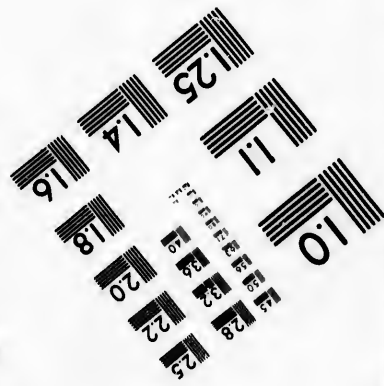
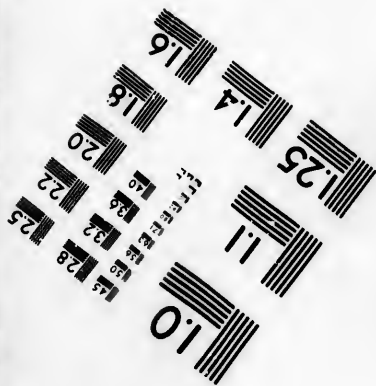
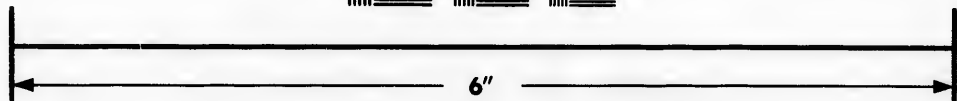
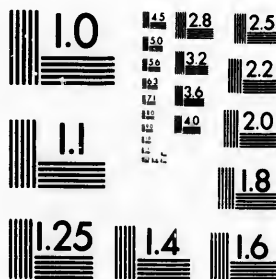


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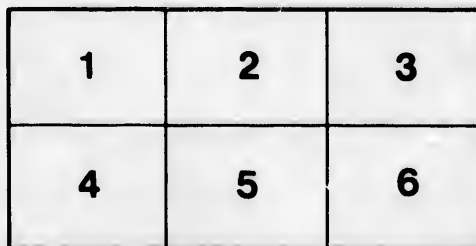
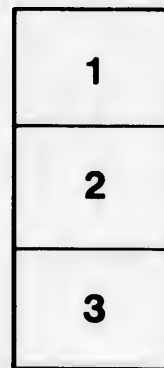
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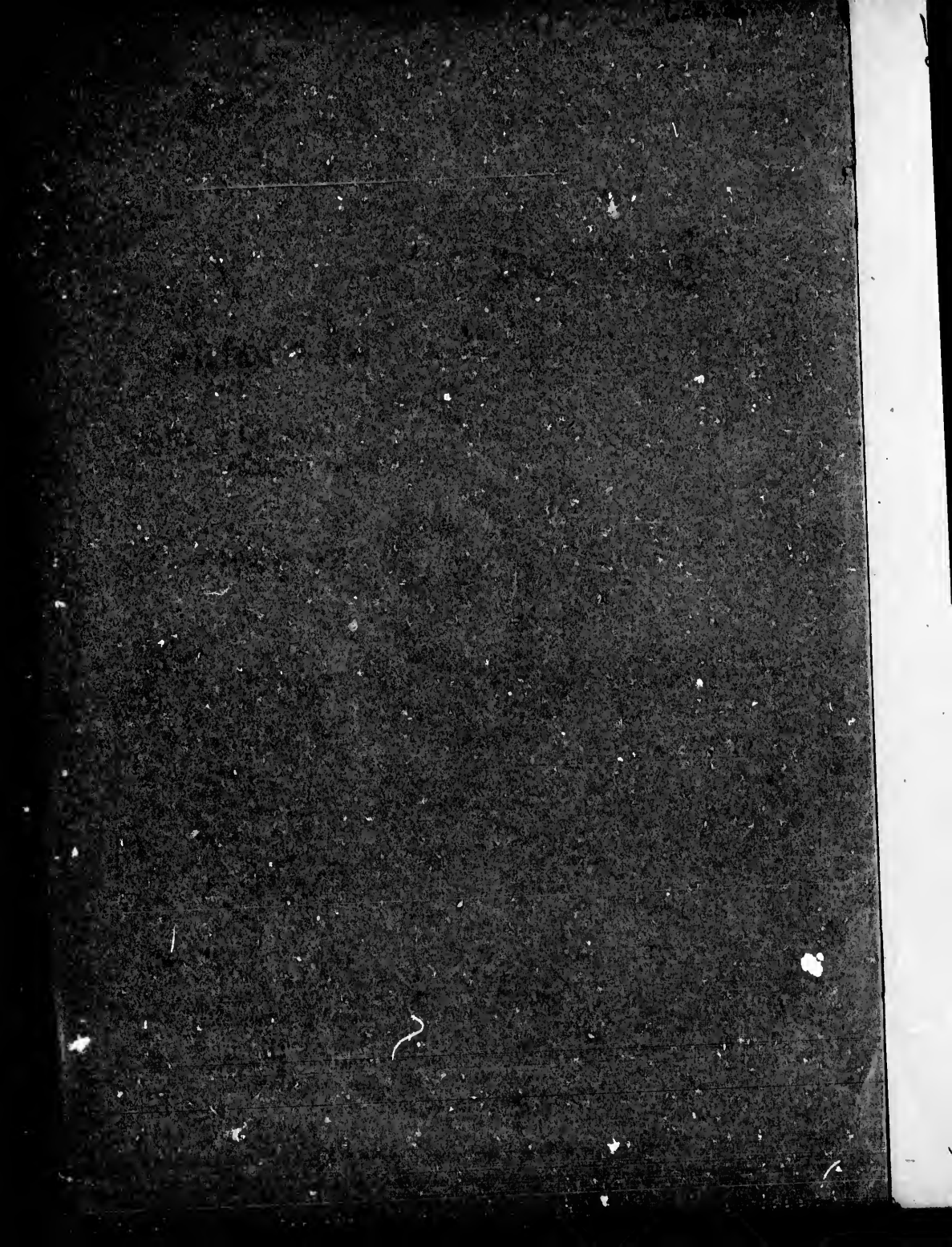
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How to Reach The New Gold Fields

Is Probably Uppermost in the Minds of many People just at this time, and to this Question we will lend our endeavors.

**There are Two General Routes to the Klondyke District
from Seattle.**

ONE route goes by ocean steamer west and a little north, and passes through Dutch Harbor, at the extreme end of the south-west Alaskan peninsula. From there the steamer turns north and continues on to St. Michael's Island, a little above the mouth of the Yukon, in Bering Sea. At that point passengers are transferred to the river steamers to begin the long journey up the Yukon, which winds northward and eastward, and finally brings the traveler to Dawson City, now the principal town in the mining district, although sixty-five miles from the Klondyke fields.

The fare on boats of the North American Transportation and Trading Company from Seattle to any point on the Yukon river is \$200, this to include 200 pounds of baggage, also meals and berth. Practically the last boat that will reach the Klondyke this fall left Seattle August 5th, and is now well on its way. There will be boats undertaking the journey later this season, but they will be fortunate to arrive at Dawson July 1st of next year. Although late when arriving, that their well filled cargoes will be welcomed by many a hungry miner is our prediction. Consequently this route is out of the question if you wish to reach the Klondyke this fall, except with dogs and sleds on ice from St. Michael's Island.

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In time the trip takes thirty days, eighteen days from Seattle to St. Michael's Island and twelve days up the Yukon to Dawson City by fast boat.

DISTANCES.

Seattle to St. Michael's Island.....	2,500 Miles
St. Michael's Island to Weare.....	1,000 "
Weare to Dawson	1,200 "

THE "MOUNTAIN ROUTE."

The other way to the Klondyke, the "mountain route," is shorter in miles, but equally long in the time it requires and a great deal more difficult in some respects. By this route the traveler sails more directly north to Juneau, which is 899 miles from Seattle, and then goes by lake and river and over the mountains 1,800 miles to the new mining territory.

Pacific Coast Steamship Co. comes from San Francisco or from Puget Sound Ports to Juneau. Steamers usually make about six sailings per month.

Steamship Company's Folder (which can be found in most of the hotel and railroad folder racks) contains a schedule of sailings.

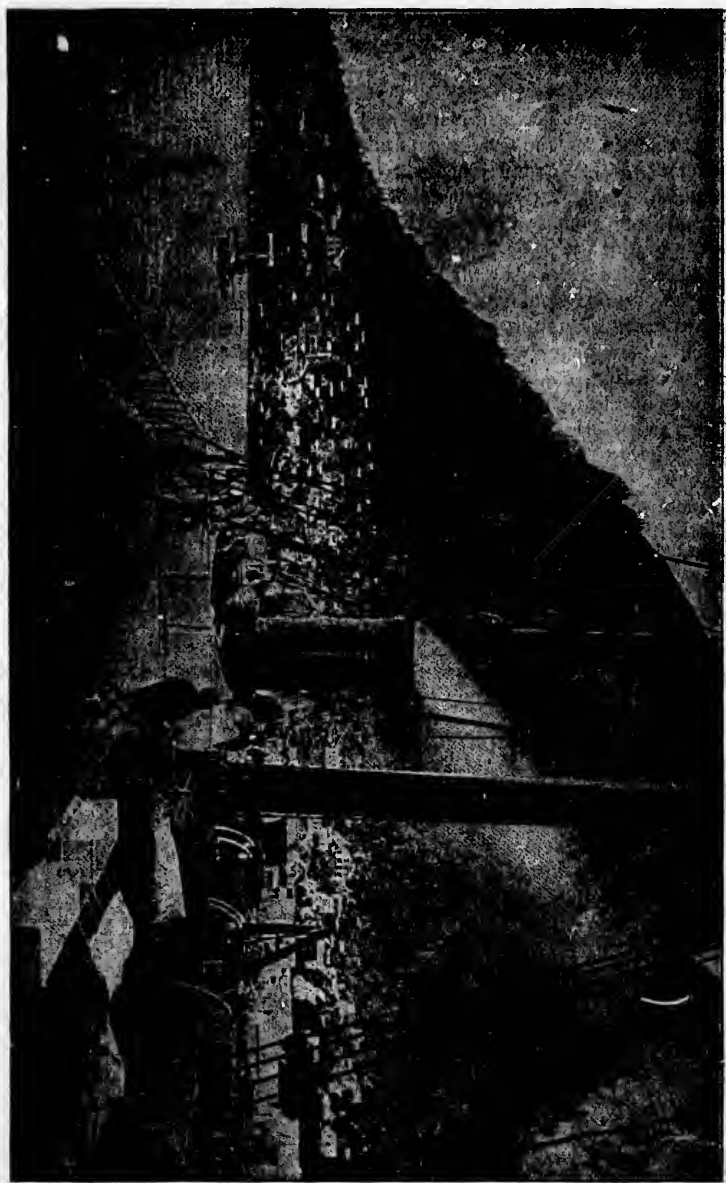
Practically the great basin of the Yukon is reached by but one route in spring and fall—that via Juneau and the Chilkoot pass, this being the shortest, quickest and cheapest, and the one taken by fully ninety-five per cent. of the gold seekers of the vast interior. The first hundred miles over this route is accomplished by steam navigation from Juneau to Dyea; the next stage is made by canoe and sleigh, or if preferred by pack train, twenty-seven miles to Lake Linderman, where boats are built in which the downstream journey is continued to completion.

WHEN TO START.

Parties going this next spring should start from Juneau between the middle of March and end of April as they can then do their own transporting on sleighs across the summit and down the lakes to where good timber for boat building is to be found, and the start down the river made when the ice breaks, which is much earlier than on the lakes, and the mines may be reached a month sooner than if the boats are built on the lakes and a wait made for the ice to break there. Four or five men should compose each party, as one tent, stove, set of tools, etc., will suffice for all. One of the party should have a knowledge of boat building, for it is an absolute necessity that the craft shall be staunch and substantial. The double ended batteau is the pattern ordinarily preferred, though the plain scow of good depth is more easily built and can be depended upon. No man should attempt the journey alone.

OUTFITS.

