

territory of Alaska  
Department of Mines

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TDM BULLETIN

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MINING ACTIVITIES

FIRST DIVISION - Most of the company exploration parties are still hard at it in this and other Divisions. Several drilling projects are still in progress, some have been completed.

The Klukwan iron ore pilot plant turned out its quota of concentrate for the summer and ceased operations some time ago. Churn drilling is still continuing on the placer portion of the deposit. The work is being done by U. S. Steel.

The Mt. Andrew Mining Company of Vancouver, B. C. is drilling the Mt. Andrew iron-copper deposit on Kasaan Peninsula of Prince of Wales Island.

The Southeastern Mining and Exploration Company of Juneau is drilling their uranium prospect above William Henry Bay on Lynn Canal with DMEA assistance.

The Kendrick Bay Mining Company is mining the Ross-Adams uranium lode pretty much on schedule. The road was completed, and the trucks are now hauling down the mountain from the open pit operation at the rate of about 400 tons per day and stockpiling on the beach. The stockpile presently amounts to over 8,000 tons. Shipment will be by barge when a larger stockpile has accumulated.

SECOND DIVISION - Placer operators have been hard hit for water this year in this Division and other placer districts throughout Alaska. The abnormally dry summer has held some miners down to a few minutes' sluicing a day, or even less. In some of the larger operations, it has been difficult to keep dredge pond levels up.

Kennecott's exploration division, Bear Creek Mining Company, is continuing its exploration on the Ruby Creek copper prospect north of the Kobuk River. This prospect was formerly being developed by Riny Berg and Jack Bullock of Chitina and Kotzebue, respectively. Dahl Creek Mining Company is building a road to the prospect for Bear Creek instead of mining this season.

THIRD DIVISION - A small shipment of metallurgical grade chromite from the Red Mountain area was made by Bill Lyons and Associates at Seldovia. The ore was produced from a concentration of surface material.

Our personnel in Anchorage have noticed a very decided increase in interest in placer mining this summer. We hope this will lead to more operations.

FOURTH DIVISION - Increased activity among the several cinnabar prospects of the lower Kuskokwim, Eek River, and Marsh Mountain (Third Division) indicates that there may well be two or three more mercury producers in the near future if the price holds up. The mercury belt is a large one and several companies and individuals are finally beginning to do some serious exploration work there.

### GOLD INTEREST REVIVING?

The Canadian mining newspapers have been carrying items and editorials for the past few weeks on a very interesting trend. Interest in gold mining is on the increase in Canada. If it continues, the Canadian optimism should spread to the U.S. There are probably two or three things that have started this trend. One was a significant statement by the U.S. Undersecretary of the Treasury, Randolph Burgess, that this country should get back on the gold standard. This is quite a statement for one that high in an administration that has repeatedly come out against any moves toward a gold standard. Then there were announcements from a few eastern Canada gold mines that profits were up in spite of increased costs. Some of the gold stocks on the Toronto exchange actually came up on one or two occasions while other metal stocks were dropping because of the lowering base metal prices. More inquiries to the authorities on gold are being received, and generally speaking, a sudden widespread interest in gold seems to have sprung up over there. One report was received of capital looking for a good idle gold mine just to hang on to until times were better for gold. Some "experts" figure that foreign countries holding U.S. paper currency are beginning to worry about a shortage of gold at Fort Knox to cover it, and are thinking that they should trade the paper for gold before the paper gets deflated any further than it already is. Whatever the reasons may be for this new trend, we are glad to see it and hope it continues. Time will tell.

### NEW USGS PUBLICATIONS

A very welcome addition to USGS maps is their new "Geologic Map of Alaska." It is a big improvement from the last overall geologic map published in 1939, and is in such demand that the supply at the Juneau USGS office is sold out already. Prospectors and exploration parties will find it to be an almost essential item. It can be obtained from the usual USGS map supply sources for the price of \$2.00. The scale is 40 miles to the inch.

Another welcome USGS map is the open file "Preliminary geologic map of part of the Bokan Mountain uranium-thorium area, Alaska" by E. M. MacKevett, Jr. This map is accompanied by a short text and is the result of work done last year on Bokan Mountain in the vicinity of the now producing Ross-Adams uranium lode on Prince of Wales Island. It shows the geologic setting of that lode and other radioactive prospects in a 15-square-mile area. This map can be consulted at the various USGS offices in Alaska and at the Juneau and Ketchikan TDM offices. Reproductions will be made at private expense if the USGS is contacted at 4 Homewood Place, Menlo Park, California. Mr. MacKevett's work in the Bokan area is continuing.

A new bulletin has been published entitled "Tungsten deposits in the Fairbanks district, Alaska." Its number is 1024-I. It deals with the geology of those deposits and suggests that undiscovered lodes of scheelite may yet exist in that district. The bulletin can be consulted in Alaska in all offices of the USGS and TDM. It can be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for \$1.00.

### CORRECTION

Some of our readers have accused us of trying to short-change the Territory. In our report last month on the new percentage of oil and gas revenues that Alaska will receive, we stated that the new figure is 52-1/2%. We neglected to add that

this is in addition to the 37-1/2% that we were already receiving, which will now give us a total of 90% of the revenues from royalties, rentals, etc. from oil and gas production. Never let it be said that we are trying to cut off any revenue to Alaska which we hope will some day lighten our income tax.

