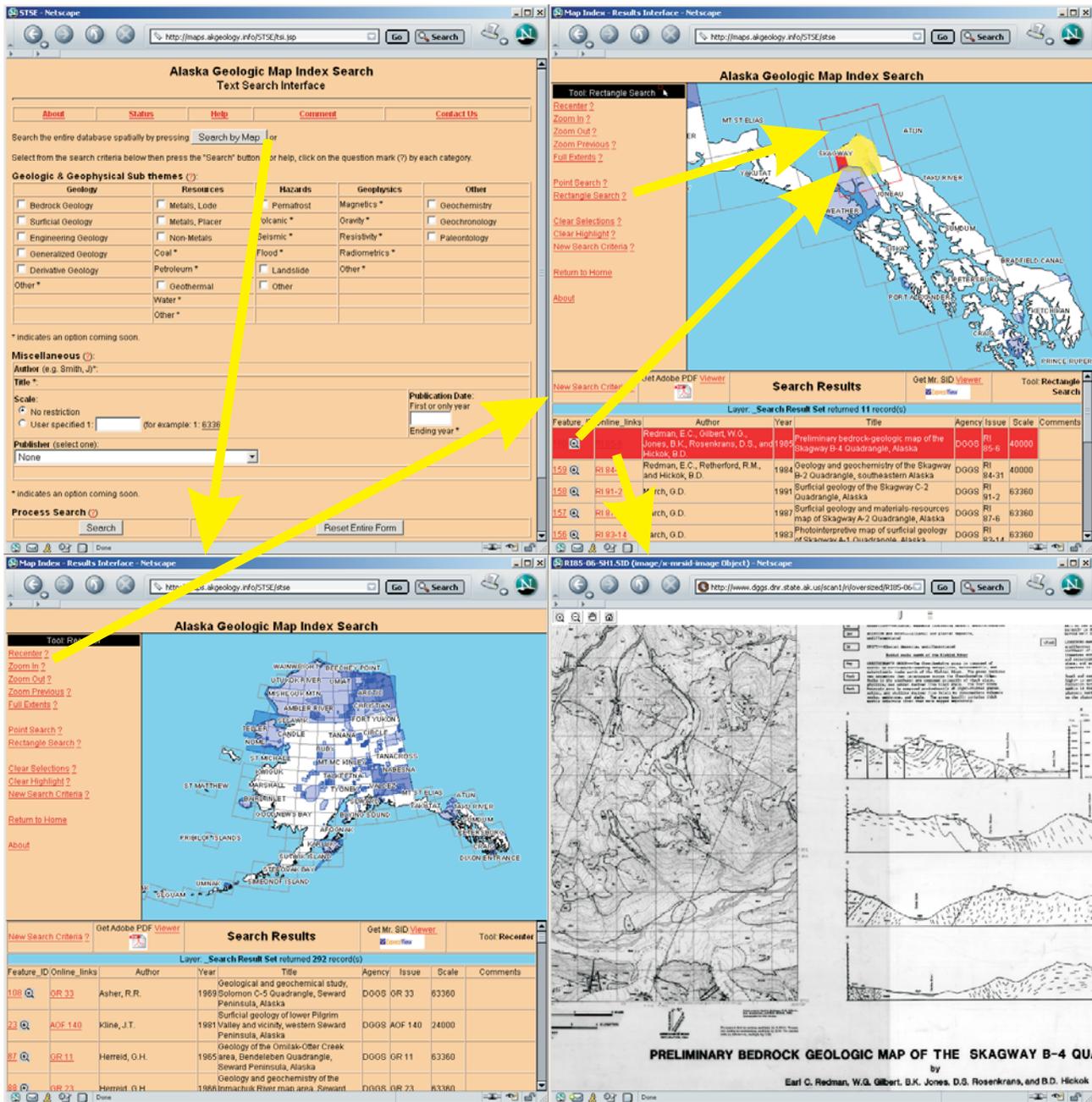


Figure 3. Alaska Geologic Map Index is a searchable map- and keyword-indexed catalog of public-sector geologic maps in Alaska. The initial search page (upper left) has an option to view all geologic maps or to select maps by theme, scale, or other attributes for display. The map display page (upper right) consists of three frames: navigational tools on the left side of the screen control the map scale in the map view on the right side of the screen and allow the user to select maps. Selected maps are highlighted in yellow and listed in the table in the bottom frame (lower left); users can highlight a single map outline in red by selecting the “Feature_ID” of the map in the table. By clicking on the “Online_Link” for a map, the user is led directly to the map stored in an online repository (lower right) <<http://maps.akgeology.info>>.

designed to allow quick identification of the pertinent available geologic mapping for any area of Alaska. Over the next year the interface will be upgraded and geologic and geophysical maps from all government agencies will be included.

Alaska Mineral Industry Data Index (AKMIDI)

AKMIDI is an index or database of nearly 16,000 records of mineral information that are owned by 18 different groups around the state, including Native corporations, private companies, and state libraries and land managers. A search engine (fig. 4) for this database is available at <http://akmidi.akgeology.info/>. The types of information included in this index include industry reports and maps, field notes, drill