Juneau merchants make a specialty of this trade, knowing exactly what is wanted and how it should be put up. Providing they have the stock in



hand, after the rush of this fall, their ability to fill orders might be a question. An outfit depends much upon the purse and taste of the purchaser and will cost from \$50 to \$150 for a spring trip. Experience has proved the following to be essentials:

Flour, 50 pounds; baking powder, 1½ pounds; dried fruit 15 pounds; bacon (side), 20 pounds; beans, 35 pounds; sugar (loaf), 10 pounds; coffee, 3 pounds; tea, 1 pound; salt, 3 pounds; pepper, ¼ pound; desiccated onions, one pound; matches, 2 bunches; butter, milk, rice, corn meal, etc., (optional).

Two pairs heaviest woolen socks; 1 pair Canadian lagans or shoe packs; 1 pair German socks; 2 pairs heaviest woolen blankets; 1 oil blanket or canvas; 1 Mackinaw suit; 2 heavy flannel shirts; two pairs heavy overalls; 2 pairs heavy woolen shoes; 1 pair snow glasses; cap, mittens, mosquito netting, etc.

One 8x10 wall tent (8 oz. duck or heavy drill); 1 small Yukon stove, 3 lengths telescope pipe; 1 large frying pan; 1 baking pan; 1 8-qu. granite kettle. 1 6-qt.; 1 large mixing spoon; 1 knife, fork and spoon; 3½ pound axe, nails, hammer, saws, pitch and oakum for boat building, and 50 feet ¼ inch rope. No doubt with the competition of trading companies the coming spring, goods will be reasonably cheap on the Yukon after July 15. The above list of provisions would be sufficient for a spring trip, but parties going over the mountain this fall should multiply their provision list by four or take in at least 700 lbs. of food.

JUNEAU IS REACHED

From Puget Sound ports by six to eight steamers each month. Leave Seattle, and Northern Pacific dock, Tacoma, calling at Pt. Townsend, Victoria, Mary Island, Kitchikan, Wrangel and other ports. The trip usually takes five or six days. During the spring months steamers leave Juneau for Dyea a day or two after the arrival of mail steamers; usual fare, \$10. No actual survey of this route has ever been made but the following table of distances has been carefully estimated and for all practical purposes will be found correct:

DISTANCES FROM JUNEAU.	Miles.
Head of canoe navigation.....	106
“ Summit of Chilkoot Pass.....	115
“ Lake Linderman Landing.....	124
“ Head of Lake Bennett.....	129
“ Boundary line bet. B. C. & N. W. T.....	139
“ Foot of Lake Bennett.....	155
“ Foot of Caribou crossing.....	158
“ Foot of Takou Lake.....	175
“ Takish House.....	179
“ Head of Mud Lake.....	180
“ Foot of Lake Marsh.....	200

DISTANCES FROM JUNEAU.	Miles.
" Head of Canon.....	225
" Head of White Horse Rapids.....	228
" Takheena River.....	240
" Head of Lake LeBarge.....	256
To Foot of Lake LeBarge.....	287
" Hootalinqua.....	330
" Cassiar Bar.....	347
" Little Salmon River.....	390
" Five Fingers.....	452
" Pelly River.....	510
" Stewart River.....	530
" Dawson City.....	700

Juneau is a city of about 3,000 inhabitants, and one of the oldest trading and outfitting points on the coast, is the head of regular steam boat navigation during the winter and spring months. The town is well supplied with hotels and restaurants. Good board may be had for a dollar a day, lodgings extra. Here your outfit must be revised and additional purchases made, such as Yukon sleigh, stove, snow shoes, etc. Advice from merchants here will be of great assistance to you in purchasing for the journey. For more than 600 miles stretch their weary length between Juneau and Dawson.

The valley of the Yukon may be reached from Juneau by four different routes, crossing the coast range of mountains through as many passes, the Dyea or Chilkoot pass, the Chilkat, Moore's or the White pass, and Takou. As the Chilkoot is the only pass used to any extent, it is this route the miner will select. From Juneau to the summit of the Chilkoot pass is a distance of 115 miles. Small steamers ply irregularly between here and Dyea, the head of navigation, a hundred miles northwest of Juneau. During the early spring these boats usually sail a day or two after the arrival of the mail steamers from the Sound. The trip in good weather is made in twelve hours if there is no towing to be done and the regular fare is ten dollars, each passenger furnishing his own blankets and provisions. If the party is a large one with considerable baggage a scow is loaded with the miners' outfits; if the tides are high the boat sometimes goes over the bar at the head of Douglas island thus saving nearly twenty miles of travel besides avoiding the rough waters of the Takous. If the tides are not high the scow may be towed over the bar by the little tug "Julia" and the steamboat will take its course around the lower end of Douglas. In rounding the point of the island the vessel is often subjected to the fierce winds which sweep down the valley of the Takou river. If there is a strong north or northwest wind, like a demon it comes roaring out from the Takou, lashing the water into foam in its rage and tossing volumes of spray clear over the top of Grand island. When the steamer has come around to the head of the island it takes the scow in tow and in about



SUMMIT AT CHILKOOT.

twenty hours from the time of leaving it enters the mouth of the Dyea river near Chilkoot, the salt-water journey is ended.

Here on a sandpit, about a mile below Healy & Wilson's trading posts, the outfits are taken from the scow and piled upon the beach. Each man must look out for himself now—the guardianship of your baggage by any carrying company is ended. Juneau is nearly a hundred miles behind you. Immediately in the foreground is the ranch and store owned by Healy & Wilson, and beyond in their mantles of snow rise the coast mountains, cold and severe, striking a feeling of dread into many a heart; and beyond this frozen barrier there stretches away hundreds of miles the vast country of the Yukon, an expanse so wide that it is limited only by the extent of man's endurance. But haste must be made in the sorting of outfits and getting them above tide water. Most miners camp near by in the edge of the woods, perhaps taking one or two meals at the trading post, which can be had at the price of fifty cents each; others find both board and lodging there until they are ready to push on.

Now for the first time the miner begins to size up his belongings, and begins to realize that a proper outfit for a trip of this kind is the result of experience, and the longer he has been in this country and the more thoroughly he knows it, just so much more care is used in the selection and packing of his outfit. A careful and thorough examination should be made to see that nothing has been lost or forgotten. There is his Yukon sleigh, without which further progress would be well nigh impossible, a skeleton affair made from the best hard wood and shod with ground steel runners. It is seven feet three inches long and sixteen inches wide—just the proper width to track behind snowshoes, and its cost from seven to fourteen dollars. Steel is preferable to iron for the shoes, as it slides more easily through the fine, dry snow one finds in the early spring. No outfit is complete without snowshoes, tent, blankets or fur robes, besides tools for boat-building and plenty of provisions, and now an ingenious little sheet-iron stove has come to be almost an indispensable luxury. An ordinary outfit will weigh about four hundred pounds to the man. For the spring trip it will be easier to buy provisions for the season's prospecting there, but to make the trip this fall you should endeavor to carry at least 1000 lbs. If anything is lacking it is well to remember that this post is the last store until the Yukon is reached. Unless the weather is stormy one night is all that is spent in camp here, and in the morning the outfit is moved ahead. Unless it is very small this must be done in sections, and it is necessary to "double-trip" it, in a miner's parlance, that is, make two or more loads of the outfit, moving a part ahead to some point then unloading it and returning for the rest. On leaving Healy & Wilson's with the last sleigh load, one bids farewell to hotels, restaurants, steamboats and stores—in fact, to civilization, and is a "free man" to pursue his course how and where he will; beyond all conventionalities of society, and practically beyond all law so far as it is the outgrowth of organized governments.

Going up the Dyea river five miles on the ice, will bring one to the mouth of the canyon. Here in the woods a comfortable camp can be easily arranged. The tent is pitched on top of the snow, the poles and pins being pushed down into it. While some are busily engaged in building a fire and making a bed, the best cook of the party prepares the supper. If you have no stove a camp-fire must be built, either on an exposed point of rock or in a hole dug down in the snow; if you have a stove it can be quickly arranged on a "gridiron" inside the tent, the gridiron consisting of three poles some six or eight feet long, and laid on the snow on which the stove is placed. The heat from the stove will soon melt a hole underneath, but there will be enough firm snow under the ends of the poles to hold it up. For the bed hemlock brush is cut and laid on the snow to a depth of a foot or more, and this is covered with a large square of canvas on which the blankets and robes are put; when finished it forms a natural spring bed, which will offer grateful rest after hauling a sled all day.

Dyea canyon is about two miles long, and perhaps fifty feet wide. A boat cannot go through it, but in the early spring miners go through on the ice, bridging with poles the dangerous places or openings. After the ice breaks up it is necessary to go over the trail on the east side of the canyon. This trail was built by Captain Healy at his own expense, but is little used, as most miners go through the canyon before the ice breaks up. The camping place beyond the canyon is a strip of woods some three miles long, known as Pleasant camp. Its name is something of a misnomer for there is not even a log shanty there; some woods to give a kind of shelter, and as everywhere else along the route, plenty of snow.

From here the ascent is gradual and the next and last camp in timber before crossing the summit is known as Sheep camp. This is at the edge of timber, and no wood for a fire can be gotten any higher up. This camp is not usually broken until all of the outfit has been placed on the summit. When the weather is favorable, everything except what is necessary for camp is pushed a mile and a half to Stone house, a clump of big rocks, and then to what is called the second bench. Care must be exercised in case of soft weather, or everything is liable to be swept from the bench by a snow-slide or avalanche, and should this happen the Indians will prove of great assistance in recovering part of the things. With long, slender rods tipped with steel they feel down in the snow and locate most of the larger packages, which, without them and their feel rods one would never find. At Sheep camp the summit towers above you about 3,500 feet, but the pass is some 500 feet lower. No further progress can be made until a clear day, and sometimes the weather continues bad for two or three weeks, the mountain top hidden in thick clouds, and icy wind hurling the new fallen snow in every direction, or driving the sleet in the face of any one bold enough to stir out of camp, and peep up at that almost precipitous wall of snow and ice. But sunshine comes at last, and the winds grow still. Now comes the tug of war—to get the outfit to the

summit, for 600 feet every step must be cut in the ice, and so steep is it that a person with a pack on his back must constantly bend forward to maintain his equilibrium. The first load landed on the summit of the pass a shovel is stuck in the snow to mark the spot, then back for another pack, and fortunate is he who gets his whole outfit up in a single day. Indians may be hired to do the packing, and their rates vary slightly, but



A HALT IN CHILKOOT PASS.

the regular price has been five dollars a hundredweight from the second bench to the summit, or fifteen cents a pound from Healy & Wilsons to the lakes. These prices have been shaded a little the past season, and some outfits were packed over to the lakes at thirteen cents a pound. The reasons for this cut in prices are that many miners insist on doing their own packing and that their work has been seriously affected by a tramway device which was operated last season with more or less success by one Peterson, whose inventive genius led him to believe that a simple arrangement of ropes and pulleys would greatly help in getting outfits up the steeper places. A small log is buried in the snow, and to this "dead man" a pulley is attached through which a long rope is passed, to the lower end of which a loaded Yukon sleigh is attached and the empty box on the sled fastened to the upper end of the rope is then filled with snow until its weight becomes sufficient to take it down the incline, thus dragging the other one up. The snow was found too light, but with three or four men as ballast in place of snow it worked well and saved a good deal of hard packing. When the last load has reached the summit, and the

miner stands beside his outfit looking down toward the ocean only twenty miles away, he can see that his journey has fairly begun, as he turns and sees the descending slope melting away into the great valley of the Yukon.

