Territory of Alaska
Department of Mines

P. O. Box 1391
Juneau, Alaska

T D M BULLETIN

Vol. IV

January 1956

No. 1

NATURAL RESOURCES AND THE PROPOSED ALASKA CONSTITUTION

After discussion with and suggestions from representatives of mining and allied industries, the Resources Committee of the Constitutional Convention has completely revised the proposed Resources Article. We would suggest that any criticisms or comments be applied to the new version. The new Article appears to have removed most of the objections to the first Article raised by the industry.

OIL NEWS

The Interstate Oil Compact Commission has been invited to hold its June 1957 meeting in Juneau. The Executive Committee of the ICCC is expected to consider the various invitations extended for this meeting and arrive at a decision within a few months. Alaska is an associate member of the ICCC, which is an organization of oil-producing States dedicated to the conservation of oil. They hold meetings twice a year at which about 350 delegates attend. Tentative plans are for a steamship to be chartered for the trip to Juneau and return.

FOOD FOR THOUGHT

An unusually thoughtful holiday greeting was received from one of our mining friends at Christmas time. We were so impressed with its message that we would like our readers to share it with us. In the interests of peace and good will, we repeat it here:

"The United States and Canada have a border of about 3,000 miles without a gun pointing in either direction. In crossing this invisible line, if it were not for the Immigration and Customs officials, it would not occur to anyone that he was not in his own country. For a hundred years we have lived side by side without a quarrel. Here are people from all European countries. They intermarry. They speak one language. They live in peace and with mutual respect. These two great nations have set an example which the rest of the world might well follow. At this season when we celebrate the birth of the Prince of Peace, it is my prayer that unity and goodwill may ever abide between us. I wish you a Merry Christmas and Happy New Year in 1956.

O. H. Solibakke"

INFORMATION FOR PROSPECTORS

Another book on uranium prospecting has been published. It is a 212-page volume named Prospecting for Atomic Minerals by A. L. Knoerr and G. P. Lutjen. The publisher is McGraw-Hill, and the price is $3.95. The book is claimed to be a concise, easily-assimilated handbook which traces the fundamentals of prospecting from basic geology to marketing a find. Where specific details are lacking, the book tells where to write for further information. It is illustrated with photographs and drawings.

The USGS has published another open file report of interest to prospectors in the northern part of Southeastern Alaska. It is entitled "Geology and Ore Deposits in the Reid Inlet Area, Glacier Bay, Alaska, with Added Notes on a Mineralized Zone near Lituya Bay" by Darwin Rossman. The report can be seen at USGS offices in Alaska, the Juneau TDM office, or can be obtained at private expense from the USGS Alaskan Geology Branch, 4 Homewood Place, Menlo Park, California.

It quite often happens that prospectors with prospects for sale or option will give their only samples or maps to a company representative pending a possible future deal, then are left with nothing to interest the next prospective purchaser who comes along. It is, of course, often necessary to part with samples, particularly when the prospect is covered with snow, but a prospector should always split his samples or cores, and keep the splits at all costs until a definite deal is made or more can be obtained. While we are on this subject, we would like to reiterate our advice to prospectors to always make a sketch map of their prospect, showing exposures, outcrops, sample locations, etc., to the best of their ability. This shows the prospective purchaser that the property holder knows what he is talking about and gives a much better idea of the prospect's possibilities.

NEW MINING LAW

Public Law 359 is a new law which opens reserved power sites to mineral entry with certain exceptions. The exceptions are power sites in operation or under construction and those under survey by a prospective licensee of the Federal Power Commission. A placer claim locator under this Act may not mine his claim for 60 days after filing his location certificate, during which time the Secretary of the Interior may or may not notify him that a hearing will be held to determine if the said placer mining would interfere with other uses of the land. If no hearing is announced, the mining may proceed. If a hearing is held, the miner will be told later whether he can mine, and if so, under what conditions. The U. S. assumes no liability for damage to mineral claims under this Act. Location certificates and assessment work affidavits for claims located under this Act must be filed with the Bureau of Land Management in addition to the other filings. Claims located before the withdrawal and those on which a discovery is diligently being sought at time of withdrawal will not be affected.

MINING INDUSTRY DIFFICULTIES

The Western Governors Mining Advisory Council at its Mineral Policies Conference in November at Sacramento reported that among the causes contributing to the present poor to critical condition of domestic mining (copper excepted) were the following:

> " 6. A tax structure unfavorable to investment of venture capital in the long range activities of mineral exploration, development, and research, resulting in an inadequate testing of domestic mineral potentialities and in lesser ultimate tax revenue than a more practical policy would have produced.
>
> 7. Regarding the public domain, certain segments of government have threatened the rights of location and patenting of mineral lands; and, have also caused substantial public domain withdrawals of questionable need in which withdrawn areas mineral locations are prohibited.

