Territory of Alaska
Department of Mines

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T D M BULLETIN

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MINING ACTIVITIES

FIRST DIVISION - Prospecting enthusiasm in Ketchikan appears to be at its highest point in many years. Added interest has been created by the University of Alaska Mining Extension Course taught there the past month, and the town is reported to be full of very serious prospectors, both old and new, laying plans and getting equipped for the coming prospecting season. Copper, iron, tungsten, and radio-actives are the minerals mostly under discussion, and geochemical methods will be used by several. A number of commercial firms will also be busy in the southern part of the Panhandle.

THIRD DIVISION - George H. Cornelius and Harold Lawhead of Kodiak have taken over full control of the Peninsula Exploration Company. This group has been quite active in prospecting copper and other deposits on Kodiak and Sitkalidak Islands for several years.

At a public auction, Evan Jones Coal Company was the successful bidder for 320 acres of coal land adjoining their present holdings. The new acquisition was formerly part of the Eska property.

Richard Alvord as the Uraluck Exploration Company has staked a group of 48 uranium claims in the area of the old railroad loop between Seward and Anchorage.

The Mining World reports that the Kodiak Exploration Company, Inc. has staked 17 claims on a scheelite showing on Kodiak Island.

FOURTH DIVISION - The old Danzenger lead-silver prospect in the Bonnifield District is being reopened by the Gilmer Lode Mining Company of Fairbanks. Last fall they took in a tractor, compressor, and tools from Ferry, and built a landing strip at the property. They are now reopening the old workings.

The newly-formed DeCoursey-Brewis Minerals, Ltd. is going ahead with the rehabilitation work at the mercury property on the Kuskokwim River as rapidly as possible. The mine is being dewatered, and a new shaft will soon be started.

Glenn Franklin, Chuck Herbert, and associates will start placer mining on Livengood Creek this year. At an RFC sale last fall, U. S. Smelting Refining and Mining Company bought the dredge and other equipment, but the original Livengood Placers, Inc. apparently kept title to the ground. Franklin and Herbert will mine by open-cut with a dragline rather than by dredging. They plan also to keep stripping sufficiently far ahead to allow the gravel to thaw naturally, if possible, and thus save the expense of thawing with cold water points.

OIL NEWS

A number of Anchorage residents forming part of the Yakutat Development Company were disappointed lately when their applications for oil leases on further acreage in the Yakutat Bay area were rejected by the Bureau of Land Management. The reason given for the rejection was that the leases, if granted, would have given the

group an excessive acreage when added to leases already held. It must be remembered, however, that under the provisions of Section 17-3 of the Mineral Leasing Act, the Secretary of the Interior has authority to approve operating, drilling or development contracts made by one or more lessees whenever the public interest may require. Such agreements are not subject to acreage limitations and do not follow any prescribed form.

Shell Oil Company has applied for more leases in the Wide Bay area to cover about 60,000 acres in addition to about 40,000 already requested. They are planning possible seismic work in that area in addition to the work they will be doing on Kenai Peninsula.

It is reported from Washington that a decision to act on the release of part of the oil-bearing lands north of the Brooks Range will be forthcoming soon. The plan would be to have Congress restore the 21-million acres withdrawn by Public Land Order 82 during World War II. This would open up the much-discussed Gubik gas field with its possibilities of piping gas to the railbelt, but apparently would not include the opening of the original Naval Petroleum Reserve No. 4. Pet. 4 includes another 24 million acres north and west of the PLO 82 withdrawal. The legislative method is the long way around, since the Secretary of the Interior could restore the land himself, but at least it would be a step in the right direction.

NOTE FOR PROSPECTORS

The "Sourdough" points out in his monthly feature in the Western Miner (We quote each other often and are both happy about the arrangement.) that the incorrect statement is too often made that all good mineral deposits in easily accessible areas have been discovered. As proof of this, he tells of a very promising nickel-copper prospect recently found near Keefers, B. C., which appears to be extensive and from which a sample was taken that assayed 2.24% nickel, 1.6% copper, and 0.25% cobalt. Northwest Ventures, Ltd. have already taken an option on it. The prospect is within one mile of the Fraser River, two trans-Canada railroads, and an arterial highway!

DRILL INFORMATION

The Packsack diamond drill, which has created so much interest in Alaska, is now reportedly being handled by the Alaska Exploration and Development Corporation, Box 1886, Anchorage. Its original Canadian distributor is Packsack Diamond Drills, Ltd., North Bay, Ontario, Canada.

The Pionjar gasoline jackhammer also has an Alaskan dealership now, according to advice received. It is the Kodiak Exploration Company, Box 448, Kodiak, Alaska. The nearest Canadian agency for the Pionjar drill is H. P. Menzies and Company, Ltd., 207 W. Hastings Street, Vancouver 3, B. C. A U. S. agency for Pionjar is Stanco Manufacturers and Sales, Inc., 1931 Pontius Street, Los Angeles 25, California.

E. J. Longyear Company, makers of an extensive line of diamond drills, has appointed Glenn Carrington and Company, 91 Columbia Street, Seattle, Washington, as their representative for Alaska. The smallest Longyear drill is called the "Porta" diamond drill. It weighs either 260 or 330 pounds, depending on the head used, and is rigged so that two men can carry it with a pair of poles, or it can be broken down to packing loads, the heaviest of which is 80 pounds, unless the heavier 150-pound head is used. Its reported capacity is 150 feet of 3/4-inch core or 100 feet of 7/8-inch core, and it is powered with a 3-1/2 HP air cooled gasoline engine.

