

MINING ACTIVITIES

FIRST DIVISION - Exploration at the Granduc holdings on the Leduc Glacier appears to be yielding excellent results. The company is currently considering various methods and routes of transportation to tidewater through the S.E. Alaska "panhandle".

Claims staked on the Leduc River just this side of the Canadian border are being considered by the Kennecott Mining Company. Across the border at this point are the Granduc copper holdings mentioned above. If the claims on the American side are as promising as the Canadian showings, the Ketchikan mining district will receive a real boost. Two of the stakers, Howard Fowler and Wendell Dawson, also held some of the claims now being prospected by Granduc.

The U.S.G.S. recently announced the issuance of two maps, (1) "The Aeromagnetic Map of the Southern Part of Prince of Wales Island" and (2) "Geological Map of Duke Island", both of which were placed on open file at the Juneau, Anchorage, and Fairbanks offices of the Survey. Since these maps are of particular interest to persons engaged in the search for magnetite iron deposits, and since both map areas lie in the immediate vicinity of Ketchikan, the TDM requested that copies be made available for public inspection at our Ketchikan office. We are happy to announce that both maps are now available for inspection at our Ketchikan office, and we wish to thank the U.S.G.S. for their excellent cooperation.

Anchorage news sources finally made it public that U.S. Steel is one of the parties currently combing S.E. Alaska for iron deposits. It was also revealed that they have been staking the legal limit of limestone claims each month. Limestone is used in the iron-smelting process. A concern as large as U.S. Steel looking for iron and limestone in Alaska surely indicates what we have been saying about the importance of iron deposits to the future mining economy of the Territory.

SECOND DIVISION - The U.S. Tin Corporation lode tin mine at Lost River shipped 183 tons of tin concentrates by Alaska Steamship Co. about a month ago. This was probably the largest shipment ever made from an American tin mine. It was shipped in 215 oil drums and was valued at \$225,000. The concentrates are destined for the government tin smelter at Texas City, Texas. Another shipment is planned for October.

THIRD DIVISION - Early in August the Kenai Chrome Co. had 26 men employed at their Red Mountain chrome mine near Seldovia, and were working two shifts. They were hauling 50 to 65 tons per day to the beach at that time and were planning to double this amount within a few days. Generally, the orebody runs from 2 to 4 feet in width, but an unexpected widening to 9 feet in one section has greatly increased their tonnage potential. The first shipment was to have been made in late August, but the TDM has received no confirmation report on it to date.

An Anchorage news report tells of a mining deal of Northern Pyrites Corp. in which they have taken a two-year option on the Horseshoe Bay pyrite deposit. The

location is on Latouche Island in Prince William Sound. The total option price is reported to be \$170,000, starting with relatively small payments. Geophysical exploration is now being carried out on the property. Production of sulfur from sulfides has been increasing during recent years, and metallurgical improvements are also beginning to include the recovery of the iron in addition to the sulfur. Northern Pyrites Corp. is a subsidiary of Texas Gulf Sulphur Co., one of the largest sulfur producers in the States.

FOURTH DIVISION - The DeCoursey Mountain Mining Company has had a combination oil tanker and deck cargo barge built for transporting oil and supplies up the Kuskokwim River from Bethel to its quicksilver mine near Sleitmut. She will carry 50 tons of cargo or 25,000 gallons of oil, and will draw 3 feet when loaded. Designed especially for her job, she has a single tunnel screw and two rudders. Her name, appropriately, is the Cinnebar.

The record high price for quicksilver is still holding, and more prospectors are turning up with new finds in the lower Kuskokwim country. Two prospectors have requested TDM help in appraising new mercury shows during the past month.

Hugh Matheson, placer miner from Ophir and Flat, is mining on Big Creek in the Chandalar. This is the first mechanized mining in the Chandalar since 1950.

COAL MINE NEWS

Military coal contracts for supplying coal to Army and Air Force installations near Anchorage and Fairbanks were awarded a month ago as follows:

Usibelli Coal Mines, Inc., 136,000 tons at \$7.40 per ton;

Arctic Coal Company, (tonnage not given) at \$7.06 per ton;

Evan Jones Coal Company, 161,000 tons at \$12.21 per ton;

Houston Coal Mine Company, 10,000 tons at \$8.82 per ton;

Pioneer Coal Mining Company, (formerly Buffalo Mine),
5,000 tons at \$12.25 per ton;

Houston Coal Company, 20,000 tons at \$8.57 per ton.

