STATE OF ALASKA
Department of Natural Resources
Division of Geological Survey
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William A. Egan - Governor | Charles F. Herbert - Commissioner

Donald C. Hartman - State Geologist

IN THIS ISSUE

DGGS ASSAYER BEGINS LONG-NEEDED ALASKA ROCK DISPLAY

by
Donald R. Stein, DGGS Assayer

For many years the State has needed a collection of ores and rocks of Alaska's mining districts that would be accessible to the public. DGGS's predecessor, the Territorial Department of Mines, started collecting ores from some mines. This was continued for some years, but the size of the specimens collected (4 to 8 inches) eventually prohibited their public display, and these rocks and minerals are now in storage. This, together with the obvious need for a more systematic type of rock and mineral file of ores in the various districts, led me to start a rock and mineral file that would serve as a visible catalog of the State's mineral resources. It will eventually be meaningful not only to miners and prospectors, but to the general public as well.

The rocks and minerals will be cross-referenced by quadrangle river and drainage system, and by quadrangle and sample number. Thus one will be able to easily inspect the ores and rocks from either a specific drainage system or a mineralized area. A sample specimen index card is shown on the next page.

The specimens will be cut into pieces about 3/16 inch thick, 1 to 2 inches high, and 2 to 3 inches wide. An index number will be put on its edge, and it will be filed in a consecutive number according to district. The small size of the rock or mineral and the systematic file will allow a large number of specimens to be stored in a small space. About 7,000 to 10,000 specimens can be stored on the shelving I have set up in my office space. Unfortunately, this is not an "overnight" project: it will take 10 to 20 years of effort to complete a representative collection of this nature; however, it will one day be a useful reference to acquaint people with the rocks and mineralization in any mining area of Alaska.

Included in the collection will be specimens from old mines and workings no longer accessible. The occasional float specimen of yet-undiscovered mineralization on a creek could also be preserved with equal ease. A mineral file could be used in conjunction with the USGS MF series of mineralization maps---a most handy map, by the way, and a bargain at 50¢. (To date, 92 of the 153 MF maps of Alaska quadrangles have been compiled.)

It goes without saying that I would greatly appreciate any samples from our readers.

Quadrangle: 59	River: Tanana
Sample # : 10	Creek: Democrat
	Lake : ___
	Other: ___

Claim: Jones No. 2
Locator: A.H. Jones
Identification:
Quartz with chalcopyrite

Assay Information:
Au - 0.2 Troy oz/ton
Ag - 0.5 " " "
Cu - 3.0%
Pb - 0.1%
Zn - 0.3%

BIRTH ANNOUNCEMENT

On August 2, Nola Bragg, DGGS secretary, gave birth to a healthy baby boy. Christened Frank Jason, the 9-lb., 6-oz. lad is joined at home by mom, dad (Sgt. Bill Bragg), and brothers Earl and Jeff. Congratulations, Nola.

NEW DGGS DOCUMENT RELEASED

Special Report 7, "Mineral Preparation of Ores From Friday Creek, Kantishna Mining District, Alaska," by Cleland N. Conwell, DGGS mining engineer, has been released. The report, which costs $1.00, is nine pages long and has six figures and six tables. Copies are available from the College office, P.O. Box 80007, College, AK 99701.

NEW USGS OPEN FILE REPORTS

The following USGS open-file reports pertaining to Alaska have been received. They may be examined at USGS offices in the Brooks Building on the U. of A. campus in College; 441 Federal Building in Juneau; and 508 2nd Ave., Anchorage.

74-7, Geological Survey open-file reports on Alaska indexed by quadrangle, by Edward S. Cobb.
74-40, Geology of the Devil Canyon dam site, by Reuben Kachadoorian.
74-52, Selected U.S. Bureau of Mines reports on Alaska indexed by quadrangle.
74-53, Reconnaissance engineering geology of Sitka and vicinity, Alaska, with emphasis on evaluation of earthquake and other geologic hazards, by Lynn A. Yehle.
74-82, Preliminary geologic map of Kayak and Wingham Islands, Alaska, by George Plafker.

THE SMALL MINER - THE MARKETING CO-OP

by Arden L. Larson, President, Multi-Metals, Inc.
(from The Mining Record, December 5, 1973)

Editors note: This article concludes the 'Small Miner' series. We wish to extend our hearty thanks to both Mr. Larson (of Ilse Route, Canon City, Colorado 81212) and to The Mining Record for allowing us to reprint this popular series.