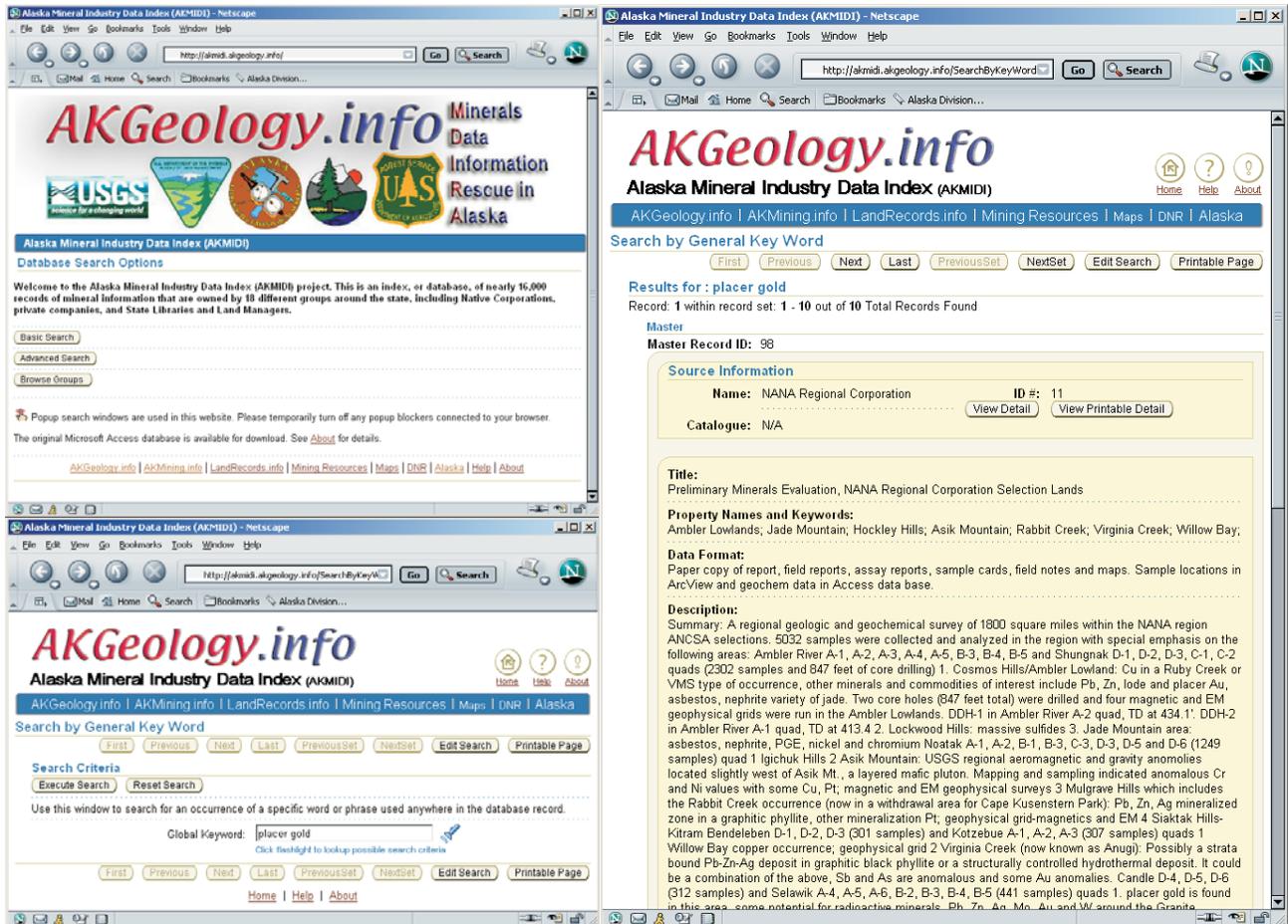


Figure 4. Alaska Minerals Data Index (AKMIDI) catalogs unpublished mineral and geologic data holdings of private- and public- sector entities. Two search options are available (upper left), including a simple global keyword search (lower left) where the user's entered keyword is used to search all the index attributes. The advanced search allows users to apply keywords to specific index attributes. The search results (right) are displayed in a full page for each record, and tools are provided for browsing through each record that meet the search criteria <<http://akmid.akgeology.info>>.

logs, and other archived data from the private sector. The actual data may still be held and controlled by the private entities (Crafford, 2004).

DIGITAL DATASETS

A major MDIRA task was recovery and renewal of legacy datasets and information. These datasets were reconstructed and reformatted either because they had not been updated, were on old electronic storage media, or were not gathered into coherent collections. The legacy data recovery effort is ongoing and will include continuing efforts to renew publications, bibliographic information, geochronologic data, and catalogs of archived geologic materials, mining company data, and agency field observation records, among others. The MDIRA data recovery will be completed in the next two years. The datasets listed below are among those recovered to date.

Alaska Resource Data Files (ARDF)

The ARDF consist of updated descriptions of mines, prospects, and mineral occurrences throughout Alaska (fig. 5). The ARDF descriptions are collected and published for individual U.S. Geological Survey 1:250,000-scale quadrangles in Alaska as USGS Open File Reports and may be downloaded from <http://ardf.wr.usgs.gov/>.

USGS geochemical data

USGS geochemical analyses on samples from Alaska have been recovered, reformatted, and published (Bailey and others, 2000). The data are available by quadrangle and sample type at <http://>

The screenshot displays two browser windows. The left window, titled 'ARDF Quad Map - Netscape', shows the main ARDF website. It features the USGS logo and the title 'The Alaska Resource Data Files'. Below the title, it asks users to 'Please select a 1:250,000 scale quadrangle.' A map of Alaska is shown with various quadrangles labeled with letters and numbers. A legend indicates that green quadrangles represent complete ARDF available as Adobe Acrobat files, red quadrangles represent additions within the last six months, and other colors represent different update statuses. The right window, titled 'Fairbanks.pdf (application/pdf Object) - Netscape', shows the details for the Fort Knox site (ARDF no. FB115). The site name is 'Fort Knox', and the site type is 'Mine'. The ARDF number is 'FB115', the latitude is '64.992', and the quadrangle is 'FB D-1'. The longitude is '147.359'. The location description and accuracy section states: 'The Fort Knox gold mine is located northeast of Fairbanks on the north flank of Gilmore Dome between Monte Cristo and Melba Creeks. The mine is accessible from the Steese Highway. To reach it, from Cleary Summit, go east on the Fairbanks Creek road; at approximately 2 miles on the Fairbanks Creek road, turn south on the Fort Knox mine road (not shown on the (D-2) NW map) and continue about 3.5 miles to the Fort Knox mill, which is just south of the open pit of the mine.' The commodities section lists 'Main: Au' and 'Other:'. The ore mineral is 'Gold'. The gangue minerals section is empty. The geologic description section states: 'Currently, the Fort Knox mine is the largest gold mine in Alaska, producing about 1,000 ounces of gold per day from 36,000 to 44,000 tons of ore (Szumigala and Swanbank, 1999). The most recent figures indicate a resource of 186 million tons of ore at a grade of 0.027 ounce of gold per ton, or a total resource of 5.04 million ounces of gold (J. Odden, written commun., 2000). The gold carries from 940-990 fine (Bakke, 1994). The Fort Knox gold deposit occurs in a granite body, now commonly referred to as the Fort Knox pluton (Bakke, 1992). This pluton has been dated at 92 Ma by the U/Pb method (Bakke, 1994). Gold occurs along margins of stockworks quartz veins and venslets, on quartz-filled shear zones, and along fractures within the granite. In the ore zones, the sulfide content is low, less than 0.5 percent. There are only minor amounts of arsenopyrite (McCoy and others, 1997). The dominant sulfide is bisulfidate (J. Odden, oral commun., 2000). The pluton has been subdivided into three phases, primarily on the basis of texture: (1) fine-grained, biotite- and hornblende-rich granite, (2) medium- to coarse-grained, seriate, porphyritic granite (the youngest phase), and (3) a hybrid, biotite- and hornblende-rich phase with relict texture similar to the porphyritic granite, formed by local contact metamorphism of impermeable country rocks (Bakke, 1992; J. Odden, writ-

