

Alaska GeoSurvey News

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

Vol. 4, No. 1, March 2000

GEOLOGIC MAPPING AND PLACER POTENTIAL OF THE PETERSVILLE (YENTNA) MINING DISTRICT

by D.S. Pinney, R.D. Reger, and D.J. Szumigala

BACKGROUND

The Division of Geological & Geophysical Surveys (DGGS) is completing a two-year field-based program to provide ground-truth geologic mapping for airborne geophysical surveys flown in the Petersville (Yentna) mining district in 1996. The Petersville study is one of the latest in a series of ground-based studies by DGGS to complement the airborne geophysical survey program. Geologic mapping in conjunction with the airborne surveys has been an integral part of the geophysical program since its inception in 1993. The Petersville district (figure 1) is located along Alaska's major railbelt approximately halfway between Fairbanks and Anchorage and is extensively utilized by a wide spectrum of users, including miners, tourists, snowmobilers, hunters, and fishermen. Legislation signed by Governor Knowles has

The proposed new Denali Visitors' Center at the Tokositna site in the northeastern part of the district has made the area the focus of much recent public interest.

established two tracts of land for recreational gold mining by the general public at Petersville, an action that should substantially increase the number of visitors to the area. The proposed new Denali Visitors' Center at the Tokositna site in the northeastern part of the district has also made the area the focus of much recent public interest. In light of the new opportunities for development in the Petersville mining district, it is critical that the State have an up-to-date inventory of geologic resources to guide planning activities and identify additional areas of potential interest. Past experience has shown that a thorough understanding of the geologic framework of an area acts as a catalyst for development and paves the way for future geologic resource exploration, engineering design of infrastructure, and environmental assessments.

During the summer of 1998, an interdisciplinary geologic mapping team from DGGS spent about three weeks in the field to carry out reconnaissance-level field investigations. Our work was concentrated in an area of approximately 428 square miles (1,097 square kilometers) in portions of the Talkeetna B-2, B-3, B-4, C-2, and C-3 quadrangles. DGGS's efforts focused on determining and understanding the geologic environments of the Petersville mining district, especially with respect to gold mineralization and deposition. New geophysical data have been critical to our efforts to extrapolate bedrock geologic contacts beneath the Quaternary cover that dominates the majority of the study area, as well as into areas we were unable to reach on the ground. To date, the completed products include maps of sample locations with results of geochemical analyses, a map of glacial ice limits with a discussion of the implications for placer deposits, and a surficial-geologic map. A bedrock-geologic map is rapidly approaching completion and will ultimately be combined with the surficial-geologic map to generate a comprehensive geologic map of the district. We are using the DGGS Geologic Data Modeling System (a geographic information system) to generate these maps and will subsequently produce a derivative engineering-geologic map of the district, including prospective construction-materials sites and potential geologic hazards.

(continued on page 2)

While most exploration efforts typically focus on hardrock mineral prospects, our work in the Petersville district has shown that significant precious metal resources may be contained within the poorly consolidated and unconsolidated deposits that blanket the lowlands. We readily recovered particulate gold and platinum from bulk samples collected from a range of Tertiary sedimentary rocks and Pleistocene glacial sediments.

TERTIARY PLACERS

The earliest geologic studies of what is now the Petersville mining district concluded that economically significant modern placer deposits were the product of reworked pre-existing placers in the Tertiary sedimentary rocks (Capps, 1913, 1925; Mertie, 1919), a contention supported by the coincidence of recognized placers with the distribution of Tertiary sedimentary rocks throughout the region. Much of the Petersville mining district is underlain by up to 2,950 feet (900 meters) or more of moderately consolidated to unconsolidated Tertiary sedimentary rocks of the Kenai Group (figure 1). The Group is divided into the Pliocene Sterling Formation and the Miocene coal-bearing Tyonek Formation, separated by an angular unconformity. Paleocurrent data and clast lithology indicate that these sediments were probably derived from the Alaska Range to the north. The massive drainage system that deposited these sediments also transported and concentrated gold and platinum liberated by erosion from lode sources in the mountains. Although no quantitative sampling was carried out during this reconnaissance-level study, a bulk gravel sample of less than one-quarter cubic yard collected from the basal contact of the Sterling Formation was concentrated using a portable sluicibox and panned to yield more than 20 specks of visible gold. The very fine-grained nature of the gold would probably require specialized equipment in order to be efficiently recovered by a commercial placer operation, but the potential resources in the large volume of Tertiary gravel are significant. There is currently one known mining operation exploiting the placer potential of the Sterling Formation gravels south of the Petersville mining district, but none within the district.

