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DIVISION OF  
GEOLOGICAL SURVEY**

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MINING ACTIVITIES

FIRST DIVISION - Northwest Ventures, Ltd., of Vancouver is now diamond drilling their copper holdings on Gravina Island near Ketchikan. They plan to complete 5000 feet of drilling in the next few months in relatively shallow holes put down into the reportedly extensive surface showings. A larger drill for deeper holes will be obtained if the preliminary drilling shows encouraging results. Northwest Ventures is primarily a prospecting firm, and it is presumed the property is open for negotiations. Forty-nine claims are involved.

It appears, finally, that a tunnel will be driven for access to the Granduc copper deposit from Stewart, B.C. Reports on the length of the proposed tunnel vary from 14 to 21 miles, but there is no denying it will be a huge project. Although it is all on the Canadian side, the large amount of traffic will benefit the Hyder and Ketchikan areas. Something like 30,000,000 tons of 1.7% copper ore have been blocked out.

Diamond drilling is continuing at the Funter Bay nickel-copper lode of the Admiralty Alaska Gold Mining Co. Some 25 holes have been drilled since a year ago, but at present the program is on a private contract basis rather than DMEA-financed as most of the work has been. Results are reported to be continually encouraging. The company now reports they are planning to extend the main adit in the hope of cutting the nickel lode about 1200 feet lower than the present working level. Twenty claims there have been filed for patent and twenty-five more have been surveyed for patent. Two other properties with which W. S. Pekovich is associated have large groups of claims which have been filed for patent: the Alaska Empire gold property at Hawk Inlet, 46 claims, and the Snettisham iron property, 18 claims.

A Juneau group, the Alaska Minerals Exploration Co., has purchased a Hiller 12-B helicopter to continue their uranium prospecting with this year.

THIRD DIVISION - Operation of the recovery plant at the Red Devil mercury mine commenced on February 27. Most of the usual mechanical problems of a new operation have been solved. The tonnage treated has gradually increased to the present rate of about 35 tons per day. Quicksilver recovered is reported to be approximately one ton per day.

A new placer operation is moving equipment in to work ground on lower Slate Creek in the upper Chistochina country.

FOURTH DIVISION - Additional pay has apparently been found on Caribou-Creek in the Selcha where the Brinker-Johnson Co. dredge was shut down three years ago. The result is that the dredge will be put back into operation there this year by a partnership of three men, one of whom was dredgemaster for Brinker-Johnson Co.

## OIL NEWS

Phillips Petroleum Co. has released the information that it is now drilling its third exploratory well in the Icy Bay area. They reported that the first two wells were not commercially productive.

Sixteen oil and gas leases covering 35,200 acres in the Yakutat area have been filed by the Colorado Oil and Gas Corporation of Denver. This firm is reported to have additional acreage in that area under contract.

The recent acquisition by Phillips Petroleum Co. of about 50,000 acres on northern Kenai Peninsula brings the total of major oil firms with large holdings on the Kenai to eight. The other major firms there are Richfield, Standard Oil of California, General Petroleum, Sunray Oil, Shell Oil, Union Oil and Ohio Oil.

### MORE COUNTER EXPORTING INFORMATION

While dwelling on the subject of taking Geiger and scintillation counters across the Canadian boundary last month, we neglected to mention the fact that another regulation to be complied with is the A.E.C. requirement of a license to take or send a counter out of this country. This license must be obtained prior to taking the counter into Canada, regardless of the purpose, distance, or time involved. Application should be made to the U. S. Atomic Energy Commission, 1901 Constitution Ave., N.W., Washington 25, D.C., Attention: Licensing Controls Branch.

### MINERAL LEASING RECEIPTS

Since the inception a short time ago of the Federal Government's program of leasing Outer Continental Shelf oil, gas, and sulfur lands off the coasts of Texas and Louisiana, receipts from bids and first-year rentals have already totalled \$252,141,077. This should give an idea of what it could mean to Alaska's treasury if she had control of her tide and offshore lands. The recent check received from the Bureau of Land Management for \$32,856 as Alaska's share of receipts from mineral leases on public lands would look like peanuts.

### CANADIAN FREE GOLD MARKET

The Canadian government has relaxed their regulations on gold so that gold in any form may now be bought, sold, or traded on the open market in Canada, or exported without restriction. Canadian officials say that this does not mean that they intend to return to the gold standard. A U.S. Treasury official has said that the new Canadian regulations will have no effect on the U.S. gold policy at the present time. It naturally follows that the new free market in Canada will have no effect on the world market price as long as foreign governments can purchase gold from the U.S. Treasury at \$35 per ounce. This is a step in the right direction, however, and may encourage some similar action in the U.S. S. 515 is a Senate bill to establish a free gold market in the U.S., and it is now before the Senate Committee on Banking and Currency, but present indications are that there will be no action on it. This bill would also prohibit the U.S. Government from selling gold for commercial purposes.

