



STATE OF ALASKA
Department of Natural Resources

Division of Geological Survey MINES BULLETIN



VOL. XIX

JULY 1971

No. 7

P. O. Box 80007

College, Alaska 99701

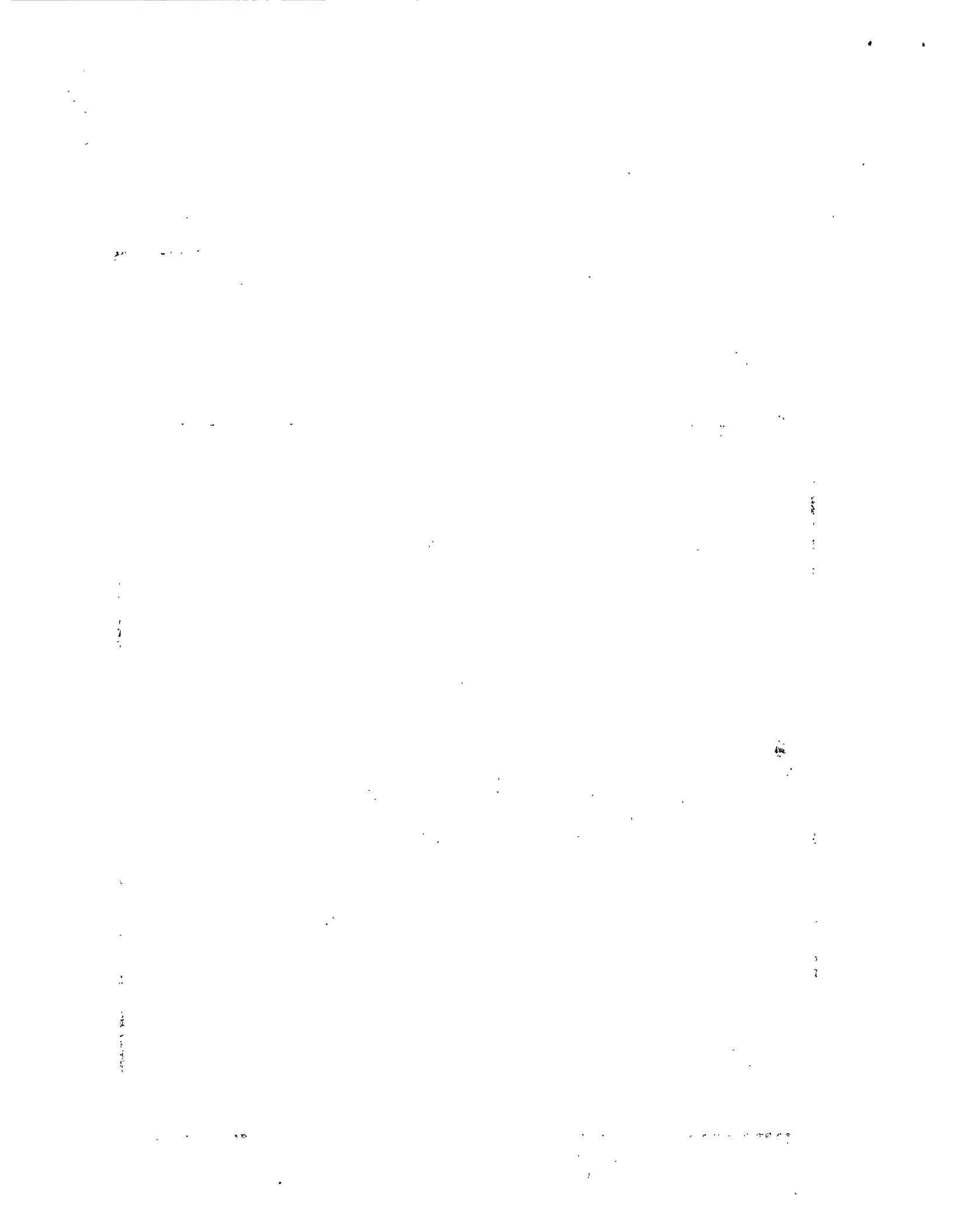
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Published to Accelerate the Development of the Mining Industry in Alaska
 William A. Egan - Governor
 Charles F. Herbert - Commissioner James A. Williams - Acting Director



NEW DIVISION EMPLOYEE

The mining geology staff has recently been joined by Dr. Thomas E. Smith, economic geologist and exploration geophysicist. He received undergraduate and master's degrees from Stanford University and a doctorate from the MacKay School of Mines, University of Nevada. Most of his professional experience over the past nine years has been on Alaskan projects, through employment with Standard Oil Company of California and the U. S. Geological Survey. He spent the past academic year as a faculty member at the University of Nevada, lecturing in petrology, mineralogy, and geochemistry. He is a member of the American Institute of Mining Engineers, American Geophysical Union, the Society of Exploration Geophysicists, the European Association of Exploration Geophysicists, and the American Association for the Advancement of Science.

