

## STATEWIDE IN ALASKA

*This month's Trends explores some of the reasons for the lack of significant metallic mineral production in Alaska, and summarizes the prospects for future development in this industry.*

It can be said that the metallic mineral deposits in Alaska are in a more primitive state of development than any of our other natural resources. This position can be graphically demonstrated by comparing the dollar value of metallic mineral production in Alaska with that of neighboring British Columbia: Alaska's metallic mineral production for 1970 was valued at only 1/30th of the worth of metallic mineral production in British Columbia, yet minerals occur in similar concentrations in both areas, and the land mass of Alaska is almost two times larger than British Columbia! The reason for this dismal production figure in Alaska is not a shortage of mineral deposits. On the contrary, Alaska has very substantial deposits of almost all metallic minerals, some of which represent the greater share of proven reserves in the entire United States. Why these substantial concentrations have not been exploited is a question of many in Alaska, but few can give ironclad answers as the reasons are many and varied. The lack of markets has hindered the development of many metal mining projects, particularly with respect to iron and copper ores. Isolation and difficulties of transportation in and out of Alaska have retarded other developments. Certain policy decisions at the federal level have reserved potentially productive deposits from the miner's hand in favor of other uses, (e.g. Glacier and Katmai National Monuments and Mt. McKinley National Park). The lack of significant exploration activity to determine more accurately the qualitative and quantitative characteristics of known ore deposits is also a reason for the scarcity of development in mining.

Despite the hesitation that has typified the past, there exists an extremely bright future for the mining industry in Alaska. This is an immediate, rather than a "light at the-end-of-the-tunnel" type of wishful thinking. There are presently serious plans for one or more extensive mining projects in nearly all regions of Alaska, with production likely in this decade. In addition to these projects, increasing world demand and decreasing world supply of many metallic minerals should make the development of other Alaskan projects quite likely. Following is a look at the mineral deposits which have the greatest likelihood for development in the near future on a regional basis.

### SOUTHWESTERN AND SOUTHCENTRAL

The copper deposits at Chignik, on the Alaska Peninsula; those near Denali; and at the site of the former Kennecott Corp. mine near McCarthy hold the most promise for development in this region. SEREM of Alaska, Inc., a subsidiary of a French consortium had been conducting exploratory operations at Chignik in 1971 to determine the economic feasibility of mining the copper and molybdenum deposits, and will continue studies in 1972. So far, the company has issued little information regarding their surveys, but the Chignik deposits are suspected to be extensive enough to facilitate development, and the location of the deposits near the shores of the Pacific Ocean, would make transportation of ore to market a very simple matter.

The Denali copper deposits came under the scrutiny of the Cities Service Co. in 1970. Market conditions that prevailed plus "tight money" had a restrictive effect on the study of the potential there. Much more activity is forecast for the summer of '72. The State Geological Survey predicts that this deposit could become the first new major copper producing area in Alaska.

As the Kennecott Co. proved, the area around McCarthy is rich in copper bearing ores, and several companies have been conducting exploratory operations in the area. Prospects for development are greatly enhanced by the construction of the new Copper River Highway which will link McCarthy with the existing road network and will open up the mineral-rich Wrangell Mountains to mining activity where it flourished in the 1930's.

### SOUTHEASTERN REGION

Southeast Alaska and the Seward Peninsula hold the greatest promise for substantial development of hardrock mining operations in the State of Alaska during the decade of the '70's. Long a known source of substantial mineral concentrations, Southeast Alaska is just now beginning to be considered as a site for large scale mineral development. Likely sites

for development in the 70's are:

- (1) The iron ore deposits near Port Snettisham, 50 miles south of Juneau.
- (2) The alluvial iron ore deposits in the vicinity of Klukwan, north of Haines, Alaska.
- (3) Iron ore deposits on Prince of Wales Island.

The key to the development of an iron ore extraction facility at Snettisham is the availability of large amounts of electrical power needed to operate the concentration plant. This need will be filled shortly when the U. S. Army Corps of Engineers completes the Snettisham Power Project which will furnish electricity for the City of Juneau and any mining operations that would be developed. Presently the Marcona Corp. holds an option on the ore deposits at Snettisham, and has received a tax credit from the State of Alaska in the event the company does establish an ore concentration plant.

