

MINING ACTIVITIES

FIRST DIVISION - The B. C. Mica Company of Vancouver, B. C. has been engaged in exploratory work on the Sitklan Island mica deposits most of the summer. Sitklan Island is south of Ketchikan. The original holder of the claims is Frank Blasher of Hyder.

SECOND DIVISION - The Big Hurrah gold quartz mine, northeast of Nome, has had to close down. After much rehabilitation work which led up almost to the point of actual production, serious ground movement and caving in the shaft forced a close-down of operations. It is reported that another attempt at reopening will be made next spring. The mine is a famous old producer of the early 1900's.

FOURTH DIVISION - The Bureau of Mines reports that the DeCoursey Mountain Mining Company's Red Devil Mine is now the leading American mercury producer. The property is on the Lower Kuskokwim River.

OIL NEWS

A new oil-land leasing contest developed in the past month over a promising structure in the Kateel River area. The Kateel River is just east of the Seward Peninsula and flows into the Koyukuk River from the west about 40 airline miles north of the confluence of the Koyukuk and Yukon Rivers. Two companies are involved, and their leases apparently overlap each other to some extent. Both parties arrived at the Fairbanks Bureau of Land Management office to file at the same time, and a legal argument may arise as to which party's filing was first, or whether they could be considered as "simultaneous filings" as the BLM contends. The companies are the Ute Royalty Company of Salt Lake City and the Texas Yukon Oil Company of Fairbanks. Over 400,000 acres are now under application for lease in the Kateel River area. Plans for exploration work running into the millions of dollars are claimed by the parties.

Russell Havenstrite stated on September 16 that his drilling operation at Chinita Bay, on Lower Cook Inlet, should hit oil within 60 days of that date. They were at 3,500 feet then, and expect to penetrate the structure which they believe contains the oil at about 9,500 feet.

Shell Oil Company is the third major oil company which plans active exploration work in Alaska next year. They have been buying up options held by Alaskans in the Wide Bay area on the Alaska Peninsula for double the original cost and a five per cent royalty agreement. An increase of field personnel will be working under Shell in the near future. The other two major companies engaged in Alaskan oil exploration are Phillips Petroleum, drilling in the Icy Bay area along the Gulf of Alaska, and Standard Oil, working on a development contract in the Homer area.

MAGNESITE MARKET SOUGHT

Part of a letter from H. J. Brillantes, Philippine Consul, 1721 Smith Tower, Seattle 4, Wash., is quoted below at his request:

"The Consulate is in receipt of a letter dated July 29, 1954 from the Department of Foreign Affairs, Manila, regarding the request of Mr. Sotero Baluyut in locating a market for magnesite ore. A sample of Mr. Baluyut's product submitted for analysis to the Bureau of Mines, Manila, resulted in the following:

Magnesia (MgO)-----	45.78%
Iron (Fe) -----	0.054%

It will be greatly appreciated if the above-treated matter can be circularized to interested parties."

ON CLAIM STAKING AND FILING

Requests have been made for claim staking and filing information to be included in the TDM Bulletin. We wrote a brief, 3-page circular for free distribution a year ago giving instructions on staking claims. It is TDM Information Circular No. 1, Proper Claim Staking in Alaska, and it will be sent on request.

Information Circular No. 1 also gives briefly the requirements on filing or recording the claims and what should be contained in proper location notices and certificates. For the further guidance of those who are interested, forms that can be followed safely for lode and placer locations are included on the last two pages of this bulletin. The forms as given can be followed for location notices as well as location certificates. The location notice is the one that is posted on the claim, and location certificate is the one that is recorded with the mining recorder of the district.

A small book entitled Alaska Mining Laws by Henry Roden may be purchased in most towns or from the Empire Printing Company, Juneau, Alaska, for \$2.00. This booklet contains much more detail concerning applications and interpretations of the mining laws and is recommended to anyone contemplating the acquiring of mineral land in Alaska.

CONGRESSIONAL ACTION IN BRIEF

Among the major pieces of mining legislation passed by the second session of the 83rd Congress were the following:

Public Law 585, providing for multiple mineral development of public lands (discussed in the previous TDM Bulletin).

Public Law 206, extending until July 1, 1958 the programs under the Defense Production Act (DPA programs).

Public Law 561, increasing the amount of land that may be held under oil and gas permits and leases.

Public Law 738, authorizing a continuing appropriation of up to \$500,000 to control coal fires.

Public Law 555, modernizing and making more workable the mineral leasing laws.

Bills not passed include the following:

S. 13 and four other bills relating to gold.

S. 783 would have limited surface use of mine locations in national forests.

S. 2320 would have changed the assessment work date.

S. 2875 would have provided for the location of mining claims by geological, geochemical, and geophysical prospecting methods without discovery of minerals in place. Such claims would be square in shape, not over 40 acres, and contiguous claims located and held at one time by a locator could not exceed 640 acres in area or two miles in length.

