

Alaska general

By

NOTES FURNISHED TERRITORIAL DEPARTMENT OF MINES ON ITINERARY COVERED  
AND OBSERVATIONS MADE BY J. C. ROEHM, ASSOCIATE MINING ENGINEER. 1937

Mr. Roehm left Juneau on July 6, 1937 and returned October 13.

The mining districts that were covered by him included the following: Goodnews Bay area and the region to the south of it as far as Cape Peirce, the Eek River area and Tuluksak River, all of which are in the Lower Kuskokwim region; the Iditarod, Flat and Innoko districts in the Upper Kuskokwim basin; the Yentna or Cache Creek placer district; the Willow Creek lode mining district; and the Moose Pass-Hope and Girdwood districts in the Alaska Railroad belt.

The two major productive placer platinum enterprises in the vicinity of Red Mountain, immediately south of Goodnews Bay, are on a sound basis and are being well managed and profitably operated. Extensive drilling within the areas controlled by these two companies has demonstrated the existence of mineable deposits that will eventually yield metals of the platinum group to the value of many million dollars. It is probable that operation of the large new dredge, which is scheduled to be working next year, will result in an annual production of platinum metals from the district that will exceed one million dollars in value.

The placer platinum deposits occur within an area characterized by ultra-basic igneous rocks the erosion of which has undoubtedly yielded the platinum metals found in the placers. This area is of limited extent and, so far as has been demonstrated, is confined to the valley of Salmon River and its several small tributaries that have their sources on the southerly slopes of Red Mountain. Substantial portions of pre-existing placer deposits within the area have probably been removed by glaciation, evidences of which are locally observable, but the remaining deposits are of considerable magnitude. Although scattered occurrences of platinum minerals have been reported in neighboring localities, no new placer platinum deposits of demonstrated importance have been found in the area since the original discoveries were made within the 5-year period prior to 1932.

Although the Lower Kuskokwim region has recently come into prominence, principally because of expansion of operations in the platinum field, placer gold deposits of great potential importance also exist. This region embraces not only Goodnews Bay and the valley of Goodnews River and its tributaries, but also the large basins of the Togiak River to the south and those of the Arolic, Eek and Tuluksak rivers to the north. The existence of placer gold deposits within the Goodnews Bay area and within the drainage basins of these other rivers has been known for many years and a relatively small production of gold, mined, mostly by crude methods, has been made from many streams tributary to them. The probable extent and potential importance of the gold placers of the region as a whole, however, have only recently been recognized.

To a large extent the gravels of the region are thawed and the ground is wet. Prospectors of the past, who employed hand methods, have not been able to reach bedrock. They lacked pumping, and other mechanical equipment that is necessary in prospecting this type of ground. The pronounced success of productive gold-dredging operations on the Tuluk-sak River, and recent drilling operations in other parts of the region, whereby extensive deposits of gold-bearing gravels suitable for dredging have already been proven, give assurance that the Lower Kuskokwim region is likely to become one of the most important dredging fields of the Territory.

The region enjoys many features that are unusually favorable for large-scale mechanical operations. The principal areas are open to either salt-water or river transportation. From these approaches machinery and supplies may quite readily be moved by means of tractors over tundra and gravel ridges, during either the summer or the winter season, without the necessity of road building. The climate is relatively mild and permits a longer working season than is possible in other sections of the Territory. Water is abundant and several favorable water power sites were observed. The deposits are virgin and have not been worked over previously by cruder methods. Airplane transportation to the several supply centers of the region is available at either Anchorage or Fairbanks. During the past season several tons of fresh vegetables were shipped by airplane from Matanuska Valley to Goodnews Bay.

At the time of visit some prospecting had been done and several hundred claims had been staked in the Slug River area, which occupies much of the peninsula lying between Chagvan Bay and Hagemeister Strait. Some gold had been found at four or five localities in this area in deposits of two different types: Concentrations of gold-bearing black sands, found at two places on the ocean beaches between Cape Peirce and a point opposite Hagemeister Island; and gold "prospects" found on the surface and at shallow depths along small streams that traverse the uplands, which consist largely of outwash plain gravels. Evidences of glaciation are present. Bedrock had not been reached at any point in the area. The ground is wet and difficult to penetrate with shafts, and the pay that had been found was in all cases observed confined to the upper 5 feet of the gravels. A drill has since been moved to the Slug River area and is now in operation.