Figure 5. Alaska Resource Data Files (ARDF) contain recently compiled reports on mineral occurrences throughout Alaska (<http://ardf.wr.usgs.gov/>). They are published by 1:250,000-scale USGS quadrangle (left) as U.S. Geological Survey Open-File Reports and can be downloaded as Adobe Portable Document Files (right), FileMakerPro databases, or comma-delimited ASCII files <<http://ardf.wr.usgs.gov>>.

geopubs.wr.usgs.gov/open-file/of99-433/ (fig. 6) or on DVD from the Alaska Branch of the USGS Western Region Minerals Division.

DGGS geochemical data

DGGS geochemical analyses are being recovered and are available through a search engine <http://www.dggs.dnr.state.ak.us/webgeochem> that retrieves geochemical data collected from many published sources (fig. 7). Fifty percent of DGGS geochemical analyses are currently available through this database. Data from future field projects will be added to this database, which is part of a much larger agency-wide centralized database (Papp, 2005).

Alaska Paleontological Database

This database (Zhang and Blodgett, 2003) contains detailed information on fossils and fossil localities in Alaska. The information is derived from unpublished USGS fossil reports, published literature, and data released by industry sources. The database includes both text- and map-based search engines (fig. 8) at <http://www.alaskafossil.org/>.

MINING CLAIM INFORMATION

Up-to-date mining claim and mineral estate ownership maps are an important part of any mineral exploration and development program. In the past prospectors were required to make multiple visits to multiple agencies to do a complete claim status review of a prospective area. One component of the MDIRA program has made mining claim information available on the web.

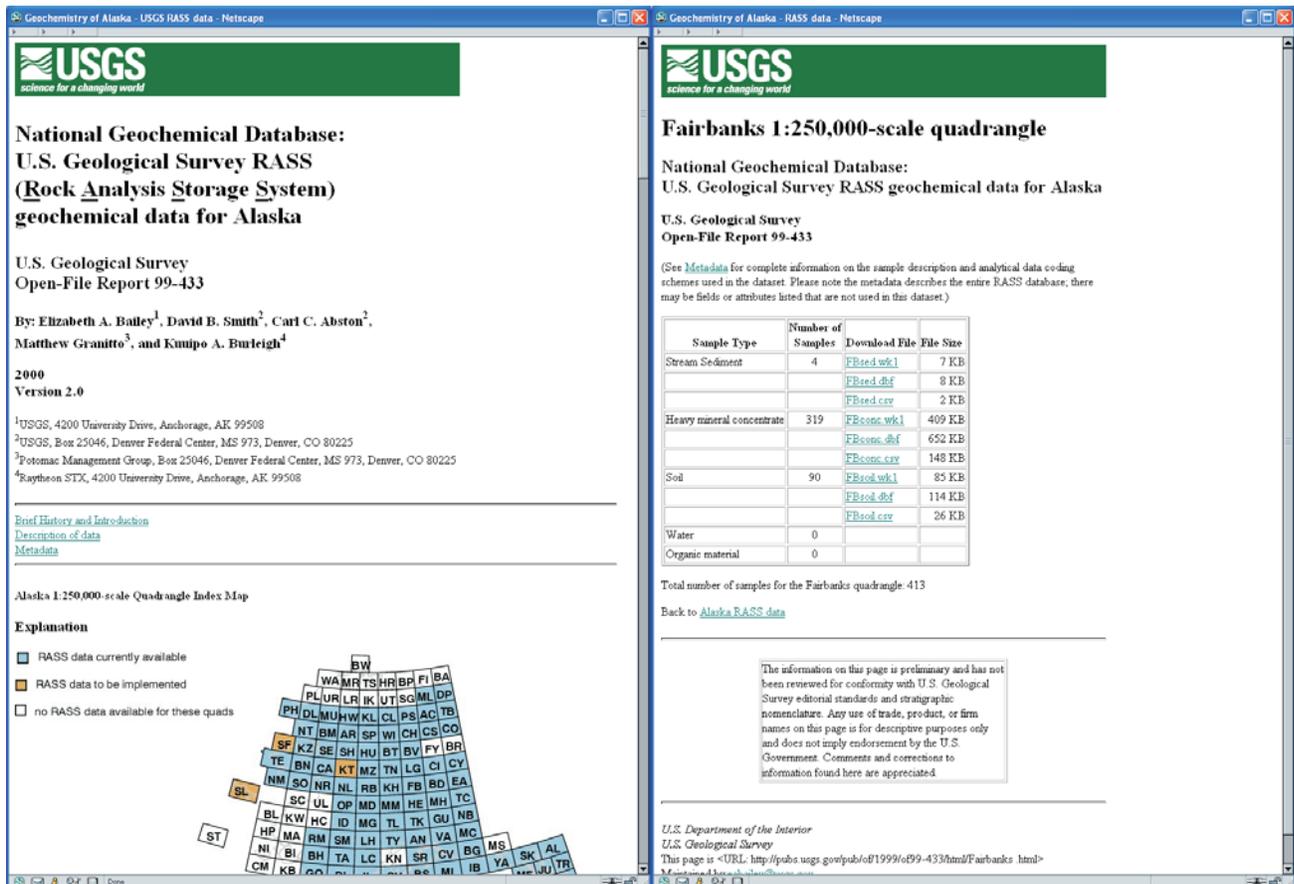


Figure 6. U.S. Geological Survey (USGS) Geochemical Data available online includes data recovered from the Rock Analysis Storage System (left). The data are collected as individual datasets organized by USGS 1:250,000-scale quadrangles and sample types, and are available in multiple file formats (right) <<http://geopubs.wr.usgs.gov/open-file/of99-433/>>.

