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IMPORTANT FEATURES OF RECENT MINING DEVELOPMENT IN ALASKA

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In reviewing the factors that were of importance in shaping the progress of mining development in Alaska during the past year the sustained high price of gold obviously is of preeminent significance. The enviable position that has been occupied by the gold mining industry in the national economy since the price of gold has been fixed at its present high level has been reflected in Alaska by a very gratifying increase in production of the metal and by the widespread attention that has been drawn to the Territory as one of the most attractive regions that exists anywhere for exploration and development of new gold-mining fields and enterprises. Satisfactory as conditions have been, however, it is true that active development of new gold-mining enterprises in the Territory during the past year has not been as vigorously attempted as was at first anticipated. General uncertainty as to the permanency of the existing high price of gold and the paralyzing effect of the Pacific Coast longshoremen's strike during a crucial period early in the year were undoubtedly major factors responsible for smothering enthusiasm and for restraining conservative investors from attempting to launch new enterprises.

Many organizations and individuals in various parts of the Territory, however, displayed the courage of their convictions and faith in their judgment by proceeding vigorously with active development of new mining properties and the restoration of long-dormant enterprises. Several of such courageous ones have already realized substantial rewards for their efforts and their success will be a potent factor in encouraging similar activity on the part of those who, heretofore, have been more timorous.

Weather conditions in the Territory have always exerted a determining influence on the extent of mining development and gold production, especially throughout the placer fields of the interior and on Seward Peninsula. Conditions in this respect during 1934 may probably be referred to properly as having been "normal" or "average," for no pronounced extremes in precipitation or temperature prevailed over extensive areas. The increasingly predominant use of dredging as a method of recovering placer gold has served to lessen in this field the importance of favorable conditions of precipitation. Dredging operations are usually much less dependent on seasonal precipitation for water supply than are hydraulicking and other methods of placer mining.

Availability of suitable transportation facilities is a fundamental requirement for the continued growth of exploration activities, mine development and production. Although road-building activities can-

not be said to have kept pace with the requirements for maximum possible mine development during the recent past, progress toward that goal has been reasonably satisfactory and substantial improvements have been accomplished in many sections. Notable examples are the practical completion of the 105-mile Gulkana-Nabesna branch from the Richardson Highway, and the progress made on the 63-mile Clines-Livengood extension of the highway system of the Fairbanks region.

Most important and pronounced among the advances in the transportation field, however, are those made in the airplane service. Remarkably rapid strides have been made within the past year toward the perfection of an excellent trunkline airway system that will traverse Alaska from Ketchikan to Nome and, according to announcements that have appeared in the press, will also link the Territory to Seattle and the States by air at an early date. Excellent local airplane service, much of which is on regular schedule, is also now available by which even the remotest portions of the various sections of the Territory may be readily reached from the major bases at Nome, Fairbanks, Anchorage, Valdez, Cordova, Juneau and Ketchikan. Rapidly increasing use is being made of the airplane in transporting mining supplies and equipment, even in the rugged mountainous portions of the coastal regions. The achievement of transporting by plane during the past summer the entire equipment, including diesel-engine, compressor and drills, as well as all

supplies required to equip, develop and place in initial production an otherwise almost inaccessible small gold-mining property situated at an elevation of over 5,000 feet on the alpine slopes of a steep mountainside in the Port Valdez district has attracted national attention, and marks a new era in the development of such properties so situated.

Numerous noteworthy improvements during the past year are to be recorded in the development and equipment of mining and treatment plants of producing properties in the lode, coal and placer mining fields; notably, of course, at the plants of the larger concerns, but likewise also at many relatively small and remote enterprises.