At several places in the Lower Kuskokwim region native Eskimos were met who had left their reindeer to care for themselves and had taken to prospecting. They make good prospectors for this region. They know the country well and can travel over the tundra on foot nearly twice as rapidly as a white man. They do not have to pack prepared foods, as they live principally on reindeer meat. Where the country does not afford

wood with which the meat can be cooked they eat it raw. Several promising prospects were visited that had been found and staked this season by Eskimos and in several places they were working with efficient automatic dams constructed by themselves. They are very eager and quick to learn and deserve encouragement in their ambition to become prospectors.

Among the principal needs of the region as a whole are more capital with which to finance prospecting and initial development; improved salt-water transportation and shore-landing facilities; improved and additional airplane landing fields; and more topographic and geologic mapping.

In the older districts of the Upper Kuskokwim region placer mining has advanced rapidly within the recent past. Up-to-date equipment has been placed in operation this year on a large number of properties in many districts. By these means ground is now being profitably worked the operation of which by older methods was a losing proposition. "Old-timers" are still in possession of most of these properties and now are finding their efforts richly rewarded where formerly a bare living was gained. Their bulldozers and draglines are handling easily and economically vastly increased yardages of material and in many instances have more than paid for themselves in a single season. Large reserves of auriferous material that can be mined profitably by these improved methods are known to these experienced operators and the future of their enterprises is bright with promise. The old-timers of this region are thus building up, with the aid of modern machinery, a mining industry of which any country might well be proud.

Placer operations<sup>ore</sup> in the Cache Creek district of the Yentna region that lies west of Talkeetna station on the Alaska Railroad have had a successful season. The gold production from Peters Creek, where dragline equipment has been installed, was exceptionally heavy.

The lode mines of the Willow Creek district in the Talkeetna mountains east of Wasilla station were all in active operation and report having had a good season. The most notable advance made in the district during the year was at the Free Gold and Independence properties on upper Fishhook Creek where a large amount of camp construction work was completed and underground development work was carried on that is reported to have revealed a valuable orebody. At the Fern mine a new adit tunnel is being driven that will penetrate the extensive ore zone on that property at a depth of 175 feet beneath the present tramming level.

Numerous small placer mining operations in the Moose Pass-Hope district report having had a normal season. The output from this region is not large, but the district has been a consistent producer for more than forty years. Lode mining development was also being carried on in this district at two properties on a small scale, but with encouraging results.

At the Stasar lode property in the Crow Creek section of the Girdwood district productive operations continue and development work at a deeper level is being carried on.

In addition to the field investigations by Mr. Roehm that are summarized above the Territorial Department of Mines has conducted during the past season extensive detailed examinations in several other sections of the Territory; notably in the Ketchikan and Juneau districts in Southeastern Alaska, in the Wild River and Koyukuk districts in Northern Alaska and, so far as the length of the field season permitted, on Seward Peninsula. Investigations of a more general character were also made by the Commissioner of Mines that covered all of the principal mining regions of the Territory.

Reports in detail on the results of all of these investigations will be prepared during the coming winter season and will be published on their completion. They will reveal that the past season has been one of unusual expansion and success in the mining industry of the Territory and that mineral production for the year will probably exceed that of any year within the past two decades.

The increase in the price of gold, the widespread introduction of improved equipment in placer mining operations and the rapid extension of dependable airplane service are the principal factors responsible for the recent marked growth of the industry.

General Points of Interest as observed by  
J. C. Roehm during field examinations for  
Territorial Department of Mines, in  
Regards to the Mining Industry of Alaska.

4<sup>th</sup> Div

1937

This season the Goodnews Bay platinum area was covered, several  
placer districts in the Interior, and several quartz <sup>properties</sup> districts  
along the Alaska Railroad. This year is a year of great expansion  
of the industry.

