

MINING ACTIVITIES

FIRST DIVISION - Active exploration with qualified field parties, conducted by the following companies, has been suspended for the season: Coast Range Exploration Co., Anchorage, Alaska; W. S. Moore Co., Duluth, Minnesota; Northwest Ventures, Ltd., Vancouver, B. C.; and U. S. Steel Company. Activities of the above groups and others have resulted in the staking of many claims this past season with iron and copper appearing to be the metals of major interest.

SECOND DIVISION - A second shipment of tin concentrates from the Lost River operation of U. S. Tin Corp., amounting to 138 tons valued at \$150,000, has been made to the Texas City Tin Smelter.

Coplin Consolidated Enterprises, a gold dredging operation on the Nuikluk River at Council, is another recent applicant for Territorial tax exemption as a "new operation" (Chapter 26, SLA 1953 - Mining License Tax).

THIRD DIVISION - Kenai Chrome Company has finally made its first shipment of chrome ore to G.S.A. from the Red Mountain deposits near Seldovia. After finally obtaining shipping space, over 3,000 tons of premium grade ore were loaded in Jakalof Bay before a sudden storm forced the cargo vessel to pull away from the loading point for Seattle.

Northern Pyrites has completed a detailed electro-magnetic survey of the sulphide deposit at Horseshoe Bay on Latouché Island, Prince William Sound, and appear well satisfied with their results.

FOURTH DIVISION - A costly fire at the Red Devil Mine of the DeCoursey Mountain Mining Company on October 22 caused damage estimated at \$300,000. Starting in the hoist house, the fire spread quickly to the power house, blacksmith shop, mine buildings and reduction plant. The bunkhouse, mine office and storehouse were saved. The company plans to continue underground exploration, but it is estimated that production from the mine will be delayed about a year.

RADIOACTIVITIES

The TDM was called upon to look into a recently reported uranium strike at Shirley Lake, 110 miles northwest of Anchorage. Remembering the sad experience of the "Fishwheel" gold strike on the Yukon in 1949, and a portion of the Territorial law establishing the TDM, which says it will "protect the interest of the investor," an examination was made of the area in question. A word of caution was extended, through the local press to those people improperly equipped and not aware of the very unique properties of radioactivities and the special knowledge required to effectively evaluate findings, to "tread with caution."

The general area investigated does give a radioactive count above "normal" or "background," but commercial grade material had not been found nor had any

minerals causing the radioactivity been identified. Since the Shirley Lake investigation, several other "discoveries" in Alaska have been reported by the press, but the TDM wishes to remind the general public that uranium exploration and mining is a very specialized field. Once a true uranium-bearing mineral has been located and identified, it requires someone with plenty of capital and know-how to develop a prospect to the point where commercial grade material has been "blocked out" and returns may be realized by the locator.

OIL NEWS

Alaska Oil and Gas Development Company has suspended drilling operations for the 1954 season. A structural failure on the derrick, which will require minor repairs but which came at a time when 15-degree temperatures were affecting the water supply, caused the company to shut down for the year.

The recent earthquake, whose epicenter was in the vicinity of Homer, caused considerable damage in the Havenstrite operation at Iniskin Bay. The present hole was at a depth of 5,100 feet when the quake refilled 600 feet of it. Then, a casing failure caused a "hang-up" of the drill stem when the bit was 900 feet from the surface on its way out of the hole. At last reports the crew was attempting to clear the bit and replace the casing section. Winter operation in this area is not feasible and drilling will cease when freezing temperatures cut off the water supply.

Excessive rains have slowed down delivery of diesel oil by air to the Icy Bay operations of Phillips Petroleum Company. Continuous drilling on the Sullivan No. 1 well is planned throughout the winter.

Rights of native Indians to potential oil lands in Alaska will be discussed at a public hearing scheduled for Anchorage, November 20. Leases and lease applications covering over 130,000 acres in the Yakutat-Icy Bay area, applied for by two different groups, are involved in the hearing set by Lowell Puckett, Area Administrator, Bureau of Land Management.

