STATE OF ALASKA
DIVISION OF
GEOLOGICAL &
GEOPHYSICAL
SURVEYS

Alaska GeoSurvey News

Vol. 1, No. 1, June 1997

Governor Knowles visits Fairbanks office

On February 13, Governor Tony Knowles stopped by the DGGS office to meet with staff and acknowledge the work the division is doing to advance the Governor's priorities. DGGS projects are important parts of the Governor's program to diversify and expand Alaska's economy and provide new job opportunities throughout the state. During his visit, the Governor spoke with geologist Laurel Burns and other team members responsible for implementing the state's airborne geophysical/geological mapping and mineral surveys of historical mining districts. Geological and geophysical maps produced from these surveys have helped catalyze the recent increase in Alaska mineral exploration.

Geologist Jim Clough is conducting the governor's coalbed methane CIP project. Jim has designed an assessment project that addresses the Governor's desire to locate sources of local energy that can be developed to reduce the cost of generating heat and power in at least some rural Alaska communities.

Gil Mull, the division's senior oil geologist, is in charge of the DGGS Tingmerkpuk project, which has recently generated data recognizing the possibility of increased oil and gas potential in the western Arctic Plain. These data will likely prove significant in the Governor's future negotiations with the federal government on land issues and North Slope oil development.

State Geologist Milt Wiltse looks on as Rocky Reifenstuhl presents Governor Knowles with a polished slab from the Mt. Fairplay granite along the Taylor Highway.

Rampart STATEMAP Project completes Phase One

Rocky R. Reifenstuhl
Alaska Geological Survey

The Rampart-Manley-Tofty mining districts, in the southeastern Tanana and southwestern Livengood quadrangles, are bounded on the north by the Yukon River near the village of Rampart and on the southwest by the Tanana River near Manley.

Geology and Geophysics

In 1995 and 1996 DGGS conducted an airborne geophysical survey of the region, and in 1996 a ground-truth geological field program in the Tanana B-1 Quadrangle. Our mile-to-the-inch geologic map will be published in June. We've already published results of geochemistry, geochronology, and chert geochemistry.

Gold, Tin, and Niobium

Historical annual placer production for the area is 765,000 ounces of gold and 720,000 pounds of by-product tin. Small-scale placer mines are active. A carbonatite at Idaho Gulch, near Tofty, contains 340,000 pounds of niobium reserves. *(continued on next page)*

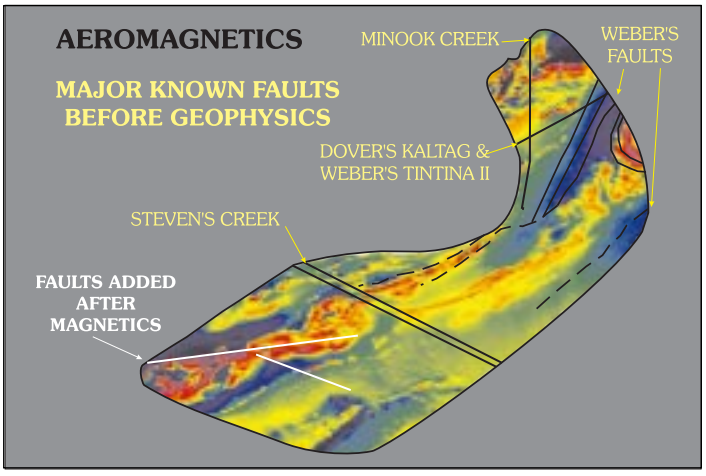


Figure 1. *Generalized aeromagnetics of the Rampart and Manley Hot Springs area showing variability of bedrock magnetic signature and major faults. Some faults are mapped by previous workers, some are postulated, and some are based on magnetic discontinuities. Fault zones may be locally mineralized.*

Stratigraphy: Proterozoic Carbonates to Tertiary Bimodal Volcanism

Bedrock in the map area consists largely of Jurassic to Cretaceous age Wolverine quartzite, with lesser Early Cretaceous age Wilber Creek flysch; both units correlate with Kandik basin rocks 300 km east. Northeast-trending, layered rocks crop out northwest of the flysch and consist of:

- A Permian to Triassic age clastic package,
- Amy Creek dolomite (Late Proterozoic to Early Cambrian),
- Livengood Dome Chert correlative (Ordovician),
- Wickersham Grit unit correlative (Late Proterozoic to Early Cambrian),
- Tertiary-age metamorphic complex (previously mapped as the "Ruby terrane" by some workers),
- Rampart Group (Mississippian to Triassic),
- Bimodal Tertiary rhyolite and basalt, and
- Tertiary sandstone and conglomerate.