The descent for the first half mile is steep, then a gradual slope to Lake Linderman some ten miles away. But there is little time for resting and none for dreaming, as the edge of the timber where the camp must be made is seven miles from the summit. Taking the camping outfit and sufficient provisions for four or five days, the sleigh is loaded, the rest of the outfit is packed up, or buried in the snow, shovels being stuck up to mark the spot. This precaution is necessary, for storms come suddenly and rage with fury along these mountain crests. The first half mile or more is made in quick time, then over six or seven feet of snow the prospector drags his sleigh to where there is wood for his camp fire. At times this is no easy task, especially if the weather be stormy, for the



LAKE BENNETT, PHOTOGRAPHED AT MIDNIGHT.

winds blow the new fallen snow about so as to completely cover the track made by the man but little ahead; at other times during the fine weather and with a hard crust on the snow it is only a pleasant run from the Pass down to the first camp in the Yukon basin. In all except the most sheltered situations the tent is necessary for comfort, and the stove gives better satisfaction than the camp-fire, as it burns but little wood, is easier to cook over, and does not poison the eyes with smoke. It is a noticeable fact that there are fewer cases of snow blindness among those who use stoves than among those who crowd around a smoking camp-fire

for cooking or for warmth. Comfort in making a trip of this kind will depend, in a great measure, upon the conveniences of camping, suitable clothing, and light, warm bedding. Yes, upon provisions, too, though oftentimes more depends upon the cook than what is in the larder. The necessary articles of food are flour, bacon, beans, sugar and tea; ham, canned meats, rice, milk, butter, dried fruits and coffee are usually taken also, although some old timers look upon them as luxuries only.

After the rest of the outfit has been brought from the summit the next move is to Lake Linderman, about three miles distant. The route now lies seven miles across the lake to its outlet, down the outlet three or four miles in a northeasterly direction to Lake Bennett. At that point is a sawmill, where boats are sold for \$75 each. Travelers who do not care to pay that price can purchase lumber and build their own boats. The lumber can be bought for \$100 a thousand feet, and about 500 feet are required to build a boat that will answer the purpose. Still other travelers carry whipsaws and get out their own lumber, and a man handy with saw and hammer can build a boat in five or six days. To continue the trip, though, a boat is necessary and by some means or other one must be had.

PORTAGES ON THE ROUTE.

After securing his boat the traveler floats down Lake Bennett and then has half a mile of portage where his boat has to be moved on rollers. There is any amount of rollers to be had, though, for earlier beaters of the path have left them. This half mile overland brings the traveler to Lake Tagish, through which he goes six miles and over a quarter of a mile of portage to Mud Lake and on to the Lewis river canyon, about forty miles to the northwest. The course down the lakes has been much in the form of a horseshoe and now bears to the west instead of the east.

Before reaching the canyon, a high cut bank of sand on the right hand side give warning that it is close at hand. Good river men have run the canyon safely even with loaded rafts, but it is much surer to make a landing on the right side and portage the outfit around the canyon three-quarters of a mile and run the raft through empty. The sameness of the scenery on approaching the canyon is so marked that many parties have gotten into the canyon before they were aware of it. Below the canyon are the White Horse rapids—a bad piece of water; but the boat can be lined down the right hand side until near the White Horse, three miles below. This is a box canyon about a hundred yards long, and fifty in width, a chute through which the water of the river, which is nearly 600 feet wide just above, rushes with maddening force. But few have ever attempted to run it and four of them have been drowned. Of two men who made the attempt in May, '88, nothing was found save a bundle of blankets. Below the White Horse the boat must be brought and re-loaded and the journey continued seventy-five miles to Lake LeBarge. This usually requires three days. This lake is about forty-five miles long and there is an island about

midway. Going down the Lewis river, the Hootalinqua, Big Salmon and Little Salmon rivers are passed on the right before reaching Five Fingers. Here four large buttes stand like giant sentinels of stone to dispute your farther ingress into the country; the water in five passages, runs swiftly between; the right hand passage is the only one which is practicable, and though the water is swift it is safe if the boat be kept in the center.

A few moments of strong pulling and careful management and the boat is rapidly approaching Reef rapids, three miles below. Here again the right hand side insures safety, and having gone through them the last dangerous water is passed. Next comes the Pelley river, and the junction of the Pelley and Lewis form the Yukon proper. At this point the first trading post is reached, and is five hundred and ten miles distant from Juneau.



THROUGH THE ICE ON THE YUKON RIVER.

Continuing the journey Stewart river, the Klondyke and Dawson City is passed on the right; White river on the left, so named on account of its milky looking water; the next tributary on the same side is Sixty Mile creek, so called on account of its being sixty miles above Fort Reliance. A hundred miles below on the left side is Forty Mile creek, forty miles below Fort Reliance. Here the Yukon is over two miles in width and on the upper bank of Forty Mile creek is the principal trading post of the interior. This was formerly the starting point for all the mines and is seven hundred and fifty miles from Juneau.

This journey is made in early spring by most miners in order to save expenses of packing, and requires then from six to eight weeks, although it can be made in summer from the lakes in eight or ten days. Plenty of provisions should be taken, as little if any game is seen unless one goes back into the hills for it. Fish are plentiful and a gill net should form a part of every outfit. The whitefish taken from the ice-cold waters of the lakes are the finest in the world. In the spring gull eggs are abundant on the small islands at the foot of Lake LeBarge.

In case you make the trip in early spring it is probable that the open water, sufficient for boating, would not be found until you arrive at the foot of Mud Lake. In this case your boat will have to be built there.

PLACER MINING LAW.

[From the Revised Statutes of the United States.]

The term "placer claim," as defined by the supreme court of the United States, is: "Ground within defined boundaries which contains mineral in its earth, sand or gravel; ground that includes valuable deposits not in place, that is, not fixed in rock, but which are in a loose state, and may in most cases be collected by washing or amalgamation without milling."

The manner of locating placer mining claims differs from that of locating claims upon veins or lodes. In locating a vein or lode claim, the United States statutes provide that no claim shall extend more than 300 feet on each side of the middle of the vein at the surface, and that no claim shall be limited by mining regulations to less than 25 feet on each side of the middle of the vein at the surface. In locating claims called "placers," however, the law provides that no location of such claim upon surveyed lands shall include more than twenty acres for each individual claimant. The supreme court, however, has held that one individual can hold as many locations as he can purchase and rely upon his possessory title; that a separate patent for each location is unnecessary.

Locaters, however, have to show proof of citizenship or intention to become citizens. This may be done in the case of an individual by his own affidavit; in the case of an association incorporated by a number of individuals by the affidavit of their authorized agent, made on his own knowledge or upon information and belief; and in the case of a company organized under the laws of any state or territory, by the filing of a certified copy of the charter or certificate of incorporation.

A patent for any land claimed and located may be obtained in the following manner: "Any person, association or corporation authorized to locate a claim, having claimed and located a piece of land, and who has or have complied with the terms of the law, may file in the proper land office an application for a patent under oath, showing such compliance, together with a plat and field notes of the claim or claims in common made by or under the direction of the United States surveyor general, showing ac-

curately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat, previous to the application for a patent on such plat; and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in such land office; and shall thereupon be entitled to a patent to the land in the manner following: The registrar of said land office upon the filing of such application, plat, field notes, notices and affidavits, shall publish a notice that such application has been made, for a period of sixty days, in a newspaper to be by him designated, as published nearest to such claim; and he shall post such notice in his office for the same period. The claimant at the time of filing such application or at any time thereafter, within sixty days of publication, shall file with the registrar a certificate of the United States surveyor general that \$500 worth of labor has been expended or improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by reference to natural objects or permanent monuments as shall identify the claim and furnish an accurate description to be incorporated in the patent. At the expiration of the sixty days of publication, the claimant shall file his affidavit showing that the plat and notice have been posted in a conspicuous place on the claim during such period of publication."

If no adverse claim shall have been filed with the registrar of the land office at the expiration of said sixty days, the claimant is entitled to a patent upon the payment to the proper officer of \$5 per acre in the case of a lode claim, and \$2.50 per acre for a placer.

The location of a placer claim and keeping possession thereof until a patent shall be issued are subject to local laws and customs.

CANADIAN MINING REGULATIONS.

PRINCIPAL FEATURES OF THE STATUTES WHICH KLONDYKE PROSPECTORS MUST OBSERVE.

In case a person thinks of going into the Yukon fields to prospect for gold, so long as he locates a claim in Canadian territory he must be guided by the mining laws of that country. He must, therefore, bear in mind and obey these regulations, which are the principal features of the statute provided for governing placer miners and their locations of property. Following are extracts from the Canadian mining regulations:

7. If any person or persons shall discover a new mine and such discovery shall be established to the satisfaction of the Gold commissioner a claim for the bar diggings 750 feet in length may be granted. A new stratum of auriferous earth or gravel situated in a locality where the claims are abandoned shall for this purpose be deemed a new mine, although the same locality shall have previously been worked at a different level.

9. A claim shall be recorded with the Gold commissioner in whose

district it is situated within three days after the location thereof, if it is located within ten miles of the commissioner's office. One day extra shall be allowed for making such record for every additional ten miles and fraction thereof.

11. Entry shall not be granted for a claim which has not been staked by the applicant in person in the manner specified in these regulations.

12. An entry fee of \$15 shall be charged for the first year and an annual fee of \$10 for each of the following years.

13. After recording a claim the removal of any post by the holder thereof, or any person acting in his behalf, for the purpose of changing the boundaries of his claim shall act as a forfeiture of the claim.

14. The entry of every holder for a grant for placer mining must be renewed, and his receipt relinquished and replaced every year, the entry fee being paid each year.

15. No miner shall receive a grant for more than one mining claim in the same locality, but the same miner may hold any number of claims by purchase, and any number of miners may unite to work their claims in common on such terms as they may arrange, provided such agreement be registered with the Gold commissioner and a fee of \$5 paid for each registration.

16. Any miner or miners may sell, mortgage, or dispose of his or their claims, provided such disposal be registered with and a fee of \$5 paid to the Gold commissioner, who shall thereupon give the assignee a certificate of his title.

17. Every miner shall, during the continuance of his grant, have the exclusive right of entry upon his own claim for the miner-like working thereof and the construction of a residence thereon, and shall be entitled exclusively to all the proceeds realized therefrom, but he shall have no surface rights therein.

18. Every miner shall be entitled to the use of so much of the water naturally flowing through or past his claim, and not already lawfully appropriated, as shall, in the opinion of the Gold commissioner, be necessary for the working thereof, and shall be entitled to drain his own claim free of charge.

19. A claim shall be deemed to be abandoned and open to occupation and entry by any person when the same shall have remained unworked on working days by the grantee thereof, or by some person in his behalf, for the space of seventy-two hours, unless sickness or other reasonable cause may be shown to the satisfaction of the Gold commissioner, or unless the grantee is absent on leave given by the commissioner.

DOMINION HOPES TO GROW RICH.

At the close of the second sitting of the Dominion Cabinet, at Ottawa, July 27, 1897, it was announced that the government had decided to im-

pose a royalty on all placer diggings on the Yukon in addition to \$15 registration fee and \$100 annual assessment.

The royalty will be 10 per cent each on claims with an output of \$500 or less monthly and 20 per cent on every claim yielding above that amount yearly.

Besides this royalty it has been decided in regard to all future claims staked out on other streams or rivers that every alternate claim should be the property of the government and should be reserved for public purposes and sold or worked by the government for the benefit of the Dominion.

ALASKA.

Formerly Russian America; a territory of the United States, comprising the northwestern part of America, purchased from Russia in 1867, for \$7,200,000.

Its Eastern boundary starts at latitude 50° 40' N. in the Portland Channel to where the 56th meridian crosses the mainland. From here it crosses inland to the summits of the mountains parallel to the coast, or Lacking mountains to ten marine leagues from the coast northward to the meridian 141° West. From this point, which proves to be very near the apex of Mount St. Elias, it passes northward to the "frozen ocean." The western limit comes southward from the "frozen ocean" to the middle of the Bering Straits, thence southwesterly in such a way as to pass between Attu (the most westerly of the Aleutian Islands) and the Commander Islands off Kamchatka. It thus includes not only an enormous tract of mainland, but Prince of Wales Island, the King George or Alexander Archipelago to the northward, the Kadiak Islands, the Aleutians, Pribiloff and St. Lawrence Island in Bering Straits.