Evan Jones also received an additional contract of 15,000 tons for a special sized coal at \$13.34 per ton. All prices are f.o.b. at the mines.

OIL NEWS

Federal legislation has been passed which allows an Alaskan acreage of 100,000 acres which may be held under one oil and gas lease. This is an increase from 15,360 acres. Also, an increase from 100,000 to 200,000 acres was made on the amount of land that can be held under option for exploration.

The Alaska Oil and Gas Development Co. drill near Eureka has passed a depth of 2,365 feet and has penetrated Cretaceous shale. Earlier in the month the company announced that they would know by late September whether or not they would strike oil at this location.

The Havenstrite drilling at Iniskin Bay is progressing at the rate of 200 feet per day and has passed the 1700-foot mark. They do not expect significant showings until they reach 6,000 or 6,500 feet, and hope to drill to 10,000 feet by November 1.

Shell Oil Co. has four geological parties in the field this year in the Cook Inlet, Ugashik and Becharof Lake areas. Fifteen geologists are employed in addition to camp attendants and pilots. Encouraging oil seepages have been found in the areas in which they are working, and they plan to increase their exploratory program in the near future.

A U.S. Geological Survey report which should be of assistance in the search for oil in the Malaspina district was released during the month. Large oil seepages were found in two localities by a GS field party, and the structures are considered favorable for the entrapment of oil. The report consists of a geological map of the Malaspina district, two structure sections, and a brief text. It can be seen at GS offices at Room 210, Glover Bldg., Anchorage, and at the School of Mines Bldg. at College.

GEOCHEMICAL PROSPECTING COURSE

Earl H. Beistline, Dean of the School of Mines, University of Alaska, has announced that a two-week course in geochemical prospecting will be taught on the University campus this month. Two faculty members will present the course, and they have both spent time this summer with the U.S. Geological Survey's geochemical branch at Denver, Colorado, learning the Survey's geochemical work and prospecting techniques. They are Dr. Nalin R. Mukherjee, associate professor of chemistry and metallurgy, and Leo Mark Anthony, instructor of the mining extension course.

Dean Beistline states the following: "The practical application of geochemical prospecting is fairly new. It holds much promise for the location of mineralized zones and ore deposits in the Territory for several reasons: It is important that the natural distribution of trace elements is relatively undisturbed in the Territory. Much of the Territory is covered by overburden and vegetation which have made the application of standard prospecting methods very difficult. The speed and economy of geochemical methods offer distinct advantages over previous prospecting techniques."

The geochemical prospecting course will be in addition to the mining extension courses taught throughout the Territory every winter and the mining short course given on the campus each fall. Further information can be obtained by writing to Dean Beistline at College, Alaska.

NEWS FROM AMERICAN MINING CONGRESS BULLETINS

"MINING CLAIMS ON LEASING ACT LANDS: President Eisenhower on August 13 approved S. 3344 which provides for multiple mineral development of U.S. public lands by amending the mining laws, the mineral leasing laws, and the Atomic Energy Act (Bull. #19, p.1). The measure is now Public Law 585, 83rd Congress.

"The new law opens 60 million acres of public lands to location under the mining laws by permitting such location on Leasing Act lands (with a reservation to the United States of Leasing Act minerals). The law also validates numerous mining

claims heretofore located on the basis of a discovery of uranium ore, and deletes from the Atomic Energy Act the reservation to the United States of fissionable source materials.

"The law protects all rights of claimants of valid mining claims located prior to its enactment. As to claims validated under this law and claims located after its enactment, the claimants will receive, upon issuance of patent, full title to all minerals, including Leasing Act minerals, unless the claims are on land then known to be valuable for Leasing Act minerals, or included in a permit or lease, or covered by an application under the leasing laws.

"The act supplements Public Law 250, enacted last year, which validated numerous mining claims located between July 31, 1939 and January 1, 1953, on lands not subject to location because they were covered by an outstanding filing under the Mineral Leasing Act or because they were known to be valuable for one or more of the leasing minerals.