H.R. 334 would have removed sand, stone, gravel, etc., from acquisition under the mining laws.

Several others were under consideration which would have further limited the miner's use of his claims, defined his mining rights, regulated his use of timber on his claim, etc. Nothing was passed to prevent abuses of mining claim locations.

METAL PRICES

The following metal prices are taken from the weekly E. and M. J. Metal Markets reports of dates as indicated to show current prices as well as trends:

	Sept. 30, 1954	Month Ago	Year Ago
Copper, per lb.	29.7¢	29.7¢	29.5¢
Lead, per lb.	14-3/4¢	14-1/4¢	13-1/2¢
Zinc, per lb.	11-1/2¢	11¢	10¢
Tin, per lb.	93-5/8¢	93-1/4¢	84¢
Quicksilver, per flask	\$325-328	\$290-293	\$184-186
Silver, per oz.	85-1/4¢	85-1/4¢	85-1/4¢
Platinum, per oz.	\$84-87	\$84-87	\$92-93
Nickel, per lb.	60¢	60¢	60¢
Molybdenum, per lb.	\$3.00	\$3.00	\$3.00
Tungsten ore, per unit	\$63.00	\$63.00	\$63.00

COPPER

Copper is used in a wide range of useful alloys with other metals. Its greatest use is in the making of brass, in which it is alloyed with zinc and sometimes tin. Next in importance is its use in wires and bars as electrical conductors. These two functions comprise about 90% of the consumption of copper.

The presence of copper in outcrops is usually indicated by distinct discolorations that distinguish it from the surrounding country rock. The color may be blue or green, which are strong copper indications, or it may be a rust-colored gossan caused by the oxidation of chalcopyrite, the chief copper ore. Gossans may also get their rust color from other minerals bearing iron only, the chief one of which is pyrite, but a prospector should never pass up a gossan without finding out what is causing it, if possible. Float in streams and other exposed places should always be carefully checked. Other copper sulfide minerals of importance besides chalcopyrite are chalcocite (the high-grade Kennecott ore), bornite, and tetrahedrite. Copper carbonates are malachite and azurite. Chrysocolla is a silicate. Pure copper is also occasionally found. Chalcopyrite resembles pyrite at first glance, but actually has a deeper yellow color, does not have the cubic habit of pyrite, and is somewhat softer. Chalcocite is the highest grade copper ore next to native copper. It is a dark blue to black, "sooty" appearing, can be cut with a knife, and often

has a light blue or green coating from oxidation. Tetrahedrite is steel gray to black. Bornite is recognized by its peacock colors, malachite is green, azurite is a light to dark blue, and chrysacolla may be either of the latter two colors. All copper minerals, if rich, are quite heavy, since pure copper has a specific gravity of 8.8. A test for copper is to dissolve some of the mineral in nitric acid and add an excess of ammonia which makes a deep blue solution if copper is present.

Copper occurs throughout the Territory of Alaska, but there are at present no producing copper mines. Very few districts do not have at least a few small showings. The largest number of copper deposits are within two broad regions: SE Alaska and the Copper River region, which includes Prince William Sound and the Nizina and Kotsina districts. Known deposits within these areas and others may well be found to be of commercial promise should they be drilled or otherwise thoroughly prospected. Canadian mining men (not just a few, but several) have told the TDM that if many of the Alaskan deposits were in Canada, they would have been well drilled and some of them developed long before now. In prospecting in known copper districts, additional deposits are likely to be found, and if they appear to be of suitable size and grade, it will not be difficult to interest a mining company in taking them over for there are several companies in contact with the TDM who are desirous of obtaining copper properties. For example, Alaskan copper ores in the past have only been considered if found to be of extremely high grade. Present-day operators are very pleased with deposits running 30 or 40 feet in width and several hundred feet in length and assaying 2 to 3%, even though found some distance from tidewater. The prospector would be well advised to re-examine many of the old prospects with this in mind. Copper mining is big business these days, and the prospector will probably do better to sell or lease his property than to try to mine it himself.

Copper deposits are found in veins, under contact metamorphic conditions, as replacements in limestones, and "porphyry" deposits which are not generally known in Alaska. The Kennecott ore was formed in limestone at the contact with the greenstone of that area by solutions which rose from or through the greenstone. Much more of the same geological setup exists in that district. In the Prince William Sound district, copper is found at or near contacts between sediments, such as slate and graywacke and greenstone. The best local locations are in shear zones and breccias. Some of the best SE Alaska deposits are near contacts where metamorphic greenstones were cut by intrusives.

Copper ores are usually sold to smelters either in the form of "shipping grade" ores that have usually been carefully hand picked, or as concentrates produced at the mine by gravity and flotation methods. Smelter and transportation charges and costs will determine the degree of concentration necessary. At present, the price of copper is 29.7¢ per pound. Copper ore or concentrates would be sent to the Tacoma Smelter from Alaska.