Dr. Smith plans to continue studies of tectonic control of mineralization and geochronology of Alaskan ore deposits. The present field season will be spent in extending detailed geologic mapping and mineral resource investigations in the central Alaska Range.

ALASKA ROCKHOUND INFORMATION

Each year, the Division of Geological Survey receives hundreds of requests for Alaska rocks and minerals. To handle these requests, the Division publishes Information Circular No. 9, which provides information on commercial sources of Alaskan specimens.

At present we are updating Information Circular No. 9. If you are a dealer in gemstones, jade, soapstone, garnets, gold nuggets, diorite, rhodonite, copper, agate, or in general any Alaskan rocks or minerals, and wish to be listed as a dealer in our information circular, please send your name and address to Edward Holmes, Editor of the Mines Bulletin, before July 30, 1971.

STATE OF ALASKA PUBLIC INFORMATION

The Division of Geological Survey has published a list of Information Circulars, Laboratory Reports, and Laboratory Notes for which there is no charge and are available on request. They are:

ONE

(INFORMATION CIRCULARS)

<u>Number</u>	<u>Title</u>
1	Proper Claim Staking in Alaska
2	Mineral Rights of Aliens in the State of Alaska
3	Hand Placer Mining Methods
4	Uranium Prospecting in Alaska
5	General Alaska Mineral Information
6	Alaskan Prospecting Information
7	Compulsory Assessment Work Affidavits (Discontinued)
8	Exploration Companies and Available Consultants
9	Alaska Rockhound Information
10	Skin Diving for Gold in Alaska
11	List of Reports Issued by the Division of Geological Survey and Corresponding Preceding Agencies

(INFORMATION CIRCULARS)

Continued

- 12 Services of the Division of Geological Survey
- 13 Dangers in Old Mine Openings
- 14 Mining Laws Applicable in Alaska
- 15 A Prospectors Guide to the Sale and Lease of Mineral Properties
- 16 Alaska Map Information

(LABORATORY NOTES)

Laboratory
Note
Number

Investigations

- 1 Precision and accuracy of the gold-silver analysis by atomic absorption on a quartz-type rock.
- 2 Laboratory test of zinc in water and ice.
- 3 AAS analyses of gold and silver in high antimony samples.
- 4 Digestion of heavy sulfide ores for AAS analyses.
- 5 Suggested reporting procedures for atomic absorption silver and gold analyses.
- 6 Improved mercury analyses by XRS.
- 7 Molybdenum analyses by atomic spectroscopy.
- 8 An investigation of the 2833A° AAS lead line.
- 9 Interference by calcium, magnesium, and iron on lead, zinc, and silver by AAS analyses.
- 10 Semi-quantitative uranium analysis by X-ray spectrography.
- 11 Potential geochemical sample contamination from cloth sample bags.
- 12 Comparison analyses.
- 13 Some experiments in the geochemistry of copper and zinc.
- 14 Dithizone field test some suggestions.
- 15 A geochemical orientation study for lead and zinc in the Fairbanks, Alaska area.
- 16 Development of the Spectrographic 30-Element Geochem Analysis.
- 17 New XRS Procedure.

(LABORATORY REPORTS)

<u>Number</u>	<u>Title</u>	<u>Author</u>	<u>Date</u>
1	A Rapid Radiometric Analysis for Equivalent Uranium	P. L. Anderson M. Mitchel, Jr.	May 1969
2	Analysis of Copper, Lead, and Zinc by Atomic Absorption Spectrophotometry	P. L. Anderson Namok Cho	May 1969
3	Geochemical Analytical Procedure for Copper, Lead, and Zinc by Atomic Absorption Spectroscopy	P. L. Anderson	April 1969

JUMBO BASIN LANDS LEASED

Eskil Anderson, Spokane Consulting mining engineer and one of the owners of the Jumbo Basin copper and iron deposit on Prince of Wales Island, Alaska, said the property has been leased to Marmae Alaska Mines, Ltd. This is a new company associated with Scurry-Rainbow Ltd., of Calgary. Marmae plans to start a diamond drilling program about June 15, 1971. (Western News Miner)

GOLD STANDARD

38 years ago, the U. S. went off the Gold Standard. Latest Harry Shultz letter says "Nothing can stop gold now" and an all time high price for the yellow metal is predicted for the near future. (Western News Miner)

CHANGE TOLD

Homestake Mining Co. now is using an all-cyanide method of extracting gold from ore at its Lead, S.D., mining operation. Formerly, about three-fourths of the gold recovery was by amalgamation, using mercury. This technique was discontinued because of pollution problems. (Western News Miner)

BUREAU OF MINES CHIEF TO VISIT

Dr. E. F. Osborn, director of the U. S. Bureau of Mines, has scheduled a visit to Alaska sometime in July. His itinerary is unknown at this time.