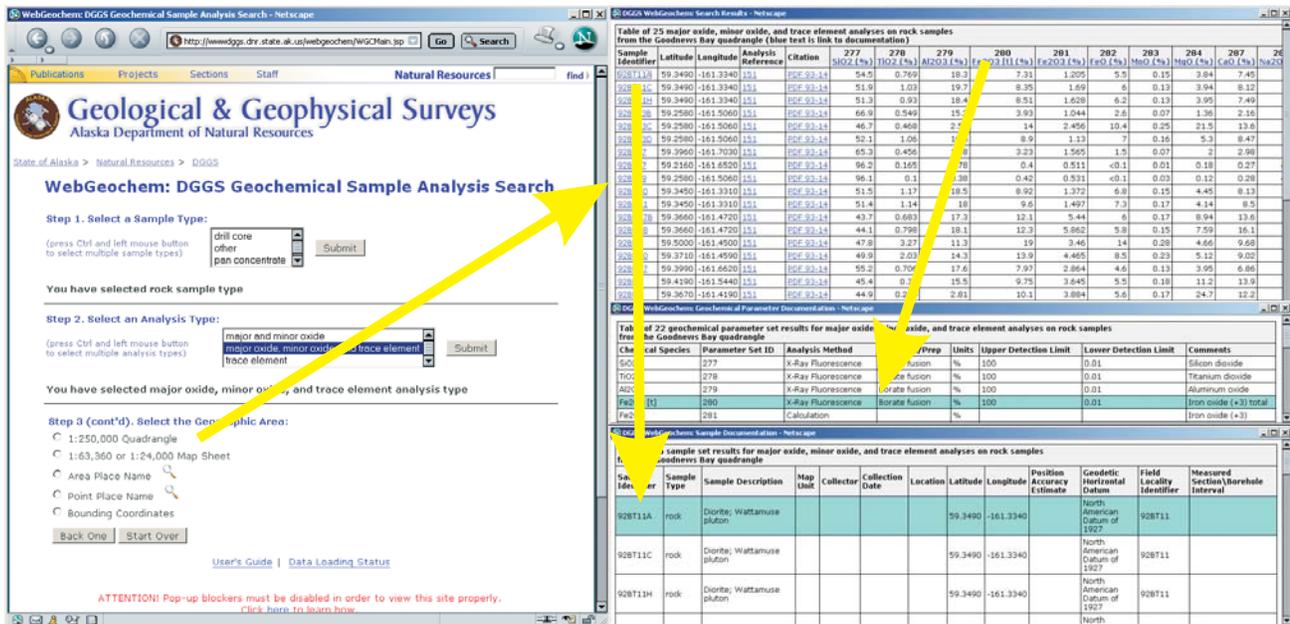


Figure 7. Alaska Division of Geological & Geophysical Surveys geochemical data is available through a web-based search engine called DGGs WebGeochem. The search engine leads the user through several query options including several geographic search methods (left). Search results are displayed in a pop-up window formatted as a table (upper right) that includes links to documentation about the analytical methods (middle right) and the samples and localities (lower right) <<http://www.dggs.dnr.state.ak.us/webgeochem>>.

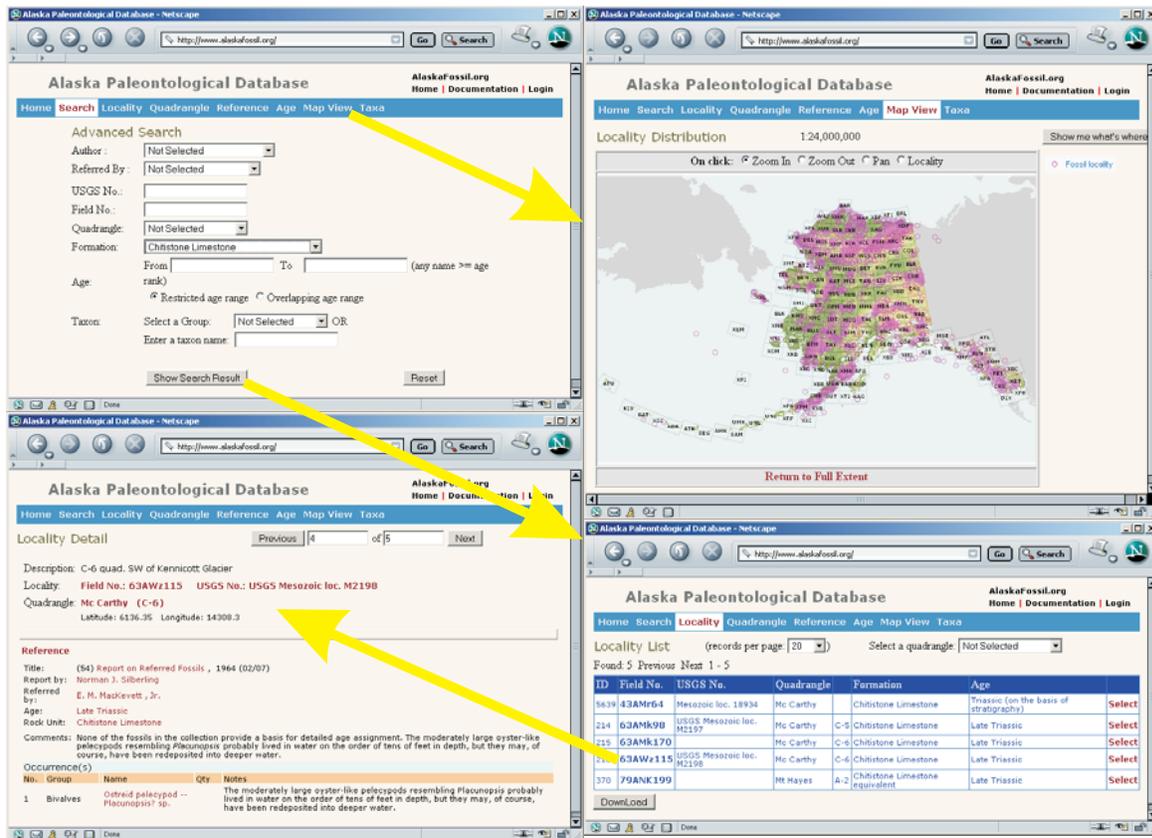


Figure 8. Alaska Paleontological Database has collected information about fossil localities from the entire state of Alaska from multiple sources. The database includes a tabular search form (upper left), a map interface that displays the sample localities (upper right). The search results are displayed in a table (lower right); clicking on the “Select” box on the right side will bring up a detail page (lower left) that describes and documents the locality <<http://www.alaskafossil.org>>.

