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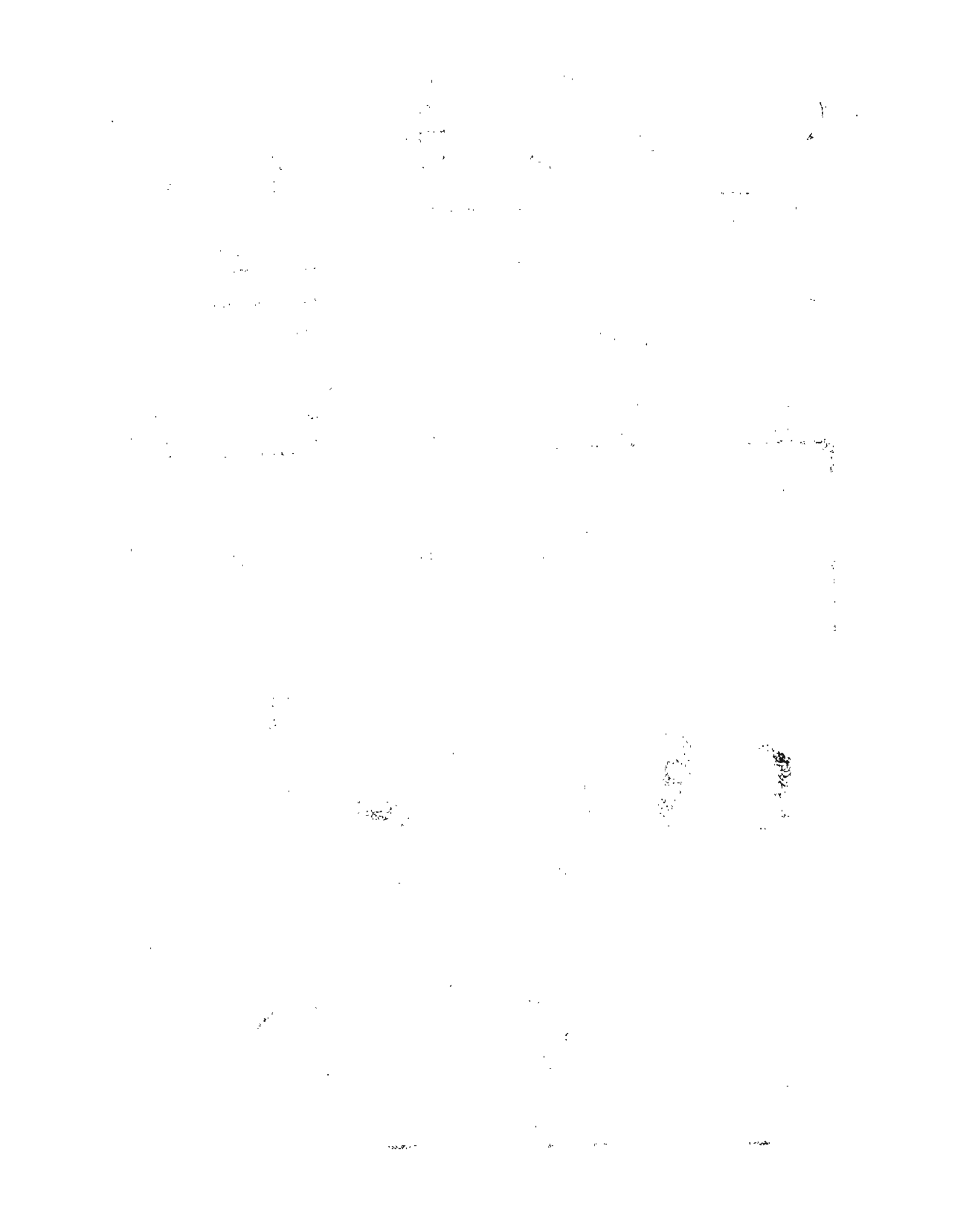


Published to Accelerate the Development of the Mining Industry in Alaska

Kelth H. Miller - Governor

Thomas E. Kelly - Commissioner

James A. Williams - Director



ANTIMONY AND MERCURY PRODUCTION INCREASES IN ALASKA

The production of mercury and antimony increased during the past summer season. The high price for antimony induced several operators in the Fairbanks area and one operator at Stampede to produce and market antimony. The Red Devil mercury mine is making a bulk sulfide concentrate of antimony and mercury. The concentrate is being sent outside Alaska for recovery of both metals. With the decline of the price of antimony in September, the mine at Stampede closed for the winter, but other mines in the Fairbanks area have continued to operate.