Rocks from Canada

Structurally, rocks are highly deformed by several periods of metamorphism and folding and faulting, although the Tertiary volcanic rocks and sedimentary rocks have only been faulted. Many rock sequences are fault bounded, and the Mesozoic and older rocks are structurally compressed by thrust faults. Prominent structural features include the west-northwest trending Stevens Creek fault with 10 km of right lateral movement and vertical movement; the north-south linear Minook Creek fault; and the 200- to 300-meter-wide northeast-trending Victoria Creek fault zone, a splay of the Tintina fault. The Tintine fault has 300 to 450 km of right lateral movement and extends into Canada.

Igneous Rocks

Two mafic to felsic plutonic suites crop out. The older (85-100 Ma) rocks show distinctive alkalic compositions relative to other mid-Cretaceous plutons of Interior Alaska. The younger suite (62-75 Ma) is north of Manley Hot Springs.

Triassic to Mississippian age Rampart Group mafic rocks are compositionally distinct from Tertiary basalt in the area. The Tertiary-age bimodal basalt-rhyolite suite is compositionally the same as other 50-55 Ma volcanic and plutonic rocks of Interior Alaska (Fairbanks and Fortymile districts) and central Yukon (Ross River) and is typical of extensional igneous activity. The bimodal rock assemblage suggests potential for epithermal Au-Ag deposits in the Tertiary volcanic rocks of the map area.

Secrets from Chert Geochemistry

Major- and minor-element analyses of chert generally indicate that chert from a given unit has a unique geochemical signature. All cherts indicate affinities with Rampart Group (Tozitna terrane), Livengood Dome Chert, or Amy Creek chert units.

Permian and Triassic rocks south of the Kaltag fault previously mapped as "Minook terrane" have affinity to Rampart Group rocks. This correlation is supported by the similar age and chemistry of the Triassic gabbro from both units.

Gold

Known lode mineralization in the area hosted by or adjacent to 90 Ma plutonic rocks has a distinctive As-Sb-Bi-W-(Sn, Te) signature.