Interactive Claim Maps

Actively updated mining claim status can be searched and viewed through a web-based interactive mapping application at <http://www.akmining.info/> (fig. 9). Users can view active mining claim and leasehold locations along with mineral estate ownership. There are tools that allow users to interactively zoom in and out, pan, and change visible map layers. Map-based query tools allow users to view information about single or multiple claims. Query result windows contain links that lead to summary information, case history, and even to images of recorded location notices and affidavits.

Download claim data

The new version of the State's Alaska Mapper application, which is the backbone of the AKmining.info map interface, provides improved map navigation tools and data output tools, including the ability to download selected GIS data for the mineral estate status layers (Alaska DNR LRIS GIS Unit, 2006).

INTERAGENCY BIBLIOGRAPHY

The third goal of the MDIRA program was to integrate recovered information into a single delivery system. The Interagency Bibliography integrates bibliographic information from multiple sources and provides direct access to online repositories of the indexed publications. Publications of the BLM, USGS, USBOM, and DGGS (including predecessor agencies) contain most of the publicly available information on Alaska mineral resources and geology. The Interagency Bibliography includes citations to all "numbered series" publications of these agencies that are pertinent to Alaska geology and minerals, and links to those publications that are available online. Entries in the bibliography also include identified Master's theses and Ph.D. dissertations that pertain to Alaska geology and mining. Participating agencies may add other bibliographic references for Alaskan geology and mineral resources; however, this bibliography is not intended to be an exhaustive listing of geologic references on Alaska. All listings are spatially indexed by USGS 1:250,000-scale quadrangles.

The Bibliography includes multiple search tool options (fig. 10) and display formats for the bibliographic information. There is an extensive user's manual available on line (Parker, 2004).

The Interagency Bibliography has required committed efforts of several agencies to pool their resources and expertise, and the result is a data delivery system that will facilitate research for those interested in exploring, evaluating, and making decisions about Alaska's earth resources.

Search Options

The Interagency Bibliography includes multiple search options to allow users to compile references on specific areas or subjects, and to find individual publications that are available online at <http://www.bib.akgeology.info/>.

The Basic Search has options to use any combination of publication title, author, publication year, or USGS 1:250,000-scale quadrangle (QMQ) names in a simple text based form. These are the attributes most commonly used to search for Alaska geologic and minerals information.

Experienced users can make more advanced searches of the Interagency Bibliography using complex Boolean arguments using the Advanced Search. This option allows users that are familiar with database searches to restrict their search by nearly any bibliographic attribute. Users can save and retrieve search statements for repeated use.

The Quadrangle Search option provides an interactive map that aids users in selecting the quadrangles that cover the geographical area of Alaska in which they are interested.

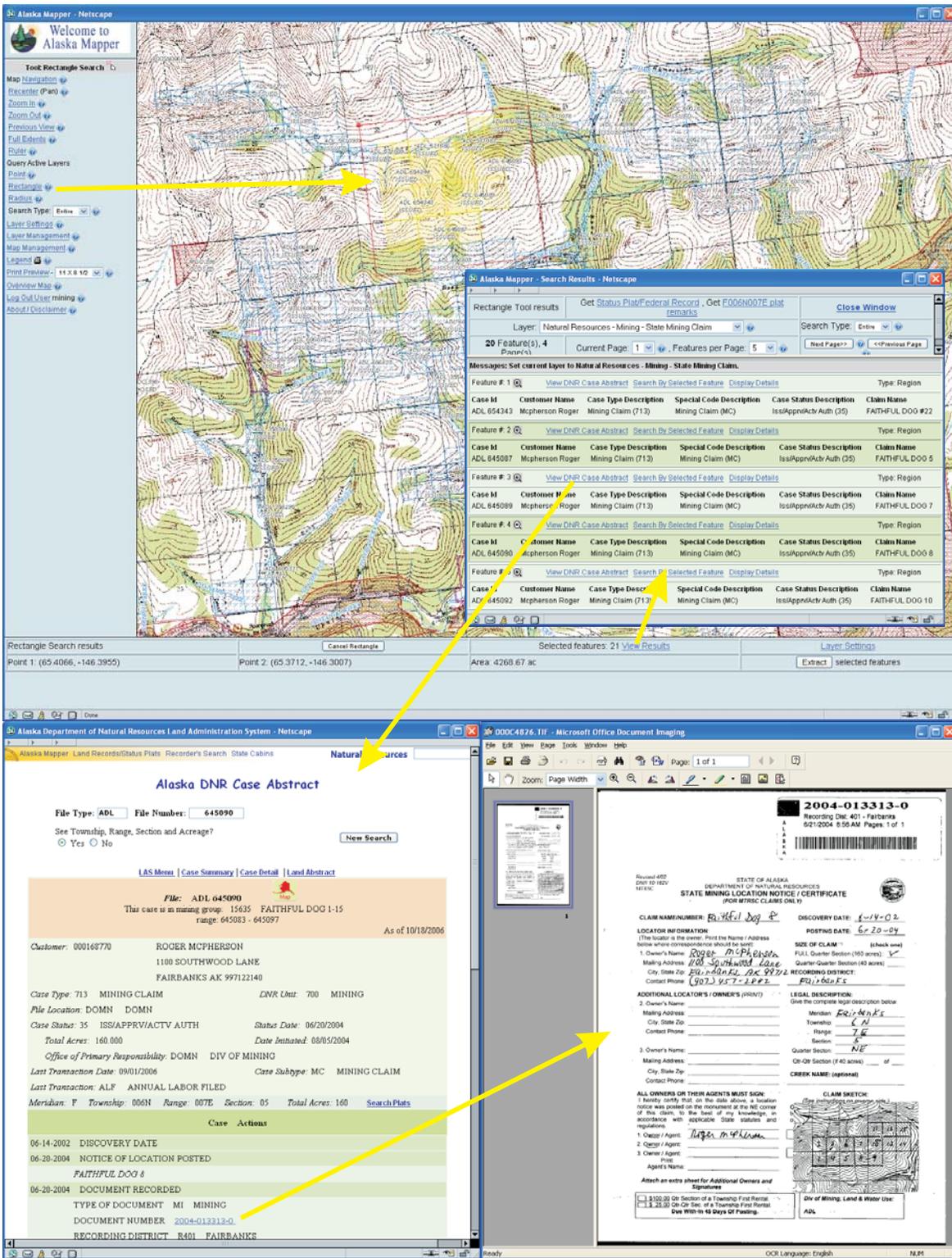


Figure 9. Federal and State mining claims can be viewed and researched by a web-based interactive mapping tool. The mining claim mapping tool is part of Alaska Department of Natural Resources' "Alaska Mapper" application. The interactive map tool (top) has three frames: a navigation tool frame on the left, the interactive map display on the right, and a status frame on the bottom. Users can graphically select features in the map and display information about the selected features in a pop-up window (middle right). If a detailed case history for a feature is available it can be displayed in an additional window (bottom left). Finally, if recorded documents are available at the Recorders Office, they can be viewed (bottom right) from links in the case history file <<http://www.akmining.info>>.