As another winter settles its cold snowy hand upon the shoulders of you small miners, I would like you to examine the current world situation. In an earlier article I stressed that we are facing a metal shortage more severe than our current fuel shortage. As I look at world metal prices of copper at one dollar per pound, zinc at fifty cents per pound, lead at twenty-two cents per pound, I am convinced that the role the small miner can play in meeting this metal shortage is significant. For the small miner, metal prices have never been better. We have always had the ore, our problem now is getting that ore or concentrate to that metal hungry world without giving someone else all of the profit. Thus I would like my fellow small miners to consider establishing an organization to help us all.

We are living in a world where all mineral commodities are in such great demand for such a variety of uses that no man can be aware of who uses what. If we had an organization established where we could accumulate information on various markets for all minerals, then when we are out in the hills and stumble across a deposit of some mineral value, we could contact our marketing coop to see if our discovery was worthwhile. Furthermore, our coop could tell us where we could sell our material, what price we could expect and in what form it had to be in.

Another function of a marketing coop would be the actual handling of a sale of ores or concentrates. Let us assume that we have a couple of you small miners in the same area with ten tons of good gold ore. Now, ten tons of ore would probably get you laughed at in most places because it is too small of an amount to handle on a custom basis by most mills. So you contact the coop and they say that the ore can be sold with someone else's ore whose sale they are also handling. Thus, perhaps for a small fee, the coop could sell your ten tons along with another lot of one hundred tons. The result would be the sale of your ore for cash through the coop when you couldn't sell it anywhere else.

Suppose that you have a small mine that is continuing to produce small amounts of good ore. In order to accumulate enough ore to sell in one large shipment, you must spend six months of hard work. Now six months of hard work has not hurt anyone, but six months of eating beans sure could. Instead of having to sell the ore in large amounts, perhaps the coop could take monthly shipments of your ore. This would give you money to buy something else besides beans and probably allow you to make a living out of mining.

Alright, you say, the idea really sounds good but how do we go about it? Well, it would seem to me that we are talking about a two part organization. First, we need an information center; where do I sell barite? Second, we need a mineral broker; can you sell my barite?

The first part of such an organization can be built up by the members themselves. Suppose each of you small miners were to send a letter to the coop telling as much as you could about the mineral uses in your particular area or field. Such information could be the location of custom mills, mill charges, users of various mineral products, their addresses, specifications, etc. In short, everything that you could dig up. Now, by mineral commodities, I mean construction material, pigments, special uses of minerals, slag, fluxes, etc., as well as the more common metals. My reason for wanting this type of information is that the user of small quantities of some mineral may have problems getting supplied from the big guys. Yet if he could be supplied by a small miner, both parties would be happy. Power to the little people!

The second part of the coop, that of acting as a broker for its members, would be a little more difficult to establish. The primary reason being the need for capital and momentum. If the coop were handling ores for ten or twenty guys at once, then it could do the job well. However, you must crawl before you can walk. Thus this step would take time to get into full swing.

Now to be realistic about such an organization, it must have some money to operate on. That money could come from its members in the form of membership dues. Additional money for expenses could come from fees for information requests. Suppose that twenty of us small miners would charter an organization called "The Small Miners Marketing Association" and would agree to a membership fee of $5.00 per year. Also if we charter members would contribute to the coop's files any pertinent information that we have, then I believe that we could get such an organization off of the ground. If we were to establish a fee of five dollars for information requests, then all expenses would be covered. Now as I am the guy suggesting this association, I will donate my time to the association and act as coordinator of it. I only ask that my expenses be covered for postage, copying, etc. I suggest such an organization after receiving several letters from my readers wanting to join something of this sort.

The second part of this association is really akin to my company, Multi Metals, Inc. It is my belief that we small miners working together can become a significant force in the mineral industry. I founded my company on that belief and am working toward it. As I have been doing some custom milling of small amounts of ore, I am beginning to fill that need as a broker for ores. In digging out information on markets for various minerals, I have accumulated quite a lot of information of use to a marketing association. I also see the real need for such an organization.

Well, you guys have heard the pitch. I do believe that there is a definite need for good marketing information of minerals for the small miner. Several of the markets that I am meeting for different minerals were unknown to me a year ago. Although I am a trained geologist, my marketing information of greatest value has come from my banker, a rancher, a tile layer, and some real digging in libraries. My point is that marketing information is not taught, nor does it exist in easily available books. Yet, without somewhere to sell your ore, it is just a worthless pile of rocks. As one of my readers so eloquently put it, "Let's hope something can be worked out for the benefit of many people who could have a successful operation through cooperation."