Another iron ore deposit with great potential for development is the Klukwan deposit, the "Mesabi" of the Pacific. Iron Ore Inc., a wholly owned subsidiary of the giant Mitsubishi Corp. of Japan, has spent several million dollars on testing the mining potential of these deposits and the feasibility of establishing a huge ore concentrator at Haines. If the project does go ahead, approximately 900 persons would be employed in the operation. The ore in these deposits is of very low quality and contains a measure of titanium which requires considerable effort to be removed. Current studies are concerned with the economic feasibility of hauling this low-grade, titanium contaminated ore to Japan for smelting.

Prince of Wales Island near Ketchikan has an estimated reserve of approximately 10 million tons of iron-bearing magnetite ore, although many experts suggest the figure may be much higher. The Prince of Wales deposits contain large amounts of copper and sulphur, which make it undesirable for use in Japanese steel mills. Until domestic markets become attractive, the Prince of Wales deposit will probably go untouched.

In addition to iron ore, Southeast Alaska contains significant deposits of additive minerals. Chromite is found in outcroppings on Baranof Island adjacent to the saltwater, which could make development and transportation of these ores quite easy. Molybdenum occurs in several large deposits in the Panhandle; at Baker Island and Muir Inlet, in Glacier Bay and at

Shakan, on Kosciusko Island. Of these, the Baker Island deposits appear most likely for future development. Southeast Alaska contains nearly all of the known nickel deposits in Alaska, primarily in large quantities on Yakobi Island, at Funter Bay, near Brady Glacier in Glacier Bay National Monument, and on Baranof Island near Sitka. The importance of nickel as an alloying mineral is projected to increase rapidly, and large scale exploitation of these deposits in Southeast is quite probable.

Southeast Alaska has the potential for becoming the primary mineral producing area of the State, because of the substantial reserves of ores and availability of low-cost water transportation. Development hinges in most cases upon favorable market conditions and a continuing supply of low-cost electric power.

### SEWARD PENINSULA AREA

The location of feverish gold mining activity in the early years of this century, the Seward Peninsula mineral deposits are again coming into preeminence after many years of obscurity and inactivity. Geologists have been aware for many years of the extensive mineral deposits in the area, but only in recent years has the exploitation of these resources been considered feasible. The reason for the re-awakening of interest in the Seward Peninsula mineral resources is the prospect of a large-scale tin-flourite-tungsten extraction mine at Lost River, near Cape Prince of Wales. A Canadian firm, Pan Central Exploration, (formerly PCE Explorations) has conducted an extensive ore sampling program on the Lost River deposits, and development of a large scale mine seems a virtual certainty. The development of this mine is exciting not only because of the direct employment effects, but also because of the prospects for further mining activity in the area. There are significant deposits of various minerals, particularly graphite, beryllium and copper, which have marginal economic value when considered separately, but could be mined profitably if development costs were not excessive. The development of the Lost River deposits will necessitate a transportation network that could easily be expanded to serve other mining operations at a fraction of a cost of establishing a new system. In addition, officials of the Lost River Mining Co. envision a new town in the area of the mine, with a population of about 1,500 persons. A new town in this area could grow to provide a work force for other mining operations in the Seward Peninsula. The area holds real promise of becoming the major mineral producing area of Alaska for many years to

come, as reserves are deemed sufficient for long-term exploitation. With planning and coordination, an integrated system of mining could be developed such as in the Sudbury Basin of Ontario.

In addition to direct employment benefits, the development of the Lost River and other deposits in the Seward Peninsula region would have substantial positive effects on the entire economy of the region. PCE is contemplating the construction of a 5,000 foot dock facility at Lost River to load ore concentrates for shipment, which could easily serve as a containership facility to supply residents of this area with the goods that their economy needs. Mining could provide the base for a stable economy in an area that is now supported only by seasonal industries and federal government projects.

## INTERIOR ALASKA

Although very few known mineral deposits in the Interior look likely for production, most authorities agree the potential of this region is as great as any in Alaska, and that the next five years should see a burgeoning of activity in the area. The catalyst for this activity is the Trans-Alaska pipeline and haul road, which will cut through the heart of the Interior providing access to mineral deposits for both exploratory and developmental purposes. There is knowledge of low-grade copper deposits along the route of the pipeline, and the availability of a road connection could provide the necessary impetus to develop these deposits. Further, it is believed that more extensive surveying of the Interior region, like other regions, will unearth significant mineral deposits that are not presently known, and that this additional surveying holds the key to development of the mining industry in the Interior and the entire State of Alaska.

