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HUNTING FOR GOLD?

If the prospective gold seeker is prepared to undergo a certain amount of hardship, can travel by canoe or back pack into the wilderness of Alaska, a prospecting trip may prove to be an interesting adventure, profitable to him in other ways if not financially. The search itself is often its own reward, but the would-be prospector hoping for financial gain should carefully consider all the facts before deciding to set out on a prospecting expedition.

The bulk of the gold mined in Alaska has come from placers. The principal placer-mining region has been the Yukon River basin, which crosses central Alaska and includes the extensive deposits at Fairbanks. Dredging in the Fairbanks district has produced more gold than in any other district in Alaska. The beach deposits in the Nome district, in the south-central part of the Seward Peninsula, rank second among productive placer deposits of Alaska.

Lode gold is gold in place within the solid rock in which it has been deposited. The areas in the lower 48 states that are at all likely to contain valuable lode deposits of gold have already been explored so carefully and thoroughly that now the inexperienced prospector without ample capital has very little chance of discovering a lode rich enough to be worth developing. In Alaska the prospecting efforts were directed more toward gold placers, but high grade gold lodes were found. Some were developed. The possibility of finding a new gold lode in Alaska should be much greater than in the lower 48. However, because the ground is covered by forest or tundra exploration is difficult.

A placer deposit is a concentration of some sought-after natural material that has accumulated in the unconsolidated sediments of a stream bed. Heaviness and resistance to corrosion make gold an ideal substance to accumulate in placer deposits close to the source rocks from which it has come. In addition to these properties, the bright characteristic color of gold, easily recognizable even in very small amounts, makes recovery by gravity separation feasible. Panning is the simplest method of separating the gold from the silt, sand, and gravel of the stream deposits. It is, moreover, the method most commonly employed by the beginning prospector.

Hunting For Gold (continued)

The gold pan, an indispensable prospecting tool, is versatile, efficient, inexpensive, and portable. With some practice, even an inexperienced panner should be able to recover most of the gold from a charge of sand and gravel. Recovery is based on the fact that gold is much heavier than the minerals that make up the sand and gravel and, when the charge is shaken and swirled with water, the grains and flakes of gold sink and collect on the bottom of the pan. As the lighter materials are winnowed from the gold, they are removed from the pan. Eventually the gold becomes concentrated along with some of the dark heavy mineral grains such as magnetite. Final separation can be made with a small magnet. In prospecting for a gold lode the gold pan is also the indispensable tool. A mortar and pestle must be added to pulverize the rock before panning. After the rock has been pulverized, the panning procedure is the same as for placer gold.

Any prospective prospector in Alaska should be aware of platinum. The techniques of panning and mining of platinum are the same as for gold. Platinum has been identified in many areas of Alaska and is mined near Goodnews Bay.

According to the Bureau of Mines production summary for 1970, the State of Alaska produced 34,776 ounces of gold.

NIXON FIRM ON \$35 GOLD FIGURE

An article, titled "Pressure mounts for gold hike" appeared in the September 20 issue of Metals Week and stated the following:

"The cry for an increase in the official gold price grew louder as major nations around the world urged the US to bear the brunt of achieving realignment of currency values. The US remained as adamant as ever in its stand to hold the \$35 price.

"Common Market nations joined forces in demanding that the Nixon administration devalue the dollar formally by raising the official price of gold. Bouncing back from its earlier failure to agree on a joint monetary policy, the EEC took a position that gold should remain the backing for the international monetary system while the International Monetary Fund and its Special Drawing Rights should be given a greater role as a reserve asset. At the same time, the six-nation bloc asked for a fixed parity system, possibly with greater flexibility in fluctuation allowances - perhaps changing to a 3% band - and is seeking to end the dollar's role as a reserve currency.

"The call for a formal dollar devaluation was repeated at a two-day London meeting of the IMF's Group of Ten. At the meeting, the US heard a call for an increase in the 37-year-old official rate as part of a general program to realign currencies and as a forerunner of negotiations to reform the international monetary system.