Our preliminary estimate is that Alaska will produce about 1400 tons of antimony metal in 1970.

The past summer was a productive year for mercury. Several field parties explored for mercury in the Kantishna district and the Kuskokwim region. At least three and possibly four mines went into production. As previously mentioned, the Red Devil mine was reopened and the concentrator is operating at full capacity. The ore is being produced from both the underground mine and an open pit. Both of these are expected to continue to operate through the winter.

The second largest Alaska mercury producer is the Haday Mining Company at Cinnabar Creek. During the early part of the year, a small concentrator was erected near the open pit mine. With a maximum crew of eight men, the company shipped over 183,000 pounds of cinnabar concentrate from Aniak via Wien Consolidated Airlines. As the pit at Cinnabar Creek was enlarged by mining during the summer, additional areas of high grade cinnabar ore were uncovered.

With the increased activity this year, Alaska should again rank No. 3 in the production of mercury in the United States.

DR. OSBORN APPOINTED DIRECTOR OF THE BUREAU OF MINES

On October 7, 1970, President Nixon announced his intention to nominate Elburt Franklin Osborn to be Director of the U. S. Bureau of Mines. The appointment has since been confirmed. A news release provides information on his background as follows:

Dr. Osborn has been vice president for research of the Pennsylvania State University since 1959. Prior to this he served as associate dean and dean, College of Mineral Industries at the University. He is a former director of the American Geological Institute (1956-59), president of the Geochemical Society (1967-68), and president of the Mineralogical Society of America (1960-61). Dr. Osborn holds memberships in 17 professional societies.

Dr. Osborn, 59, received his B.A. at DePauw University in 1932, his master's degree at Northwestern in 1934, and his Ph.D. from California Institute of Technology in 1937. He is a member and past president of both Phi Beta Kappa, Penn State Chapter, and Sigma Xi, Penn State Chapter. He is the author of over 90 published articles.

LAND RECLASSIFIED FOR MULTIPLE USE MANAGEMENT

The U. S. Bureau of Land Management is proposing for reclassification approximately 19.5 million acres for multiple use management in the area roughly bounded by the Canadian border to the east and Livengood to the west, south of the Yukon River and north of Nabesna, south of the Alaskan Highway. The area has been divided into two units, the Fortymile Planning Unit, and the White Mountain Planning Unit.

In the Fortymile Planning Unit, over 5,000 acres are to be reserved for recreational use exclusively and will be closed to mining entry. These lands are along the Taylor Highway. In the White Mountain Planning Unit, over 1,000 acres will be reserved for recreational use and closed to mining along the Steese Highway. Other than the relatively small recreational areas, the units will not be closed to mining according to the BLM.

Detailed information in regard to the proposed multiple use management classification can be obtained from the United States Department of the Interior, Bureau of Land Management, Fairbanks District and Land Office, Fairbanks, Alaska 99701.

MINES LIAISON OFFICE OPENS IN ANCHORAGE

A new state liaison office for the U. S. Bureau of Mines will go into operation in Anchorage about November 1, according to William Eckard, chief of the Alaska Field Operation Center in Juneau. Eckard said the liaison officer will be Alfred L. Service, who is presently the supervising mining engineer with the Bureau of Mines' Spokane Field Operation Center. Service is a graduate of the University of Alaska.

The provision for the liaison post, and others like it across the country, was made during a general reorganization of the Bureau last April. Interior Secretary Walter J. Hickel has said the goal of the new job is "to further federal-state cooperation on problems of mineral supply and environmental quality."

Service will handle part of the Bureau's local-level business, as well as working for state involvement in areas of mutual interest and functioning as a primary public contact. He will conduct specific inquiries on assignment and make routine reports upon activities in the mineral industry.