OPEN-FILE REPORT SERIES AMENDED

The following list comprises the revised open-file report series. Some reports have been deleted, some renumbered, some updated, and some changed in price. The reports may be examined at any of the four DGGS offices: U. of A. Physical Plant Bldg., Fairbanks; 323 E. 4th Ave., Anchorage; Goldstein Bldg. (Rm 509), Juneau; and 306 Main St. (Rm 312), Ketchikan. Prepayment (cost listed below) for any of the open files may be sent to the new printing vendor, Petroleum Publications, of 409 W. Northern Lights Blvd., Anchorage, AK 99503; purchases made in person at the vendor's office will be less.

Open files 1-21 are aeromagnetic map sheets of Alaska quadrangles, scaled 1:125,000; they cost $2.25 each.

AOF-	Quadrangle	AOF-	Quadrangle
1	Selawik (SW part)	12	Gulkana (NE part)
2	Teller (SE part)	13	Nabesna
3	Bendeleben	14	Bethel (SE part)
4	Candle (W half)	15	Goodnews
5	Nome (NE part)	16	Hagemeister Island (NE part)
6	Solomon (N part)	17	Nushagak Bay (NW part)
7	Norton Bay (NW part)	18	Eagle
8	Fairbanks (SE part)	19	Talkeetna
9	Healy	20	Talkeetna Mts.
10	Mt. Hayes	21	Anchorage (N part)
11	Tanacross		

The others are:

AOF-	Title	Cost
22	Revised—Geology and mineral evaluation of the Arctic Wildlife Range, northeast Alaska (by D.C. Hartman, 1973) 16 p., text figure, map sheet.	$3.75
23	Geologic and mineral evaluation of the Nowitna River drainage basin, Alaska (by M.W. Henning, 1973) 6 p., text pl., 2 map sheets.	$2.80
24	Combined with report AOF-25.	- - -
25	Geologic and mineral review of the Chitina and Bremmer River drainage basins (by M.W. Henning & P. Dobey), 20 p., text figures, map sheet.	$3.90
26	Geologic and mineral evaluation of the Aniakchak River drainage, Alaska Peninsula, for Wild and Scenic River Study (by W.M. Lyle & P.L. Dobey, 1973) 10 p., text figure, 2 appendixes, map sheet.	$2.90
27	Omitted, superseded by AOF-37.	- - -
28	Geologic and mineral evaluation of the Charley River drainage, Alaska (by W.M. Lyle, 1973) 6 p., text figure, map sheet.	$2.70
29	Withheld temporarily—Geologic map of the Western Clearwater Mountains.	- - -
30	Coal Reserves Study--Chitina-Beluga-Copper Area, Alaska (by D.L. McGee, 1973) 5 p., text, geologic map and three cross sections.	$4.90
31	Geology and mineral resources of Kodiak Island and vicinity, Alaska (by D.L. McGee, 1972) 7 p., map sheet.	$3.60
32	Gulf of Alaska petroleum seeps (by D.L. McGee, 1972) 7 p.	$2.25
33	Geology and mineral review of proposed wilderness area, Nunivak National Wildlife Refuge, Alaska (by P.L. Dobey, 1973), and Geology and mineral review of proposed wilderness area, Clarence Rhode National Wildlife Range, Alaska (by D.C. Hartman, 1973) 13 p., text figure, map sheet.	$3.00
34	Mineral evaluation of D-2 land area, Nabesna quadrangle, using aeromagnetic and geochemical data (by P.L. Dobey and M.W. Henning, 1973) 10 p., 2 text figures, table, map sheet.	$2.50
35	Withheld temporarily--Geologic Map of Craig A-2.	- - -
36	Withheld temporarily--Maps of southeastern Ambler River and part of Survey Pass quadrangles.	- - -
37	Withheld temporarily--Geologic mineral evaluation of the Ambler River drainage, southwestern Brooks Range.	- - -
38	Withheld temporarily--Geochemical analysis of stream-sediment samples from Ambler River.	- - -
39	Geochemistry of parts of the Bendeleben A-6, A-5, A-4, B-5, and B-4 quadrangles, Alaska (by T.K. Bundtzen, 1973) 10 p., includes 742 stream-sediment, rock and soil samples; location plate, six data sheets, and histograms.	$4.65
40	Withheld temporarily--Preliminary Investigation, Livengood Mining District.	- - -
41	Coal bibliography for Alaska (by W.M. Lyle, 1974) 31 p.	$4.00
42	Withheld temporarily--Generalized bedrock geology and mineralization in Mt. McKinley National Park.	- - -
43	Gravels from the Alaska continental shelf, Beaufort Sea, Arctic Ocean: Petrologic character and implications for sediment source and transport (by T.C. Mowatt and A.S. Naidu, 1974) 70 p.	$8.40