"With some \$41-billion of gold reserves held by the IMF and nations around the world, an increase in the official price would indeed bolster the reserve assets of nations holding gold - particularly large holders such as France - in addition to increasing US liquidity. Since IMF regulations state member nations' currency values in terms of a fraction an ounce of gold - as well as in terms of the dollar - a hike in the gold price would only be effective in realigning currency values and righting the US balance of payments problems if other nations didn't follow with matching devaluations of their own gold values. A 10% hike in the gold price - to \$38.50 - has been suggested.

"The free market held at its \$41-42 level. London prices jumped to \$42.24 in anticipation of an announcement that the official price would be raised substantially. But the US wasn't giving in to the European and Japanese pressure. Treasury Dept. official reiterated the administration's stand on the \$35 price."

AMC SURFACE MINING VIEWS

The Board of Directors of the American Mining Congress, supported by companies engaged in surface mining, has agreed to endorse Federal surface mining legislation now pending. The following paragraphs from an AMC letter addressed to the House Interior and Insular Affairs Committee are of interest:

"In summary, the mining industry will support a grant of federal authority to set broad, reasonable guidelines for mined-land reclamation while urging that these guidelines be sufficiently broad as not to impinge on the power of the various states also to regulate.

"This position represents a profound change in the views of the mining industry on this subject, made possible by enactment last year of the National Mining and Minerals Policy Act.

"In urging that the states continue to have a responsible role, we recognize that it is incumbent on a state to satisfy federal guidelines -- and if it does not, then the federal government will come into that state and do the job itself."

DIVISION GEOLOGISTS RETURN

Gordon Herreid, Geologist, and two student assistants from the University of Alaska, Jim Pray and Tom Bundtzen, have returned from a season of geological-geochemical mapping in S.E. Alaska. They worked in an 8 x 20 mile area around the old Copper Mountain mining district on Prince of Wales Island, about 40 miles west of Ketchikan. This area was much prospected in the early days, and several small sized deposits were mined before World War I. There are contact metamorphic copper deposits near Copper Mountain and fault-controlled copper and gold-lead-zinc deposits some distance away. Herreid's mapping shows the contact metamorphic deposits to be concentrations in a large pyrite-bearing hornfels aureole around the Copper Mountain intrusive. The fault-controlled deposits occur along N and NW trending members of an extensive system of faults with northern trending faults cut by northwest trending faults, which are cut in turn by west trending faults. All of these are younger than a major overthrust that separates the oldest rock in the area (Wales schist) from the overlying rocks. Geochemical stream sediment samples were taken throughout the area. Work in this complex mineralized area will continue.

A six-man team of three geologists - C. E. "Jim" Fritts, Gilbert Eakins, Robert Garland - and three assistants - John Larson, Bill Roberts, Mark Zdepski - mapped bedrock geology in the Survey Pass quadrangle in the south-central Brooks Range this summer. In eighty-six days in the field with full helicopter support they mapped approximately 1700 square miles of previously unmapped geology at a scale of one mile to the inch. The principal features in the area are major east-west trending thrust faults. They found continuity with previous Survey mapping in the Angayucham Mts. and the Cosmos Hills to the south and southwest respectively, and also with recently completed U.S.G.S. mapping of the Wiseman quadrangle and eastern portion of the Survey Pass quadrangle. In addition, a geochemical stream sampling program with complete coverage of all of the streams in the area was conducted, with more than 600 samples being collected and sent to the Division's laboratory facilities in College for analysis.

The geology of the area was found to be varied and interesting. Approximately 400 square miles of the mapped area are occupied by granitic plutons, which form the scenic Arrigetch Peaks and Mt. Igikpak. The remaining bedrock consists of marble, dolomite, schist, slate, and quartzite. Among the more spectacular "finds" of the summer was a 425 lb. quartz crystal, found by Mark Zdepski, which the Division donated to the museum at the University of Alaska. This unusual specimen is presently on display in the foyer of the museum.

Division Geologists Return (continued)

Another interesting incident, though not strictly geological, was the discovery of artifacts on the site of their camp at Walker Lake. All information and specimens of this find were turned over to Dr. John Cook, Archaeologist, at the University of Alaska.