LOST RIVER REPORTS PROGRESS

In a report to the Northern Miner, Mining Engineer Murray Watts, who heads both PCE Exploration and the Lost River Mining Company, stated that Lost River has established a reserve of more than 10 million tons of open pit ore. The deposit is at Lost River, about 90 miles northwest of Nome and near the Bering Sea coast. It is a multimineral deposit of fluorite-tin-tungsten, with fluorite the most important mineral. According to the Northern Miner, this will make the deposit the largest fluorite deposit in North America. Exploration is continuing with two drills that will operate through mid-November.

Work being carried out by the mineral and metallurgical processing division of the Battelle Memorial Institute has already demonstrated that the fluorite can be effectively beneficiated to a near acid grade (97% CaF₂) by flotation, with an 85% recovery. Furthermore, "it appears technically feasible to achieve tin concentrates assaying up to 70% Sn with overall recoveries as high as 80%-85% and to make tungsten concentrates of 70% WO₃ with an 80% recovery", Battelle reports.

The University of Alaska Mineral Industry Research Laboratory has worked with PCE on two occasions. A beneficiation study in cooperation with Battelle was conducted on Lost River ore, and analytical techniques were developed and samples analyzed for tin, tungsten, beryllium, and fluorine.

Fluorite is considered as particularly significant at this time due to a developing world shortage and a trend towards a doubling of consumption requirements within the near future. One of the biggest users is the aluminum industry, but another fast developing and substantial consumer is the oxygen process for making steel.

The Northern Miner also reports that at current prices a grade of 28%, which is about the grade at Lost River, is worth about \$18 per ton. The United States, which imports about 90% of its fluorite (mostly from Mexico), imposes an import duty of about \$8 per ton. Inasmuch as Alaska is part of the U.S., the Lost River ore would not be subject to this duty.

The Northern Miner states further that in a summary report submitted on September 15 by Dr. Michael Jeremic and based on drilling results to July 31 only, ore reserves are calculated at 5,974,021 tons in the No. 1 zone grading 30.80% CaF_2 and 0.30% tin, of which 5,305,500 tons grade 30.80% fluorite, 0.22% beryllium and 0.42% tin. The No. 2 zone contained 4,093,060 tons averaging 28.0% CaF_2 and 0.20% BeO (beryllium). This alone would be sufficient to supply a 2,000 ton mill for 15 years. But, as intimated above, officials are shooting very much higher.

PRICE OF COPPER FALLS

The Metals Week reported that on Wednesday, October 21, 1970, Phelps Dodge lowered the price of copper by 4¢ effective on Thursday, October 27, 1970. By Friday morning Anaconda, Inspiration, and Cities Service had followed, while Kennecott and Copper Range were still considering the move. The assumption is that they will have to follow. Inco cut its Canadian price to the equivalent of US 56¢.

Thus ended a decade of rising prices for copper. In January 1961, the US producer price was lowered from 30¢ to 29¢. Since that time, all price changes have been increases -- except for the Johnson administration's forced rollback of a 2¢ hike from 36¢ to 38¢ in late 1965. The 60¢ price had been in effect since April 1.

Many trade observers have been saying that the 60¢ US price would not hold in the face of much lower foreign producer, dealer, and scrap prices. Yet when the Phelps Dodge move finally came, there was a moment of stunned surprise. Had the copper bubble really finally burst?

Apparently it has. And unless there is an upturn in demand both here and abroad, the new 56¢ price might not last long. Merchants on Friday were quoting 51-3/4¢.

One year ago, the London Metal Exchange was holding firm at 70¢ or higher; now the price has drifted below 50¢. The declining price itself is not as remarkable as are the conditions under which the decline has taken place. Chile's Chuquibambilla -- the world's largest -- has been struck since October. Zambia's Mufilira mine -- another one of the copper giants -- was shut down by a disastrous cave-in and will be about 80% inoperative through all of next year. "Chuqui" represents a lost supply of 26,000 tpm and Mufilira close to 14,000 tpm.