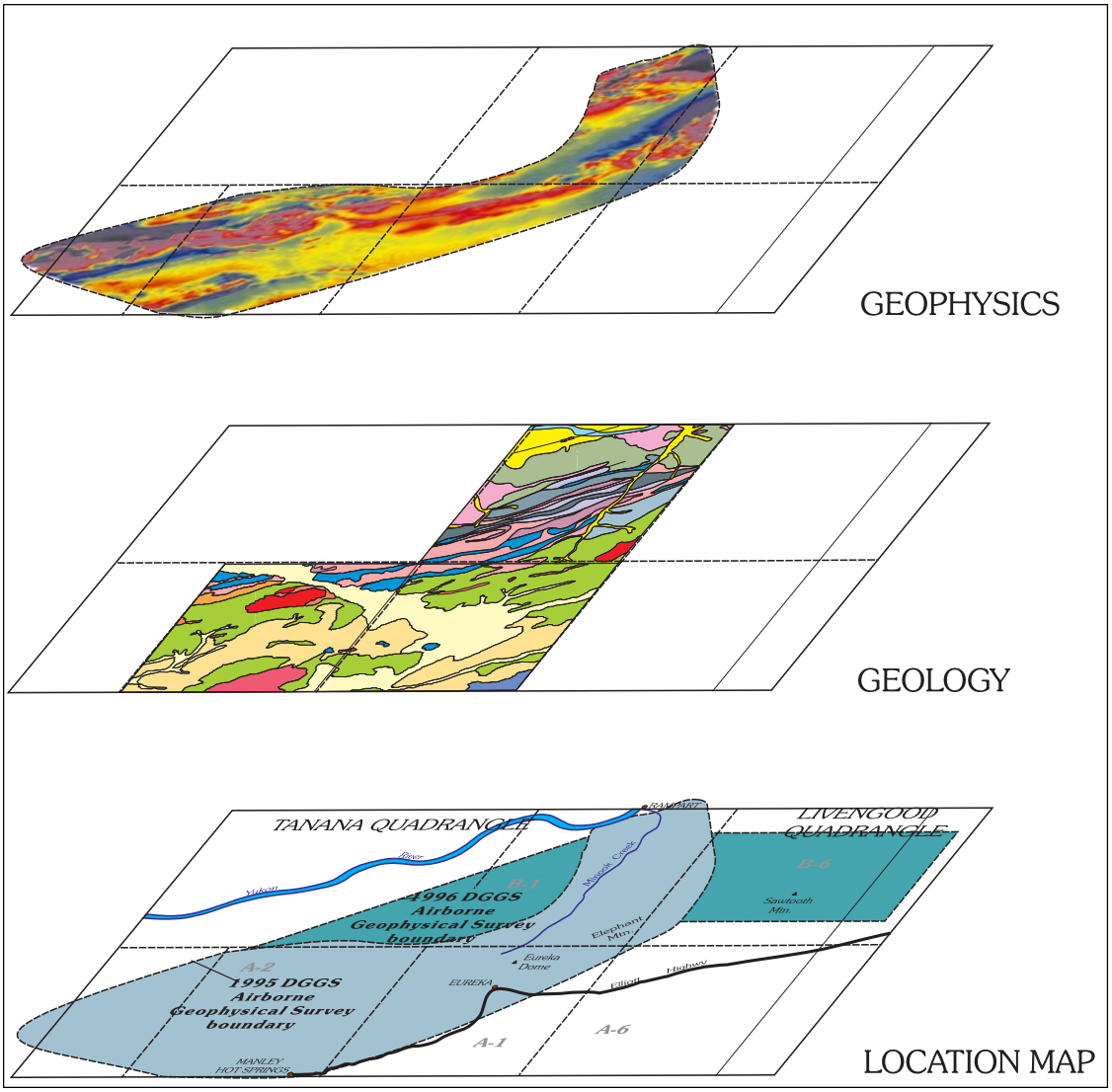


Figure 2. *Diagrammatic representation of components used in final geologic map of the Rampart area. First, airborne geophysics are completed over a potentially mineralized area. Detailed ground-truth geologic mapping is then combined with geophysics, producing a high quality, accurate representation of mineral resources, geologic hazards, and geologic materials.*

Anomalies of these elements in Tofty, Eureka, and Rampart district placers suggest that all were derived directly (Eureka, Tofty) or indirectly (Rampart) from these plutonic sources. Glaciation in upper Minook Creek has apparently removed placer gold accumulations near Elephant Mountain, whereas down-dropped blocks north of the Kaltag fault and east of the Minook Creek fault have preserved early Tertiary placers, which apparently represent the penultimate sources of present placers in the Rampart area.

The Team

The Rampart project has been a successful merging of airborne geophysics, geochemistry, ground-truth geology, and a highly skilled team which includes economic geologist Rainer Newberry (University of Alaska Fairbanks), veteran Interior field geologists Jim Dover and Florence Weber (both U.S. Geological Survey), consulting macropaleontologist Robert Blodgett (University of Oregon), and DGGS geologists. This project was funded by the State and the federal STATEMAP program. The summer of 1997 will find us mapping the two adjacent quadrangles (Tanana A-1, A-2).

NEW PUBLICATIONS

IC 42. **Alaska's mineral industry 1996: a summary,** by R.C. Swainbank, T.K. Bundtzen, A.H. Clough, and M.W. Henning, 1997, 12 p. Free.