## MORE ON RECORDING ASSESSMENT WORK

Further arguments in favor of compulsory recording of assessment work or termination of the claim by forfeiture have been received. This sort of regulation would remove the stigma of "claim jumping" when new claims are located by a second party where assessment work has not been done. Also, it would give due notice to interested parties that are willing to do some work on the claim that the assessment work has not been done. Such a regulation could be so worded that the original staker could return and relocate the ground in the absence of intervening stakers after a given period had elapsed sufficient to allow others to locate. It might be said that the filing of the assessment work affidavit is an easy way to insure proper title to a mining claim.

## BISMUTH

About 80% of the bismuth consumed in the U.S. is used in metals production and the remainder is used in the manufacture of pharmaceuticals. Bismuth improves the casting properties of tin and lead by lowering the surface tension and it also acts as a hardening agent. It is added to molten iron to produce cleaner castings. Also, its addition to certain aluminum alloys and corrosion resistant steels is standard practice to produce castings of free-cutting quality and castings of greater machinability. A recent potential development for bismuth is in nuclear power. Several fuel and breeder systems in reactor design are dependent on alloys or compounds of bismuth with uranium, thorium, tin and lead. Naval Ordnance has developed the most powerful magnet in existence from a bismuth and manganese alloy.

The estimated 1955 U.S. consumption of bismuth was 1,730,000 pounds, of which an estimated 630,000 pounds was imported. Exports amounted to 258,000 pounds. It is expected that the supply and demand will continue about the same during the next few years, with no particular difficulty in meeting domestic requirements. Price has been quite stable at \$2.25 per pound in ton lots since 1950.

The two most common (though rather rare) bismuth minerals are native bismuth and the sulfide, bismuthinite, with the former being the most common of the two. Bismuth minerals occur in veins in gneiss and other igneous rocks and also in sedimentary rocks, notably shales. They are nearly always associated with other ores. The chief associations are with tin, copper, cobalt, tungsten, molybdenum, gold and many lead minerals. Only a few small deposits are mined for bismuth alone, the great bulk of the metal being obtained as a byproduct of treatment of ores. Principal foreign sources are the copper, lead, and silver deposits in Peru, the lead deposits of Mexico, the tin and tungsten deposits of Bolivia, and a large scheelite deposit in Korea. Principal domestic sources are the lead-silver ores of Utah and Colorado and the copper, lead, and zinc ores of Montana, Utah, Nevada, Arizona, Idaho, and New Mexico. Some gold ores contain bismuth, but it is only partially recovered.

Native bismuth is found in placer concentrates of several placer districts in Alaska, including the Fairbanks, Livengood, Nome, and Salcha districts, but apparently not in quantities of economic possibilities. The best known lode deposit containing bismuth is on Charley Creek in the Nome district and is held by Native Bismuth, Inc. of Nome, O. A. Margraf, President. This prospect consists of several

bismuth-bearing quartz veins in a schist country rock. The most prominent showing is a vein cut by the creek which varies in width from 12 to 30 inches. The vein system can be followed for two claim lengths. The property is considered promising, but development work is necessary to determine whether a minable tonnage exists. Samples taken recently have run from 0.01% to 3.03% bismuth. The future of this prospect depends on whether the owners can interest a mining company in a development program.

Native bismuth has a perfect cleavage, is colored silver-white, has a metallic luster, and a silver-white streak. Hardness is 2.5 and sp. gr. is 9.8. It tarnishes easily. It often forms beautiful crystals. Bismuthinite is of about the same appearance, though lighter in weight and darker in color. The minerals dissolve easily in hot nitric acid, causing a white precipitate. Under the blowpipe, they cause a yellow coating on charcoal.

Bismuth is sold in 10- and 22- to 25-pound bars, the wholesale lot being 2,000 pounds. The bars are packed in cartons or wooden boxes with packing between the bars to protect the soft brittle metal from injury. As mentioned earlier, the price (\$2.25 per pound), and also the market, are quite stable.

E. AND M. J. METAL MARKET PRICES

	<u>Mar. 22</u> <u>1956</u>	<u>Month</u> <u>Ago</u>	<u>Year</u> <u>Ago</u>
Copper, per lb.	46.4¢	45.0¢	32.7¢
Lead, per lb.	16¢	16¢	15¢
Zinc, per lb.	13-1/2¢	13-1/2¢	11-1/2¢
Tin, per lb.	\$1.00	\$1.00	91-1/2¢
Quicksilver, per flask	\$258-261	\$268-271	\$320-323
Silver, foreign, New York	91-1/8¢	91-1/2¢	88-1/2¢
Silver, domestic, per oz.	90-1/2¢	90-1/2¢	90-1/2¢
Platinum, per oz.	\$97-111	\$97-111	\$76-80
Nickel, per lb.	64-1/2¢	64-1/2¢	64-1/2¢
Molybdenum, per lb. in conc.	\$1.10	\$1.10	\$1.05
Tungsten ore, per unit	\$63.00	\$63.00	\$63.00
Titanium ore (Ilmenite) per ton	\$26.25	\$26.25	\$18-20
*Chrome ore (48%, 3 to 1 ratio ) per ton	\$115	\$115	\$115

\*GSA guaranteed stockpile price. Not quoted by E&MJ