BORDER COPPER ACTIVITY

Activity in search of copper prospects will continue along the Alaska/Yukon Territory border this summer with involvement of both "large exploration firms" and smaller and more individualized prospecting efforts. The so-called "Casino Prospect" (in the Dawson Range in the uplands between the Tanana and Yukon drainages) on the Canadian side set off a flurry of activity in the area last summer. The Casino ore is reportedly of a strip mining variety not generally found in the north, but which holds greater potential of being "economic" than other ores.

Indications are that firms have already made arrangements for helicopter support work out of Anchorage, but that work will be slightly delayed this year due to the tremendous amount of snow still in the highlands and the late run-off. (Alaska Construction & Oil Report)

MERCURY MINE SHUTS DOWN

The Red Devil mercury mine shut down as of the first of June and is being placed on a caretaker basis until the price for mercury improves. Mercury a year ago was selling for \$425 a flask. Today the price is \$265 a flask.

LOST RIVER MINE EQUIPMENT

Interior Airways is flying three Hercules loads of drilling equipment to the Seward Peninsula to outfit a 40-man camp which is continuing exploratory diamond-core drilling for the Lost River Mining Corporation. The program is to determine feasibility of production of fluoride-tin-tungsten deposits held by the company. Engineering crews, working since January, have just finished testing the sea bottom offshore from the Lost River Mine for a new docksite. Prospects for development continue to look good. (Alaskan Construction & Oil Report)

NEW OPEN FILE RELEASE

The U. S. Geological Survey has released on open file the following reports:

1. Maps showing distribution of anomalous amounts of selected elements in stream-sediment and rock samples from the Eagle quadrangle, east-central Alaska, by Helen L. Foster and Martha E. Yount. 6 p., plus 3 illus. (1 = page-size; 2 = plates), scale 1:250,000.
2. Geochemical data from the Nabesna A-1 quadrangle, Alaska, by N. A. Matson, Jr., and D. H. Richter. 10 p., 1 fig.
3. Geochemical data from the Nabesna C-4 quadrangle, Alaska, by N. A. Matson, Jr., and D. H. Richter. 6 p., 1 fig.
4. Geochemical data from the Nabesna C-5 quadrangle, Alaska, by N. A. Matson, Jr., and D. H. Richter. 10 p., 1 fig.
5. Geochemical data from the Nabesna D-5 quadrangle, Alaska, by N. A. Matson, Jr., and D. H. Richter. 8 p., 1 fig.
6. Reconnaissance geologic map and geochemical analyses of stream sediment and rock samples of the Anchorage B-6 quadrangle, Alaska, by Sandra H. B. Clark and Susan R. Bartsch. 63 p., including 55 tabular pages, 2 figs.
7. Arctic Mesozoic correlation chart, by R. L. Detterman. 1 chart.
8. Cretaceous plutonic rocks of St. Lawrence Island, Alaska: a preliminary report, by Bela Csejtey, Jr., William W. Patton, Jr., and Thomas P. Miller. 20 p., 3 maps, 1 table.
9. Results of geochemical sampling in the northern Darby Mountains, Seward Peninsula, Alaska, by Thomas P. Miller, Raymond L. Elliott, Donald H. Grybeck, and Travis L. Hudson. 12 p., including 1 fig., 1 table.

These reports can be seen in the following listed Alaskan offices of the USGS and ADGS and certain USGS offices in the other states.

U. S. Geological Survey:

402 Brooks Building, College
108 Skyline Building, Anchorage
441 Federal Building, Juneau

Division of Geological Survey:

College Road and University Ave., College
323 East 4th Ave., Anchorage
509 Goldstein Building, Juneau

Material from which copy can be made at private expense is available at the Alaskan Mineral Resources Branch, USGS, 345 Middlefield Rd., Menlo Park, Calif., 94025.

OTHER PUBLICATIONS

Two new publications written by William C. Kellogg on: Aerial Radioactivity Surveying Techniques of Successful Application and Calculation of Airborne Radioactivity Survey Responses - Theory, Method and Field test are now available. For further information on how to obtain these publications, drop a line to Edward Holmes, Editor of the Mines Bulletin.