Despite these two major supply disruptions -- plus several on-again, off-again strikes in Peru -- the LME has continued to sink. London warehouse stocks are at a record level of

over 53,000 tons and the Japanese reportedly have excess inventories which they may unload. In the midst of this softening market, CIPEC members -- Chile, Zambia, the Congo, and Peru -- will soon be getting together to decide what, if anything, they should do to deal with the situation.

In view of the Chuqui strike and the Mufilira cave-in, it seems quite likely that Chile and Zambia will not look favorably on additional production cutbacks, but a move away from LME pricing back to a common CIPEC price might well be their strategy.

If the US mines follow the pattern established over the past decade, 1971 will be a year for negotiations with labor unions. This has, in the past, shut down the entire industry or at least a large segment of the industry. Therefore, it would appear that the future price of copper will be subject to considerable speculation during the next year with factors to stabilize, raise, or lower the price of copper.

MINING CLAIMS

<u>NUMBER OF CLAIMS</u>	<u>CREEK OR AREA</u>	<u>QUADRANGLE</u>	<u>DATE NOTICE POSTED</u>
60	Arctic Creek	Ambler River	August, 1970
14	Klery Creek	Baird Mountains	July, 1970
7	Rainy & Arsenic Creeks	Bethel	August, 1970
2	No Grub Creek	Big Delta	August, 1970
7	Bradfield Canal	Bradfield Canal	August, September, 1970
2	Eagle Creek	Circle	September, 1970
18	Flume, Eastar & Bonanza Creeks	Eagle	August, September, 1970
7	Godge Creek	Eagle	July, 1970
4	Walkers Fork Creek	Eagle	August, 1970
6	Wattamuse Creek	Goodnews	September, 1970
3	Clear Creek	Hughes	July, 1970
5	Bellows & Bear Creek	Livengood	September, 1970
2	Williams Peak	McCarthy	September, 1970
4	Smith Lake	McGrath	July, 1970
3	Utopia Creek	Melozitna	September, 1970
6	Delta River	Mt. Hayes	February, 1970
11	Red Rock Canyon	Mt. Hayes	August, 1970
6	Glacier Creek	Mt. McKinley	August, 1970
31	Bond Creek	Nabesna	June, August, 1970
12	Bishop Creek	Nulato	July, 1970
16	McKinley Creek	Skagway	September, 1970
23	Mountain Top Creek	Sleetmute	September, 1970
10	Baldry Mountain	Tanana	June, August, 1970
22	Mile 6 Taylor Highway	Tanacross	August, 1970

METAL MARKET

	<u>October 26, 1970</u>	<u>Month Ago</u>	<u>Year Ago</u>
Antimony ore, stu equivalent European ore	\$16.96-18.70	\$22.32-24.11	\$13.00-13.25
Barite (drilling mud grade per ton)	\$12-16	\$12-16	\$12-16
Beryllium powder 98% per ton	\$54-66	\$54-66	\$54-66
Chrome ore per long ton	\$31-35	\$31-35	\$31-35
Copper per lb.	56.0¢	59.6¢	52.0¢
Gold per oz.	\$38.70	\$35.90	\$40.85
Lead per lb.	15.0¢	15.0¢	15.5¢
Mercury per 76# flask	\$340-345	\$338-355	\$400-495
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb.	\$1.33	\$1.28	\$1.03
Platinum per oz.	\$122-127	\$130-135	\$120
Silver, New York, per oz.	172.6¢	177.5¢	187.2¢
Tin per lb.	174.0¢	177.7¢	166.6¢
Titanium ore per ton	\$30-35	\$30-35	\$20-21
Tungsten per unit	\$50-53	\$50-55	\$43.00
Zinc per lb.	15.5¢	15.5¢	15.5¢