Geologic mapping during the 1971 season by Thomas E. Smith, Geologist, and Gary L. Kline, assistant, in the Clearwater Mountains, central Alaska, has demonstrated the continuity of a broad metavolcanic belt between the Amphitheater Mountains and the area south of Windy Creek to the west. The lower part of the volcanic section consists mainly of massive basalt and basaltic andesite, in part somewhat amygdaloidal; these give way upsection to a heterogeneous assemblage of lavas containing red hematitic flows, amygdaloidal and columnar jointed flows, as well as numerous interbeds of volcanoclastic sediment and limestone. These broad scale variations of character across the volcanic terrane give promise of subdivision in continued mapping efforts.

A thin transitional series of tuffs, limestones, and argillites separates the volcanic belt from isoclinally folded pelitic rocks to the north. Argillites with recognizable primary structures grade northward through slates and phyllites into biotitic schists near the headwaters of Clearwater Creek. This metamorphic pattern is an extension of an equivalent zonation mapped by Smith to the west in 1968-69.

A medium density stream sediment sampling program was completed in the Mt. Hayes A-6 quadrangle concurrently with geologic mapping. These data will be made available in the near future.

MINE-FINDING ODDS

One example of the odds involved in finding a mine was expressed in some statistics recently released by Cominco, Ltd., a large Canadian producer. In the past 40 years, Cominco has explored more than 1000 prospects. "Explored" means going beyond the preliminary stage of visual examination and taking a few samples. Of these 1000-plus properties, only 78 were judged to be worthy of major work. This major work developed minable ore bodies at 18 of the 78, but only 7 of the 18 resulting mines were profitable. It has often been said that only one in a hundred prospects is successful, but Cominco's success has been 30% less than that.

LOST RIVER SHUTS DOWN DRILLING

Lost River Mining Company is shutting down its intensive diamond drilling program, which has been in operation on a 24-hour basis all summer. Company officials feel they have enough information now for their feasibility study. They will concentrate now on bulk samples. Reports indicate there are more ore reserves (fluorite-tin-tungsten-beryllium) than previously estimated. (Alaska Construction & Oil Report 9-14-71)

FIRST AID MANUAL

A new edition of the Bureau of Mines first aid manual, just issued by the Interior Department, is now available from the Government Printing Office for \$1.25 per copy. This manual has for years been a major source of information on how to treat industrial accident victims. The 191-page manual contains pictures and text describing treatments for virtually all types of injuries likely to be suffered by mining and industrial workers.

Copies of "First Aid for the Mineral Industries" (catalog number I 28.16 F 51 2.970) can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A quantity discount of 25 per cent is allowed on orders of more than 100 copies mailed to a single address.

NEW OPEN FILE RELEASE

The U.S. Geological Survey has released on open file the following report:

Chukchi Sea seismic reflection profiles and magnetic data, 1970, between northern Alaska and Herald Island, by Arthur Grantz, W. F. Hanna, and S. L. Wallace. 32 sheets profiles, 2 sheets magnetic data, 1 location map.

This report can be seen in the following listed Alaskan offices of the USGS and ADGS and certain USGS offices in the other states.

U. S. Geological Survey:

402 Brooks Building, College
108 Skyline Building, Anchorage
441 Federal Building, Juneau

Division of Geological Survey:

College Rd. and University Ave., College
323 East 4th Ave., Anchorage
509 Goldstein Building, Juneau
306 Main Street, Ketchikan

Material from which copy can be made at private expense is available at the Alaskan Mineral Resources Branch, USGS, 345 Middlefield Rd., Menlo Park, Calif., 94025.

NEW DIVISION PUBLICATIONS

The following publications are now available through the Division of Geological Survey and Mining Information offices located at the following addresses:

State of Alaska
Division of Geological Survey

Pouch M
Juneau, Alaska 99801

323 E. Fourth Avenue
Anchorage, Alaska 99501

P. O. Box 80007
College, Alaska 99701

P. O. Box 2438
Ketchikan, Alaska 99901

Bibliography of Alaskan Geology 1960 - 1964, compiled by Crawford E. Fritts and Mildred E. Brown, Division of Geological Survey, College, Alaska, 1971. (81 p.). Price \$1.00.

Bibliography of Alaskan Geology 1950 - 1959, compiled by Crawford E. Fritts and Mildred E. Brown, Division of Geological Survey, College, Alaska, 1971. (82 p.). Price \$1.00.