METAL MARKET

<u>Metals</u>	<u>June, 1971</u>	<u>Month Ago</u>	<u>Year Ago</u>
Antimony ore, stu equivalent European ore	\$ 10.00-11.82	\$ 9.09-10.91	\$ 35.71-37.50
Barite (drilling mud grade per ton)	\$17-20	\$17-20	\$12-16
Beryllium powder, 98%, per lb	\$54-66	\$54-66	\$54-66
Chrome ore per long ton	\$25-27	\$25-27	\$31-35
Copper per lb.	52.8¢	52.8¢	59.7¢
Gold per oz.	\$40.27	\$40.93	\$35.71
Lead per lb.	13.5¢	13.5¢	16.5¢
Mercury per 76# flask	\$262-267	\$275-285	\$415-425
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb.	\$1.33	\$1.33	\$1.28
Platinum per oz.	\$120-125	\$120-125	\$130-135
Silver, New York, per oz.	161.6¢	167.3¢	163.7¢
Tin per lb.	164.2¢	165.8¢	168.45¢
Titanium ore per ton (Ilmenite)	\$30-35	\$30-35	\$30-35
Tungsten per unit	\$55.00	\$55.00	\$50-55
Zinc per lb.	16.0¢	16.0¢	16.0¢

MINING CLAIMS

<u>NUMBER OF CLAIMS</u>	<u>CREEK OR AREA</u>	<u>QUADRANGLE</u>	<u>DATE NOTICE POSTED</u>
103	Chicken Creek Mtn.	Iditarod	May 1971
8	Kugruk Lagoon	Kotzebue	April 1971
8	Kiwalik River	Candle	April 1971
3	Quartz Creek	Candle	April 1971
20	Kugruk River	Bendeleben	April 1971
8	Midway Ridge	Bendeleben	April 1971
4	Mina Creek	Bendeleben	April 1971
145	Tisuk River	Nome	March 1971
112	Anderson Creek	Teller	April 1971
224	Cassiterite Creek	Teller	April 1971
30	Elliott Creek	Valdez	May 1971
2	Queens Creek	Valdez	May 1971
30	Copper Creek	Valdez	May 1971
4	Trail Creek	McCarthy	May 1971
2	Scottie Creek	McCarthy	May 1971
2	Mineral Creek	McCarthy	May 1971
4	Lime Creek	McCarthy	May 1971
16	Porphyry Creek	McCarthy	May 1971
10	Surprise Creek	McCarthy	May 1971
4	Shower Gulch	McCarthy	May 1971
2	2.5 Mile Creek	McCarthy	May 1971
1	Happy Creek	Fairbanks	May 1971
1	Quartz Creek	Seward	September 1970
2	Crooked Creek	Livengood	May 1971

MINING CLAIMS (Continued)

<u>NUMBER OF CLAIMS</u>	<u>CREEK OR AREA</u>	<u>QUADRANGLE</u>	<u>DATE NOTICE POSTED</u>
2	Mettenpharg Creek	Wiseman	May 1971
1	Sweepstakes Creek	Candle	May 1971
2	King Solomon Creek	Eagle	April 1971
2	O'Brian & McKinley Creek	Eagle	April 1971
10	Bachelor Creek	Circle	April 1971
5	Portage Creek	Circle	May 1971
1	Silver Creek	Circle	May 1971
4	Dry Creek	Healy	April 1971
83	Ingraham Bay	Dixon Entrance	April 1971
2	Daves Creek	Seward	April 1971
1	Gore Point	Seldovia	April 1971
9	Offield Creek	Teller	March 1971
2	Spring Creek	Chandalar	April 1971
51	Beaver Creek	Taylor Mts.	April 1971
24	Cinnabar Creek	Taylor Mts.	April 1971
8	Chikulnuk Creek	Taylor Mts.	April 1971
1	Happy Creek	Fairbanks	April 1971
1	Wolverine Creek	Tyonek	April 1971

DID YOU KNOW

Do you know which weighs more:

1. An ounce of feathers or an ounce of gold?
2. A pound of feathers or a pound of gold?

Feathers are weighed in avoirdupois ounces, each ounce containing 437.5 grains. Gold is weighed in Troy ounces - 480 grains per ounce, so an ounce of gold weighs more than an ounce of feathers.

There are 12 ounces to a Troy pound of 5,760 grains and 16 ounces to an avoirdupois pound of 7,000 grains, so a pound of feathers weighs more than a pound of gold.

EDITOR'S COMMENTS

Anyone wishing to contribute articles of interest on mining, please send them to Edward Holmes, Editor-Researcher, State of Alaska, Division of Geological Survey, P. O. Box 80007, College, Alaska 99701.