

MINING ACTIVITIES

FIRST DIVISION - Mining activity in the First Division was mostly confined to the District Court Room at Juneau where the case of Flynn vs Vevelstad was heard for four days by Judge Folta. Plaintiff Flynn, who staked the Yakobi Island nickel property in the fall of 1952, asked that his right to the ground be cleared, charging improper staking and assessment work by Defendant Vevelstad. Vevelstad filed a counter-suit against Flynn for \$20,000,000 damages, charging Flynn with jumping his claims. Witnesses testified as to time spent in assessment work, times of locations, kinds and amounts of surveying done, etc. An expert forester testified as to the ages of blazes which marked claims and to the actual amount of trail improvements made within the last three years. A mineral surveyor testified as to the conditions of posts and boundary markings of the conflicting claims. Since there was no jury, the lawyers were asked to file briefs summing up their arguments. Judge Folta will, no doubt, render a decision within a month.

At the Funter Bay nickel-copper-cobalt deposit, the lower crosscut has been driven 100 feet into the Mertie Lode without yet reaching the hanging wall. A zone about 45 feet wide has a very good grade of mineralization. Exploration beyond this point under the present DMEA program will be accomplished by diamond drilling.

SECOND DIVISION - A recent report from Don Kochersperger, manager of the Lost River Tin Mine, indicates that things there are steadily improving toward the ultimate goal of steady production. They are now installing the flotation cells, but have not yet set up the tailings thickener for water reclamation. The 9,000-foot water pipe and pumping system are supplying 300 gallons per minute to the mill without trouble, and so far only two of the four heating cable circuits have had to be used to keep the water from freezing. Several hundred pounds of representative material taken by the Bureau of Mines for metallurgical testing indicate higher grade ore is present in 32 Crosscut South than was first apparent from diamond drilling and chip sampling. This is the crosscut which intersects the granite cupola southwest of the main shaft on the 365 level. The use of the shrinkage stoping method of mining with draw holes at the lower level is working very satisfactorily on the Cassiterite Dike ore body.

An eleven-man crew is working at the Big Hurrah Gold Mine, preparing it for production sometime this winter. Hirk Edwards is foreman and T. P. Lane is manager.

The tin mine operators of Seward Peninsula met with Secretary of the Interior McKay in Washington last month to determine what could be done to have tin placed back on the strategic list and obtain other help. This group includes representatives of the U. S. Tin Corp., Alaska Tin Corp., Zenda Mining Co., and the Northern Tin Corp. Results were apparently not discouraging for another meeting is scheduled in January.

THIRD DIVISION - A group from British Columbia are investigating possibilities of developing the sulfur deposits of Unalaska Island. The main obstacle is that the deposits are within a military withdrawal. Steps are being taken in an effort to have this restriction lifted. A new treatment process which makes possible the

economical mining of deposits like those under question includes crushing, grinding, melting the sulfur with superheated steam to free it from the gangue, then making the final recovery by flotation.

A magnetite deposit at Tuxedni Bay was staked two or three months ago by George Lingo of Anchorage for California interests.

The Premier Coal Mine has been leased by Warren Rice and Howard and Don Wilcox. They have a crew of four men working it. "Cappy" Faroe of Anchorage has the old Howard and Jessen Coal Mine.

Locally called "the doughnut-cutter", the Jonesville mine has a coal-cutting machine that is apparently operating satisfactorily. It is "home-made", cuts out a five-foot circle at the rate of 1-1/4 tons of coal per minute, and will work up the pitch.

FOURTH DIVISION - The new road being constructed from Paxson's westward toward Mt. McKinley has uncovered copper mineralization in various places, making the general area appear promising. It is in this region that the MacLaren River prospect was discovered last summer. This prospect (also parts of the road) is actually in the Third Division rather than in the Fourth as previously reported by this Bulletin.

TDM ACTIVITIES

Daniel Jones, Assayer-Engineer at the Nome office, resigned on December 31st. He will be replaced by Pete Sandvik, former Assayer at Anchorage, in April when he is released from the Army. The Nome office will be closed until Sandvik's arrival, but M. E. "Mike" Kelly of that city will handle the Department's affairs during the closure.

Art Glover closed the Ketchikan Assay office shortly after Christmas and moved to Juneau for at least three month's work on the Department's mineral deposit inventory. Elmer Johnson, Ketchikan prospector, will look after things there during Art's absence. As these two paragraphs indicate, the only Department Assay offices open for business for the next three or four months will be those at College and Anchorage.

The compilation of the much-spoken-of TDM mineral deposit inventory is finally under way. All of the necessary filing cabinets, printed Kardex cards, indexing equipment, etc., are on hand at last, and the work of systematically listing and indexing the basic information has begun. The U. S. Geological Survey has been researching on a somewhat similar project for a number of years, and has agreed to make the information gained thus far available to the Territorial Department of Mines. This will save us much time and money on the project. The TDM is highly appreciative of this act, and wishes to accord the USGS full credit for its generous cooperation.