HISTORY.

The coast of this part of America was discovered by a Russian expedition under Bering in 1741. Settlements were gradually made, and the coast was at one time claimed as far South as San Francisco. In 1799 the territory was granted to a Russo-American Fur Company by the Emperor Paul 8th, and the Charter was renewed in 1839. New Archangel, now Sitka, was the principal settlement. The privileges of the Company expired in 1863, and the territory was purchased by the United States in 1867. Portions of the territory were soon after explored by the employees of the Russo-American Telegraph Company in surveying a route for an overland telegraph line to Europe.

Explorations of the coast have since been continued by the Coast and Geodetic Survey. The Yukon has been explored by Dall and Schwatka, and Mount Elias by several parties. In 1884 a district government was created by Congress, with a governor and a district court. The latter sits alternately at Sitka and Wrangel. The laws as those of Oregon. Sitka is the capitol, and has a land office. The farming of the Pribiloff or Fur

Seal Islands in Bering Sea was at first granted to the Alaska Commercial Company at a renting amounting to \$300,000 annually. On the expiration of their lease in 1890, the right was acquired by the North American Commercial Company.

CLIMATE.

The climate of the Alaskan coast is much milder, even in the higher latitudes, than it is in the interior or in corresponding latitudes on the Atlantic coast. This is easily understood and explained when the natural forces productive of this milder temperature are contemplated. The most important among them is a thermal current, resembling the Gulf stream in the Atlantic. This current, known as the Japanese or Kuro Sino, has its origin under the Equator near the Kolucca and Phillipine islands, passes northward along the coast of Japan and crosses the Pacific to the Southward of the Aleutian Islands after throwing a branch through Bering Sea, in the direction of Bering Strait. The main current strikes the coast of British Columbia, where it divides again, one branch turning northward toward Sitka and thence westward to the Kadiak and Shunagin Islands. The comparatively warm waters of these currents affect the temperature of the superjacent atmosphere, which absorbing the latent heat, carries it to the coast with all its mollifying effect. Thus the oceanic and the atmospheric currents combine in mitigating the coast climate of Alaska, and this process is greatly aided by the configuration of the extreme northern shores of the Pacific, backed as they are with an almost impenetrable barrier of lofty mountains, which holds back from the interior the warm moist atmospheric currents coming in from the ocean, deflecting at the same time the ice laden northern gales from the coast to the interior.

TOPOGRAPHY.

The coast line of Alaska is greater than the Atlantic seaboard of the United States. The chief inlets are Prince William Sound and Cook inlet, on the northern extension of the Pacific called the bay of Alaska. Bristol bay and Norton Sound on Bering Sea; and Kotzebue Sound on the Arctic ocean. Point Barrow (lat. 73° 23 N.) is the northernmost point of Alaska.

The principal river is the Yukon, which rises in British Columbia less than 200 miles N. N. E. from Sitka strikes the arc of a circle more than 2,000 miles long, and enters Bering sea on the South side of Norton sound through an extensive delta. At 600 miles from the coast it is over a mile wide, and the volume of its water is so great as to freshen the water ten miles off shore from its principle mouth. The next largest river is the Kuskokwin, which rises on the northern slopes of the Alaskan range of mountains to the eastward of the meridian of 150° west, and empties into Koskokwin Bay. Bering sea is about lat. 60° north. The length of coast line of Alaska's mainland and islands is nearly four times that of all others

ports of the United States combined as exemplified in the subjoined statement furnished by the United States Coast and Geodetic survey.

California including Islands.....	1,280	miles.
Oregon " "	328	"
Washington " "	2,028	"
Alaska " "	26,364	"
Gulf Coast " "	1,810	"
Atlantic Coast " "	2,043	"
Total.....	33,853	

U. S. DIRECTOR OF MINTS

DISCUSSES ALASKA GOLD DISCOVERIES.

Washington, D. C., July 23.—The information I have myself received confirms the truth of the telegrams to the daily papers concerning the richness of the newly discovered gold field. I learn from the San Francisco mint that \$1,000,000 of gold has been received in that city from the Klondyke district, and from Helena, Mont., that \$200,000 from the same source has been deposited at the United States assay office in that city.

To question the report of rich gold discoveries in the Klondyke would be to question the reliability of all the news agencies of the United States from Alaska to San Francisco and New York. Last Sunday all the papers of the United States published the intelligence, based upon a telegram from Port Townsend, Wash., that at 3 o'clock in the morning of July 17 a steamship from St. Michaels passed the sound with more than a ton of solid gold on board; that in the Captain's cabin there were three chests and a large safe filled with the precious nuggets; that the metal was worth nearly \$700,000, and that most of it was taken out of the ground in less than three months.

GAVE NAME OF OWNERS.

Not only this, but the same telegram gave the names of a number of the happy owners of this newly extracted gold treasure. Last Thursday's papers informed us that among the sensational advices received at San Francisco from St. Michaels is one that over \$4,000,000 in gold dust, which had not been included with the fortunes brought there by miners, will be shipped through the Wells-Fargo company.

While one may reasonably question whether there was really and exactly a ton of gold on board the steamship arriving last Saturday and whether there are still four millions of gold dust to be shipped from St. Michaels through the Wells-Fargo company, of this there can be no doubt—a large amount of gold was produced in the Yukon and Klondyke districts during the last winter and a new gold field of considerable importance has been discovered in that region.

The gold there discovered is placer gold, but the existence of gold in the sands of the Klondyke points unmistakably to the fact that quartz

gold must exist in the vicinity of that river. It is too early, however, to yet claim that the Klondyke is a new Eldorado. That only the future can reveal.

As to the probable effect on the gold production of the United States of these discoveries, so far as the newly discovered gold has been found within United States territory it will, of course, go to increase the total product of the country in 1897. I do not see how the opening of the new gold fields can decrease the gold production of any other of our States or Territories. It may, indeed, attract some of our prospectors and workmen, but there never has been and never will be any lack of these in the United States. The places of those who actually leave the United States will be rapidly filled. The new gold mines are placer mines and need comparatively little capital to develop them. I expect, therefore, that for years to come the gold production of the United States will be continually increasing.

COMPARED TO THE TRANSVAAL.

The best answer that can be given to the question how these recent discoveries compare in results with those of the Transvaal in its early days is that as far as mere results are concerned they are greater. There is scarcely a possibility, however, that the production of the newly discovered gold fields will ever reach the figure of the gold output of the south African republic in recent years.

No single gold field ever reached it before, and the chances are that none will ever reach it in the future. It is the unanimous opinion of all mining experts that the wealth of the mines, especially of the Witwaterstrand, is assured for some decades at least, and they have been led to the mines themselves.

It has been demonstrated that the gold contents of the Witwaterstrand strata increase with the depth. The difficulty that lay in the fact that the pyrites occurring at a certain depth could not be treated has been practically solved by the successful application to them of the chlorination process. By the introduction of the cyanide process it has become possible to obtain almost the last traces of the gold in the tailing, which has hitherto been considered worthless.

What influence the production of gold in the Klondyke district, if it should prove to be very large in the next succeeding years, will have on prices and in the money market it is simply impossible to state. The supply and production of gold has doubled within the last ten years, while the demand for it and the employment of it in the wholesale trade has been more and more decreased by the clearing-house system. The large central banks of Europe have a gold stock far greater than would have been supposed possible a decade ago. And although the production of gold has kept on increasing, it has not been able to stop the decline of the prices of commodities.

This is the best refutation that can be given of the contention that the decline of prices has been caused by the scarcity of gold.

MADE LIKELY BY THE PAST.

The history of gold production in Alaska hitherto would prepare the mind for the acceptance of a belief in the likelihood of further gold discoveries in that region or its proximity.

Our accurate knowledge of the production of gold in Alaska dates back to 1870 at least. It was known in that year that gold in limited quantities abounded in the island of Kadiak. This gold occurred in veins of quartz which yielded about \$5 per ton in gold and silver. The mineralogical character of the specimens was the same as that of the most productive veins known. The development of the wealth of southern Alaska may be said to have begun only recently.

The first steps were taken by placer miners, who washed the sands of the stream and the debris from the hillsides. It is not possible to ascertain accurately what amount of gold is actually produced by such workings, on account of the number of miners who carry away and sell the gold dust they obtain. Hence it is that the figures given of the production of gold in Alaska since 1880 are probably below the actual amount extracted. Professor Emmons considers it doubtful whether this interior country, where the expense of transporting supplies over the mountains is great, will ever become the scene of systematic mining.

ALASKA MINERAL BELT.

The mineral belt of Alaska has, according to Professor Emmons of the United States Geological Survey, a longitudinal extent of about 100 miles in a northwestern and southeastern direction. It is said to be only a few miles wide.

The gold product of Alaska thus far has been remarkable rather for its regularity than its amount, and is, therefore, more favorable to the permanency of development of the mineral resources than if it were subject to violent fluctuation.

Nature seems to have sprinkled Alaska and all Asiatic Russia with gold. The latter region sends annually over \$25,000,000 to the mint at St. Petersburg. The production of gold there is such that the annual output of the Russian empire would, it is claimed, exceed \$50,000,000 were it not for the obstacles put in the way of human industry by an inclement climate and an inhospitable soil.

The drawbacks in the Klondyke district will necessarily partake of the nature of those in Asiatic Russia. The severity of the climate there will, as in Siberia, reduce the labor year to about 100 days. The sands can only be washed in summer, and the production is thus reduced to about one-third of what it would be in another latitude.

R. E. PRESTON.

Director of the United States Mints.

ADVICES FROM A TRANSPORTATION COMPANY.

THE FOLLOWING IS A LETTER RECEIVED FROM THE NORTH AMERICAN TRANSPORTATION AND TRADING COMPANY, JULY 23, 1897.

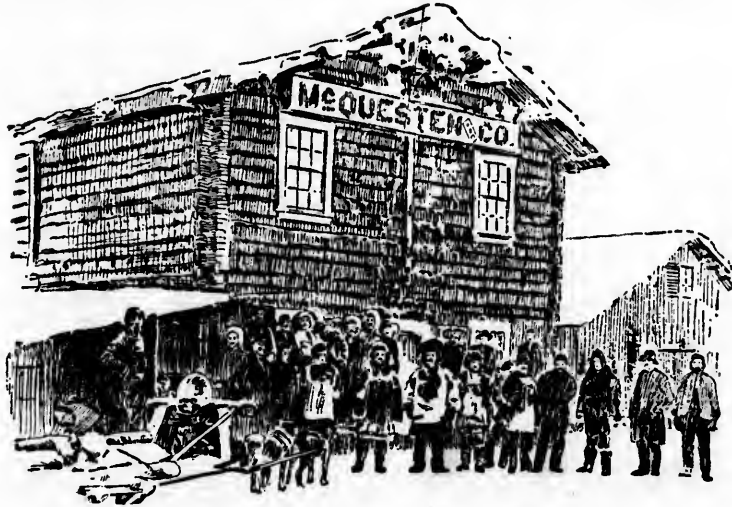
Dear Sir: We have had many inquiries the past few days regarding Alaska, the Yukon country, and particularly the Klondyke region around Dawson, and having received a letter of recent date from you, we reply to you in this form, giving possibly some details that you are already familiar with, but we will endeavor to cover all the points that men want to know in making a trip to the country.

FARE.

The fare on our boats from Seattle to any point on the Yukon River is \$200, this to include 200 lbs. of baggage, also meals and berth.

DATE OF SAILING FROM SEATTLE.