#### Platinum Industry

The two platinum placer operations, located in the vicinity  
of Red Mountain south of Goodnews Bay have developed into  
an unique industry. It is sound, profitable, well managed  
and Alaskan owned and operated. It is an industry proven to the  
extend that several million dollars of the rare metals will be  
produced. This is an industry that any country would be proud  
to own.

The platinum bearing formation thus far found is very limited.  
It is found as a central core of Red Mountain and is locally  
known as Red Mountain formation. It is an Ultra Basic intrusive.  
The platinum is found in its native state associated with all  
the rarer members of the platinum family and gold. The deposits  
mined are a gravitational, residual concentration, originating  
by weathering and alteration from the basic intrusive itself.  
A considerable number of the deposits have no doubt been  
scattered and lost by ice action. However the amount of  
pay dirt yet remaining intact is no small amount. The new  
eight cubic foot dredge should put the industry well over

the million dollars mark in production by the end of next season.

The Goodnews Bay district is generally known for its platinum; however this district and the surrounding districts, generally known as the Lower Kuskokwim is the future gold gold dredging area of Alaska. ~~The~~ Gold was never found very ~~&~~ extensively in this region by the old timers, due not to the lack of gold, but due to the fact that the gravels in this area are thawed and wet. The old prospectors could not get to bedrock because they lacked machinery and pumps, both very necessary in prospecting this type of ground. Gold is there beyond doubt, and considerable ground is being proven <sup>this season</sup> by drill. High values have been found in spots, and one operation was reported to have values of seven dollars a bedrock foot. The gravels are medium size and very extensive.

The native Eskimoes have taken to prospecting, leaving the reindeer to go as they please. These natives are the makings of good prospectors for this area. First, they know the country well and can travel over the tundra on foot nearly twice as fast as a white man. And second, they do not have to pack food ~~with them~~ since they live mainly on reindeer meat. Where the country does not afford wood enough to cook the meat, they eat it raw. Several good looking prospects were seen, found and staked this season by the natives. They should be encouraged further into prospecting as they are very eager and quick to learn. Several places they had automatic dams working of their own construction.

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Further as to why this region holds great promises for the future is due to the combination of several favorable conditions. The region is open to salt water transportation. Roads are not necessary as with the types of machinery already there, it is moved by catipillar over the tundra and gravel ridges nearly anywhere either summer or winter. The climate permits a much longer operating season as compared with the other interior districts. Water is abundant and several water power sites were seen. And last the field is new and not exploited with former workings. Several other conditions contribute to low cost mining. And another condition which promises to be a great aid to the entire industry is seen in the fact that this fall several tons of fresh vegetable were shipped from Matanuska to Goodnews Bay.

The platinum industry as it is found today on such a sound basis is due to its own past development. The area was found, developed, and well started onto production before inflated interest took hold which usually retards sound mining. The same will be true of the vast dredging areas as the present operators in the district are well aware of the facts and have laid plans for the future. These large low grade areas will make for a long future and a large production.

The beach discoveries of this year contain both gold and platinum. However the types of deposits thus far found, do not hold for large production and are not extensive.

Only three essential needs are necessary to greatly aid the industry in this area.

1. Initial <sup>development</sup> Capital
2. Better Salt water Transportation and landing facilities
2. Aerial and Geologic Maps.

In the placer districts of the Interior, mining has taken a great step forward. Great amounts of new up-to date machinery has been put into operation this year. Ground is being worked with profit which was formerly a losing operation under the old methods. In many operations the old timer is in charge, whom only last year was making a bare living with the old methods. He is now watching the bulldozer and dragline do the same work on a vast scale. Many operations are owned and operated by the old timer himself, whom, owns the property, has already paid for the machinery, and knows where there is lots more ground.

Why the old timer has made his success is simple.

1. He knows where the ground is that contains the gold.
  2. His problem in the past has been to get it out.
- Modern machinery has solved his problem.

Thus we are developing a great industry, which in turn will develop Alaska on a much greater scale than any industry thus far has done.

This industry is mostly Alaskan owned, operated by Alaskan capital in the hands of honest and capable men, backed by years of experience and hard work.

The future depends upon the price of gold and general world economic conditions.