## ALASKA'S ECONOMY IN JANUARY

**TOTAL EMPLOYMENT:** Total estimated employment for the month of January declined 3400 from December totals as the post-Christmas slump in the trade industry, layoffs of cannery workers in the Kodiak area, and declines in construction activity highlighted the employment picture. Primarily on the strength of gains in government, trade, and service industries, employment is up 3700 over January, 1971. The seasonal industries in the Alaska economy seem to be holding their own this winter, as construction and manufacturing employment maintain last year's levels. Only mining shows a decrease in employment, down 500 from last year due to cutbacks in oil exploration this winter.

**Mining:** As it has throughout the winter, the mining industry continued to show depressed levels of employment when compared to the same month last year. The drop from December to January was 100 positions, with the decline again due to reduced activity in the oil and gas sector. The low levels of operation in the industry are expected to continue until hardrock mining begins anew in the spring.

INDUSTRY	(Thousands)			Changes From:	
	1/72	12/71	1/71	12/71	1/71
CIVILIAN WORKFORCE.....	113,900	114,200	110,400	- 300	3,500
INVOLVED IN WORK STOPPAGES.....	200	0	0	200	200
TOTAL UNEMPLOYMENT.....	12,700	10,800	13,100	1,900	- 400
Percent of Workforce.....	11.2	9.5	11.9	-	-
TOTAL EMPLOYMENT 2/.....	101,000	103,400	97,300	-3,400	3,700
Nonagricultural Wage & Salary 3/.....	89,600	91,500	86,200	-1,900	3,400
Mining.....	1,900	2,000	2,400	- 100	- 500
Construction.....	4,300	4,700	4,300	- 400	0
Manufacturing.....	4,800	5,100	4,800	- 300	0
Food Processing.....	1,600	1,700	1,600	- 100	0
Logging-Lumber & Pulp.....	2,000	2,100	2,100	- 100	- 100
Other Manufacturing.....	1,200	1,300	1,100	- 100	100
Transp.-Comm. & Utilities.....	9,100	9,300	9,100	- 200	0
Trucking & Warehousing.....	1,100	1,200	1,200	- 100	- 100
Water Transportation.....	500	600	600	- 100	- 100
Air Transportation.....	2,600	2,600	2,800	0	- 200
Other Transp.-Comm. & Utilities..	4,900	4,900	4,500	0	400
Trade.....	15,700	16,400	14,900	- 700	800
Wholesale Trade.....	3,200	3,200	3,100	0	100
Retail Trade.....	12,500	13,200	11,800	- 700	700
General Merchandise & Appar....	3,500	4,000	3,200	- 500	300
Food Stores.....	1,700	1,800	1,700	- 100	0
Eating & Drinking Places.....	3,100	3,100	2,700	0	400
Other Retail Trade.....	4,200	4,300	4,200	- 100	0
Finance-Insurance & Real Estate...	3,400	3,400	3,100	0	300
Service & Miscellaneous.....	12,300	12,500	11,400	- 200	900
Government 4/.....	38,100	38,100	35,800	0	2,300
Federal.....	16,400	16,400	16,700	0	- 300
State.....	12,200	12,200	10,500	0	1,700
Local.....	9,500	9,500	8,600	0	900

1/ Estimated in accordance with techniques recommended by U. S. Bureau of Labor Statistics.

2/ Includes domestic, nonagricultural self employed and unpaid family workers, and agricultural workers.

3/ Prepared in cooperation with the U. S. Bureau of Labor Statistics.

4/ Includes teachers in primary and secondary schools, and personnel employed by the University of Alaska.

**Construction:** Estimated employment in the industry dropped 400 positions in December, but is maintaining last year's levels, which is encouraging in light of the severity of the winter that has halted construction work in some areas where it might otherwise continue. The spring break-up should see a large increase in construction employment, as 1972 promises to be the best year in many for the industry.

**Manufacturing:** Highlighting the month of January was the closure of the canneries and associated layoffs in the Kodiak area. Because of a severe water shortage, all but one fish processing plant in the area were forced to close, idling hundreds of cannery workers and fishermen. Exact figures are not yet available pertaining to the layoffs, but reliable estimates place the figure between 1500 and 2000 workers and fishermen. These layoffs are extremely