Our steamer Cleveland, a special boat, leaves Seattle on or about August 5th, connecting with our river steamers. The steamer Portland leaves Seattle about August 20th. We are unable to carry any freight this year, as our freight room has all been taken, and on account of the necessity of carrying food and supplies to the interior we are obliged to limit our passengers in baggage allowance as above stated, with the exception of the last trip of the Portland, when passengers will be allowed 200 lbs. of food supplies each in addition to the above baggage allowance. Our reason for



STORE AT CIRCLE CITY, ALASKA, JAN. 1897.

this is that, owing to the late date of sailing, we may not be able to land passengers at Dawson or the upper river mining camps. If we are unable to complete the trip this fall, board will be furnished at about \$2.00 per day until spring, when we will complete the trip on the river without extra charge to those holding through tickets. On the Portland's last trip we will carry none but strong, able-bodied men. It usually takes from 30 to 35 days to make the trip from Seattle to the gold fields. It is our endeavor to run boats on the river through to Klondyke region, but owing to the difficulty of navigation and the many possible obstacles, including the shortness of season, we may be obliged to tie up for the winter at Circle City or some point below Dawson. In this event men will be able to leave the boat and make the trip on foot. In selling you a ticket we agree to take you as far on the river as possible, but of course cannot agree to go to Dawson. The first boat in the spring leaves Seattle on or about June 12th.

BEST TIME FOR GOING.

As to the best time to make the trip, we would suggest it would be well for a man to winter there, taking this time of the year to look around, get acquainted with the country and do what prospecting is necessary. This will put him on the ground when the season opens.

OUTFIT.

Regarding the purchase of an outfit, what is needed, etc., to provide for your wants in prospecting and mining in the country, our suggestion to you is to carry only your winter clothing and such things as are needed on the journey, and leave the purchase of your outfit for use in the interior to be attended to after your arrival on the ground. No list could be made out that would cover all your wants, and such a list might include many things that you did not need, and as you would have to buy in a retail way here and transport your purchases to the interior it would cost you more this way than to go to our stores and purchase there just what the experience of our salesmen and your own experience in the country will teach is needed.

MINING.

In order to get to the pay dirt in this country it is necessary to go through about twelve to fifteen feet of snow and ice before coming to the gravel in which the gold deposits are found. This is usually done by building fires and thawing your way through.

The climate in this country during the winter months is extremely cold, the thermometer averaging 50 degrees below zero. This, however, does not stop mining, which is carried on the year round.

DISTANCES.

	Miles.
Seattle to St. Michael's Island.....	2,500
" St Michael's Island to Dawson.....	2,200

The recent stories coming from this country are causing intense excite-

ment all over the country and there is no question that they are founded on facts. The country is rich in gold, and the possibilities are enormous; however, no man should go there without expecting to face great hardships and possible suffering, and should have at least \$500 capital upon arrival at his destination. You should also figure on staying at least a year.

The country is growing, and with a river 2,200 miles long and a population in the neighborhood of 7,000, it would seem there is plenty of room for everybody and new discoveries are being made continually. If you contemplate a trip to Alaska, it would be well to engage your passage at once, as the accommodations are limited and we are receiving a great many inquires.

We trust that the above will answer some of your questions and that if you decide to go we can serve you further.

Yours truly,

NORTH AMERICAN TRANSPORTATION & TRADING CO.

DISCOVERY NINE MONTHS OLD.

So the miners worked, being fairly well paid for their labor, until the "tenderfoot" made the Klondyke discovery. That was nine months or so ago, and the news of it is just reaching the outside world. It was not long in reaching the miners along Forty Mile and Birch creeks, though, and they shouldered their picks and moved forward in a wild rush at the first word of the new lucky strike. As a result gold dust and nuggets by the



CLAIM NO. 3 ON MILLER CREEK, OWNED BY JOSEPH BEAUDREAU.

ton are turned into the mints out on the coast, and men who never before rose above the level of the commonest of miners have come back to civilization and comfort loaded with gold to last them a lifetime. Take as an illustration this list of returned miners who came on the Excelsior:

	Brought from Alaska.	Value of Claims.
T. S. Lippy.....	\$ 65,000	\$ 1,000,000
F. G. H. Bowker.....	90,000	500,600
Joe La Due.....	10,000	.....
J. J. Hollinseed.....	25,500	.....
William Kulju.....	17,000	.....
James McMann.....	15,000	.....
Albert Galbraith.....	15,000	.....
Neil Macarthur.....	45,000	.....
Douglas Macarthur.....	15,000	.....
Bernard Anderson.....	14,000	35,000
Robert Anderson.....	14,000	20,000
Fred Lendesser.....	13,000	.....
Alexander Orr.....	11,500	.....
John Marks.....	11,500	.....
Thomas Cook.....	10,000	25,000
M. S. Norcross.....	10,000	.....
J. Ermmerger.....	10,000	.....
Con Stamatin.....	8,250	.....
Albert Fox.....	5,100	35,000
Greg Stewart.....	5,000	20,000
J. O. Hestwood.....	5,000	250,000
Thomas Flack.....	5,000	50,000
Louis B. Rhoads.....	5,000	35,000
Fred Price.....	5,000	20,000
Alaska Commercial Company.....	250,000	.....
Total.....	\$399,850	.....

A PERILOUS JOURNEY.

Every one of these men has a story to tell of the vast riches of the new gold fields, but they tell another story, too—a story of hardship, trial and suffering through long winter days, when the sun was smiling on the earth's other pole and leaving them in miserable cold and darkness. They tell a story of prodigious travels, of staggering journeys and the dangers that beset the traveler. They tell what a trip it is to reach the gold fields, and when they get through the faint-hearted prospector, who isn't thoroughly convinced that he wants to undergo the trial, decides to forego the trip to Alaska and dig up his wealth at home or go without. Some of the gold-mad adventurers, though, rush on unheeding, crowding into the Alaska-bound steamers without anything like enough supplies or enough money

to see them through ten days of travel on land. Miners who have been there say that such as these will perish.

DAWSON CITY.

The center of the new mining region, although sixty-five miles distant from the Klondyke, is said to be a typical mining camp—minus the guns. The British government enforces its laws in Dawson, and those laws prohibit the use of firearms, so few men carry guns. The laws of the camp are enforced by mounted police, whose captain is a civil officer. Though there are said to be 3,000 people in Dawson, few houses have been built, for the principal reason that lumber is \$100 per 1,000 feet. The general fear is, of course, that there will be great suffering there this winter, and it will be increased, it is expected, by the rush of unprepared prospectors who sailed for the new fields immediately on learning what luck had befallen those who have but recently returned.

To give an accurate idea of the cost of living in Dawson City, the price list of a general store there is herewith given:

Flour, per 100 lbs.....	\$12.00
Moose ham, per lb.....	1.00
Caribou meat, per lb.....	.65
Beans, per lb.....	.10
Rice, per lb.....	.25
Sugar, per lb.....	.25
Bacon, per lb.....	.40
Eggs, per dozen.....	1.50
Better eggs, per dozen.....	2.00
Salmon, each.....	\$1 to 1.50
Potatoes, per lb.....	.25
Turnips, per lb.....	.15
Tea, per lb.....	1.00
Coffee, per lb.....	.50
Dried fruits, per lb.....	.25
Canned fruits.....	.50
Canned meats.....	.75
Lemons, each.....	.20
Oranges, each.....	.50
Tobacco, per lb.....	1.50
Liquors, per drink.....	.50
Shovels.....	2.50
Picks.....	5.00
Coal oil, per gallon.....	1.00
Overalls.....	1.50
Underwear, per suit.....	\$.5 to 7.50
Shoes.....	5 00
Rubber boots.....	\$.10 to 15.00

TOOLS.

About the only tools considered absolutely necessary in the placers are a pick, shovel and gold pan. It is nearly always desirable but not always possible to have a sluice. This sometimes is very primitive. It may be only a gully bottomed with cobblestones, or poles lying lengthwise, or it may be a long line of plank troughing, with riffles or cleats at intervals across the bottom. In either case the gold-bearing dirt or gravel is thrown in while water is running through the sluice. The current is supposed to carry away the worthless rocks and dirt, allowing the gold to settle into the crevices or against the riffles at the bottom. If the gold is in finely divided particles the sluice is made tight and quicksilver is placed above the riffles, which envelops and holds the gold dust. No two mines are exactly alike, and the manner of working them has to be varied to suit the circumstances.



DAWSON CITY.

OUTPUT OF ALASKA MINES IN 1896.

It is well in considering the wealth of the yellow metal in Alaska to take into account a few figures uninfluenced by the present excitement. Perhaps none more reliable are to be had than those furnished by the Alaska Mining Record, in its summary of the business of last year. The following extract shows the output :

“ The output of the mines of Alaska is difficult of estimation. The vastness of the mining territory, the extremely migratory characteristic of its population and the entire absence of reports and statistics from a great

part of the smaller camps render it difficult to arrive at a statement approximating correctness except by careful study and watchful attention to every detail. The following estimate is the result of just such work, and is believed to be as nearly correct as is possible, and still represent, fully yet conservatively, the production of gold in Alaska during 1896:

Total output of quartz mines.....	\$2,355,000
Lituya Bay placer mines.....	15,000
Cook Inlet placer mines.....	175,000
Birch Creek district, Yukon mines.....	1,300,000
Other Yukon districts.....	800,000
From several small creeks in various parts of the territory, worked by arrastas.....	25,000
Total output.....	\$4,670,000

BIG OUTPUT FOR 1897.

"This is an increase over 1895 of \$1,670,000. At the same time the number of new discoveries which promise well has been great. These will be more or less productive during the next year, and a corresponding increase is assured. Two new mills of ten stamps each have been erected during the past year, and sixty-five stamps have been added to mills already operating, bringing the number of stamps now dropping in Alaska to 549, of which all but ninety-four are in continuous operation, these latter being closed down by climatic severities during the winter season. As development is carried forward, however, steps are taken to overcome this and it is but a question of a short time when all our mines will run regardless of climate or season. It is quite likely that during the coming summer no less than 250 stamps will be added to the present number."

RICHNESS OF THE NEW FIELD.

(Special Correspondence.)

Dawson City, N. W. Ter., June 18.—This newly established town of shacks and log cabins, situated on the Klondyke river where it empties into the Yukon, promises to be one of the chief placer gold-mining camps of the world.

Fourteen miles from Dawson City, twelve miles up Bonanza creek, which empties into the Klondyke River one and one-half miles from the Yukon, gold was discovered by "Siwash" George Carmack and his two Indian brothers-in-law last August. The credit for the discovery really belongs to the Indians. A stampede from Circle City, Forty Mile and other camps was the result of this find, but few had much faith in the new region even after they were on the ground, and in spite of the rich prospects on the surface it was generally regarded as a "grub-stake" strike on which one might succeed in getting a winter outfit. A little later, however, the prospects found on the river called forth the half-skeptical remark that "if it goes down it is the greatest thing on earth." Then at

few began to believe in the new diggings, but many old miners even yet would not stake out claims, thinking the creek too wide for gold. A number of side gulches along the Bonanza were staked, among them El Dorado, which was rich in gravel near the mouth. But so little faith was manifested in the region that claim holders could not get "grub" from the stores in exchange for their prospects. There was a general fear that these might be only "skim diggings."

PAY DIRT AT EL DORADO.

In December bed rock was reached on No. 14 El Dorado and fabulously rich pay dirt was found. Then more holes went down in a hurry. Everywhere were discovered prospects on bed rock ranging from \$5 to \$150 to the pan. The gold was nearly all coarse. Still the greatness of the strike was not realized. Some of the best claims were sold by their owners for a few hundred or a few thousands. Drifting was carried on by the usual winter process of "burning," and the pay dirt taken out as rapidly as possible under the difficulties of intense cold. Pans as rich as \$500 were discovered, and nuggets containing gold worth as high as \$235 were brought to light. Claims jumped up enormously in price, but still many men sold for a small part of the value of their holdings. They seemed wholly unable to realize their good fortune. Doubts were still expressed about the dumps holding out to the prospects.

Then the test—sluicing—came in the spring when the ice melted and the water ran down from the hills. Then the wildest hopes of the toiling miners were realized. Despite the lateness of commencing work and the scarcity of men about \$1,500,000 was taken out of El Dorado alone. On some of the richer claims men who secured ground to work on shares—50 per cent.—cleared \$5,000 to \$10,000 apiece in from thirty days' to two months' drifting. As high as \$150,000 was drifted out of one claim, the other sums being less. From seventy-five feet of ground on Nos. 25 and 26, El Dorado, \$112,000 was taken, or \$1,500 per running foot, and the pay not cross-cut, for it frequently runs from vein to vein, being in places 150 feet wide.

