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T D M BULLETIN

December - 1953

MINING ACTIVITIES

FIRST DIVISION - While not technically classified as mining, the Juneau airport dredging operation came up with minerals of interest to miners. Concentrates of the material brought to the surface by the suction dredge were found to contain small quantities of radioactive material. The radioactive content was not high enough to be of commercial interest, but it does indicate a possible nearby source.

THIRD DIVISION - Placer interest in the Chistochina-Gakona region is on the increase. George and Harvey Gilbertson and sons of Fairbanks have located 14 claims on Alder Creek in that area, and plan to haul in supplies early in the spring. Pilot Smokey Thomas located 7 claims on the Upper Chisna. Louis Elmer located 6 more claims on Slate Creek. Two other parties have located placer claims on Eagle Creek, near Mankomen Lake. Mines Ventures, Inc. has its washing plant fairly well assembled now on its Middle Fork ground, and is hoping for an early start operating next year.

Alaska Oil and Gas Development Co. shut down its drilling operations at Eureka for the winter after reaching a depth of 717 feet and setting 16-inch casing to that depth. Kerr-McGee Oil Industries is preparing to start drilling its first hole near Icy Bay before the end of the year. They intend to drill to a depth of 11,000 feet if necessary, and must also have a second well drilled by July, 1955. About $1,500,000 worth of equipment has been landed at Icy Bay since summer.

H. A. and E. R. Bowling, Anchorage construction men with mining backgrounds, are taking an interest in the gold quartz properties of the McKinley Lake area (near the mouth of the Copper River), and intend to ship in equipment and start development in the spring.

FOURTH DIVISION - The Mount Eielson lead and zinc deposit, situated about 60 miles west of the railroad in McKinley Park and formerly held by O. M. Grant and associates, is now held by Harold Herning and associates of Fairbanks. The deposit consists of large bodies of lead-zinc ore with zinc predominant. Plans for the coming season include construction of buildings and open-cut prospecting.

NEW INDUSTRY IN ANCHORAGE

Basic Building Products, Inc., is the name of a new company which has been formed in Anchorage for the purpose of making building products from Alaskan minerals. The men who are behind it are Arthur Waldron and Jack Harrison, who have long experience in the Alaskan building business with the Anchorage Sand & Gravel Co. Land has been acquired and a building has been constructed which is now awaiting the installation of machinery and equipment. More buildings are planned.

Initial products to be produced include firebrick, facing brick, Roman brick, terra cotta, and various types of tile. A chromite refractory brick will also be produced which will require a raw ore of about 35% chromic oxide. The possibility of developing another refractory brick from high-olivine-content dunite is being considered. Light-weight aggregate from expanded shale is also planned for the future.

Sources for the necessary raw materials are mostly along the railbelt. The fireclay will be trucked from Sheep Mountain, on the Glenn Highway. One thing that is needed which they have not yet found is a deposit of good silica, preferably quartz, with sulfide content not over 5% (hint to prospectors). This new industry should give railbelt mining a definite boost.

DMEA PROGRAM CHANGE

The DMEA loan program for the exploration for strategic minerals has been changed again. Some of the minerals have been eliminated from the list of those eligible for government assistance, and the minerals that the government formerly loaned 90% of the cost on are now in the 75% category. The minerals that have been eliminated from the program are as follows: crocidolite and amosite types of asbestos, refractory grade bauxite, industrial diamonds, and thorium. DMEA assistance is now available for the following:

Group A, for which the government will contribute 50% of the costs: Chromium, copper, and molybdenum.

Group B, for which the government will contribute 75% of the costs: Chrysotile asbestos, beryl, cobalt, columbium, manganese, mica (muscovite blocks and film only), nickel, platinum, tantalum, tungsten, and uranium.

GOVERNMENT MINERAL PROCUREMENT

An article in the E & M J Metal and Mineral Markets, dated Nov. 19, 1953, states that government procurement of the strategic minerals tungsten, manganese, chrome, mica, beryl, asbestos, and columbium-tantalum is lagging far behind the amount of purchasing authorized. This program is a function of the General Services Administration, and is separate from DMEA. GSA has purchase depots where the minerals are accepted in various stateside locations. Further details of this government purchasing program can be obtained from the above mentioned publication which is on file at all TDM offices.

FREE GOLD MARKET LOW

Unless the present trend in the world's free gold market is reversed, the time has passed when selling on this market would help the Alaskan gold miner. Early in November, it was reported that the European price had dropped below $36, and the latest report from the Northern Miner is that the price was down to $35.40 on November 10. Market experts blame the latest drop largely on the sale by Russia of 1,000,000 ounces of Soviet gold to the British treasury and 250,000 ounces to a Swiss-French banking group. Johannesburg is now allowed to sell gold in plain bars without making it into the form of "manufactured" gold, thereby reducing their expenses and letting the South African gold go on the market slightly cheaper.

