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Department of Natural Resources  
DIVISION OF MINES AND GEOLOGY

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**MINES BULLETIN**

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MINING ACTIVITIES

International Nuclear Corporation -- The Minerals and Special Projects Division of International Nuclear Corporation has been involved in three prospecting projects in Alaska this summer. Former Commissioner of the Alaska Department of Natural Resources, Phil Holdsworth, is in charge of these Alaska operations.

The first concerns a previously unexplored copper-nickel area. Three geologic field parties with helicopter support have been used to conduct a detailed investigation of the area. If the results of this summer's work prove favorable, a drilling program will be carried out next summer.

Two copper-silver prospects were also explored by helicopter-supported parties. Again, if this summer's results are favorable a more detailed project will be undertaken in 1970.

Ocean floor exploration techniques were the object of the third project. Plans call for the techniques researched this year to be used to further explore the company's prospecting permits held in the Icy Bay area of Alaska. If enough gold-platinum is found within the permit areas, year round dredging operations would be feasible in this ice-free bay.

Trans-Pacific Resources -- Trans-Pacific Resources, Inc., of Spokane, Washington recently completed an extensive mapping program on its magnetite iron ore deposit in Tuxedni Bay off Cook Inlet. This land was acquired by the company when it merged with Alaska Mining and Smelting, Inc., earlier this summer.

The company holds 28 lode claims encompassing about 90% of the upland surface of Magnetite Island. Two separate deposits on the island display surface mineralization. The western deposit is a massive body containing approximately 75% magnetite. The eastern deposit consists of disseminated magnetite in hornfels which occurs in two parallel lodes separated by 20 feet of country rock.

The company has conducted both ground and aerial magnetometer surveys of the island, along with aerial photography, topographic mapping, and ground surveying. Based on results of these various studies a deep drilling program will be conducted on the deposits in the near future.

Hanna Mining Company -- Hanna Mining Company has had an option this year on the patented claims covering the old Kennecott Mother Lode property in the McCarthy area. The claims are owned by Walt Higger of Fairbanks. Hanna has been cleaning out the old workings and carrying out geological and geophysical exploration work underground. The company plans to return next year "in force".

Chandalar Mill -- The Chandalar Mill is now operating on a production basis. It is processing 400 to 500 tons per day and plans call for milling 3000 tons this season before the winter shut-down. The Ilikado lode is the source of the ore and is one of the better known gold lodes in the Chandalar district.

#### INTERIOR SUPPORTS MINING LAW OF 1872

Secretary of Interior Walter J. Hickel recently gave full support of the existing Mining Law of 1872. This will necessarily be the stand of the Department of the Interior (which includes the Bureau of Land Management) in the nation-wide controversy over whether the present claim location system should be replaced by a leasing system. This stand completely reverses the position taken by the former Secretary, Mr. Udall.

In a letter to the Public Land Law Review Commission, Secretary Hickel recommended ".... a workable revision of the mining law of 1872 which will enable it to meet our present and future needs. This can be accomplished without sacrificing the best qualities of the old law and stifling needed exploration and development while still insuring appropriate consideration for necessary conservation and multiple use management."

He further recommended "....that a careful study be made of revenues resulting from minerals claims to determine whether the Federal Government should receive any compensation from the minerals extracted from such claims. However, consideration should not be given to revisions which would deter exploration for and development of our mineral resources nor which would render unfeasible or uneconomical the removal of vitally needed minerals from public lands."

His letter then went on to make the following suggestions for improving the Mining Law of 1872:

- "1. Revision of the patenting procedures to grant claimants only a patent to subsurface mineral resources with a right to use so much of the surface as is necessary for mining and related activities. Preference should be given to the patentee in any sale of the remaining surface rights.
- "2. Provision for realistic increases in the purchase price per acre for mining claims upon patenting. Such increases should adequately reimburse the Federal Government for expenses incurred in issuing the patents. Prices established in 1872 are far from in line with prices of today.
- "3. Retention by the United States of surface rights should be accompanied by a provision enabling the Federal Government to exercise a reasonable degree of control over the impact upon the surface and environment as a result of mining and related operations.

"4. Elimination of the distinction between lode and placer claims. Countless problems have been caused by this needless distinction and it is generally agreed that it serves no useful purpose.

"5. Establishment of a means to clear the public land of stale and abandoned mining claims. The present system is ineffective and extremely expensive. As a result, very slow progress has been made in clearing public land of questionable claims which adversely affect both the mining industry and the public interest.

"6. Elimination of local laws and customs for the regulation of claims locations and the establishment of clear and modern federal requirements applied uniformly which recognize the technological developments made in the mining industry. These regulations should require claim locations to conform to the lines of public survey and follow the description of legal subdivisions as closely as possible.

"7. Elimination of extralateral rights. Amend existing laws to provide that mining claims only include minerals within the vertical extensions of claim boundaries.

"8. Establishment of a system of pre-discovery claims subject to reasonable requirements for time of development. This should provide necessary protection for one engaging in exploration with reasonable diligence intending to develop any workable deposits found."