AOF-	Title	Cost
44	Estimated speculative recoverable resources of oil and natural gas in Alaska (by R.M. Klein, W.M. Lyle, P.L. Dobey, and K.M. O'Connor, 1973) 8 p.	$4.00
45	Clay mineralogy of the lower Colville River and Colville Delta, North Arctic Alaska (by T.C. Mowatt, A.S. Naidu, and Namok Veach, 1974) 39 p.	$4.70
46	Petrologic studies in the Fairbanks district - I. Molybdenum Mineralization at the Silver Fox Mine (by T.C. Mowatt, 1974) 29 p.	$4.50
47	Geologic Report of Glacier Bay National Monument (by D.L. McGee, 1974) 16 p.	$3.00

GOLD DEEPER THAN ANY OTHER METAL
(from The Mining Record, February 6, 1974)

Men burrow deeper into the earth for gold than for any other metal.

In South Africa, which yields more than 900 tons of gold a year or two-thirds of world production, the glittering prize lures miners down 12,350 feet.

The Soviet Union is the biggest gold producer after South Africa --- perhaps 250 tons a year, mostly from dredging in Siberia. The United States ranks fourth just behind Canada.

Yet the biggest accumulation of the metal anywhere, 12,600 metric tons, rests on the bedrock of Manhattan, in a vault of the Federal Reserve Bank of New York. It belongs to some 80 nations that prefer to store it there.

Gold's allure has endured through the centuries, points out Peter T. White in the January National Geographic. "Gold," he notes, "needs nobody's signature to make it valuable. It doesn't merely represent value, it is value.

"Should you ever need it to help you in an emergency, its quality can easily be determined, its quantity readily and precisely weighed, and someone will always be glad to take it off your hands."

Gold has become much more than a storehouse of value.

Because gold is so malleable and such a fine conductor of electricity, and because it won't corrode, a lot of it goes into tiny but dependable circuitry for pocket calculators, TV sets, and computers. A good deal also disappears into people's mouths, to restore or replace teeth, because it wears like a natural tooth.

Gold reflects a large portion of the scorching infrared rays of the sun, so it can serve as a coating for office windows. People see out, but relatively little heat enters, reducing the power needed for air conditioning and conserving energy.

And, Mr. White found when a precious metals firm made him one, a frying pan of gold is superb because it diffuses heat so evenly. But the law forbids such uses of gold, so after two breakfast eggs, the pan was melted.

The biggest use of gold in the United States is in jewelry. About 15 tons of the metal a year go into class rings alone.

Mr. White refuses to guess whether the price of gold will continue to rise, but he makes two prophecies.

"One: That through the lifetime of anyone now alive, gold will be ardently wanted by people around the world. And so, at least for the foreseeable future, it will remain something of real value.

"And two: That one morning my wife will ask me if I've heard that in September President Nixon signed a bill permitting U.S. citizens to hold gold in any form - - so we could have a solid gold frying pan, couldn't we?

"I'll reply no, we can't: Because that legislation also says that it won't go into effect until the President decides that private ownership of gold bullion 'will not adversely affect the United States' international monetary position.' And I won't even try to predict when that will be."

NEW ALASKAN BIBLIOGRAPHICAL ENTRIES FROM GSA

Listed below are the entries from the latest issue of the Geological Society of America's "Bibliography and Index of Geology," Volume 38, No. 5.

Berden, Jean M., and Copeland, M.J. Ostracodes from Lower Devonian Formations in Alaska and Yukon Territory: U.S. Geol. Surv., Prof. Pap., No. 825, 47 p., illus. (incl. sketch map).

Black, Robert F. Late Quaternary sea-level changes, southwest Umnak Island, Aleutians (abstr.): Geol. Soc. Am., Abstr., Vol. 5, No. 7, p. 552, 1973.

Forbes, R.B., and Swainbank, R.C. Garnet-clinopyroxene from the Red Mountain Pluton, Alaska: Geol. Soc. Am., Bull., Vol. 85, No. 2, p. 285-292, illus. (incl. geol. sketch map), 1974.

Menyaylov, I.A. Fumarol'nyye gazy piroklasticheskikh potokov vulkanov Bezymyannogo i Katmai (Fumaroles of pyraclastic flows of the Bezymyannyy and Katmai volcanoes): In Vulkany i izverzheniya, p. 78-81, Akad. Nauk SSSR,Sib. Otd. Inst. Vulkanol., Moscow, 1969.

Moening, Harold J. An overview of the Trans-Alaska Pipeline; Engineering and Environmental Geology Problems: In Geology, seismicity, and environmental impact, p. 405-409, illus. (incl. sketch map), Assoc. Eng. Geol., Los Angeles, 1973.