In the lode-mining field an especially important accomplishment has been the completion of the new shaft that is to serve in mining the ores in the deep levels of the Alaska Juneau Mine. This shaft, which is vertical and which includes one ladder-compartment, one man-cage compartment, and two hoisting compartments, each of which compartments is 6½ feet square inside the timbers, has been constructed to a depth of 1,000 feet below its collar, which is at the level of the main haulage-adit of the mine. As a safeguard against fire all the timbers that were used in the construction of this shaft are of fir that has been treated with zinc chloride. The hoisting equipment that has been provided for the shaft is of the finest and latest type and was especially built for the job. The Nordberg hoist which was placed in operation in November, 1934 is of the double cylindrical-drum geared type, the drums of which are 10 feet in diameter. It is

electrically operated, and is very completely equipped with indicator, control, and other safety devices. This hoist is capable of lifting at a speed of 1,000 feet per minute the loaded skips, each of which has a capacity of 10 tons of ore, and itself weighs 8 tons. The underground chamber required to accommodate this hoist that was excavated from bedrock has dimensions as follows: Width 40 feet, height 35 feet and length 110 feet.

Also noteworthy are the preparations being made by the Alaska Juneau Company for the introduction of a new method for disposing of the enormous tonnage of coarse waste that results from the initial sorting operation in their milling plant. Heretofore, this coarse waste has been disposed of through the use of an extensive system of conveyor belts that are fed by steel-car trains operated by gravity on an incline surface tram from the milling plant to the beach, and which deliver their loads within a strip of tide lands of limited extent along the shore of Gastineau Channel. By the new method the waste, instead of being delivered to the conveyor belt system, will be delivered to sea-going barges of 600 tons capacity each, which will be towed by a powerful tugboat to deep water at a distance from the milling plant and there dumped. The tugboat and barges are now under construction. The barges will have a length of about 100 feet, a beam width of 34 feet and will draw from 8 to 9 feet of water when loaded.

Among the smaller lode mines of the interior probably the most significant improvement in equipment was the introduction of oil flotation during the year at the milling plants of the Nabesna Mining Corporation in the Copper River region and at the Ki Yu Mine in the Fairbanks district.

Property acquisitions of major significance that were consummated during the year include the purchase by the Alaska Juneau Company of the property of the Alaska Mining and Power Company, successors to the Alaska Gold Mines, more commonly referred to as the Alaska-Gastineau property, which adjoins their own ground; the purchase by the Trites interests of Vancouver, B. C. of the Kensington and Comet properties in the Berners Bay region; the purchase by the Fairbanks Exploration Company of extensive holdings of placer ground in the Ester Creek valley near Fairbanks; and the purchase by the Hammon Consolidated Gold Mines of the Powell properties adjacent to their own dredging field on the outskirts of Nome.

On the whole, new lode mining development that was undertaken in many sections of the Territory during the year was attended by more than ordinary success in disclosing valuable deposits of gold ore. This was notably the case in the Fairbanks district. Of general interest also was the resumption of gold-lode development at the Golden Horn property in the Iditarod district, where for many years mining operations have been confined to placer enterprises.

In the field of placer mining outstanding among recent developments has been the extensive work done by the Fairbanks Exploration Company in preparing for dredging their new holdings in the valley of Ester Creek. This work includes the completion of a very efficient pumping system on Chena Slough and its accompanying pipeline and ditch system to be used for water supply in the Ester Creek dredging operations. On large areas in the upper sections of the Ester Creek drainage basin stripping operations have proceeded actively and cold-water thawing was in progress at the end of the season.

On Seward Peninsula several new dredging enterprises have been launched and negotiations are in progress for others to be commenced during the coming season. The success that attended drifting operations from a shaft sunk on the tundra area outside of Nome served to focus attention on the latent possibilities of such areas as being potentially productive.

From many other placer districts of the interior reports that were received indicate that a successful season was the rule.

Except for a marked over-supply of common labor, especially at the mines of the coastal region, employment conditions in the industry were satisfactory throughout the year. In that connection it is most gratifying to be able to record the observation that there has recently been a very noticeable increase in the percentage of young men of fine type employed in the mining industry of the Territory. This

observation applies especially to the placer mining operations of the interior. Many of these young men have received college training in mining subjects and are earnestly endeavoring to fit themselves by experience to become active participants in the development of the mineral resources of the Territory. Perhaps the future will disclose that this influx of new blood of high type is destined to be the most important factor of all in shaping the progress of the Territory's mining industries.