GLACIER-RELATED PLACERS

The modern landscape of the Petersville mining district was shaped largely by the action of massive glaciers during the last Ice Age, which also had a profound effect on the distribution and preservation of many placer deposits (figure 1). During the early Naptowne glaciation, which began about 25,000 years ago, almost all of the district was inundated by glacial ice as thickening glaciers originating in the southcentral Alaska Range spread into the lowlands south of the range. Following the culmination of the Naptowne glaciation about 18,000 years ago, the expanded glacier systems began thinning and receding as the climate ameliorated and less glacial ice formed. During this phase, two ice caps persisted on the summits of the central and northeastern Peters Hills. A complex of overlapping morainal arcs and lobes of this age in the northeastern trough between the Peters Hills and Dutch Hills is evidence that fluctuations of ice from the Dutch Hills interacted nonsynchronously with fluctuations of glaciers from the Peters Hills and from the Tokositna River valley. During the final phase of the Naptowne glaciation, which ended about 9,500 years B.P., compound trunk glaciers continued to drain the southern flank of the central Alaska Range through the Yentna River valley, Kahiltna River valley, and Tokositna River valley. These massive ice streams apparently formed barriers across the mouths of nearly ice-free tributary valleys, forming several glacier-dammed lakes in the vicinity of Dutch Hills and Peters Hills. No Holocene moraines were identified in the field area, although at least some of the moraines close to Kahiltna Glacier and other modern glaciers outside the study area are probably assignable to the Holocene-age Alaskan Glaciation.

Any significant placers of pre-Naptowne age were probably buried by till and associated sediments during the early, waxing phase of the Naptowne glaciation. The potential for preservation of such buried placers is highest where ice was relatively thin, for example, downglacier from bedrock highs in the Fairview Mountain area in a situation that provided downstream erosion shadows and where ice scouring was less intense than where the ice was thicker and faster moving. Buried placers, if present, might provide significant economic resources much like they have at Anvil

REFERENCES CITED

- Capps, S.R., 1913, The Yentna district, Alaska: U.S. Geological Survey Bulletin 534, 75 p., scale 1:250,000, 2 sheets.
———1925, An early Tertiary placer deposit in the Yentna district, *in* Brooks, A.H., ed., Mineral resources of Alaska, report on progress of investigations in 1923: U.S. Geological Survey Bulletin 773, p. 53-61.
- Collier, A.J., Hess, F.L., Smith, P.S., and Brooks, A.H., 1908, The gold placers of parts of Seward Peninsula, Alaska, including the Nome, Council, Kougarok, Port Clarence, and Goodhope precincts: U.S. Geological Survey Bulletin 328, 343 p.
- Mertie, J.B., Jr., 1919, Platinum-bearing gold placers of the Kahiltna Valley, *in* Capps, S.R., Mertie, J.B., Jr., and Martin, G.C., eds., Mining and mineral deposits in the Cook Inlet–Susitna region, Alaska: U.S. Geological Survey Bulletin 692-D, p. 233-264.
- Reger, R.D., and Bundtzen, T.K., 1990, Multiple glaciation and gold-placer formation, Valdez Creek valley, western Clearwater Mountains, Alaska: Alaska Division of Geological & Geophysical Surveys Professional Report 107, 29 p., scale 1:63,360, 1 sheet.
-