HINTS TO PROSPECTORS

An interesting article by "Sourdough" was noted in the November Western Miner concerning tungsten-carbide tipped hand steel for prospectors who wish to develop properties where a drill cannot be taken. A Canadian prospector used a set of this steel all summer without any real sharpening problem. His set was composed of four pieces: 14", 22", 29", and 36" in length. The 14" starter was fitted with tungsten-carbide inserts of 1-1/4" gauge and the three longer pieces were of 1-1/16"

gauge. The TDM can furnish the name of a firm who will make up a set of this tungsten-carbide insert hand steel for any prospector who is interested.

Usually when reports of oil seeps are encountered, it develops that the person saw an iridescent film on some water which resembled an oil film, but which was merely the result of deteriorating vegetable matter. A simple means of distinguishing between this vegetable film and that of a mineral oil is to disturb it with a foot or a stick. Upon being disturbed, if it breaks up into patches which remain separated, it is the former worthless substance. If the film remains constant and evenly distributed over the water's surface, it is likely to be genuine oil.

QUOTE WITHOUT COMMENT

A letter from the General Services Administration dated December 2, 1953, in answer to a TDM query on their mica-purchasing program, contains the following paragraph:

"The Domestic Mica Program applies only to mica mined in the 48 states and does not include mica mined in Alaska. Therefore, I am sorry to inform you that regardless of the quality of the mica it could not be considered under the Domestic Program."

CANADIAN ACTIVITIES

New radioactive strikes are being made in Canada by the use of scintillometers from helicopters. This method of prospecting for uranium is being used more and more with constantly improving techniques and results.

Another example of the progress being made in Canada is the brief history of the new Sherritt Gordon nickel mine just now coming into production at Lynn Lake, Manitoba. In 1941, a veteran prospector named Austin McVeigh in the employ of Sherritt Gordon Mines Limited was prospecting in the Lynn Lake area, which was considered unfavorable by other concerns. He found some nickel-bearing float and traced it to an outcrop which was so small it could have easily been overlooked. He reported this find to the company's general manager E. L. Brown, who in spite of the difficulties of the war years was sufficiently interested to have McVeigh continue prospecting the area for four more summers. By 1946, his discoveries warranted diamond drilling, and the company moved in drills and commenced exploration work. In the succeeding years, other companies moved in, became discouraged and quit, but Sherritt Gordon continued explorations until in 1950 they were again alone in the field. Drilling outlined eleven ore bodies estimated to contain 14,055,000 tons of ore averaging 1.223 per cent nickel and 0.618 per cent copper. The company made financial arrangements necessary for production in 1951 and a railroad spur was started from Sherridon, 144 miles away. In the meantime, mining and milling equipment and buildings were hauled in by tractor trains over the snow, construction on the property was started, and a shaft and development levels were excavated. Production was accomplished simultaneously with the completion of the railroad so that shortly after the steel was laid, trains were bringing in freight and taking out concentrates. Ultimate production will be 2,000 tons per day.

FIELD TEST FOR NICKEL

Nickel being one of the most sought-for metals in Alaska today, we offer the following field tests, by which the prospector may prove the presence or absence of nickel in suspected rocks and minerals.

The simplest test may be made by sprinkling a small quantity of dimethylglyoxime powder directly upon the surface of the rock or mineral to be tested, and then wetting the powder (generally by spitting on it). After letting stand for about 15 minutes to a half hour, examine closely to see if a crimson color has developed, which would indicate that nickel is present. Generally, it is probable that in the richer ores the color will be developed more quickly than in the lower grade ores.

While this test is indeed simple, it is not as accurate nor as sensitive as the following procedure which requires more in the way of reagents and equipment. It is recommended, however, that wherever possible, the following procedure be used in preference to the "spit test".

Equipment required: Glass Beakers (250 ml. size); Glass Funnel; Filter Papers.

Reagents required: Nitric Acid (HNO_3); Ammonium Hydroxide (NH_4OH); 1% alcoholic solution of dimethylglyoxime.

Crush and finely pulverize the suspected ore or mineral fragment. Place one or two grams (about what can be held on a 25¢ piece) in a glass beaker, add about 20 ml. (about 1/2 inch in the beaker) of strong nitric acid, and place on stove or hot plate and bring to a slow boil. (In the presence of pyrite or other sulfides dense brown fumes may be evolved and the action may be quite pronounced, in which case it may be advisable to dilute with a little water.) Boil about 5 or 10 minutes, then remove from the heat and dilute with about 6 parts of cold water.

Now cautiously and slowly (to avoid possible splattering) add strong ammonium hydroxide, while stirring, until the iron precipitate has formed and the solution has a distinct odor of ammonia. (Warning: Blow ammonia fumes away from surface of solution before smelling, and then "sniff" cautiously.)

Filter the solution and note the color of the clear filtrate. If solution is blue it indicates the presence of copper or nickel, or both. To the clear, filtered solution add 20 or 30 drops of dimethylglyoxime solution and stir vigorously. If an abundant red precipitate forms add more dimethylglyoxime solution, otherwise a small quantity is sufficient. The amount of scarlet precipitate formed will be in proportion to the grade of the ore. Many rocks will reveal traces (perhaps up to 1/10th of 1%) which amount is of no commercial significance.

In performing the above test, particularly during the digestion with nitric acid, be sure there is adequate ventilation and do not breathe the brown nitrous oxide fumes which may be evolved.

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