"The Act establishes basic principles of operation which are to be followed in multiple use of the same lands but, in general, it provides that operations shall be conducted in so far as reasonably practicable in a manner compatible with any other mineral use. Any disputes between a miner or a leasing act operator may be adjudicated in the courts."

Further information on this new law can be obtained from the TDM.

NEW PROSPECTING EQUIPMENT

E.&M.J. Metal Markets reports that Geiger counters only slightly larger than a pack of cigarettes are now being produced by a well-known maker of geophysical instruments. This means that a prospector, sportsman, or anyone else going into the bush can check the possibility of radioactive minerals where ever he goes without having to carry a heavy and bulky instrument.

A new type of water jet drill developed by the U.S. Geological Survey is being used by them to drill for water in the Fairbanks area. It is reported to be a faster and more economical method of drilling and will penetrate rock as well as soil. D. J. Cedarstrom of the Ground Water Branch of the U.S.G.S. is in charge.

ASSESSMENT WORK AFFIDAVITS

More than half of the assessment work affidavits currently being filed in Alaska are incorrect in some way or another. While it is true that the filing of the affidavits is not compulsory, and also true that the courts usually place considerable weight on a claim holder's honest intent, it still seems reasonable that the affidavit should be filed and filed correctly for the claim holder's own protection. If the affidavit is to be filed, it might as well be correctly made out and filed within the time limit so that future possible claim contestants or purchasers can not question it or the holder's title to the claim. Otherwise it may be a waste of time and money.

The law states that the affidavit shall be filed within 90 days after the expiration date of the assessment year if it is to be effective. That makes the deadline for filing affidavits at noon September 29.

The law requires the 5 following items to be included in a correct affidavit:

- (1) The name or number of the claim and where situated;
- (2) The number of days' work done and the character and value of the improvement made;
- (3) The date of the performance of such labor and of the making of improvements;
- (4) At whose instance the work was done or the improvements made;
- (5) The actual amount paid for such work and improvements, and by whom paid, when the work was not done by the owner or his lessee.

One of the most common mistakes made is failing to indicate on the affidavit who owns the claim. The affidavit must be sworn to before a Notary Public or a Postmaster. It may be made out for more than one claim so long as the claims are named and all details given. A suggested form to be followed in the preparation of assessment work affidavits is included on the last page of this bulletin.

CURRENT METAL PRICES

The following metal prices taken from the E.&M.J. Metal Markets report of August 26, 1954, should be of interest to the prospector and miner:

Copper	Domestic average - 29.7¢ refinery (per lb.)
Lead	14-1/4¢ N. Y. (per lb.)
Zinc	11¢ East St. Louis (per lb.)
Tin	93-1/4¢ prompt, N. Y. (per lb.)
Quicksilver	\$290 - \$295, N. Y. (per flask of 76 lbs.)
Silver	85-1/4¢ (per oz.)
Platinum	\$84 - \$87 (per oz.)
Nickel	60¢ (per lb.)
Molybdenum	\$3.00, 99%, (per lb.)
Tungsten	Western high grade scheelite concentrate \$63 per unit, f.o.b. mine
Manganese	36.2 to 37.45¢, 96%, (per lb. delivered)

MISCELLANEOUS

It appears as if the DMEA program will continue strong for some time yet. An additional six million dollars has been made available to finance mining exploration projects up to June 30, 1955.

The AEC booklet, Prospecting With A Counter is now available. They can be obtained from the Superintendent of Documents, U.S. Printing Office, Washington, D.C., or from the TDM offices, which have a limited supply. The price is 30¢. This booklet has additional information on the use of Geiger counters and scintillometers that is not contained in the other AEC booklet Prospecting For Uranium. Prospectors should be equipped with both volumes.

The prediction of Jeron King Criswell of Hollywood quoted in our February Bulletin that the U.S. would return to the gold standard by August 1, 1954, quite apparently did not work out.

MOLYBDENUM

This is the start of a new series of articles in which the TEM plans to bring information on various metals and minerals to the prospecting public and thereby encourage people to be on the lookout for them while in the field. Some of the following material is to be credited to texts by Bateman and Dana.