The office of Naval Petroleum Reserves, Department of the Navy, has made available for public inspection and study all well records and geological data relating to oil exploration in Naval Petroleum Reserve No. 4, located in the vast sedimentary basin lying north of the Brooks Range in Northern Alaska. The data may be consulted in the offices of the U. S. Geological Survey, Washington, D. C., Room 2643, Interior Building, and in the office of the Inspector, Naval Petroleum Reserve No. 4, Fairbanks, Alaska.

U. S. GEOLOGICAL SURVEY INFORMATION

A preliminary geological reconnaissance map of a portion of the Lower Kuskokwim area, Alaska, which may provide information helpful in exploration for gold, platinum and other minerals, has been made available for public inspection.

An index of mineral resources information on Alaska, in card form, has also been released. The above information may be consulted in the following Alaskan offices: 210 E. F. Glover Building, Anchorage; Brooks Memorial Mines Building, College; 117 Federal Building, Juneau; and the Territorial Department of Mines office, Juneau.

U. S. BUREAU OF MINES REORGANIZATION

A general U. S. Bureau of Mines reorganization, recently recommended by a survey team, will become effective January 1, 1955. Alaska, formerly Region 1, will now come under a new Region 1 including Washington, Oregon, Idaho and Montana with headquarters at Albany, Oregon. No change of personnel at Juneau is anticipated other than a slight reduction in force which might result from the usual number of resignations or transfers.

QUESTION

How about an annual Alaskan prospectors' convention backed by the large mining companies and supply houses interested in Alaska?

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:

	Oct. 28, 1954	Month Ago	Year Ago
Copper, per lb.	29.7¢	29.7¢	29.6¢
Lead, per lb.	15¢	14-3/4¢	13-1/2¢
Zinc, per lb.	11-1/2¢	11-1/2¢	10¢
Tin, per lb.	92-1/3¢	93-5/8¢	81¢
Quicksilver, per flask	\$325-330	\$325-328	\$103-185
Silver, per oz.	85-1/4¢	85-1/4¢	85-1/4¢
Platinum, per oz.	\$79-84	\$84-87	\$92-93
Nickel, per lb.	60¢	60¢	60¢
Molybdenum, per lb.	\$3	\$3	\$3
Tungsten ore, per unit	\$63	\$63	\$63

AMERICAN MINING CONGRESS NEWS

Part of the Declaration of Policy adopted at the September meeting of the A.M.C. had to do with taxation. Following were some of the changes recommended to restore normal incentives for economic growth and development:

"Many of our tax rates are still too high to leave incentive for maximum economic effort and initiative.

The over-all tax rate on income of the individual or of the corporation should in no case exceed 50%.

While a start has been made in an allowance to stockholders on dividends with respect to taxes paid by the corporation, the principle should be further extended, and depletion allowed to a mining corporation should be carried through to the stockholder on some equitable basis.

Substantial improvement has been made in depreciation provisions and in their administration, but there is still need that the tax benefit rule should be fully applied.

The limitations on deductibility of exploration expenses have been somewhat eased, but such limitations should be completely eliminated.

Tax exemption should be granted a new mine for three years after beginning of profitable operation.

Capital gains should be taxed at more moderate rates."

COAL MINERS EXAMINING BOARD

The next meeting of the Territorial Coal Miners Examining Board, tentatively set for December 3 and 4, 1954, has been postponed until December 10 and 11. The meeting will be held at the TDM office, 329 Second Avenue, Anchorage, for the purpose of examining applicants for qualification as foremen and fire bosses in the coal mines of the Territory.

URANIUM

This is the most talked about element in the Territory today. Although uranium is one of the "newer" elements, several helpful pamphlets have been published which are useful to the prospector in his search for this very important source of energy. Prospecting with a Counter, July, 1954, for 30 cents and Prospecting for Uranium, October, 1951, for 45 cents are available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Prospecting for Uranium in Canada, 1953, is available for 50 cents from The Prospectors and Developers Association, 67 Yonge Street, Toronto, Canada.