Search Results

Results are displayed in tabular form that allows users numerous options for browsing the bibliographic listings that met the search criteria (fig. 11). The Search Results table includes additional options so that users can view detailed information about an individual bibliographic record, print a formatted list of the bibliographic references, and export the results to a parsed text file or a formatted text file that meets the editorial requirements of USGS *Suggestions to Authors* (Hansen, 1991).

If a user sees an error in any bibliographic entry, there is tool on the detailed listing page (fig. 11) that enables the user to notify the agency responsible for the bibliographic record in the detailed listing.

Any individual publications that are available online are shown in red (fig. 11) in the results table, and are actively linked to the online repository where the publication can be viewed online.

Contributing Agencies

In addition to the tools provided for the public users of the bibliography, tools are provided so that each contributing agency can edit, delete, and add individual records of its publications and holdings. Charging agencies with maintaining their individual contributions will help ensure that the content of the bibliographic database is kept current.

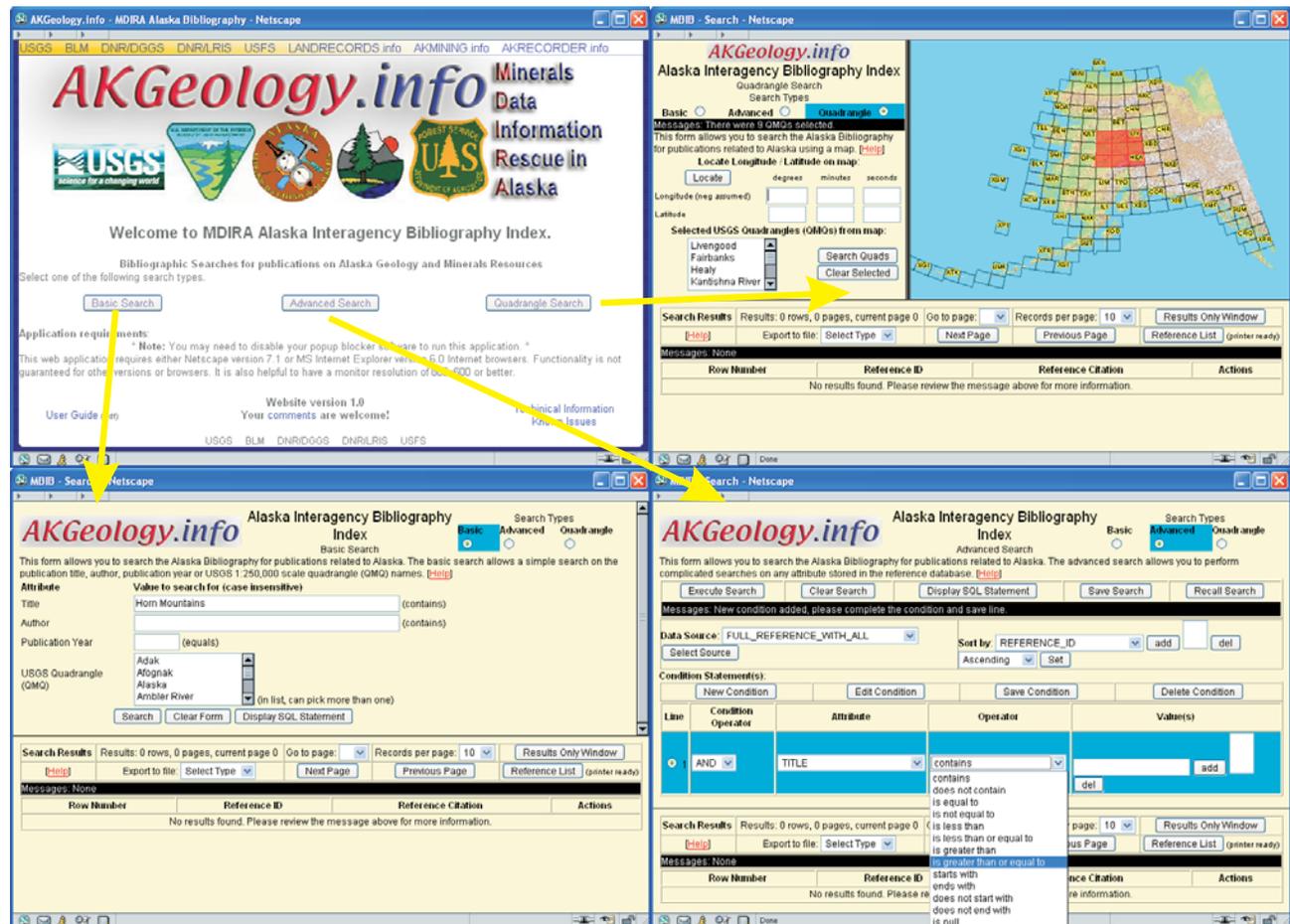


Figure 10. *Interagency Bibliography provides search tools for the statewide bibliography of agency publications of the Alaska Division of Geological & Geophysical Surveys, the U.S. Geological Survey, the U.S. Bureau of Land Management, and the U.S. Bureau of Mines. The Basic Search (lower left) gives users a quick form-based search based on author, title, keyword, publication year, or quadrangle. The Quadrangle Search (upper right) is a map-based search that enables users to outline or point to the part customized Boolean searches of all the bibliographic attributes; a tool allows users to save their search for future use <http://www.bib.akgeology.info>.*

Repositories

As an ongoing part of this bibliography project, legacy publications are scanned and the resulting electronic files are linked to their citation in the database. Newer publications, which frequently are published directly to the web, also are linked through the database. Currently, electronic files of all DGGs publications and those USGS publications that pertain to Alaska are available (fig. 12). When the MDIRA projects are completed (by the end of 2007), all Alaska publications from the USGS, BLM, USBM, and DGGs will be available, and will be indexed in and linked in the Interagency Bibliography at <http://bib.akgeology.info>.