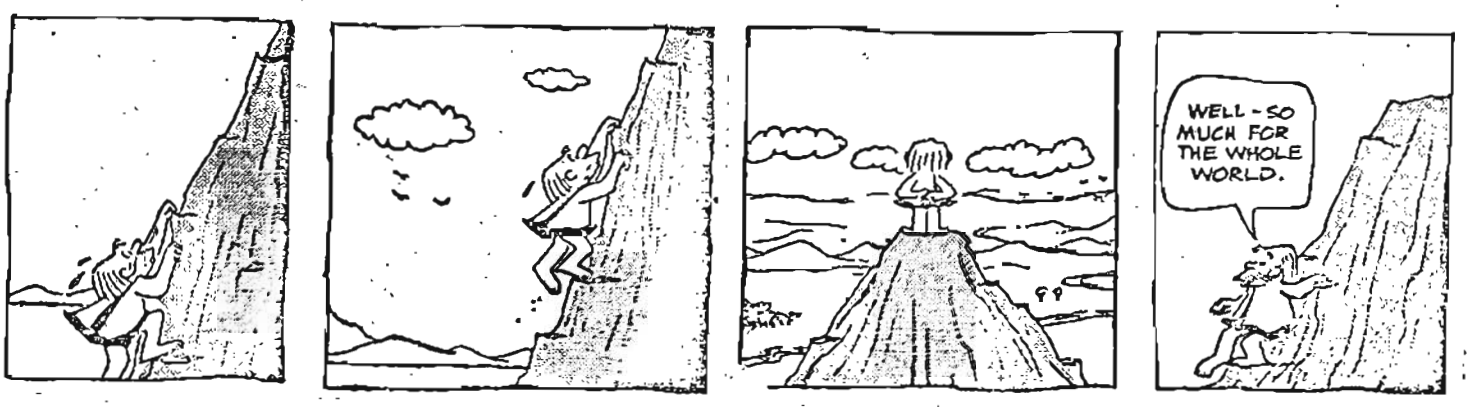
Richards, H. Glenn. Tectonic Evolution of Alaska: Am. Assoc. Pet. Geol., Bull., Vol. 58, No. 1, p. 79-105, illus. (incl. sketch maps), 1974.

Seppala, Matti. On the formation of small marginal lakes on the Juneau Icefield, south-eastern Alaska, U.S.A.: Turku Univ., Inst. Geogr., Publ., No. 63, 6 p. (incl. Fr., Ger. sum.), illus. (incl. sketch maps), 1973 (reprint).

Smith, Thomas E., Trible, Thomas C., and Stein, Donald R. Analyses of rock and stream-sediment samples, Mt. Hayes A-6 quadrangle, south-central Alaska. Alaska Div. Mines Geol., Geochem Rep., No. 26, 1 p., map, 1973.

Stevens, A.E., and Milne, W.G. A Study of Seismic Risk near Pipeline Corridors in Northwestern Canada and Eastern Alaska: Can. J. Earth Sci., Vol. 11, No. 1, p. 147-164 (incl. Fr. sum.), illus. (incl. sketch maps), 1974.

B.K.



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METALS MARKET

	Aug. 30, 1974	Two Months Ago	Year Ago
Antimony ore, stu equivalent European ore	$33.5-34.5	$30.5-31.5	$13.40-14.00
Barite (drilling mud grade per ton)	$17.00-$21.00	$17.00-21.00	$18-22
Beryllium ore stu.	$30.00	$30.00	- - -
Chrome ore per long ton	$47.00	$37.00	$24-27
Copper per lb. (MW-prod.)	86.6¢	85.97¢	60¢
Gold per oz.	$156.30	$154.72	$104.19
Lead per lb.	24.5¢	24.0¢	16.5¢
Mercury per 76# flask	$285.00	$340.00	$271.00
Molybdenum conc. per lb.	$2.05	$1.87	$1.72
Nickel per lb.	$1.85	$1.62	$1.53
Platinum per oz.	$180.00-185.00	$195.00	$163.91
Silver, New York, per oz.	410¢	480¢	263.48¢
Tin per lb. New York	432¢	460.75¢	263.48¢
Titanium ore per ton (Ilmenite)	$55.00	$38.00	$32.00
Tungsten per unit	$98.77	$96.39	$55.00
Zinc per lb.	37.82¢	34.76¢	20.31¢

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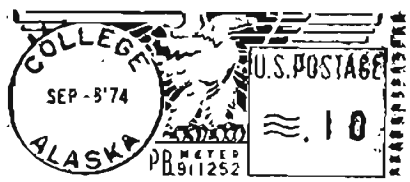

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