RI 96-6a. **Geologic investigations of the Kandik area, Alaska, and adjacent Yukon Territory, Canada,** by Gerald K. Van Kooten, Arthur B. Watts, James Coogan, Van S. Mount, Robert F. Swenson, Paul H. Daggett, James G. Clough, Charles T. Roberts, and Steven C. Bergman, in cooperation with Arco Alaska, Inc. and Doyon Ltd., 3 sheets, scale 1:125,000. $39.

RI 96-6b. **Station locations in the Kandik area, Alaska, and adjacent Yukon Territory, Canada,** by Gerald K. Van Kooten, Arthur B. Watts, James Coogan, Van S. Mount, Robert F. Swenson, Paul H. Daggett, James G. Clough, Charles T. Roberts, and Steven C. Bergman, in cooperation with Arco Alaska, Inc. and Doyon Ltd., 1 sheet, scale 1:125,000. $13.

RI 96-6c. **Gravity maps of the Kandik area, Alaska, and adjacent Yukon Territory, Canada,** by Gerald K. Van Kooten, Arthur B. Watts, James Coogan, Van S. Mount, Robert F. Swenson, Paul H. Daggett, James G. Clough, Charles T. Roberts, and Steven C. Bergman, in cooperation with Arco Alaska, Inc. and Doyon Ltd., 1 sheet, scale 1:250,000. $13.

RI 97-1. **Total field magnetics and electromagnetic anomalies of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, 3 colors, scale 1:63,360. $4.

RI 97-2. **Total field magnetics of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

RI 97-3. **900 Hz resistivity contours of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

RI 97-4. **7200 Hz resistivity contours of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

Public-Data Files (PDF) are unpublished documents that make project data immediately available to the public. PDFs usually comprise raw data and have not undergone peer review or been edited by DGGS staff. In many cases, PDFs are later released as DGGS Reports of Investigations (RI), Special Reports (SR), or Professional Reports (PR). Prices for PDFs are determined by their individual reproduction prices and are thus sold at copying costs. Information Circulars (IC) are normally free.

RI 97-5. **Total field magnetics and electromagnetic anomalies of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, 3 colors, scale 1:63,360. $4.

RI 97-6. **Total field magnetics of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

RI 97-7. **900 Hz resistivity contours of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

RI 97-8. **7200 Hz resistivity contours of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 1 sheet, full color, scale 1:63,360. On-demand color plot from electronic file, 400 dpi. $10.

RI 97-9. **Extended coverage of the total field magnetics and electromagnetic anomalies of the Rampart-Manley mining district, Alaska,** by DGGS, Dighem, and WGM, 1997, 3 sheets, 3 colors, scale 1:63,360. $12.

RI 97-14a. **Geologic map of the eastern half of the McGrath Quadrangle, Alaska,** by T.K. Bundtzen, E.E. Harris, and W.G. Gilbert, 1997, 34 p., 1 sheet, scale 1:125,000. $17.

RI 97-14b. **Derivative map of the geologic materials and hazards in the eastern half McGrath Quadrangle, Alaska,** by D.S. Pinney, 1997, 1 sheet, scale 1:125,000. $13.

RI 97-15a. **Geologic map of the Tanana B-1 Quadrangle, central Alaska,** by R.R. Reifenstuhl, J.H. Dover, D.S. Pinney, R.J. Newberry, K.H. Clautice, S.A. Liss, R.B. Blodgett, T.K. Bundtzen, and F.R. Weber, 1997, 17 p., 1 sheet, scale 1:63,360. $15.

Please see insert for additional list of new publications and ordering information

RI 97-15b. **Interpretive geologic bedrock map of the Tanana B-1 Quadrangle, central Alaska,** by R.R. Reifenstuhl, J.H. Dover, R.J. Newberry, K.H. Clautice, S.A. Liss, R.B. Blodgett, T.K. Bundtzen, and F.R. Weber, 1997, 15 p., 1 sheet, scale 1:63,360. $14.50.

RI 97-15c. **Surficial geologic map of the Tanana B-1 Quadrangle, central Alaska,** by DeAnne S. Pinney, 1997, 5 p., 1 sheet, scale 1:63,360. $14.