ONGOING PROJECTS

The next two years should see completion of several ongoing data recovery tasks including the creation and publication of public sector geochemical and geochronologic databases for Alaska.

Geologic Materials

At the Geologic Materials Center in Eagle River the catalog of archived geologic materials, in particular for the U.S. Bureau of Mines samples, DGGs samples, and mining industry “hard rock” core collections, are being updated and overhauled and will be made available on the web over the next two years.

Integrated digital data

Finally, for the AKGeology.info site, a single integrated portal is being created that uses the collaborative model of the Interagency Bibliography and the technology of the Alaska Geologic Map Index and Mining Claim map interface. This portal will provide search, display, and download utilities for all the recovered MDIRA datasets (fig. 13). This new data delivery system is currently in development.

ACKNOWLEDGMENTS

The author played only a small role in the overall project and simply serves as messenger to report a successful collaboration of many agencies and individuals. The U.S. Congress authorized and appropriated funding for the five-year Minerals Data and Information Rescue in Alaska program starting in 1998. The program was administered by the USGS and BLM, with oversight from a liaison committee consisting of stakeholders from the participating agencies and the private sector. Participating agencies include the Alaska Branch of the U.S. Geological Survey Western Region Minerals Division, the Solid Minerals Branch of the Alaska Office of the U.S. Bureau of Land Management, the U.S. Forest Service, the Alaska Division of Geological & Geophysical Surveys, the Alaska Department of Natural Resources Land Records Information Section, the Alaska Resource Library & Information Services, and the Keith B. Mather Library of the Geophysical Institute and International Arctic Research Center at the University of Alaska Fairbanks. This article was expanded from a poster presentation by Freeman and Triplehorn (2005).

The screenshot displays the AKGeology.info website interface. The top left shows the search results page with a map of Alaska and a table of results. The top right shows a 'Results Only Window' with a table of search results. The bottom left shows a 'Reference List' with a list of bibliographic entries. The bottom right shows a 'Reference Detail' window for a specific entry.

Search Results Table (Upper Right):

Row Number	Reference ID	Reference Citation	Actions
1	15920	Martin, O.C., 1904, Petroleum fields of Alaska and the Bering River coal fields, in U.S. Geological Survey Staff, Contributions to economic geology, 1903. U.S. Geological Survey, Bulletin 725, p. 365-382.	Detail
2	14986	Griffin, William, 1905, Excerpt from report on the Matanuska coal field in the valley of the Matanuska River, Alaska. Alaska Territorial Department of Mines, Miscellaneous Report 85-0, 6 p.	Detail
3	15911	Martin, O.C., 1905, Bering River coal field, in U.S. Geological Survey Staff, Report of progress on investigations of mineral resources in Alaska in 1904. U.S. Geological Survey, Bulletin 259, p. 140-150.	Detail
4	15994	Martin, O.C., 1906, Distribution and character of the Bering River coal, in U.S. Geological Survey Staff, Report on progress of investigations of mineral resources of Alaska in 1905. U.S. Geological Survey, Bulletin 284, p. 65-77.	Detail
5	15895	Martin, O.C., 1906, Preliminary statement of the Matanuska coal field, in U.S. Geological Survey Staff, Report on progress of investigations of mineral resources of Alaska in 1905. U.S. Geological Survey, Bulletin 284, p. 88-100.	Detail
6	16014	Martin, O.C., 1906, A reconnaissance of the Matanuska coal field, Alaska, in 1905. U.S. Geological Survey, Bulletin 289, 36 p., 1 sheet, scale 1:360,000.	Detail
7	15806	Martin, O.C., 1911, Preliminary report on a detailed survey of part of the Matanuska coal fields, in U.S. Geological Survey Staff, Mineral resources of Alaska, report on progress of investigations in 1910. U.S. Geological Survey, Bulletin 480, p. 128-130.	Detail
8	16030	Martin, O.C., and Kay, F.J., 1917, Geology and coal fields of the lower Matanuska Valley, Alaska. U.S. Geological Survey, Bulletin 500, 98 p., 5 sheets, scale 1:62,500.	Detail
9	12111	Fieldner, A.C., Smith, H.I., Paul, J.W., and Sanford, S., 1918 [1916], Analyses of mine and car samples of coal collected in the fiscal years 1913 to 1916. U.S. Bureau of Mines, U.S. Bureau of Mines Bulletin 123, 478 p.	Detail
10	15690	Martin, O.C., 1919, Geologic problems at the Matanuska coal mines, in U.S. Geological Survey Staff, Mineral resources of Alaska, report on progress of investigations in 1917. U.S. Geological Survey, Bulletin 692, p. 268-282.	Detail

Reference List (Lower Left):

- Mendenhall, W.C., 1903, The Chistochina gold field, Alaska, in Emmons, S.F., and Hayes, C.W., Contributions to economic geology, 1902. U.S. Geological Survey, Bulletin 213, p. 71-75.
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Reference Detail (Lower Right):

Publication Type: **Numbered Series** Owner: **Alaska Division of Geological & Geophysical Surveys (ADGGS)**
 Title: **Excerpt from report on the Matanuska coal field in the valley of the Matanuska River, Alaska**
 Publishing Year: **1905 (ACTUAL)** Release Year:
 Edition:
 Pages: **6 p.** Sheets:
 Map Scale:
 Repository: **Alaska Division of Geological & Geophysical Surveys**
 Authors: **Griffin, William** OMQs: **Anchorage Taikethna Mountains** URLs: **http://www.dggs.dnr.state.ak.us/subs/pubs/?req=pcitation&ID=830**
 Publishing Agency: **Alaska Territorial Department of Mines (ATDM)**
 Series: **Miscellaneous Report** Series Number: **85-0**

Figure 11. Interagency Bibliography results are displayed in tabular form in a frame below the search frame (upper left) once a search is issued. Users can enlarge the search results into a results-only window (upper right) and browse through the results. There is an option for viewing the details of the bibliographic listing (lower left); a tool for the user to provide feedback to the contributing agency is available. The result set can be formatted into a printer-ready bibliographic list (lower left), or downloaded as a parsed dataset or a formatted bibliographic list. References that are highlighted in red have links that lead to the repository where the document can be viewed online.