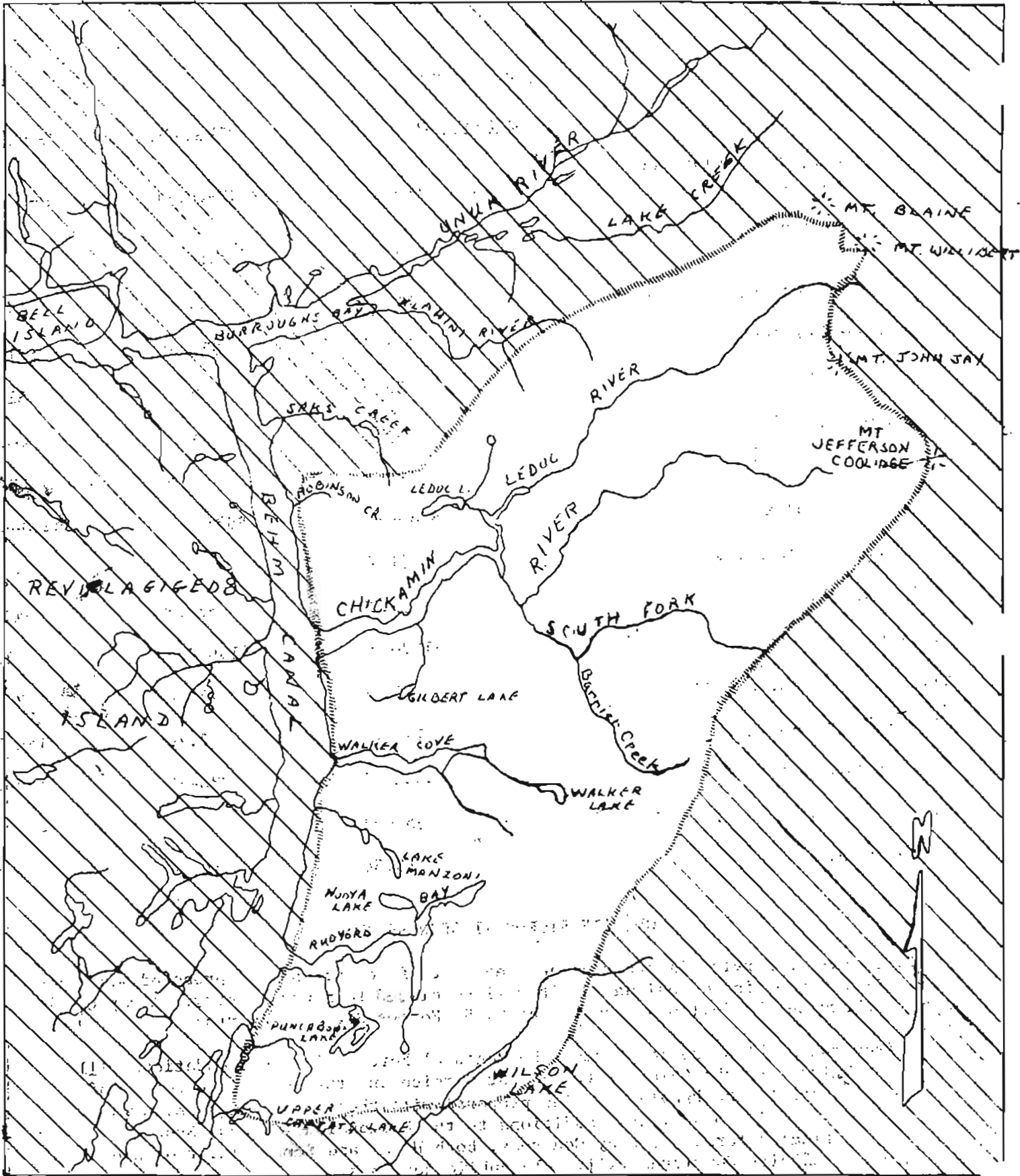
GRANITE FIORDS WILDERNESS AREA

The U. S. Forest Service is studying an area east of Ketchikan as a proposed wilderness area. If the area is so designated, it will be closed to mineral entry. A map of the area is shown on the following page. The U. S. Forest Service reports:

After the studies are completed, the Regional Forester's recommendations will be submitted to the Chief of the Forest Service and through the Secretary of Agriculture to the President. The proposal will then go to Congress, whose authority it is to designate additions to the National Wilderness System. Before final determination by Congress, both House and Senate Interior and Insular Affairs Committees will hold public hearings.