MERCURY

An article, titled "Mercury and the Surtax", appearing in the September 20th issue of Metals Week states: "Cominco has notified its customers that the \$7.60 import surtax would not be absorbed by the Canadian producer, but would be billed - as a separate item - to customers accounts".

In the first half of 1971, the consumers of mercury in the United States imported 12,200 flasks. Of this amount a Canadian Company - Cominco - supplied 10,995 flasks or 90% of the total imports.

Cominco has maintained that the Metals Week quotation is basically for the U.S. mercury mines; that Cominco will not absorb the 10% surtax based on the Metals Week quotation; and that the added cost must be absorbed by the U.S. consumer.

Mercury (continued)

For the mercury dealer, the \$7.60 import surtax simply increases the duty and widens the spread between the U.S. and non-U.S. markets. If he can sell for a \$5 profit in Europe, he won't sell for a lower profit in the U.S. And since the U.S. spot market now must rely on non-Canadian imported metal, the \$7.60 surtax has automatically been absorbed into the current U.S. market. Stated another way, prior to the surtax Mexican mercury would sell in the U.S. for \$11.40 (the 1971 duty) more than it would in Europe - freight differences not considered. Since the surtax, a seller of Mexican mercury would charge \$19 more in the U.S. And that is exactly what has happened. While the European market has declined, the U.S. has held and the spread between the two markets has widened by roughly the amount of the surtax.

MINER HAS FAITH IN GOLD

John Miscovich, born and raised an Alaskan gold miner, but who has also been a success in off-shoots of mining has "never lost faith in gold as a basic industry" and personally feels that gold will again play a very important part in Alaska's economy.

Miscovich, 53, one of four mining brothers and three sisters all born at Flat to pioneer miners Peter and Stana Miscovich, is still in the mining business, but has made his mark in other parts of the world. One brother, Andrew, is also still a gold miner working in the Koyukuk area on Porcupine Creek.

Miscovich is the inventor of the Intelligiant Monitor which produces a high-volume water spray directed by pre-set automatic controls.

The Intelligiant Monitor of course is also utilized extensively in Alaska, presently being used in Flat by the Fullerton Brothers operating as Flat Creek Placers, the Prince Creek Mining Co. at Flat, and Mike O'Carroll at Ophir.

Miscovich said the monitor has it all over the old hydraulic sluicing methods used in the early days of the creeks by the F.E. Co. and other mining firms because they are fully automatic and don't need a nozzleman to point the water trajectory. (Daily News Miner 9-21-71)

ALASKA MINING CLAIMS

<u>Number of Claims</u>	<u>Creek or Area</u>	<u>Quadrangle</u>	<u>Date Notice Posted</u>
1	Candle Creek	Candle	June 1971
1	Fourth of July Creek	Charley River	July 1971
31	Horace Mountain	Chandalar	June 1971
14	Bachelor Creek	Circle	July 1971
3	Landlocked Bay	Cordova	July 1971
18	Kasaan Peninsula	Craig	May 1971
2	Niblack	Craig	August 1971
21	My and Our Creeks	Eagle	August 1971
1	Daniels Creek	Fairbanks	August 1971
3	Birch Creek	Fairbanks	July 1971
2	Hogan Hill	Gulkana	August 1971
2	Portage Creek	Healy	August 1971

Alaska Mining Claims (continued)

<u>Number of Claims</u>	<u>Creek or Area</u>	<u>Quadrangle</u>	<u>Date Notice Posted</u>
2	Jack River	Healy	August 1971
2	Falls Creek	Ketchikan	August 1971
2	Dome Creek	Livengood	May, August 1971
2	Elliot Highway	Livengood	July 1971
8	Powell Gulch	Mt. Hayes	August 1971
12	Big Eldorado Creek	Nabesna	August 1971
4	Sixmile Creek	Seward	August 1971
2	Summit Creek	Seward	August 1971
1	Tincan Creek	Seward	August 1971
14	Saksaia Glacier	Skagway	June 1971
2	Sherret Creek	Solomon	August 1971
5	Solomon River	Solomon	August 1971
2	Offield Creek	Teller	July 1971
82	Tin Creek	Teller	May 1971
18	Buck Creek	Teller	August 1971
3	Sheep Creek	Valdez	August 1971
5	Jackson Point	Valdez	August 1971
2	Hummel Bar	Wiseman	August 1971
3	Allen River	Wiseman	August 1971