FIRST SBA MINE LOAN

The January Mining World reports that at long last the Small Business Administration has approved its first mining loan after having granted 953 loans to other types of small businesses. So, perhaps there is hope from this quarter after all. The loan is in the amount of $56,000 to the Klamath River Chrome Company in California for the mining and concentrating of chrome ore. It remains to be seen how this will work out. Miners will remember that RFC loan terms were often very difficult to live up to, and it may develop that SBA terms will be as onerous as those of the RFC.

KOREAN ITEM

As is well known to mining men and many others, one of the surest ways of putting a country on a firm financial footing is the exploitation of its mineral deposits, if such exist in sufficient quantity. Part of the UN Korean Reconstruction Agency's plan to help Korea recover is just that. To assist in assessing the value of existing mines and newly discovered prospects, UNKRA has built an assay laboratory there at a cost of $160,000. With this they hope to attract investors from abroad to look into the possibilities of Korean mining ventures.

MERCURY

Mercury is popularly known as quicksilver because of its molten or fluid state at normal temperatures and its bright silvery appearance. Until the last few years, it was used mostly in the manufacture of mercury batteries, pharmaceuticals, electrical apparatus, instruments, munitions, and antifouling point. Recently, a use for it has been found in the production of atomic energy, and this use is consuming large quantities. Something over 100,000 flasks per year are now being consumed.

Mercury is bottled and sold in standard iron or steel screwplug flasks which hold 76 pounds of the metal. Until the recent upsurge of consumption mentioned above, the mercury market and price were notoriously unstable. This was principally due to large mercury mines in Spain and Italy which could undersell the American product whenever the price and demand started to rise. In 1950 the price was as low as $50 per flask, on which few American producers could subsist. By early 1954 the price was up to $180 then to $200 in March, 1954. At this time, statistics suddenly revealed that far more mercury had been purchased than had been reported consumed and the public realized that something new was happening. The price went steadily up until it reached $331 for an all-time high, and it has now levelled off at $322-324. In addition, the GSA guaranteed a floor price of $225 for three years, which is still a very good price for quicksilver. All this, of course, has been quite an impetus to Alaskan mercury prospecting and mining.

The chief ore mineral of mercury is cinnabar. It is not often found in other forms. Cinnabar deposits in Alaska have been mostly found to be in a belt through the Lower Kuskokwim country which extends from Ophir on the north about 300 miles to Aleknagik on the south and about 80 miles in width, but its presence has been definitely noted in many other parts of the Territory. It often shows up in placer concentrates. Among the better known mercury properties or prospects are the Alice and Bessie, Barometer, Cinnabar Creek, Fairview, Willis, Kolmakof, Marsh Mountain, Red Devil and DeCoursey Mountain. Some production has been obtained

from most of these, and fairly large production from the last two named. Cinnabar is a profitable mineral under the present conditions, and one with which all prospectors should be familiar.

Cinnabar is mercuric sulfide, HgS, in which mercury is 86.2% and the sulfur 13.8%, when pure. Its outstanding feature is its color, which runs from bright to dark red but on occasion tends toward brown. The streak is scarlet. Cinnabar is relatively soft, H=2 to 2.5, and heavy, Sp. G.= 8.0 to 8.2, because mercury itself is very heavy. When carefully heated in an open tube, cinnabar will give sulfurous fumes and metallic mercury, which condenses in minute globules on the cold walls of the tube. An easier test is performed with a mineralight and a willemite screen, whereby the specimen is heated in a dark room, and mercury fumes rising between the mineralight and the screen will cause dense shadows on the screen. It is reported that this test can even be performed without the screen, the shadow showing up on a white wall or sheet of paper. It should be mentioned here that in testing for mercury, or heating same, care should be taken not to breathe the fumes because of their poisonous nature.

The Alaskan cinnabar deposits occur generally in sediments such as sandstone, shale, and graywacke. They are associated with thin intrusions of andesite, diabase, or basalt. The mineralization is usually accomplished by ascending solutions from the intrusions, and the resulting deposits are more often in the form of odd-shaped lenses than veins, depending on the fractures and zones of weakness available as solution channels.

As to what would constitute an economically interesting cinnabar ore body, the lower limit would probably be about 1/2% ore (10 pounds of mercury to the ton) at the present price in interior Alaska where mining and treatment costs run about $40 to $50 per ton. Location and size of the ore body would have their effect on the break-even point, of course. Mercury is mined by underground methods. Treatment is by heating the ore in a sealed chamber (retort) whereby the mercury is driven off as a vapor, then condensed and collected in its pure state.

E. AND M. J. METAL MARKET PRICES

	Feb. 24, 1955	Month Ago	Year Ago
Copper, per lb.	32.7¢	29.7¢	29.7¢
Lead, per lb.	15¢	15¢	12-1/2¢
Zinc, per lb.	11-1/2¢	11-1/2¢	9-1/4¢
Tin, per lb.	91-1/4¢	86-1/4¢	85¢
Quicksilver, per flask	$322-324	$322-324	$188-190
Silver, foreign, New York	85-1/4¢	85-1/4¢	85-1/4¢
Silver, domestic, per oz.	90-1/2¢	90-1/2¢	90-1/2¢
Platinum, per oz.	$76-80	$78-84	$90-92
Nickel, per lb.	64-1/2¢	74-1/2¢	60¢
Molybdenum, per lb.	$3	$3	$3
Tungsten ore, per unit	$63	$63	$63