RI 97-15d. **Derivative geologic materials map of the Tanana B-1 Quadrangle, central Alaska,** by DeAnne S. Pinney, 1997, 1 sheet, scale 1:63,360. $13.

RI 97-15e. **Derivative map of potential geologic hazards in the Tanana B-1 Quadrangle, central Alaska,** by DeAnne S. Pinney, 1997, 1 sheet, scale 1:63,360. $13.

PDF 97-1. **Flight line maps of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, February 1997, 1 sheet, blueline, scale 1:63,360. $4.50

PDF 97-2. **Clear mylar version of RI 97-1: Total field magnetics and electromagnetic anomalies of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, February 1997, 1 sheet, scale 1:63,360. Electromagnetic anomalies and magnetic contours 100% black; topography 50% black. Made on request. $130.

PDF 97-3. **900 Hz resistivity contours of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, February 1997, 1 sheet, blueline, scale 1:63,360. $4.50

PDF 97-4. **7200 Hz resistivity contours of the Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, February 1997, 1 sheet, blueline, scale 1:63,360. $4.50

PDF 97-5. **CD-ROM digital archive files of 1996 survey data for Chulitna & Petersville mining districts, Alaska,** by DGGS, Dighem, and WGM, April 1997. $150.

PDF 97-6. **Disk containing gridded files and section lines of 1996 geophysical survey data for Chulitna mining district, Alaska,** by DGGS, Dighem, and WGM, February 1997. $10.

PDF 97-7. **Portfolio of aeromagnetic and resistivity maps of the Chulitna mining district,** by L.E. Burns, February 1997, 13 p. Includes color and shadow maps. Maps fit on 8½" x 11" sheet. $6.

PDF 97-8. **Project report of the airborne geophysical survey for the Chulitna and Petersville mining districts, Alaska,** by Ruth Pritchard, May 1997, 293 p., 2 sheets, scale 1:63,360. $41.30

PDF 97-9. **Flight line maps of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 1 sheet, scale 1:63,360. $5.50

PDF 97-10. **Clear mylar version of RI 97-5: Total field magnetics and electromagnetic anomalies of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 1 sheet, scale 1:63,360. Electromagnetic anomalies and magnetic contours 100% black; topography 50% black. Made on request. $165.

PDF 97-11. **900 Hz resistivity contours of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 1 sheet, scale 1:63,360. $5.50

PDF 97-12. **7200 Hz resistivity contours of the Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 1 sheet, scale 1:63,360. $5.50

PDF 97-13a. **Total field magnetics and detailed electromagnetic anomalies of the southwest Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $5.25.

PDF 97-13b. **Total field magnetics and detailed electromagnetic anomalies of the northeast Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $5.25.

PDF 97-13c. **Total field magnetics and detailed electromagnetic anomalies of the southeast Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $5.25.

PDF 97-14. **Disk containing gridded files and section lines of 1996 geophysical survey data for Petersville mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997. $10.

PDF 97-15. **Portfolio of aeromagnetic and resistivity maps of the Petersville mining district,** by L.E. Burns, March 1997, 13 p. Includes color and shadow maps. Maps fit on 8½" x 11" sheet. $6.

PDF 97-17. **Extended flight line coverage of the Rampart-Manley mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 3 sheets, scale 1:63,360. $12.

PDF 97-18. **Clear mylar version of RI 97-9: Extended coverage of the total field magnetics and electromagnetic anomalies of the Rampart-Manley mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 3 sheets, scale 1:63,360. Electromagnetic anomalies and magnetic contours 100% black; topography 50% black. Made on request. Sheet #1 - $130., sheet #2 - $130., sheet #3 - $65.

PDF 97-19. **Extended coverage of the 900 Hz resistivity contours of the Rampart-Manley mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 3 sheets, scale 1:63,360. $12.

PDF 97-20. **Extended coverage of the 7200 Hz resistivity contours of the Rampart-Manley mining district, Alaska,** by DGGS, Dighem, and WGM, March 1997, 3 sheets, scale 1:63,360. $12.