BIG PRICES FOR EL DORADO CLAIMS.

Ground has sold here this spring for over \$1,000 a running foot, or at the rate of \$500,000 for a claim of 50 feet. Men on whose judgment reliance can be placed and who base their opinion on what their own ground and that of others has yielded, tell me that there are claims here from which over \$1,000,000 will come. Last winter men on "lays" (percentage) left 50-cent dirt because they had better in sight and only a limited time before spring to get out ore. Owing to the large number of men on "lays" the production of almost every claim is known, and no overstatement is possible, since so many are interested in the amount of gold produced. As soon as sluicing was fairly under way the price of claims jumped again and but few would sell. It might almost be said that

no one would part with a claim on El Dorado. On Bonanza, where the pay, except on a few claims, is not as rich as on El Dorado, owners who had looked in vain for the \$5, \$10 and \$150 pans, which were plentiful on the rival creek, were disgusted with their moderate gains and were willing to sell. Thus many claims having 20 to 50 cent dirt and three to seven feet of it were sold. On the boat which takes this letter down the Yukon will be many men, some of them having been in this country only a few months when the strike was made, who will take with them to the mint from \$10,000 to \$500,000, the result either of working the ground or of selling out. The men who sold were paid almost entirely out of their own ground, the men who bought taking the dumps and these, when sluiced, paying for the claims and having a handsome margin for the purchasers. In some instances enough gold was rocked out to make a first payment on the claims before sluicing was possible. Many of these men, to my personal knowledge, had neither money nor credit to get "grub" last fall.

PRESENT DANGERS OF THE TRIP.

But those chances are of the past; let no one imagine that they still exist. Claims are held by their owners now up in the hundreds of thousands, and those of the less desirable quality are dear in proportion. To get a bargain in a claim is impossible at this stage of the fever here. One might as well stand on State street now and think of getting the Palmer house lot at a low rate, because at some time in the past it was sold for a song. The value of claims is now clearly known. Most of them have passed into second hands, the present owners paying for them in many cases \$20,000, \$30,000 or \$50,000, and holding and working them as straight business propositions. That there will be other finds of gold in other creeks is likely, but as El Dorado is one of those strikes that are made only once in a quarter of a century, it is extremely unlikely that another will be found in this region. As the capacity of the river steamers is limited, and is likely to be taxed to the utmost this year to supply the necessities of those now here, or already coming in, with the rigors of the arctic winter before them, and no provisions, and after September no way of getting out where they may be had, those thinking of coming here, attracted by the marvelous richness of the strike, cannot be too strongly cautioned against making the attempt this season. They gain nothing, and may suffer much.

GOLD ON THE KLONDYKE RIVER.

The Klondyke is a stream emptying into the Yukon, eighty miles above the boundary line of Alaska, in the British northwest territory. It is supposed to be about 125 miles long, heading in the Rockies, and is a rapid river running in a northerly direction. Bonanza creek, coming in one and one-half miles up from the mouth, is twenty-five miles long, and heads at the Dome, a big bold hill, as do a number of lesser creeks. It runs southwesterly. El Dorado comes in twelve miles up, and is seven miles long, running in the same general direction as does Bonanza. The

pay on Bonanza is good from the 60s' below the point of discovery, where one claim has 20 and 25 cent dirt, with the pay 125 feet wide, up to forty-three above, claim No. 41 being very rich. Gold on Bonanza is finer than that on El Dorado. There is not a blank up to No. 38, and there are some good claims above that number. The richest claims are in the middle of the gulch, the gold there being coarse, with lots of nuggets. This, with the fractions of claims, makes nearly twenty miles of paying ground.

PROSPECTS IN THE SIDE GULCHES.

In addition there are a number of side gulches on which good prospects have been discovered. Bonanza district, it is estimated, is likely to produce not less than \$50,000,000 in gold, and this is believed to be an underestimate than otherwise. Hunker creek empties into the Klondyke twelve miles up and is twenty miles long. In places \$2 and \$3 to the pan on bedrock have been found, and the indications are that it will prove a



PLACER MINERS IN THE KLONDYKE DISTRICT.

rich-paying creek. Gold Bottom, a fork, and Last Chance, a side gulch, show up equally well for a considerable distance. These comprise, with Bear Creek, which comes into the Klondyke between Bonanza and Hunker, the extent of territory of which anything certain is known. Quartz creek and Indian creek are reached from the heads of Bonanza and Hunker and they have also some prospects. The country rock is slate and mica schist. Many of the nuggets are full of quartz. Iron rock is found with them, and

pieces of stratified rock containing iron are found showing plainly on their sides the matrices of gold nuggets. Some fair gold-bearing quartz has been discovered, but no rich, free gold-bearing rock in place. The mineral belt seems to run northeast and southwest, if one may judge from the creeks, and to be about ten miles wide. It seems to parallel the main range of mountains about 100 miles distant from it.

WAGES AND COST OF LIVING.

There are both summer and winter diggings on all the creeks, as some of the claims are capable of both drifted and sluiced. Some summer drifting is also done. Wages, owing to the scarcity of men last winter, were \$15 a day at diggings, but they are likely to fall very soon. The price of flour at Dawson City last winter was \$1 a pound, and this spring the trading companies advanced their prices in some cases 50 per cent. Canned meats were sold at 75 cents a can. Meals were charged for at the rate of \$1.50 apiece. Whisky was the same old price—50 cents a drink. Lumber, when it can be had, is \$130 a thousand feet. The price of sawing at the mills is \$100 a thousand feet, the logs being furnished by the purchaser. Beds or lodgings are not to be had. If you can't find a place in some tent where you may sleep you may try the saloon floor, of which places there are a number. Good riverfront lots in the center of the town may be purchased at from \$3,000 to \$5,000 each. These same lots sold last fall at \$5 a piece.

The richness and extent of the diggings are such that if they were in any place less inaccessible than this, doubtless the stampede to them would be tremendous, but a great influx of gold-hunters at this time would be a calamity. The Canadian government has sent in another detachment of police and also a judge and a gold commissioner, who, with the customs officer, constitute the governing force. Owing to the impossibility of escape from the country such of the criminal element as has come in thus far is very quiet and peaceable. Outside of a little stealing of provisions and similar petty offenses there is no crime. There are but a few places where supplies can be had in all this vast country, and any offender is certain therefore of being caught and punished. Though gold has been sitting around in the cabins for months in lard pails, baking-powder cans, old boot legs and buckets, no thefts have been committed.

NEED OF OUTSIDE COMMUNICATIONS.

What the country needs above all things is communication with the outside world. If the government at Washington would make some arrangement whereby the Canadians could get a port of entry on the disputed part of the coast it would be a great boon to Alaska as well as to this part of the Northwest territory. Most of the men who "hit it" are Americans, whose gold will go to San Francisco and the United States. Because of the lack of adequate communication with the civilized world the miners are in constant fear lest supplies should give out. Many articles

can be had, but for a limited time after the arrival of a steamer, and those who are not fortunate enough to get a supply at that time must do without for weeks and months, no matter how much gold they may have to make purchases with. The scarcity may be one of provisions, window sashes or gum boots, but always there is a scarcity here of some important article. Generally there is never enough of anything, and only the opening up of communication with the coast by some other route than the mouth of the Yukon offers any prospect of adequate relief. If the Canadians had a port of entry they would have commerce coming down the river from the direction of Juneau, and the country would not be dependent upon the scanty supplies coming 1,900 miles up the Yukon from Bering sea.

WILLIAM D. JONES.

KLONDYKE OR BUST.

This is the sentiment which now animates a goodly number of the American people. The wild days of '49, when men staked their lives on the hazard of reaching the gold fields of California, are being duplicated in the Alaskan excitement of 1897. Stories of bonanza placer deposits of the precious metal along the tributaries of the upper Yukon River have given thousands of people a consuming desire to get to that far-off arctic region as speedily as possible and secure a share of the gold which, if reports be true, is to be easily obtained there in unlimited quantities.

This country has been seized with the gold fever many times in the last fifty years, but never since the yellow particles were first found in the Sacramento Valley has there been any such widespread interest as is now displayed over the Yukon discoveries. Men, and even women, talk of little else. In nearly every city parties are being organized to invade the Klondyke district. Experienced miners who have spent years in Alaska advise them that the road is beset with hardships, that cold and hunger and probably death awaits many of those who go there at this season of the year, but this friendly counsel has no effect in stemming the rush.

It is less than ten days ago that corroborative evidence of the richness of the new fields was received in Seattle in the shape of \$2,000,000 worth of gold dust, and now the cry of "Klondyke or bust" is raised in all parts of the land. There is nothing like the sight of gold to incite a desire for the possession of it. People will read with calmness of rich discoveries in various sections of the world as long as the actual product itself is not handed out for inspection, but when the nuggets and dust are passed around the craze strikes in deep and lasting.

This is the secret of the present Klondyke excitement. For years it has been known there was gold in the Yukon country, but it was not until an immense lot of it was brought back by successful prospectors that the people generally were seized with the determination to get some of it.

TOUGH PLACE IN THE WINTER.

There are but few sane men who would deliberately set out to make an

arctic trip in the fall of the year, and yet this is exactly what those who now start for the Klondyke are now doing. Experienced arctic voyagers, the hardy men who have conducted exploring expeditions in the frozen north, invariably begin operations in the spring, aiming to get within the arctic circle about the time summer opens and the extreme rigors of cold are somewhat abated.

In no other way can they hope to accomplish anything of value. Going to the Klondyke is to all practical purposes making a trip into the arctic circle. Klondyke is the name given to a stream which empties into the Yukon from the British side of the imaginary line which at the 141st meridian divides Alaska from the possessions of Great Britain. For eight months in the year the entire country is held tight in the grip of icy winter, the temperature raging from 70° to 90° below zero. Last winter the maximum of cold was 70° below, and the old-timers refer to it as an unusually mild season. The ground freezes solid to a depth of fifteen or twenty feet, rivers and creeks are clasped in unbreakable bonds of ice, while on every side fields of snow cover the ground.

It is a bleak, barren, mountainous land, deserted even by wild animals of all kinds save when a hungry polar bear, attracted by the smell of human habitation, makes an occasional predatory incursion in search of an Indian or a white prospector for dinner. Winter begins about the middle of September and lasts until late in May. In all these eight months the only sources of food supplies are the salmon in the ice-bound rivers and the stocks of the trading companies' stores. To get the first requires dangerous exposure in the extreme cold; possession of the latter can be had only on a cash basis, and even with plenty of money or gold dust it is sometimes difficult to get enough to eat, as the storekeepers have to deal out provisions sparingly to guard against a shortage before the new supplies arrive in the spring.

It is in the four months of so-called summer, a season of melting snows, floods, and mud, that the denizens of northern Alaska do their work—so far as it consists of labor on the surface of the ground.

WHERE THE GOLD IS FOUND.

Is there gold in the Yukon country? This is the question which outweighs all others in the minds of those suffering from the gold craze. Making due allowance for wild exaggerations, which will attach to every new field of this nature, it may be safely said there are rich placer deposits on nearly all the streams that empty into the Yukon and at the head waters of the main river itself. No quartz has been found as yet, and this leads old miners to doubt the permanency of the present finds, which they refer to as "pockets."

Just at present the biggest yields are obtained in the Klondyke district, but quantities of gold have been taken out in other parts of the Yukon country. In hunting for gold, prospectors dig a hole down to bed rock, which is generally found at a depth of from fifteen to eighteen feet.

The first twelve feet or so of earth is non-auriferous. Under it lies a strata of coarse gravel three feet or more in thickness which is rich in the precious metal, most of it being in the shape of small nuggets or grains. It is called "dust," but it is much coarser than the dust found in other parts of the world. Some of it is so large that a big percentage can be picked out by hand as the gravel is brought up out of the hole, but the general practice is to sluice or pan wash it.