#### AMMONIUM HYPOPHOSPHITE MINERAL TESTING

Our assayer in Ketchikan, Mr. Ralph Pray, has given us the procedure for a new (to us) and simple method of testing for nine elements: chromium, cobalt, columbium, manganese, molybdenum, titanium, tungsten, uranium, and vanadium. Four ounces of the reagent, ammonium hypophosphite, available in many chemical and drug houses, will suffice to fuse several hundred samples. Containers in which to make the test should be porcelain crucibles of the #00 size, sold by laboratory equipment dealers. These crucibles may be washed with water after use.

The sample to be tested is crushed to a powder with a hammer or mortar and pestle, and an amount taken equal to no more than the phosphorus tip on the head of a wooden match. After placing an amount of ammonium hypophosphite equal to the size of a pea in the crucible, the sample is sprinkled over the reagent and the crucible placed over a hot flame. CAUTION: Avoid breathing the fumes given off by the heating, and do not run this test in an enclosed room. Heat the material until it becomes well fused, then cool and note the color of the fusion.

Green fusion indicates chromium, uranium, or vanadium. Add a few drops of hydrogen peroxide, reheat and cool. If the fusion is smoky grey, it contains chromium; if rose pink, vanadium; and if still green, chromium or uranium. In the latter case, reheat, and if fusion is still green at red heat, uranium is proven. If not, then chromium is indicated.

Blue fusion indicates tungsten or titanium. To test for tungsten, add ten to fifteen drops of water. If blue turns to violet in fifteen minutes, tungsten is proven. This test is sensitive to less than 0.1% tungsten, and a deeper violet indicates a higher grade. To test for titanium, add about ten drops of hydrogen peroxide to a second fusion. A yellow (low grade) to red-orange (high grade) color indicates titanium. Small amounts of titanium in iron will give a positive test with the hydrogen peroxide.

Pink fusion that was blue when hot indicates cobalt. If blue again when reheated, cobalt is proven.

Colorless fusion may indicate manganese, molybdenum, or columbium. Add a few drops of nitric acid and boil until dry. Rose-purple color just as acid boils away indicates manganese. This is an extremely sensitive test which will show a manganese content of less than 0.5%. If the color is a faint greenish-blue after the acid has boiled away, molybdenum is indicated. Add 10 to 15 drops of water. Color will change to yellow if molybdenum is present. To test for columbium, add hydrochloric acid to a second fusion, heat to boil, and add a small piece of tin while the mixture is hot. A blue color indicates columbium.

The colors of the tests are best when viewed right after the fusions have cooled, unless otherwise noted. However, most of the colors will remain distinctive for several hours. The tests should first be made with ores or chemicals known to contain the element sought so that the prospector will be familiar with the expected results before testing the unknown samples. Mr. Pray states that he will be glad to assist anyone in obtaining supplies for the tests or answer questions on them. His address is TDM Assay Office, Box 1408, Ketchikan, Alaska. This service will be free of charge, the same as all other services of the TDM.

### MORE DMEA INFORMATION

Since publishing our item on the DMEA move to Spokane last month, we have been informed that DMEA does have a representative in Alaska, part time. It is Ed MacKevett, USGS geologist who is also working on a geological field project as noted elsewhere in this issue. Ed advises that he will answer all mail on the subject addressed to 204 Austin Tower, Ketchikan, and will arrange to meet anyone in Ketchikan until shortly after October 1 when he will go south for the winter. He plans no more trips north to the Interior this year, but will return next summer. In the meantime, the Spokane address given last month is still in effect.

### CONGRESSIONAL NEWS

The tidelands bill to transfer title of tidelands within surveyed town-sites to Alaska has been passed by both houses and now awaits the President's signature.

Senator Bible's bill to allow geophysical work to be applied as assessment work has passed the Senate and is now in the House Interior Committee.

The bill to allow leasing of tide and submerged lands for oil and gas exploration passed the House, but seems doomed to stay in the Senate Interior Committee until next year. The committee is reported to have repeatedly delayed action on it without explanation. If passed, it will eventually mean more development and revenue to Alaska.

On August 20, the Senate passed with minor amendments a House bill to provide that military withdrawals of over 5,000 acres for one Defense Department facility can be made only by Act of Congress. The bill is expected to go to the President for signature soon.

### E. AND M. J. METAL MARKET PRICES

	<u>Aug. 22,</u> <u>1957</u>	<u>Month</u> <u>Ago</u>	<u>Year</u> <u>Ago</u>
Copper, per lb.	28.0¢	28.7¢	39.7¢
Lead, per lb.	14¢	14¢	16¢
Zinc, per lb.	10¢	10¢	13-1/2¢
Tin, per lb.	94.1¢	96¢	99-1/4¢
Quicksilver, per flask	\$251-253	\$255-257	\$255-257
Silver, foreign, New York	90.9¢	90.2¢	90-3/4¢
Silver, domestic, per oz.	90-1/2¢	90-1/2¢	90-1/2¢
Nickel, per lb.	74¢	74¢	64-1/2¢
Molybdenum, per lb., in con.	\$1.18	\$1.18	\$1.18
Platinum, per oz.	\$81-87	\$89-95	\$103-108
Titanium ore (Ilmenite)			
per ton	\$26.25-30.00	\$26.25-30.00	\$26.25
*Tungsten ore, per unit	\$55.00	\$55.00	\$63.00
**Chrome ore (48%, 3 to 1 ratio)			
per ton	\$115.00	\$115.00	\$115.00
*GSA tungsten purchasing presently suspended. Foreign import price			
\$13.50-\$14.00, depending on grade.			
**GSA guaranteed stockpile price. Not quoted by <u>E. &amp; M. J.</u>			