The Granite Fiords Wilderness Study area will be managed by the Forest Service to protect the wild character of the land until Congress makes its final decision.

For more information, please write to: Forest Supervisor; South Tongass National Forest, P. O. Box 2278, Ketchikan, Alaska 99901



500,000 ACRE GRANITE FIORDS WILDERNESS AREA

PROPOSED BY U. S. FOREST SERVICE NEAR KETCHIKAN, ALASKA



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 Department of Natural Resources
 Division of Geological Survey
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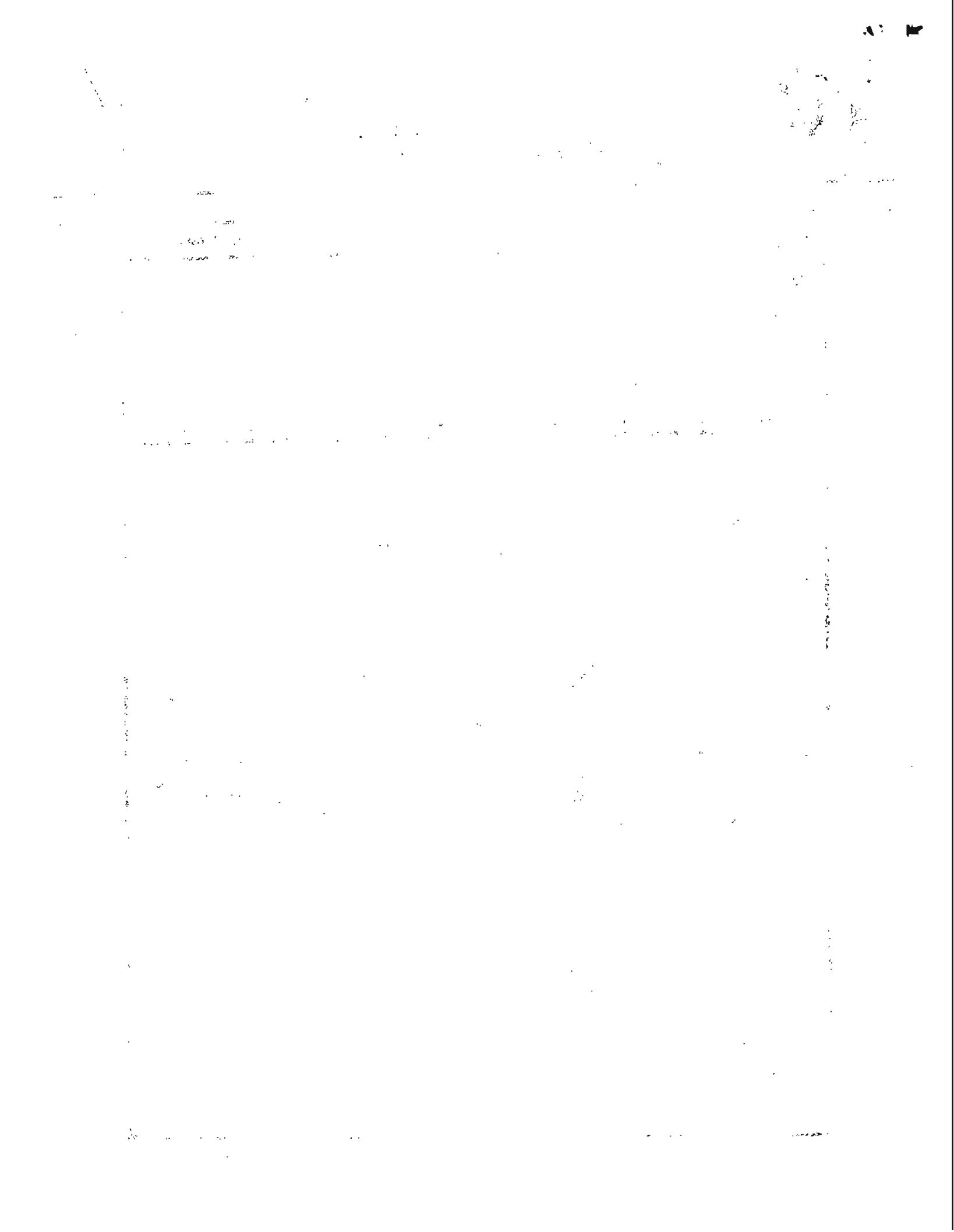