Molybdenum is used as an alloy in steel in which it acts like tungsten, but more powerfully. It is the most potent hardening alloy, and also increases the strength and ductility of steel and cast iron. It serves best in steels containing nickel, manganese, or chromium; and amounts used are small, usually less than 2 percent. Chemical concerns are also big users. The largest producer, as everyone knows, is the Climax Mine in Colorado which is currently producing close to 28,000 tons per day of less than one percent ore.

Molybdenum is practically always found in the form of the mineral molybdenite (called "moly" for short, which is pronounced "molly"). Molybdenite is a sulfide with the chemical composition MoS_2 , 60% of which is the Mo, the other 40% being sulfur. It is quite soft, and when in good specimens, splits into thin sheets (foliates) very easily. It is often mistaken for graphite since it has a dark lead-gray color, but on close examination it will be seen that it has a dark bluish tinge that distinguishes it from the dark grey to black of the graphite. Also it does not rub off on the hands as easily as graphite, but will soil them to a certain extent. Its specific gravity is around 4.7; it has a gray-green streak, and a greasy feel. Graphite has a black streak and a specific gravity of only 2.1.

Moly is found in five types of deposits: pegmatite, contact, disseminated replacement (Climax), fissure veins, and pipes. It is likely to be associated with cassiterite, scheelite, wolframite, fluorite, granite, syenite, and gneiss. In Alaska, moly has been found in almost all districts. U.S.G.S. Bulletin 926-C, Occurrences of Molybdenum Minerals in Alaska, describes 41 deposits in the Territory on which definite information was reported by 1939. The bulletin states that since Alaskan occurrences found thus far have been very close to intrusive granite masses, these are the type of formations near which moly prospecting should be done. A deposit on Canyon Creek, tributary to the upper Chitina River, is described among others, which certainly should be investigated by someone to determine if it has commercial possibilities.

Moly mines are underground, and concentration of the ores is accomplished by differential flotation.

A recent letter from the Molybdenum Corporation of America, Washington, Pennsylvania, to the Alaska Development Board contained the following marketing information: (a) Moly concentrates are only purchased on the Eastern seaboard and could not be priced higher than 55¢ per pound of contained MoS_2 delivered there to attract buyers at present. The concentrates would have to be free of lead and zinc, maximum copper content of 0.5%, maximum phosphorous 0.06%, and no other deleterious impurities such as arsenic or tin. (b) Usual terms are payments between 40 and 60 days after receipt of concentrates. (c) Present market conditions are not too stable, but moly will always sell if priced low enough. (d) Rail freight rates from Seattle to the east are probably around \$36.00, or higher, per ton. Shipping rates to Seattle from Alaska, of course, would vary greatly with respect to location, size of tonnage, type of hull used, dock facilities, etc.

AFFIDAVIT OF ANNUAL LABOR

United States of America)
Territory of Alaska) ss.

_____ being first duly sworn on his oath deposes
Print name of person who did the work
and says:

1. I am well acquainted with _____ claim(s) known as _____
Placer or Lode Name of
on _____, a tributary to _____ in the
Claim Name of stream, mountain, etc.
Mining District and _____ Recording Precinct,
Alaska, and I know that _____ is the owner of said claim(s).
Print name of claim owner
The claim(s) lies _____
Describe location of claim with reference to a well-known or
easily found landmark or land survey

2. That I performed _____ days of work and labor _____ said
Upon or for
claim doing _____
Describe actual work accomplished, amounts done, and time spent on
each item
such work and labor is reasonably worth the sum of \$ _____; and the work was
done at _____
Actual location of work on or with reference to claim.

3. Said work and labor was performed by me between the _____ day of
_____, 19____, and _____ day of _____, 19____, or upon
the following days _____.

4. Said work and labor was performed by me at the instance and request of
said _____, owner of said claim, who did actually
pay me the sum of \$ _____ for said work and labor.

5. Said work and labor was done for and as assessment work for the benefit
of said claim for the assessment year ending at noon on the first day of _____
19____.

Subscribed and sworn to before me this _____
Signature of person who did the work
day of _____, 19____

(Notarial Seal) _____
Notary Public in and for Alaska.
My Commission expires _____

Note: The affidavit may be sworn to before the local postmaster.