8. Adoption of short range solutions to basic problems have served only to continue the liquidation of the industry rather than to give it new life. Between tax impact on profits and lack of a sound, long term national mineral policy no real incentive exists for substantial investment in exploration for and development of new mineral or metal deposits. This condition is particularly applicable to those minerals and metals which are sold as raw materials competitive with products of foreign mines."

NEWS FROM THE AMERICAN MINING CONGRESS BULLETIN

ALASKA LAND WITHDRAWAL: The Department of Army has filed an application with the Department of Interior calling for the withdrawal of 51,750 acres in Alaska from all forms of appropriation including mining and mineral leasing. The Army said the land is needed for a training site.

The proposed area to be withdrawn is located southeast of Delta Junction in the Fourth Judicial Division. Objections to the Army application may be presented in writing to the Bureau of Land Management, Box 480, Anchorage, Alaska, prior to February 11, 1956. Public hearings may be held following the receipt of objections.

MANGANESE

Manganese is essential for making steel. In present steel-making practice, manganese serves as a deoxidizer and desulfurizer, a dual purpose for which no substitute has been found. Some 13 or more pounds of manganese per short ton of finished steel are added to the molten bath in the final stages of the open-hearth process. This manganese is in the form of ferromanganese, and is used in addition to the manganese contained in the ores and other materials consumed in the making of steel. Manganese increases the strength and hardness of steel. It is also used in the manufacture of dry batteries, in photography, varnish and paint dryers, in fertilizers, and as coloring agents.

Manganese in small quantities is a primary constituent of all igneous rocks. It is the sixteenth most common element in the earth's crust, but because of its affinity for oxygen it is never found in the metallic state. Manganese commonly occurs as an oxide and frequently occurs as a silicate or as a carbonate. More than 125 manganese minerals are known but only a few are of economic importance.

Pyrolusite (MnO_2), psilomelane (a barium-bearing, hydrous manganese oxide), and wad (an impure mixture of manganese oxides) are the most common oxides. The oxides manganite ($Mn_2O_3.H_2O$), braunite ($3Mn_2O_3.MnSiO_3$), and hausmanite (Mn_3O_4), also occur as ore minerals. All pyrolusite is apparently of secondary origin. Psilomelane ordinarily is also secondary, but is locally a hydrothermal mineral. Wad is commonly secondary, but also forms as a direct chemical or biogenic precipitate. Manganite occurs in low-temperature hydrothermal veins and in deposits formed by meteoric waters. Hausmanite is generally a high-temperature hydrothermal vein mineral. Rhodochrosite ($MnCO_3$) is an important primary mineral and rhodonite ($MnSiO_3$) is also prominent.

Pyrolusite, psilomelane, and manganite are all black heavy minerals. Pyrolusite is soft and fingerstaining; psilomelane, hard but usually accompanied by some psilomelane easily rubbed off. Manganite is characterized by a dark

brown streak and prismatic crystallization. Rhodochrosite and rodonite are commonly reddish to pinkish in color, and heavier than quartz.

A borax bead test with platinum wire can be made for manganese. A very tiny amount of the mineral must be used, for too much will turn the bead black and opaque. After fusing the bead, a reddish-violet color indicates the presence of manganese.

Probably the best known manganese prospect in Alaska is the Sunrise Group above Taku Harbor held by Henry "Tiger" Olsen. It is a series of parallel narrow veins in a schist zone sometimes 200 feet wide that extends for about 1000 feet. The minerals are silicates and oxides with the former predominating. The property is under option to Toronto interests. Other manganese prospects are known in several locations about the Territory.

Current prices are quoted as follows: 46-48% Mn, 94-96¢ per unit; low iron, 48% Mn (max 2% Fe) $1.12 per unit; chemical grade, min. 84% MnO_2, $96 per ton in carload lots.

E. AND M. J. METAL MARKET PRICES

	Dec. 29 1955	Month Ago	Year Ago
Copper, per lb.	43.1¢	43.0¢	29.7¢
Lead, per lb.	15-1/2¢	15-1/2¢	15¢
Zinc, per lb.	13¢	13¢	11-1/2¢
Tin, per lb.	$1.10	99-1/2¢	87-1/2¢
Quicksilver, per flask	$280-284	$280-284	$322-324
Silver, foreign, New York	91-1/2¢	91-5/8¢	85-1/4¢
Silver, domestic, per oz.	90-1/2¢	90-1/2¢	90-1/2¢
Platinum, per oz.	$97-117	$97-114	$78-84
Nickel, per lb.	64-1/2¢	64-1/2¢	64-1/2¢
Molybdenum, per lb.	$3	$3	$3
Tungsten ore, per unit	$63	$63	$63
Titanium ore (ilmenite) per ton	$20	$20	$18-20
*Chrome ore (48%, 3 to 1 ratio) per ton	$115	$115	$115

*GSA guaranteed stockpile price. Not quoted by E&MJ.

To all our readers: TDM's best wishes for 1956.