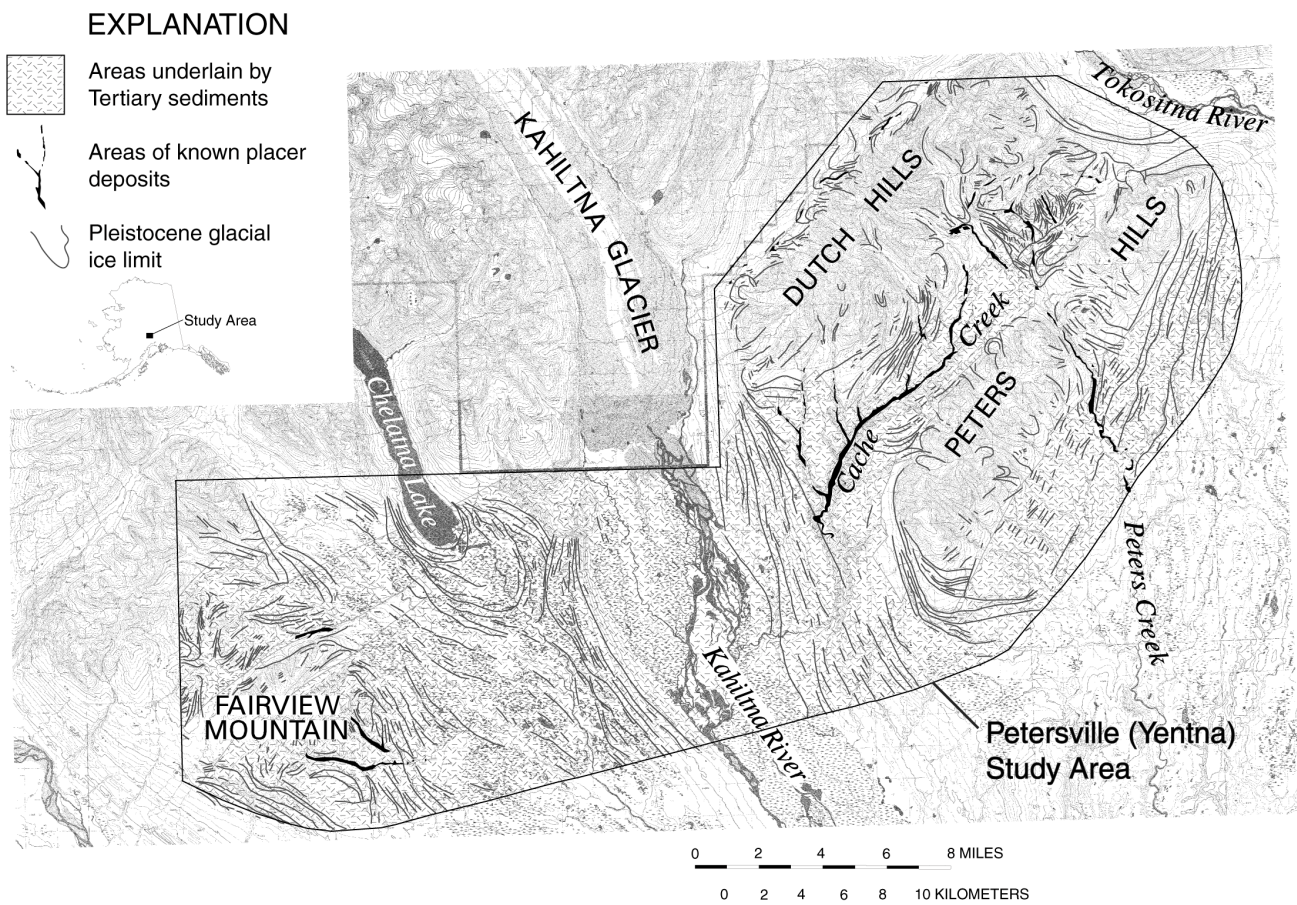


Figure 1. Map showing the distribution of Tertiary sediments, Pleistocene glacial limits, and known placer deposits in the Petersville (Yentna) mining district, south-central Alaska.

Mountain near Nome and at Valdez Creek along the Denali Highway (Collier and others, 1908; Reger and Bundtzen, 1990). Although not visible at the surface, the bedrock or false-bedrock channels in which these deposits are potentially located might be identified using ground-penetrating radar, refraction seismic methods, or other geophysical methods.

Known placer deposits of middle Naptowne age formed in ice-free valleys and sideglacial stream channels of the Mills Creek basin near Fairview Mountain, probably by the reworking of pre-existing placers in local Tertiary bedrock and by the concentration of particulate gold and platinum that were distributed in the local till (Capps, 1913, 1925; Mertie, 1919). Placers of this age also formed in the arcuate upper drainage of Willow Creek, which follows the eastern margin of the former Peters Creek glacier in the lowland trough between the eastern Dutch Hills and the eastern Peters Hills.