The TDM has long advocated a long-range, large-scale program for future copper production in Alaska to go on the following lines: If a company could gain control of several copper properties in one area such as Prince William Sound or Kasaan Peninsula, and then set up a central treatment plant, mill, or smelter to which crude ore from the nearby properties could be barged or hauled; or if a cooperative or custom plant could be set up by or for a number of individuals who held copper properties; then sufficient money could be saved in transportation and treatment costs to allow properties to produce at a profit that otherwise would not make expenses or be marginal at best. We believe that this is something worth careful consideration by aggressive mining companies and individuals.

LODE LOCATION CERTIFICATE (NOTICE)

Notice is hereby given that on the _____ day of _____, 19____, the undersigned did discover, locate, and stake the (Name of Claim) _____ Lode Claim. The claim as marked on the ground extends (Max. of 1500) _____ feet along the (Name of Lode, if any) _____ Lode (or vein) and (Max. of 300) _____ feet on each side of the center line of said lode. The location notice is posted on the discovery post (or monument) which is a (Describe discovery post or monument) _____ and which is located at the point of discovery. From the discovery post, the claim extends _____ feet along the lode in a (Bearing) _____ direction and _____ feet along the lode in a (Opposite bearing) _____ direction. The name(s) of the locator(s) is (are) (Print name(s) of Person(s) actually doing the staking) _____ and the mineral(s) discovered is (are) (Name(s) of mineral(s)) _____.

The general course of said lode or vein is (Bearing) _____ and (opposite bearing) _____, and the boundaries of the claim are as follows: commencing at the discovery post, thence _____ feet (Bearing) _____ along the vein to the (Bearing or number) _____ center end post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ corner post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ corner post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ center end post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ corner post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ corner post which is a (Describe post or monument) _____ and is marked (Describe markings) _____, thence _____ feet (Bearing) _____ to the (Bearing or number) _____ center end post which has already been described. All posts and monuments are properly marked, and all boundaries are blazed and brushed out, or marked with stakes or monuments where no brush or trees exist, as prescribed by law.

The discovery monument is located _____ feet in a _____ direction from (Describe nearby landmark) _____. The claim is situated in the _____ Mining District and the _____ Recording Precinct, Alaska, and it lies (Carefully describe location of claim with reference to a well known or easily found landmark or land survey as prescribed by law) _____

*Witnesses _____
Signature _____

Located by _____
(Signature of person actually doing the staking)

Ditto

Located for _____
(Print name of owner of claim)

Ditto

*Not necessary, but advisable

PLACER LOCATION CERTIFICATE (NOTICE)

Notice is hereby given that the undersigned did discover, locate, and stake

_____ acres of placer mining ground known as the _____
 _____ (Name of Claim)
 Placer Claim on _____ tributary to _____ which
 _____ (Name of pup or creek) _____ (Name of creek or river)
 is a tributary to _____. It is a _____
 _____ (Name of creek, river, lake, bay, etc.) _____ (Creek or bench)
 claim situated _____ Discovery on the _____ limit of the
 _____ (Above or below) _____ (Right or left)
 creek. The name (or names) of the locator(s) is (are) _____
 _____ (Print name(s) of person(s))

_____ actually doing the staking)

The claim extends _____ feet along the stream and _____ feet across the valley.

The location notice is posted on corner post (or monument) No. _____ which is a

_____. This post is situated _____ feet in a _____
 _____ (Describe post or monument) _____ (Bearing)
 direction from _____.

The boundaries are as follows: Starting

_____ (Describe nearby landmark)
 at above mentioned Post No. _____, thence _____ feet _____ to Post No. _____
 _____ (Bearing)

which is a _____, thence _____ feet _____ to Post No. _____
 _____ (Describe post or monument) _____ (Bearing)

which is a _____, thence _____ feet _____ to Post No. _____
 _____ (Describe post or monument) _____ (Bearing)

which is a _____, thence _____ feet _____ to Post No. _____
 _____ (Describe post or monument) _____ (Bearing)

the point of beginning. All posts and monuments are properly marked. All boundaries are blazed and brushed out, or marked with stakes or monuments where no brush or trees exist, as prescribed by law.

_____ was discovered on this claim on the _____ day
 _____ (Name of mineral or minerals)
 of _____, 19_____, and location notice posted on the _____ day of
 _____, 19_____. The claim is situated in the _____ Mining
 District and the _____ Recording Precinct, Alaska, and it lies

 _____ (Carefully describe location of claim with reference to a well known or easily
 found landmark or land survey as prescribed by law)

*Witness _____
 _____ (Signature)

Located by _____
 _____ (Signature of person actually
 doing staking)
 _____ (Ditto)

Located for _____
 _____ (Print name of owner of claim)
 _____ (Ditto)

*Not necessary, but advisable