#### NATIVE LAND CLAIMS AND MINING

Both a revision of the law of 1872 and a national mineral policy will, in most cases, benefit the mining industry in the United States, but Section 11 of the proposed Congressional Native Land Claim Bill (HR 13142) may prove detrimental to exploration and mining in Alaska. The section is quoted below.

"SEC. 11. Deposits of all minerals included under the mineral leasing laws, including but not limited to coal, phosphate, sodium, potassium, oil, oil shale, or gas located in all public lands in Alaska shall be subject to disposition by the Secretary under the terms of this Act. After the effective date of this Act, the Secretary is authorized to dispose of such deposits only by competitive bidding, but otherwise under the provisions of the applicable mineral leasing law. He shall prescribe by regulation the procedures to be used for competitive bidding. The term "mineral leasing laws" as used in this section means only the Mineral Leasing Act of February 25, 1920, as amended and supplemented (30 U.S.C. 181-283), and the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351-369)."

Hearings on the bill will be held in Fairbanks on October 17, 1969 from 8:00 a.m. to 5:00 p.m. at Alaskaland, and in Anchorage on October 18 from 8:00 a.m. to 5:00 p.m. at West High School. Testimony on all phases of the bill are invited and those interested in speaking should contact Representative Howard Pollock's office in either city for a scheduled time.

#### REMOTE SENSING SYMPOSIUM

Remote sensing, a modern means of learning quickly many unknowns with airborne devices, will be the subject of a symposium December 8-10 in Anchorage, co-sponsored by the State of Alaska and the Department of the Interior, and directed by the State Department of Economic Development in cooperation with the Department of Natural Resources. The purpose will be to inform industry, government, and the general public on the potentials of remote

sensing for providing the information needed to use and manage Alaska's resources properly. Remote sensing employs photographic equipment, infrared sensors, radiometry, radar, multi-sensor devices, and automated data reduction techniques simultaneously from aircraft to provide a comprehensive picture of what lies below. The symposium will be the initial step of a statewide effort to inventory resources, measure environmental characteristics, and provide data on natural habitat.

#### MINING INFORMATION: WHERE TO FIND IT

There are numerous sources of information for those interested in Alaska mining. Knowledge and utilization of these sources can save one many needless and expensive hours in the field. Locations of some of the Federal and State offices and the services available are listed below.

#### U. S. Geological Survey

Office of Public Inquiries, 108 Skyline Building, 508 Second Avenue, Anchorage  
Alaska 99501 Phone 277-0577:

- 1) Serves as public contact point for dissemination of information about Geological Survey activities in Alaska.
- 2) Maintains sales stock of Alaska topographic and geologic maps and book reports (bulletins, etc.) for over-the-counter sales. Does not sell by mail.
- 3) Depository for open-file reports on Alaska.
- 4) Has a complete library of Survey publications.

Alaska Distribution Section, 310 First Avenue, Fairbanks, Alaska 99701, Phone GL-67084:

- 1) Sells Survey maps and map-related publications on Alaska over-the-counter and by mail (does not handle bulk orders).

Branch of Alaskan Geology: Headquarters office: 345 Middlefield Road, Menlo Park, California 94025, Phone (415) 325-6761. Fairbanks Office, Box 5-580, College, Alaska 99701, Phone 479-7245; location: Brooks Building, University of Alaska. Anchorage Office: Room 216 Skyline Building, 218 E Street, Anchorage, Alaska 99501 Phone 272-8228:

- 1) Maintains liaison with and supplies information to Federal, State, University and private groups or individuals in the area who are interested in geological and mining matters.
- 2) Have available reference sets of Alaska publications, open-file reports, maps, and other related publications.

Branch of Mining Operations, 207 Skyline Building, 218 E Street, Anchorage, Alaska 99501 Phone 272-0578:

- 1) Mining and prospecting operations on Federal lands in Alaska subject to the Federal mineral leasing acts are supervised.
- 2) Liaison is maintained with military on production problems.
- 3) Office consults with other agents on leasing matters.

Branch of Oil and Gas Operations, 214 Skyline Building, 218 E Street, Anchorage, Alaska 99501, Phone 277-0579:

- 1) Supervision of oil and gas exploration, development, production, and royalty accounting on all Federal and Indian lands in Alaska (except Naval Petroleum Reserve #4), as well as outer continental shelf lands adjacent to Alaska.

### Bureau of Land Management

Fairbanks Office: 516 2nd Avenue, Fairbanks, Alaska 99701, Phone 456-6687. Anchorage Office: 555 Cordova, Anchorage, Alaska 99501, Phone 277-1561:

- 1) Land status up through first patents for a given land district.
- 2) Copies of isolated land surveys and mineral surveys done for patent and homestead applications, etc.