In the search for radioactives, one of two types of counters is generally used; i.e., either the Geiger or scintillation counter. The heart of the Geiger counter is the Geiger tube which is a metal-walled tube filled with one or more gases, such as helium, argon, or krypton. A positive charge of about 1,000 volts is applied between the metal wall of the tube and a center wire which acts as the other pole.

Radioactive elements emit alpha, beta and/or gamma rays. Both types of counters measure, in a relative sense, the emission of gamma rays from a sample or material "in place." The Geiger tube is discharged, or affected by, only about one percent of the gamma rays which penetrate it, while the scintillation counter which uses a different type of "detector" will react to 50 percent or more of the gamma rays.

The "detector" in a scintillation counter is a sodium iodide or potassium iodide crystal which produces tiny momentary flecks of light (scintillations) when penetrated by gamma rays. It can be seen, therefore, that the scintillation counter is 50 or more times as sensitive as the Geiger counter.

One of the most important things to remember in the use of all counters is the penetrating power of gamma rays. The gamma rays from uranium are stopped by approximately:

- 3 inches of lead
- 1 foot of rock
- 2-1/2 feet of water
- 15 feet of snow
- Several hundred feet of air

In other words, a counter measures only the gamma rays from the outer foot of a rock outcrop. It cannot detect radioactive ores deep within the rock.

A counter reading may be strongly influenced by the size of a sample tested. A large piece of radioactive rock gives off more gamma rays than a small piece. The safest way to check for "relative" radioactivity of samples is to grind them to a pulp and then weigh out a uniform amount of each. These pulps placed in small envelopes of uniform thickness and held at the same distance from the Geiger tube

or scintillation counter will give a "relative" or "equivalent" uranium content. The TDM has a set of "standards," samples of known uranium content, at all field offices against which you can check your counters.

In addition to uranium, several other elements are also radioactive. The only one sufficiently abundant to pose a problem in the field is thorium, which has about two-fifths the gamma ray activity of uranium. The most reliable way to determine the uranium content of a sample is to obtain a chemical analysis. This analysis determines uranium directly, and is not affected by decay products or thorium which influence the Geiger counter.

Even after uranium is found and positively identified, the exploration and development of a promising area requires considerable capital and experience. Most areas require careful drilling and sampling. Then comes the problem of ore beneficiation, which is also a specialized field. As far as Alaska is concerned, no difficulty would be encountered in interesting one of the many qualified uranium operators in the United States in a promising uranium deposit anywhere in the Territory.

The TDM also wishes to point out that both the Atomic Energy Commission and the Territory of Alaska have established a \$10,000 bonus to any person who discovers and produces (and here is the catch) "the first twenty (20) short tons of uranium-bearing ores or mechanical concentrates assaying 20 percent or more U_3O_8 by weight from any single mining location which has not previously been worked for uranium." To our knowledge, nobody has collected this bonus to date.

Marketing data on uranium ores may be covered briefly as follows: Ores are not acceptable to the Atomic Energy Commission, who is the sole purchaser, (1) if the U_3O_8 content is less than 0.10 percent; (2) if they carry in excess of 6 percent lime; (3) if they contain lumps in excess of 12 inches in size.

The base payment for the uranium contained in ores is as follows:

0.10% U_3O_8	\$1.50 per lb. of U_3O_8	0.16% U_3O_8	\$2.70 per lb. of U_3O_8
0.11	1.70	0.17	2.90
0.12	1.90	0.18	3.10
0.13	2.10	0.19	3.30
0.14	2.30	0.20 or more	3.50
0.15	2.50		

In addition to the above, there are two premiums:

- (1) For each pound of U_3O_8 in excess of 4 lbs. - 75¢ per lb.
- (2) For each pound of U_3O_8 in excess of 10 lbs. - 25¢ per lb.

Payment is also made for the vanadium content of these ores at the rate of 31 cents per pound of V_2O_5 . Other allowances made by the Atomic Energy Commission are 50 cents per pound of U_3O_8 for development purposes and six cents per wet ton mile (up to a maximum of 100 miles) for haulage allowance.

For full details of the purchase schedules, the United States Atomic Energy Commission should be consulted at P. O. Box 270, Grand Junction, Colorado.