GEIGER COUNTERS

The Territorial Department of Mines receives many requests for information on Geiger counters for prospecting. There are two models which have been found to be fairly reliable yet small enough for relatively easy carrying when walking. These are the Detectron DC-2 and the Lucky Strike Model 106, manufactured by different companies. The prices of these instruments are about $100 each, and they each weigh 5 or 6 pounds. The same counters (with different model numbers) can be obtained with the counter tube attached as a probe, rather than installed inside the instrument

case, for an additional $35 or $40. This feature is an advantage in using the counter, but is a disadvantage in packing or carrying the instrument. Persons who are contemplating the purchase of counters for serious prospecting are urged to consider the above class of instruments, unless they wish to obtain more expensive ones. Geiger counters should be waterproof, as moisture in the instrument will interfere with its proper function.

A recently developed radiation detector that operates on a different principle and is more sensitive than Geiger counters is the scintillometer. A number of models are on the market, the cheapest of which is about $500. The Department of Mines has had no experience with these instruments.

RESPONSE TO QUESTION

The response to our QUESTION in last month's Bulletin has been slight, but that received has been favorable to the proposition, indicating that the few people who have written in are in favor of the Territorial Department of Mines going ahead with its plan for informing claim holders when it appears that they have not complied with the law in regard to claim locations or assessment work.

MAP INFORMATION

In case you haven't been made aware of it already, we'd like to remind prospectors and mining men that excellent new topographic maps are now available for all portions of the Territory. The Alaska Reconnaissance Series divides the entire Territory into 153 quadrangles. Each of these 153 separate maps, on a scale of 1:250,000 (4 miles to the inch), may be purchased at a cost of 25 cents. More detailed maps, on a scale of 1:63,360 (1 mile to the inch), are also obtainable for certain selected areas. The price of the latter is 20 cents.

Write to the U. S. Geological Survey, Alaska Service and Supply Section, Federal Building, Box 2659, Juneau, Alaska, for a free index map to determine the topographic map or maps desired. You may order these from the same office, accompanying your order with payment therefor. After Jan. 1, 1954, the address of the Alaska Service and Supply Section will be Box 1088, Fairbanks, since they are scheduled to move there from Juneau at that time. The USGS also has an Information Office in Anchorage where maps may be obtained. It is in the Glover Building and the P. O. Box is 259.

Another map that many people should be interested in, judging by inquiries received at the Juneau office, is a map showing the Recording Districts and offices that has been compiled by the University of Alaska School of Mines. It can be obtained by writing to the University School of Mines at College, Alaska, and enclosing the price of 25 cents.

TDM ACTIVITIES

The TDM assayer at Anchorage, Roy Rowe, gave a demonstration of assaying procedures and equipment in the Anchorage assay laboratory to the Alaskan Prospectors Club. He also lectured to high school students on Alaskan mining problems and the need for more people to follow the engineering profession. At Ketchikan, safety examinations of the nearby tunnel projects were continued. Some old mine workings near Juneau were examined for radioactivity.

HINTS FOR PROSPECTORS ON THE MAINLAND OF SOUTHEASTERN ALASKA

Small but suggestive quantities of uranium and thorium minerals, together with appreciable zircon and titanium minerals, have been recognized in heavy mineral concentrates from many of the rivers and streams that flow westward across the Coast Range batholith of Southeastern Alaska. No commercially valuable concentrations are yet known, but prospectors in this region might be advised to utilize the technique of obtaining and studying placer concentrates from the various streams and tributaries. By such means, it is often possible to localize areas of mineralization worthy of systematic prospecting, or to discover workable placers.

Use of the Geiger counter would be required for field detection of any radioactive constituents. A portable ultra-violet light, such as the Mineralight, will identify the zircon by its characteristic fluorescence. More accurate and detailed study of the concentrate samples than is possible in the field may be obtained free of charge if small portions of each are sent to the Ketchikan laboratories of the Territorial Department of Mines for identification and/or analysis.

A further suggestion is offered, which is especially advantageous in seeking to recognize zircon by its fluorescence. When a rather close concentrate of the heavy minerals has been obtained by ordinary panning, remove the magnetic minerals (usually predominately magnetite) by aid of a small magnet. This is best accomplished by covering the concentrate in the pan with several inches of water, and causing the magnetite to rise to the magnet through a little water, thus dropping much of the non-magnetic minerals which would otherwise be occluded when a mass is attracted to the magnet. Repeated passes through and over the material in the pan will finally remove all of the magnetite, and the resultant non-magnetic fraction may be better examined. Best results will be obtained if a comparatively weak magnet is used. The strong, Alnico types will usually carry over too much of the non-magnetic portion.

Zircon should be looked for in the heaviest portion (the "tail") of the panned material. To the naked eye, the zircon concentrate is usually of a somewhat lighter color, even gray-white. Under the Mineralight, zircon is recognized by a rather vivid, golden, fluorescence of the individual grains and crystals. For best results, allow at least 30 seconds for the eyes to become accustomed to the darkness, and also to permit maximum intensity of the fluorescence color of the zircon to develop. Any mineral grains showing a bright blue-white fluorescence in this test are probably scheelite.

Zircon would be of commercial value in itself, as well as serving as an indicator mineral in searching for uranium and thorium minerals. Current quotations list the price of zircon concentrates (65% ZrO_2) at $42. per ton.

It might be well, too, to list the current price for uranium minerals as a reminder that the search may be well worthwhile. The current Government price is $3.50, plus another $3.50 bonus, or $7.00 for each poundoof U_3O_8 contained in ores or concentrates assaying 0.20% (4 lbs. per ton) or more.

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