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DIVISION NAME CHANGE

As our readers may have noticed on the cover sheet of this Bulletin, this Division is now the Division of Geological Survey. This is the result of a new law, Chapter 125, passed by the 1970 Legislature. Chapter 125 requires that there be a Division of Geological Survey within the Department of Natural Resources and that the head of this Division shall be called the State Geologist. The State Geologist has not yet been selected.

Functions and duties of the Division as stated in the new law include the following:

"The division of geological survey is authorized to make a complete geological survey of the state, giving special attention to all natural products of economic importance, in order to determine the character, location, and amount of these products; and to provide information on and call attention to areas of potential danger of a geologic nature to private or public building projects."

"The state geologist may make provisions for topographic, geologic, and hydrographic surveys of the state in cooperation with the United States Geological Survey in such manner as in his opinion will be of the greatest benefit to the agricultural, industrial, and geological requirements of the state."

Functions of the old Division of Mines and Geology such as assaying, collection and dissemination of information, assistance to the industry, mine safety, etc. which are charged to the Department of Natural Resources by law will be continued.

RECORDING FEES

New fees are now in effect at all recording offices for filing location notices and annual labor certificates. The fees are:

First Page	\$3.00
Each additional page or fraction	\$2.00
Indexing each name or location over four	\$.25

RAY RIVER ASBESTOS

The weekly ALASKA INSIDE reports that a mineral prospecting crew has been making a survey of a little known asbestos deposit in the Yukon River area due north of Fairbanks. The deposit is on the Little Salt Creek near the confluence of the Ray and Yukon Rivers. This deposit is close to both the proposed pipeline road and the possible future extension of the Alaska Railroad.

COPPER EXPORT RESTRICTION ENDED

The U.S. Commerce Department has ended controls on U.S. copper exports which has been in effect since 1966. The Department cites the end of short supplies in copper as the reason unrestricted export licensing will be resumed immediately.

We have long maintained that U.S. restrictions on exporting of copper ores and concentrates have held back Alaskan copper developments because foreign capital (mostly Japanese) has been unable to purchase our copper under these restrictions. With the new freedom to export, Alaskan copper exploration and development should show significant acceleration.

MINING EXTENSION COURSES

The University of Alaska, Division of Statewide Services has released the following 1970-71 schedule of mining extension courses. Further information may be obtained from the Division of Statewide Services, University of Alaska, College, Alaska 99701.

Willow M. Burand

<u>Location</u>	<u>Dates</u>	<u>Course</u>
Nome	Oct. 12 - Nov. 6	Basic Prospecting
Petersburg	Nov. 9 - Dec. 4	Basic Prospecting
Petersburg	Dec. 7 - Dec. 23	Rock Identification
Ketchikan	Jan. 4 - Jan. 29	Basic Prospecting
Thorne Bay	Feb. 1 - Feb. 26	Basic Prospecting
Ninilchik	Mar. 1 - Mar. 26	Basic Prospecting
College	Mar. 29 - April 23	Basic Prospecting
Tok	April 26 - May 14	Rock Identification

Leo Mark Anthony

Anchorage	Oct. 12 - Nov. 13	Prospecting
Kodiak	Nov. 16 - Dec. 4	Rock Identification
Sitka	Dec. 7 - Dec. 18	Geophysical Prospecting
Elmendorf	Jan. 4 - Feb. 5	Prospecting
Anchorage	Feb. 8 - Mar. 12	Prospecting
Anchorage	Mar. 15 - April 2	Rock Identification
Homer	April 5 - April 16	Rock Identification
Anchorage	April 19 - April 30	Geochemical Prospecting
College	May 3 - May 14	Geochemical Prospecting

NEW PUBLICATIONS

USGS

The following open file report has been released by the U.S. Geological Survey and is available for consultation in the Alaska U.S.G.S. and State Division of Geological Survey offices. Material from which copies of this open file report can be made at private expense is available only at the Alaska Geology Branch, U.S.G.S., 345 Middlefield Road, Menlo Park, California 94025.