METAL MARKET

<u>Metals</u>	<u>September 27 1971</u>	<u>Month Ago</u>	<u>Year Ago</u>
Antimony ore, stu equivalent			
European ore	\$8.64-10.00	\$8.64-10.00	\$21.43-23.21
Barite (drilling mud grade			
per ton	\$18-22	\$18-22	\$12-16
Beryllium powder, 98%, per lb	\$54-66	\$54-66	\$54-66
Chrome ore per long ton	\$25-27	\$25-27	\$31-35
Copper per lb.	52.9¢	52.9¢	59.6¢
Gold per oz.	\$42.90	\$43.60	\$36.45
Lead per lb.	14.1¢	14.1¢	15.0¢
Mercury per 76# flask	\$283-286	\$280-285	\$355-360
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb.	\$1.33	\$1.33	\$1.28
Platinum per oz.	\$120-125	\$120-125	\$130-135
Silver, New York, per oz.	140.1¢	160.2¢	176.7¢
Tin per lb.	167.1¢	165.4¢	174.8¢
Titanium ore per ton (Ilmenite)	\$30-35	\$30-35	\$30-35
Tungsten per unit	\$55.00	\$55.00	\$50-53
Zinc per lb.	17.0¢	17.0¢	15.0¢

MINING IMPACT STATEMENT

In an address to the Society of Mining Engineers of the AIME in Seattle on September 22, Mr. Charles F. Herbert, Commissioner of Natural Resources, "took a look" at the Federal Environmental Protection Act of 1969 and subsequent regulations to see how these apply to the question "Should Alaska be developed?" "I believe" said Mr. Herbert, "that the Act provides a sound legal basis for defeating nihilistic emotions and, since Alaska is relatively undeveloped, adoption of environmental safeguards will be simpler than correcting longstanding abuses." He quoted from the Act to show that it emphasized production in harmony with the environment and seeks the wise use of the Nation's resources consistent with maintenance of "safe, healthful, productive, and esthetically and culturally pleasing surroundings."

The Act requires that an environmental impact statement be prepared on any proposed project that has a major Federal impact to determine if the project meets the requirements of the law. Mr. Herbert proposed that the search for mineral wealth in Alaska be expanded and that ores and mineral fuels be produced. He then narrated in some detail how his proposal would be described, justified, and found necessary in the required impact statement, and would meet the requirements of the Act. He also dwelled on the alternative which is proposed by some (do nothing) and what its bad effects would be on the Nation and its people.

Mr. Herbert concluded with, "True, there are problems with protecting the environment--there are even greater problems in protecting the Nation from the preservationists. We can meet both types of problems with the Environmental Protection Act of 1969."

GOLD HIJACKING

An article, titled "Gold hijacking not dead either" appeared in the September 14 issue of the Daily News Miner and stated: Clinton Rothburn, owner of a gold mine at Deadwood Creek Alaska, reported to State Troopers that an unknown quantity of gold was taken from his sluice boxes.

AEROMAGNETIC SURVEY PROGRESS

Progress toward printing the final aeromag maps is not as far along as we had hoped. We are now looking at November 30 as a possible date for the sale of at least those maps within the Tanacross and Nabesna quadrangles. As announced in earlier Bulletins, we are compiling a mailing list for sale notices. When we know positively when the first sale can be held and what maps will be available at that sale, we will mail out sale notices giving the exact particulars.

GLACIER BAY WITHDRAWAL PROPOSALS

The latest large withdrawal proposals are by the National Park Service with regard to the Glacier Bay National Monument, which is presently open to mining. The Monument is generally considered to have an excellent mining potential. The proposals are to (1) establish a 2,210,600 acre wilderness area within the Monument, or (2) designate the Monument as a national park. Hearings will be held November 17 to 20 in Anchorage and Juneau. Further information, maps, plans, etc., can be obtained from the National Park Service, Room 376 Federal Building, Anchorage, Alaska 99510.