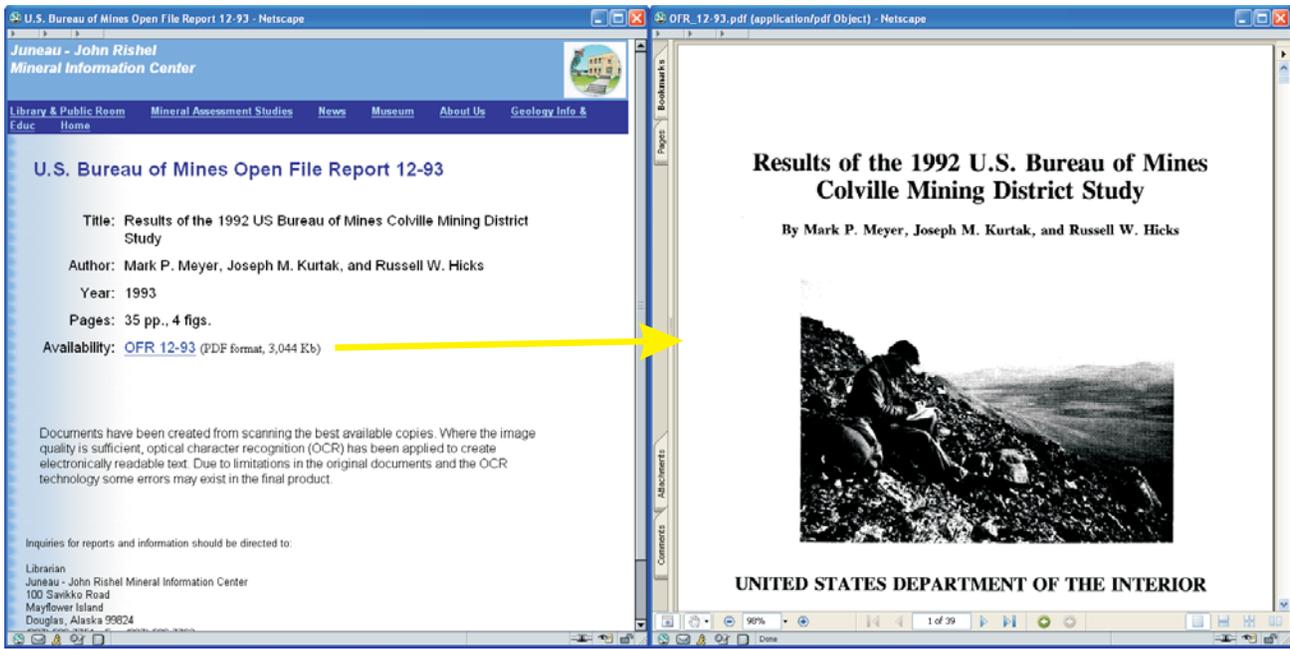


Figure 12. Online repositories host the agency publications that are listed in the Interagency Bibliography. Typically the link in the Interagency Bibliography will lead to a page that describes the publication and its component files (left). If the documents are available online then there will be a link to the Adobe Acrobat portable document format (PDF) files (right).

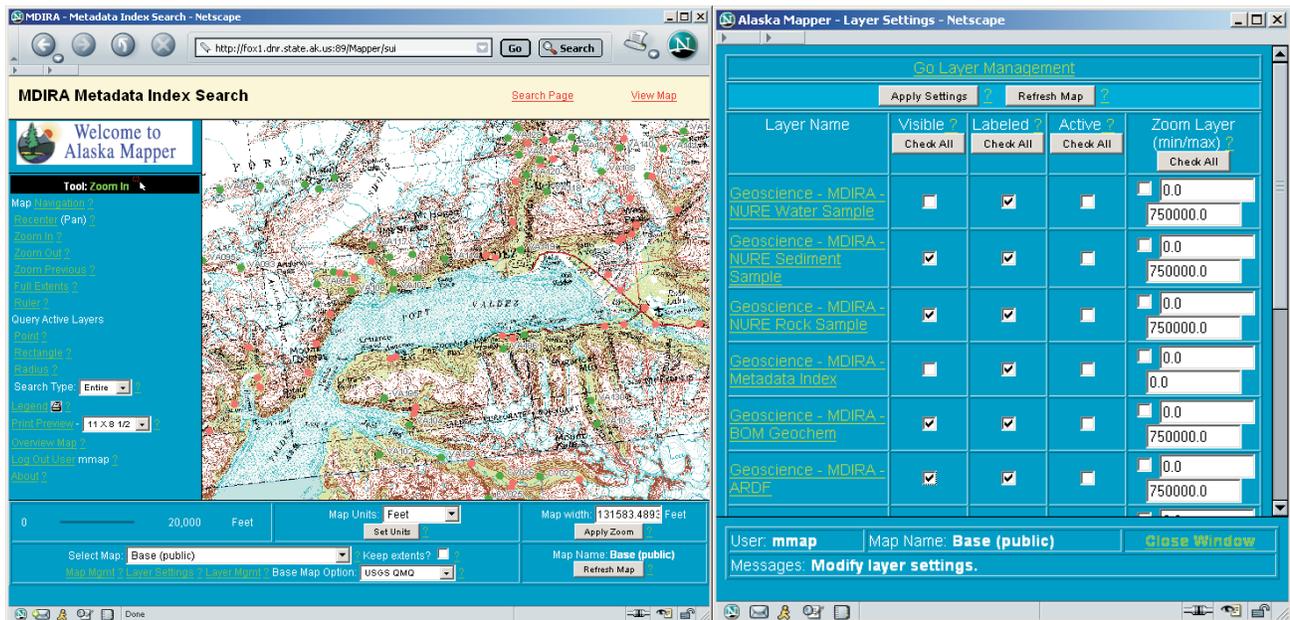


Figure 13. Alaska Minerals Data Mapper is an application that is being developed to integrate all the datasets that have been recovered and compiled by the Minerals Data and Information Rescue in Alaska program. The data will include bibliographic and data indexes, mineral localities, mining claims, geochemical data, fossil localities, and more. The application will use the same "Alaska Mapper" framework as the geologic map index and the AKmining.info interfaces. Users will have the ability to browse and search for data using an interactive map interface, and will be able to download customized datasets. Availability for some of the datasets is expected by the end of 2006.

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