Results of geochemical sampling in the western Clearwater Mountains, Alaska, by Thomas E. Smith. 249 p. (including 141 tabular p.) 23 text figs.

MINING CLAIMS

<u>NUMBER OF CLAIMS</u>	<u>CREEK OR AREA</u>	<u>QUADRANGLE</u>	<u>DATE NOTICE POSTED</u>
5	Lone Tree Gulch	Anchorage	August, 1970
6	Old Glory Creek	Bendeleben	August, 1970
3	Candle Creek	Bendeleben	July, 1970
7	Humbolt Creek	Bendeleben	September, 1970
23	Rainy Mountain	Big Delta	July, 1970
72	Horace Mountain	Chandalar	June, July, 1970
30	Warner Bay	Chignik	August, 1970
4	Mastadon Creek	Circle	August, 1970
4	Copper Creek	Eagle	July, 1970
2	Lost Chicken Hill	Eagle	August, 1970
2	O'Brien & Dome Creeks	Eagle	August, 1970
2	Glory Creek	Fairbanks	July, 1970
9	Partin Creek	Healy	August, 1970
2	Bryn Mawr Creek	Healy	September, 1970
15	No Water Mountain	Healy	July, 1970
1	Nenana River	Healy	August, 1970
16	Takoka Creek	Lake Clark	July, 1970
23	Wildcat Creek	Livengood	August, 1970
4	Alder Gulch	Livengood	August, 1970
9	Sec. 14, T2N, RLW, F.M.	Livengood	August, 1970
1	Boston Creek	Livengood	August, 1970
2	Crooked Creek	Livengood	August, 1970
1	Nome Creek	Livengood	July, 1970
2	Pedro Creek	Livengood	August, 1970
1	Golconda Creek	McCarthy	August, 1970
6	Weldon Creek	Mt. Hayes	July, 1970
1	McCumber Creek	Mt. Hayes	July, 1970
3	Glen Creek	Mt. McKinley	June, 1970
9	Big Eldorado	Nabesna	August, 1970
12	Kuskokwim River	Russian Mission	May, June, 1970
3	Slate Creek	Seward	July, 1970
2	Porcupine Creek	Skagway	July, 1970
4	Big Hurrah Creek	Solomon	August, 1970
1	Cache Creek	Talkeetna	July, 1970
115	Taylor Highway	Tanacross	June-August, 1970
76	Bean Ridge	Tanana	August, 1970
4	McKinley Creek	Tanana	August, 1970
190	Lost River	Teller	July, 1970
4	Cassiterite Creek	Teller	August, 1970
4	Becharoff Lake	Ugashik	January, 1970
2	Chitina River	Valdez	June, 1970

METAL MARKET

September 28 Month Ago Year Ago

	September 28	Month Ago	Year Ago
Antimony ore, stu equivalent			
European ore	\$21.43-23.21	\$22.32-24.11	\$9.29-9.46
Barite (drilling mud grade per ton)	\$12-16	\$12-16	\$12-16
Beryllium powder 98% per ton	\$54-66	\$54-66	\$54-66
Chrome ore per long ton	\$31-35	\$31-35	\$31-35
Copper per lb.	59.6¢	59.6¢	48.1¢
Gold per oz.	\$36.45	\$35.90	\$41.29
Lead per lb.	15.0¢	15.0¢	15.5¢
Mercury per 76# flask	\$355-360	\$338-355	\$487-495
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb.	\$1.28	\$1.28	\$1.03
Platinum per oz.	\$130-135	\$130-135	\$120-125
Silver, New York, per oz.	176.7¢	184.8¢	166.7¢
Tin per lb.	174.8¢	177.7¢	165.3¢
Titanium ore per ton	\$30-35	\$30-35	\$20.21
Tungsten per unit	\$50-53	\$50-55	\$43.00
Zinc per lb.	15.0¢	15.5¢	15.0¢