PDF 97-21. **CD-ROM digital archive files of 1995 and 1996 survey data for Rampart-Manley mining district, Alaska**, by DGGS, Dighem, and WGM, April 1997. $150.

PDF 97-22. Disk containing gridded files and section lines of the 1995 and 1996 geophysical survey for the Rampart-Manley mining district, Alaska, by DGGS, Dighem, and WGM, March 1997, 3 disks. $10

PDF 97-23. Portfolio of aeromagnetic and resistivity maps of the extended coverage of the Rampart-Manley mining districts, by L.E. Burns, March 1997, 13 p. Includes color and shadow maps. Maps fit on 8½" x 11" sheet. $6.

PDF 97-24. Project report of the airborne geophysical survey for the extended coverage of the Rampart-Manley mining district, Alaska, by Ruth Pritchard, May 1997, 163 p., 3 sheets, scale 1:63,360. $34.30

PDF 97-25g. Extended coverage of the total field magnetics and detailed electromagnetic anomalies of the Rampart-Manley mining district, Alaska (Tanana A-2 and B-2 areas), by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $4.75.

PDF 97-25h. Extended coverage of the total field magnetics and detailed electromagnetic anomalies of the Rampart-Manley mining district, Alaska (Tanana B-1 area), by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $4.75.

PDF 97-25j. Extended coverage of the total field magnetics and detailed electromagnetic anomalies of the Rampart-Manley mining district, Alaska (Livengood B-6 area), by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680.$ 4.75.

PDF 97-25k. Extended coverage of the total field magnetics and detailed electromagnetic anomalies of the Rampart-Manley mining district, Alaska (Livengood B-5 area), by DGGS, Dighem, and WGM, April 1997, 1 sheet, scale 1:31,680. $4.75.

PDF 97-26a. Total field magnetics and detailed electromagnetic anomalies of the northwest Chulitna mining district, Alaska, by DGGS, Dighem, and WGM, April 1997, 1 sheet, blueline, scale 1:31,680. $5.25.

PDF 97-26b. Total field magnetics and detailed electromagnetic anomalies of the northeast Chulitna mining district, Alaska, by DGGS, Dighem, and WGM, April 1997, 1 sheet, blueline, scale 1:31,680. $5.25.

PDF 97-26c. Total field magnetics and detailed electromagnetic anomalies of the southwest Chulitna mining district, Alaska, by DGGS, Dighem, and WGM, April 1997, 1 sheet, blueline, scale 1:31,680. $5.25.

PDF 97-26d. Total field magnetics and detailed electromagnetic anomalies of the southeast Chulitna mining district, Alaska, by DGGS, Dighem, and WGM, April 1997, 1 sheet, blueline, scale 1:31,680. $5.25.

PDF 97-27. Total field magnetics of the southeastern Bethel basin, Alaska, by Sander Geophysics Ltd. and DGGS, April 1997, 6 sheets, scale 1:125,000. $20.

PDF 97-29g. Rock geochemistry from the Rampart mining district, by S.A. Liss, R.R. Reifenstuhl, K.H. Clautice, T.K. Bundtzen, R.J. Newberry, J.H. Dover, and R.B. Blodgett, February 1997, 19 p., 1 disk. $7.

PDF 97-29h. Geochronology ($^{40}Ar/^{39}Ar$) of 17 Rampart-area rocks, Tanana and Livengood quadrangles, central Alaska, by R.R. Reifenstuhl, P.W. Layer, and R.J. Newberry, February 1997, 22 p. $2.20.

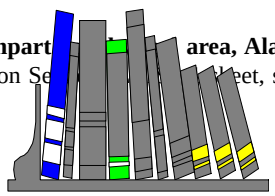
PDF 97-30. Hydrologic reconnaissance of the Sheenjek River Basin, Alaska, by M.A. Maurer, February 1997, 16 p. $2.

PDF 97-31. Bedrock geologic map of the Kigluaik Mountains, Seward Peninsula, Alaska, by J.M. Amato and E.L. Miller, March 1997, 6 p., 8 sheets, scale 1:42,240. $25.