The feeble suns of the short summer do not thaw out the frozen ground to its full depth, and it has to be softened by building huge fires, which are kept going night and day until the earth is in such shape that the miners can force their way through it with picks. This done, a number of holes are dug on each claim, but even then when the gold gravel is taken out it is in frozen chunks resembling small masses of concrete. By making these holes in the summer the miners are enabled to work underground a portion of the winter and thus prepare for an early wash-up when the spring thaw comes in June. To take advantage of this the gravel which has been dug out during the winter has to be again softened with fire before it can be put through the sluices or pans and the gold separated.

WONDERFUL RICHNESS OF GOLD DEPOSITS.

Wonderful tales are told of the great richness of the Yukon placers. More than one man reports having obtained \$1,000 from a single pan washing, while reports of yields of \$500 and \$600 to the pan are numerous. An ordinary pan of gravel will weigh twenty-five pounds and a yield of \$1,000 worth of gold means sixty-two ounces, or nearly one-sixth of the entire bulk in precious metal. The average is said to be \$50 to the pan and this is phenomenal when it is taken into consideration that the California pan washer was well pleased with a uniform product of \$3 to a washing and could make money with a yield running as low as 50 cents. With this kind of field to work it is small wonder that claim holders gladly pay \$15 a day for common labor and are unable to get anything like a fair supply at that. It is only men who are "broke" that will work for wages.

The country is large, gold-bearing gravel is found on nearly every creek, and every man who has provisions enough to carry him through the winter is mining on his own account. There are many unlucky ones, however, who cannot find a pay streak for themselves, and these have to starve or work for a pittance of \$15 a day with others taking out gold by the pound all around them. They are the same kind of individuals who sit all day on the pier unable to catch a puny perch, while their companions haul out fine bass by the score. Prospecting for gold is a curious lottery. One man, skilled in the business and eager to make a rich strike, will carefully search over a strip of country without finding a trace of color. Along will come a tenderfoot who doesn't know gold when he sees it. He will scratch away in the most unlikely of places, to the amusement of the wise ones, and finally unearth a deposit of fabulous richness.

This is as strangely true of the Yukon country to-day as it was of California in '49. The fact is, gold appears unexpectedly in so many varying forms that even the best of experts are frequently deceived. The richest deposits in the Klondyke lie next to the bedrock and are inky black in color. The gravel over these contains bright yellow, dull yellow, and reddish-hued gold. These latter forms are easily recognized, but the black deposit is one that might be readily overlooked were it not that word of its true nature has gone forth through all the country.

GOLD BROUGHT BY GLACIERS.

Where the gold in the Yukon Valley comes from is a conundrum for geologists. The peculiar character of the deposit, buried next to bedrock under many feet of more recently formed earth, and mixed with a gravel which is now found only far under ground, give plausibility to the theory that it was carried there ages ago by some monster glacier.

If this idea is correct the gold now being dug must have been ground from some fabulously rich mother lode by the attrition of the ice. All over that region there are undeniable marks of glacial action. Valleys have been hewn through rocks which date far back in the world's formation according to geological chronology. Boulders, smoothed and rounded by being rolled onward before an irresistible pressure, are found hundreds of miles away from the spot in which they were originally placed by the workings of nature. The very gravel which carries the gold is unlike any gravel to be met with above ground and wherever the bed rock has been uncovered it shows plain marks of the grinding process to which it has been subjected.

Along the valleys the sides of the rocky walls are creased in a manner which, to the practical observer, tells plainly of the force that did the wonderful work. It is along the creeks now running in these glacial formed valleys that the richest gold deposits have been discovered. There is no sign of volcanic action, no commingling of the gold with other metals, as is common in other parts of the world. It is simply pure native gold, ground off from some huge block of the same material from a "mother lode," as the miners call it. Where is this mother lode? Who knows? The course of the glacier was from the north. Perhaps the great source of gold supply lies in that direction; perhaps it has been entirely ground away by the glacier, and its remnants are those now being garnered by the hardy prospectors of the Yukon. If the lode is still in existence, as many good authorities believe, the man who finds it will have wealth at his command beside which the riches of the Astors and Vanderbilts will be infinitesimal.

ROUTES TO THE KLONDYKE.

Klondyke can be reached by two routes, both beginning at Seattle, Wash. There the traveler may take a steamer for a 3,000-mile ocean voyage to St. Michaels Island, and then make a 2,600-mile journey up the

Yukon, or he may go by steamer to Juneau and from there climb over 600 miles of rough mountains. The Yukon route is the one most in favor as being invested with the minimum of hardship, but it is only open during the short four-month summer. It is a forty-day journey from Seattle to the new gold fields by water. Leaving Puget Sound the steamer sails out to the northwest across the Pacific Ocean to the Aleutian Islands, between which a channel leads into Bering Sea. Safe in these latter waters the steamer is put on a direct northerly course to St. Michaels Island, which lies on the far western coast of Alaska at the mouth of the Yukon river. There a transfer is made to a light-draft river boat and in this the cost of the voyage to Dawson. Circle City, or Fort Cudahy is made. This cost of assage from Seattle, provisions included, is \$165. Up to this time there have been two boats in this Yukon river service, each of which makes one round trip during the summer. The first boat up in the spring reaches Circles City toward the end of June, and the last one leaves there early in September on the return trip to St. Michaels Island. Between the coming of these boats there is no communication with the outside world except by dog sledge over the mountains. The trip of 2,600 miles to St. Michaels Island can be made by dog sledge over the frozen river, but at that point the voyager would be but little better off than he was at Circle City or Klondyke, as the ocean steamers only run in connection with the Yukon river boats. The last steamer for this season left Seattle for St. Michaels Island, Thursday of last week and, if there is no unforeseen delay, its passengers will be landed in Dawson City, which is the tented metropolis of Klondyke, about September 1.

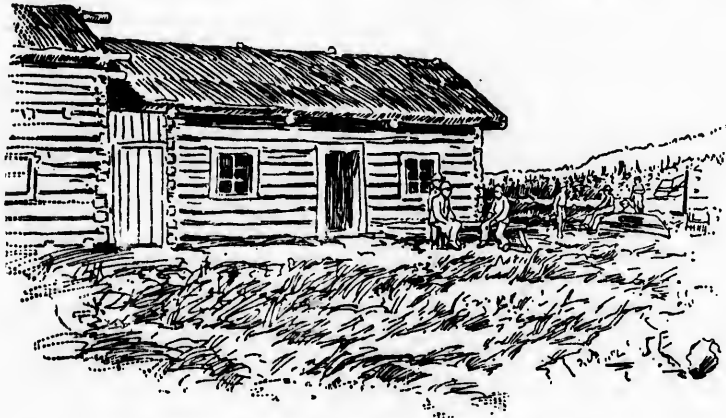
TRANSPORTATION AND FOOD SUPPLIES.

Hitherto the traffic by water has been solely in the hands of the North American Transportation and Trading Company, a Chicago corporation in which such men as P. B. Weare and Michael and John Cudahy are interested. The company owns the boats which are used in the traffic and also the stores along the Yukon. Transportation of passengers and supplies is a profitable feature, but its principal purpose is the sale of provisions and the transaction of a general commercial business. Like all similar enterprises in a new country it has practically a monopoly. The company will carry a passenger with 150 pounds of baggage from Seattle to the head waters of the Yukon for \$165, and give him all he wants to eat on the way, but it will not permit him to carry a store of provisions for use after he gets there. Food supplies must be procured from the company's agent. These can be bought on the Yukon or contracted for in advance. In the former instance it will be a matter of getting what is in stock and paying such prices as are made possible by a rush of customers. If the contract is made the traveler pays down the lump sum of \$400 and the company guarantees to feed him for a year. The great danger that now faces people in the Klondyke is a scarcity of provisions. Everything in the way of supplies that is possible to get there this year is now on the road. With the stocks now in store

10,000 people can be fed this winter. There are nearly that many now on the ground and the number is increasing right along. With 15,000 mouths to feed it is certain to be a case of short rations at the best, and a swelling of the population to 20,000 means starvation for some of them. An effort is being made to get cattle and sheep into the country by driving them through the mountain passes from Juneau, but the journey is exhausting and dangerous. Such live stock as can be landed in Dawson City in eatable condition will readily bring \$1 a pound. The principal food used now is bacon, beans and flour, with condensed milk and a few canned goods. Fresh milk, butter and eggs are unknown quantities.

OVER THE MOUNTAIN TRAILS.

There are three paths over the mountains from Juneau to the upper Yukon. These are known as the Chilkoot, the Chilkat and White Pass. The former has been generally used, but the latter is now coming into favor as the shortest and most favorable. Prospectors can get from Seattle to Juneau by steamer for \$15, but after reaching the latter port their expenses will be heavy. It is a trip of 600 miles through mountains



TRADING POST AT FORT SELKIRK, ALASKA.

covered with snow and subject to sudden storms of terrible violence. Supplies must be transported by dog sledge or packed on small ponies, the former being preferable. To get any kind of an outfit requires a large expenditure of money, and besides this Indian guides and porters must be well paid for accompanying the expeditions. In addition to the animal loads every man carries from fifty to sixty pounds of provisions and tools on his back, and when this is packed along for four weeks, up and down steep hills and over rude trails in ice and snow, the task is herculean in its nature. The Indians charge \$1 a pound for carrying loads through the fords, and on every side there is a chance to spend money fast. American traders

are now making an experiment by way of the White Pass, through which they think the trip from Juneau to Dawson City can be made in two weeks. For some unknown reason this pass has been overlooked by most of the people crowding into the Yukon country overland, and the thousands who were unable to get passage by the last boat to St. Michael's Island are going through the Chilkoot trail. There is one advantage in the overland route, and that is the traveler may carry anything in the way of provisions he wishes to, providing he does not run afoul of the Canadian custom authorities. Canadians are much worried over the fact that, while the richest deposits are on the Canadian side of the line, nearly all the miners are Americans, and they buy their supplies from American merchants, thus giving the country no revenue. To remedy this it is proposed to vigorously enforce the collection of custom duties by means of a private company, to which the privilege will be leased, and in this way either secure a big tribute in cash or compel the purchase of goods from Canadian merchants.

OUTFIT NECESSARY FOR PROSPECTORS

Equipment for mining in Northern Alaska is an important item but little understood by amateur prospectors. Many laughable things are seen in the outfits of those who assemble in Seattle to take boat for St. Michael's or Juneau, and some shrewd but unkind traders have found it a favorable time for working off odds and ends which have been accumulating in stock for years. Your old-timer takes as simple an outfit as he can—heavy woolen underwear, coarse trousers and pea jacket, stout shoes, blue flannel shirts, dark blankets, and a black sweater, the latter being chosen on account of economy in washing. His tools will be a pickax and long-handled spade, while a few tin pans and dishes will comprise his camp equipage. A good repeating rifle is always handy, but not an essential. The tenderfoot goes loaded down with an arsenal of firearms, a camping kit for which he can have no possible use, and clothing more suitable for tending store in Georgia than mining in the wilds of Alaska. Half of his useless truck has to be abandoned on the road, and if he reaches the Klondyke with a quarter of his original load he is in luck. The first thing to be done in every instance on reaching the Eldorado is to get a shelter of some kind. In the summer a heavy tent with a board or well packed earth floor will answer, but in the winter, with the mercury down to 70 or 80 degrees below zero, nothing but a substantial log cabin with a roaring fire will keep out the cold, and even then there will be times when the occupant will wish he had more blankets. It is a struggle to sustain life in a northern Alaskan winter, and the conditions must be favorable, with plenty of food, clothing and fuel, if a healthy vitality is to be retained. It is foolhardy to attempt the trip in the fall of the year. Even allowing that the dangers of the mountain trail can be overcome, there is the further emergency of short food supplies to be met on arrival at Dawson. The best time to start is in the early spring, when the journey can be made by boat.