### Alaska State Department of Natural Resources

Division of Mines and Geology, Main Office: Box 5-300, College, Alaska 99701, Phone 479-2202, location: University of Alaska Maintenance Plant, University and College Avenues, College, Alaska. Anchorage Office: 3001 Porcupine Drive, Anchorage, Alaska 99504, Phone 279-1433. Juneau Office: Pouch II, Juneau, Alaska, Phone 536-6352, located: Room 509 Goldstein Building, Juneau, Alaska 99801

Main Office:

- 1) Kardex files listing all claims staked in Alaska. Gives status (active or inactive patent or non-patent) owner, location, and commodity.
- 2) USGS open-file reports, professional papers, and circulars pertaining to Alaska.
- 3) USBM reports of investigations, information circulars, and open-file reports pertaining to Alaska.
- 4) Unpublished mining property examinations, mineral investigations, and prospector assistance program reports (after the two-year period of confidentiality).
- 5) Geologic and geochemical reports based on the Division's summer field work. List available upon request.
- 6) Laboratory and assay office.

The Anchorage and Juneau office have all State, USGS, and USBM reports as listed above. They also have xeroxed copies of the Kardex file. The professional staff is located in the College office.

Division of Oil and Gas, 3001 Porcupine Drive, Anchorage, Alaska 99504, Phone 279-1433:

- 1) Issues permits for drilling of oil and gas.
- 2) Regulates drilling and production.
- 3) Maintains well records, including electrical and formation logs and keeps well samples and cores in its building (available to public after two year period).

### University of Alaska

College of Earth Science and Industry, College, Alaska 99701, Phone 479-7366:

- 1) Courses in geology and mining engineering.
- 2) Various publications. List available upon request.
- 3) Mineral Industry Research Laboratory: investigative work in the mineral industry and resources of Alaska. List of publications available upon request.

Division of Statewide Services, College, Alaska 99701, Phone 479-7221:

- 1) Extension courses in prospecting, rock identification and geochemical prospecting.

### NEW PUBLICATIONS

The following open file reports have been released by the U. S. Geological Survey and are available for consultation in the Alaska USGS and State Division of Mines and Geology offices. Material from which copies of these open file reports can be made at private

expense is available at the Alaska Geology Branch, U.S.G.S., 345 Middlefield Road, Menlo Park, California 94025.

Petroleum potential of the Kandik Basin, east-central Alaska, by Michael Churkin, Jr., and Earl E. Brabb. 15 p., 4 figs

Analyses of stream-sediment and rock samples from the Fortymile area, Eagle quadrangle, Alaska, by Helen L. Foster and Sandra H. B. Clark. 10 p., 2 pl., 97 sheets of tabular material

Analyses of stream-sediment rock, and soil samples from a part of the Seventymile River area, Eagle quadrangle, Alaska, by Sandra H. B. Clark and Helen L. Foster. 10 p., plus 119 p. of tabular material

Availability of petrographic thin-section slides from Naval Petroleum Reserve No. 4, Supplement No. 1; South Barrow Test Well No. 2, South Barrow Test Well No. 4, Avak Test Well 1, by George Gryc and I. L. Tailleux. 3 p

Preliminary carbonate lithofacies maps and possible dolomite porosity trends, Mississippian-Pennsylvanian Lisburne Group, North Slope, Alaska, by Augustus K. Armstrong. 15 p., 7 figs

Foraminiferal zonation and carbonate facies of the Mississippian and Pennsylvanian Lisburne Group, central and eastern Brooks Range, Arctic Alaska, by Augustus K. Armstrong, Bernard L. Hanst, and J. Thomas Dutro, Jr. 26 p., 4 figs

Preliminary investigation of gold mineralization in the Pedro Dome-Cleary Summit area, Fairbanks district, Alaska, by H. D. Pilkington, R. B. Forbes, D. B. Hawkins, R. H. Chapman, and R. C. Swainbank. 47 p., 1 pl., 6 figs, 11 tables (36 p.)

Gold anomalies and magnetometer profile data, Ester Dome area, Fairbanks district, Alaska, by D. L. Stevens, R. B. Forbes, and D. B. Hawkins. 43 p., including 37 p. tabular material

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

	<u>Sept. 25</u>	<u>Month Ago</u>	<u>Year Ago</u>
Copper, per lb.	51.9¢	48.14¢	42¢
Lead, per lb.	15.5¢	15.5¢	13¢
Zinc, per lb.	15.9¢	15.0¢	14¢
Tin, per lb.	165.65¢	165.25¢	143.1¢
Nickel, per lb.	\$1.03	\$1.03	94¢
Platinum, per oz.	\$120-125	\$120-125	\$109-114
Mercury, per flask	\$492-498	\$487-495	\$538-550
Antimony ore, per unit	\$9.55-9.73	\$9.29-9.46	\$5.00-5.95
Beryllium powder, 98%	\$54-66	\$54-66	\$54-66
Chrome ore, long ton	\$31-35	\$31-35	\$31-35
Molybdenum conc, per lb.	\$1.72	\$1.72	\$1.62
Titanium ore, per ton	\$20-21	\$20-21	\$21-24
Tungsten, per unit	\$43.00	\$43.00	\$43.00
Silver, New York, per oz.	178.9¢	166.7¢	240.8¢
Gold, per oz.	\$41.14	\$41.29	---
Barite (drilling mud grade from E/HJ August)	\$12-16	\$12-16	---