PDF 97-32. Land status and mining claims for the Chulitna geophysical area, Alaska, version 1.1, by DNR Land Records Information Section (LRIS), 1 sheet, scale 1:125,000. $15.

PDF 97-33. Land status and mining claims for the Petersville-Collinsville geophysical area, Alaska, version 1.1, by DNR Land Records Information Section (LRIS), 1 sheet, scale 1:85,000. $15.

PDF 97-34. Land status and mining claims for the Rampart area, Alaska, version 1.1, by DNR Land Records Information Section (LRIS), 1 sheet, scale 1:125,000. $15.



ORDERING INFORMATION

For each publication ordered, include both the publication title and number. Mail orders are payable in advance. Make check or money order in U.S. currency and payable to the **State of Alaska**. Credit cards are not accepted. Telephone orders are accepted by the Fairbanks office between 8 a.m. and 5 p.m. Alaska time. Fax and email requests are accepted any time; these orders will be invoiced. If you would like to leave your order on voice mail, this can also be done 24 hours a day and you will be invoiced.

WHERE TO ORDER

Publications of the Division of Geological & Geophysical Surveys are available over the counter, by mail, phone, fax, or email from the DGGS Fairbanks office:

ATTN: Geologic Communications
Section-Sales
Alaska Division of Geological &
Geophysical Surveys
794 University Avenue, Suite 200
Fairbanks, AK 99709-3645
(907) 451-5020 Fax (907) 451-5050
Email: dggspubs@dnr.state.ak.us

Prices of DGGS publications are subject to change. Increases in costs make it necessary to raise the selling prices of many publications offered. It is not feasible for DGGS to change the prices stated in previous announcements and publications in stock, so the prices charged may differ from the prices in the announcements and publications. Overpayments of $2 or less will not be refunded.

Shipping & Handling

✉Domestic postage
$1.00 per copy of each report ordered

✉Canada and Mexico
$1.50 per copy of each report ordered

✉All other international
$2.50 surface, $5.00 air mail per copy of each report ordered

For rolled-map orders requiring mailing tubes, add an additional $3.50.

Dear Readers:

Like many other state government organizations, the Division of Geological and Geophysical Surveys (DGGS) finds itself engaged in a rapid and challenging evolution. New expectations from our clients combined with decreases in funding from traditional sources are forcing DGGS to examine all facets of its business. We have been greatly aided in this process by guidance from the Alaska Geologic Mapping Advisory Board and the recommendations by the Committee on Public Geology, chaired by Dr. David Hite.

DGGS has clearly heard the message that the highest geological survey priorities for Alaska are the creation of new geologic framework data that are moved quickly into the public domain, and the preservation of valuable state geologic databases. In coming issues of Geosurvey News we will outline some of the changes being instituted in your geological survey.

Sincerely,
Milton A. Wiltse
Director and State Geologist

State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys
794 University Avenue, Suite 200
Fairbanks, AK 99709-3645

RETURN SERVICE REQUESTED

DGGS maps/publications on the Web

In early February, DGGS launched a Home Page on the World Wide Web. You can find the page at **http:\\wwwdggs.dnr.state.ak.us.** Note that this address does not begin with the normal www. but with wwwdggs. instead.

The Web page provides access to Alaska geologic information and instructions on how to order publications. By clicking on a map of the quadrangles or on a quadrangle name, you will find a list of DGGS publications that are available for each of the 1:63,360-scale quadrangles.

Please take a look at some of our newer maps and reports. An increasing number of those shown are available for download in Acrobat Reader's .pdf format. Maps can be quite large, downloading allows the user to print them on a large-scale plotter or view them on-screen at any scale desired.

Please join us in hyperspace. Let us know what ideas you have for improving what we are doing with electronic media and how we can serve you better.

Visit our Web Page
http://wwwdggs.dnr.state.ak.us

Alaska Department of NATURAL RESOURCES

Please send address corrections to:
Newsletter, Alaska Division of Geological & Geophysical Surveys, 794 University Avenue, Suite 200, Fairbanks, AK 99709-3645
fax (907)451-5050
email: joni@dnr.state.ak.us