Most of the known placers in the Petersville mining district have been located in the floodplains and terraces of streams that established their courses during and after the late Naptowne glaciation. The lack of a clear spatial relation between late Naptowne ice limits and the distribution of

known placers indicates that late Naptowne glaciation probably did not have a significant effect on the formation of most placers. However, the presence of particulate gold and platinum in several random bulk samples of late Naptowne-age till and even lake sediments collected by DGGs in the study area indicates that the concentration of particulate gold and platinum from till and associated sediments contributed to the value of local placers.

PLACER RESOURCES IN THE PETERSVILLE MINING DISTRICT

While it is impossible to calculate reserves without more detailed thickness and distribution data as well as quantitative sampling, it seems clear from the reconnaissance mapping and sampling carried out by DGGs that the extensive unconsolidated deposits in the Petersville mining district potentially represent a significant resource that may locally be as rich as some low-grade hardrock mines. Given a sufficient increase in the market value of precious metals, mining of these extensive gravel deposits may become an economically viable option in the future.✱

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

Dear Readers:

Geologists are fortunate to work with both art and science to convey data and information gleaned from field investigations to persons needing that information to make informed decisions. The first geologic map product to emerge from the Petersville project exemplifies this synthesis of disciplines. "Reconnaissance surficial-geologic map of the Petersville (Yentna) mining district, Alaska" (Report of Investigations 99-9), by R.D. Reger, R.A. Combellick, and D.S. Pinney, provides new insights about the control of placer gold mineralization in the Petersville mining district and the map itself is a work of art. Alfred (Fred) Sturmman, senior cartographer for DGGS, was awarded a well-deserved first prize for the cartography on this map at the recent

American Congress on Surveying and Mapping meeting in Anchorage. A good geologic map is nearly self-explanatory, giving the user an intuitive feel for the rocks and the geologic history of the area portrayed. The Petersville map does just that. It is an outstanding example of the blending of art and science to convey information--a job well done by our scientists and our cartographer.

Sincerely,



Milton A. Wiltse
Director and State Geologist

Please send address corrections to:

Newsletter, Alaska Division of Geological & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, AK 99709-3645
fax (907)451-5050 email: joni@dnr.state.ak.us
<http://www.dggs.dnr.state.ak.us>

If you have access to the Internet and would like to receive this newsletter via email,
please drop us a line at:
dggsnews@dnr.state.ak.us

**STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS**

Mail order to:

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

E-mail dggspubs@dnr.state.ak.us
<http://www.dggs.dnr.state.ak.us>
Phone: (907) 451-5020
Fax: (907) 451-5050

REPORT NO.	TITLE	QUANTITY	UNIT PRICE	POSTAGE	TOTAL
Total amount due					

*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*

Ship publication(s) to:

Name _____

Organization _____

Address _____

City, State _____ Zip _____

Payment must accompany your order. Make check or money order payable to **STATE OF ALASKA**. We cannot accept credit cards.

NEW PUBLICATIONS

- GPR 1999-13.** Portfolio of aeromagnetic and resistivity maps of selected areas near Ketchikan, southeastern Alaska, by L.E. Burns, 1999, 21 p. Includes color and shadow maps. Maps fit 8½" x 11" sheet. \$13.
- GPR 1999-17.** Project report of the 1999 geophysical survey data for Ketchikan area, parts of the Craig, Dixon Entrance, and Ketchikan quadrangles, southeastern Alaska, by Jonathan Rudd, 1999, 240 p., 4 sheets, scale 1:63,360. Blue-line. \$40.
- GPR 2000-1.** Total magnetic field of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Topography included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-2.** Total magnetic field of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Magnetic contours and section lines included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-3.** Color shadow magnetic map of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-4.** Total magnetic field and electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Magnetic contours and section lines included. Clear mylar. Made on request. \$50.
- GPR 2000-5.** Total magnetic field and electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Magnetic contours, simplified electromagnetic anomalies, and section lines included. Blue-line. \$6.
- GPR 2000-6A.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta D-3 and D-4 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6B.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta D-2 and D-3 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6C.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta C-3, C-4, D-3, and D-4 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6D.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta C-2, C-3, D-2, and D-3 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6E.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta C-3 and C-4 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6F.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta C-2 and C-3 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-6G.** Total magnetic field and detailed electromagnetic anomalies of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 1 sheet, scale 1:31,680 (parts of Big Delta B-2 and B-3 quadrangles). Magnetic contours, detailed electromagnetic anomalies, and section lines included. Blue-line. \$3.
- GPR 2000-7.** 7200 Hz coplanar resistivity of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Topography included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-8.** 7200 Hz coplanar resistivity of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Resistivity contours and section lines included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-9.** 7200 Hz coplanar resistivity of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Resistivity contours and section lines included. Blue-line. \$6.
- GPR 2000-10.** Radioelement–ternary of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Topography included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-11.** Thorium/Potassium (eTh/K) of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Topography included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.
- GPR 2000-12.** Thorium/Potassium (eTh/K) of the Salcha River–Pogo mining area, central Alaska, by L.E. Burns, Geotrex-Dighe, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines

NEW PUBLICATIONS

included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.

GPR 2000-13. Thorium/Potassium (eTh/K) of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Blueline. \$6.

GPR 2000-14. Total Air Absorbed Dose Rate of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Full-color plot from electronic file, 600 dpi. Made on request. \$26.

GPR 2000-16. Flight lines of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Topography included. Blueline. \$6.

GPR 2000-17. Potassium (K%) of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Blueline. \$6.

GPR 2000-18. Uranium (eU) of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Blueline. \$6.

GPR 2000-19. Thorium (eTh) of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Blueline. \$6.

GPR 2000-20. Total Air Absorbed Dose Rate of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000, 2 sheets, scale 1:63,360. Data contours and section lines included. Blueline. \$6.

GPR 2000-21. CD-ROM containing profile and gridded data

and section lines of 2000 geophysical survey data for the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000. \$150.

GPR 2000-22. Zip disk containing gridded files in Geosoft format and section lines of 2000 geophysical survey data for the Salcha River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000. \$15.

GPR 2000-23. Project report of the Geophysical Survey of the Salcha-River-Pogo mining area, central Alaska, by L.E. Burns, Geoterrex-Dighem, and Stevens Exploration Staff, 2000. \$15.

GPR 2000-24. Portfolio of aeromagnetic and resistivity maps of the Salcha River-Pogo mining area, central Alaska, by L.E. Burns and Kathy Vincent, 2000, 27 p. Includes color and shadow maps. Maps fit 8½" x 11" sheet. \$15.

IC 46. Alaska's mineral industry 1999: a summary, by R.C. Swainbank and D.J. Szumigala, 2000, 12 p. Free.

MP 39. Geologic hazards in and near proposed State of Alaska Oil and Gas sale, North Slope Foothills, by D.S. Pinney and R.A. Combellick, 2000, 7 p. \$2.

PIR 2000-1. Generalized stratigraphy and petroleum potential of the Holitna Region, southwest Alaska, by D.L. LePain, R.B. Blodgett, J.G. Clough, and Tim Ryherd, 35 p., 1 sheet, scale 1:250,000. \$22.

PIR 2000-2. Coalbed methane potential and exploration targets for rural Alaska communities, by Roger Tyler, Andrew R. Scott, and James G. Clough, 177 p. \$10.

RI 99-8. Reworked palynomorph trends in Late Jurassic to Neocomian strata of the Colville Delta Region, Alaska, by Hideyo Haga and M.B. Mickey, 1999, 14 p. \$2.

RI 99-9. Reconnaissance surficial-geologic map of the Petersville (Yentna) mining district, Alaska, by R.D. Reger, R.A. Combellick, and D.S. Pinney, 1999, 1 sheet, scale 1:63,360. \$13.

SR 53. Alaska's mineral industry 1998, by D.J. Szumigala and R.C. Swainbank, 1999, 71 p. Free.

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.

SHIPPING & HANDLING

- Domestic postage - \$1.00/copy of each report
- Canada and Mexico - \$1.50/copy of each report
- All other international - \$2.50 surface
\$5.00 air/copy of each report
- For rolled-map orders requiring mailing tubes, add an additional \$3.50.

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.