PERMANENCY AND OTHER CONDITIONS.

Will the gold last? Placer mining is an uncertain quantity. Deposits which bid fair at the outset to last for years frequently pinch out suddenly when least expected. The Yukon field is described as inexhaustible, but the same thing has been said of placers in California, Oregon, Idaho and Kootenai, but they were all worked out in time, and some of them in pretty short time at that. So far as can be judged from the Klondyke reports there is a good chance that this new field may prove more permanent than others to which people have crowded in search of fortune before, but it is all a lottery. Precautions are being taken to prevent "hogging" and to give all comers a fair show. The mining laws on both sides of the line are being rigidly administered. Claims are limited in size and number, must be properly staked out, and record of ownership filed. There are no provisions for preserving the peace, and thus far none is necessary. The miners are orderly, and there are no shooting scrapes or drunkenness. What may arise should the deposits suddenly pinch out, or the Canadian authorities make a determined effort to collect tribute, can only be guessed at. Little danger is apprehended from this source, however, as the Americans hold the roads which lead into the Klondyke, and it is impossible to reach the mining country without making use of these highways. Even in the case of the White Pass, which is on British soil entrance must be made from United States territory by way of Juneau, and it would be easy to place a retaliatory embargo on foreigners trying to get into the gold fields.

There are serious drawbacks to the northern Eldorado aside from the bitterness of its long, icy winters. One is the scarcity of natural food products. Nothing can be grown there; everything for all time to come must be imported at a high cost. Another handicap is the lack of woman's society. In the rush to California in '49 men took their wives and sweethearts with them in many instances, and as the climate and agricultural conditions were good it was not long before permanent settlements were made and the nucleus of what is now a great State was started. In Alaska, aside from one or two daring tourists, no white women of refinement have been seen, and few will care to brave the hardships of life there. The miners' sole companions are greasy, blubber-eating Indians, and the more intelligent dogs which serve as beasts of burden. But there is gold there, and day and night, in all parts of civilized America, there goes up the cry of "Klondyke or bust."

WEATHER IN ALASKA.

STATEMENT OF CHIEF MOORE—ONLY FOUR HOURS OF DAYLIGHT IN WINTER.

WASHINGTON, Aug. 2.—Under the direction of Secretary of Agriculture Wilson, Chief Moore of the weather bureau has made public a statement in regard to the climate of Alaska. In this statement Mr. Moore says:

The climates of the coast and interior of Alaska are unlike in many respects, and the differences are intensified in this, as perhaps a few other countries, by exceptional physical conditions. The fringe of islands that separates the mainland from the Pacific Ocean, from Dixon Sound north, and also a strip of the mainland for possibly twenty miles back from the sea, following the sweep of the coast as it curves to the northwestward to the western extremity of Alaska, form a distinct climatic division which may be termed temperate Alaska. The temperature rarely falls to zero; winter does not set in until December 1, and by the last of May the snow has disappeared except on the mountains. The mean winter temperature of Sitka is 32.5, but little less than that of Washington, D. C.

The rainfall of temperate Alaska is notorious the world over, not only as regards the quantity, but also as to the manner of its falling, viz., in long and incessant rains and drizzles. Cloud and fog naturally abound, there being on an average but sixty clear days in the year.

North of the Aleutian Islands the coast climate becomes more rigorous in winter, but in summer the difference is much less marked.

The climate of the interior, including in that designation practically all of the country except a narrow fringe of coastal margin and the territory before referred to as temperate Alaska, is one of the extreme rigor in winter, with a brief but relatively hot summer, especially when the sky is free from cloud.

NATURE'S HOARDED TREASURES.

[From the Alaska Mining Record, 1897.]

The very small portion of Alaska which has thus far been prospected for quartz, lies entirely along the southeastern coast and never more than three miles from navigable tide water. Back of this very narrow strip the vast region is a veritable terra incognita so far as its leads, lodes and ledges are concerned. True, the miner has penetrated the far interior, and auriferous rock has been found there, but it has invariably been passed by as being an impracticable proposition, yet, there it lies, awaiting only the process of development to add its golden riches to the treasure of the world, while the prospector, searching only for the nuggets and coarse dust which he may at once carry with him out of the wilderness, has paid no attention to that which may not be readily gathered, or observing it, has given it no heed in his quest for the immediately profitable placer ground. The utter absence of roads and trails, and the great difficulty to be found building them through the wild mountain fastness and dense vegetation of their rugged sides, has confined the operations of the quartz prospector and hence of his successor, the developing purchaser, to that very limited strip which lies within easy access to tide water.

This strip, however, has already entirely fulfilled the most sanguine expectations, has developed properties from which gold is being taken in surprising amounts, lie tracts whereon the foot of the prospector has never trodden; hills and mountains which can but be rich in the precious ores,

yet awaiting the patient and intelligent search which has been often richly rewarded and which shall meet further and greater reward whenever and wherever upon this coast it shall be diligently prosecuted, and when development shall expose the hidden riches of this treasure house of Nature. This strip includes also the thousands of islands which line the coast, and upon them are located many of the richest of the developed properties as well as many of the most promising prospects in Alaska, many of which are being looked up and bonded by capitalists with a view to investment.

THE YEARLY OUTPUT OF GOLD.

The output of the mines of Alaska is difficult of estimation. The vastness of the mining territory, the extremely migratory characteristic of its population and the entire absence of reports and statistics from a great part of the smaller camps render it a very difficult matter to arrive at a statement approximating correctness except by careful study and watchful attention to every detail. The following estimate is the result of just such work, and is believed to be as nearly correct as is possible and still represent fully, yet conservatively, the production of gold in Alaska during 1896:

Nowell Gold Mining Company, 35 stamps	\$ 160,000
Berner's Bay Mining and Milling Company, 40 stamps..	125,000
Alaska Treadwell Gold Mining Company, 240 stamps ..	800,000
Alaska Mexican Gold Mining Company, 120 stamps....	450,000
Alaska Commercial Company, 40 stamps	500,000
Bald Eagle Mining Company, 4 stamps	200,000
Ebner Gold Mining Company, 10 stamps.....	35,000
Juneau Gold Mining Company, 30 stamps	35,000
Julian Gold Mining Company, 10 stamps.....	20,000
Alaska Willoughby Gold Mining Company, 10 stamps..	15,000
Green mine, Norton Sound, 10 stamps.....	15,000
Total output of quartz mines	\$2,355,000
Lituya bay placer mines	15,000
Cook Inlet placer mines.....	175,000
Birch creek district, Yukon mines	1,300,000
Other Yukon districts.....	800,000
From several small creeks in various parts of the territory, worked by arrastres	25,000
Total output.....	\$4,670,000

This is an increase over 1895 of \$1,670,000. At the same time the number of new discoveries which promise well, has been great. These will be more or less productive during the next year and a corresponding increase is assured. Two new mills of ten stamps have been added to mills already operating, bringing the number of stamps now dropping in Alaska to 549, of which all but 94 are in continuous operation, these latter

being closed down by climatic severities during the winter season. As development is carried forward, however, steps are taken to overcome this, and it is but a question of a short time when all our mills will run regardless of climate or season. It is quite likely that during the coming summer no less than 250 stamps will be added to the present number, of which 200 will be put upon the Ready Bullion property by the Treadwell Company.

The mining population has wonderfully increased during 1896, and the present year opens with promise of unprecedented immigration. Over 11,000 people came to Alaska last year and of those who took their departure at the approach of winter a great number have expressed their intention to return. These, with the number who will visit Alaska for the first time in the spring, will swell the number to a total far beyond that of any previous season. The great majority will come to seek fortune in the mines and if properly distributed throughout the country will advance its development greatly. The great area of Alaska will afford profitable fields for an incalculable number, but the danger of overcrowding a particular district should not be underestimated. Last season's rush to the Inlet may be taken as a complete demonstration of this fact. While in Alaska there is ample prospecting ground for thousands more than will ever undertake its occupancy it cannot be expected all can prosper within the bounds of any district. There is a little ground in Southeastern Alaska which will not repay careful prospecting. All the choice spots have by no means been found or located, nor do they lie within the confines of any section, but are liberally scattered throughout the length and breadth of the vast domain of the great Northwest. Here as throughout the mining regions of the world, careful work reaps the richest reward and thorough search over a reasonably limited space is worth years of almost aimless wanderings, looking for fortunes in nuggets already panned out and awaiting only the picking up. Mining is a business which can be more advantageously carried on in Alaska than in many more favored places but it must be prosecuted intelligently or failure is certain. The bitter disappointments of the past should prove a fund of instruction to those who contemplate coming to Alaska; but to the practical and experienced miner or prospector there need come no fear that his coming will be in vain.

DOUGLAS ISLAND.

Foremost in every respect among the developed properties of Alaska is that of the Alaska Treadwell Gold Mining Company, located on Douglas Island, two and one-half miles from Juneau, on the other side of Gastineau Channel. So much has been written of this famous mine that only the briefest description will be necessary here. In January, 1882, prospectors crossed the channel from Juneau, found "pay dirt" on the beach, and in March following commenced washing for gold on the ground now known as Ready Bullion. The first three days' cleanup yielded twenty-seven ounces of gold, which created great excitement. In further washing the bed rock upon this discovery the great Treadwell ledge was exposed. It

was located as a quartz claim and called the Paris. Nothing toward development was done until the property was acquired, in 1882, by John Treadwell, for the sum of \$400. A five-stamp mill was erected and prospecting developed a ledge 400 feet from wall to wall. In 1883 a mill of 120 stamps was erected and in 1888 its capacity was doubled, making it a 240-stamp mill, the largest in the world under one roof at the present day. The stamps weigh 850 pounds each, with a seven-inch drop, ninety-six strokes per minute, the capacity of the mill being about 750 tons daily. In 1890 the chlorination works were erected and improvements and additions have been added at various times since, the plant standing today by far the best and most complete extant. Additional ground was acquired to the extent of 5,000 feet, including the Ready Bullion, Mexican and Golden Chariot claims. The Mexican mill of sixty stamps was built and last year increased to 120 stamps, the plant being connected by railway with the Treadwell chlorination works. On the Ready Bullion claim development work has been extensively prosecuted during the past year.

The last annual report of the Treadwell shows that during the year ending May 31, 1896, 263,670 tons of ore were mined and milled at a cost, including the chlorination of 4,397 tons of sulphuretes, of \$1.16 per ton, with a bullion yield of \$2.96 per ton of ore mined. All costs of construction, maintenance, office expenses, freight, insurance, and the like, are charged as operating expenses. The Treadwell has paid \$3,025,000 in dividends.

The Mexican mill is a model and for convenience and economy in production and hadling of ore has no equal. In the enlargement and improvement of the plant during the past summer nothing short of perfection was aimed at and no expense spared to attain that standard. Both this and the Treadwell plants and workings are lighted throughout with electricity and power is secured by means of eighteen miles of ditch, supplying water, a 250 feet pressure to giant Pelton wheels, that at the Treadwell being twenty-two feet in diameter. During periods of scant water from winter frosts, the Peltons are supplemented by powerful Corliss engines and both mills run continuously throughout the year save only for the shutdown on Christmas and the fourth of July, with ores in sight sufficient to last throughout the next century.

The superintendency of both the Treadwell and Mexican operations is in the hands of Mr. Robert Duncan, Jr., assisted by Mr. J. P. Corbus, and to these gentlemen is due to the high degree of efficiency to which the workings of the mines and mills have been brought.

Aside from the Treadwell and Mexican properties, which have made this island famous the world over, many prospects here are being quietly developed with every indication of success, and a large number of locations are held awaiting development.

On Edwards creek recent discoveries have been made which are of great promise and which have attracted the attention of prominent mining men.

SILVER BOW BASIN.

Four miles from Juneau at the head of Gold Creek lies Silver Bow basin, where Jureau and Harris made their first discovery of auriferous quartz. Here the development of properties has been steadily carried forward until many of the claims are highly productive and their permanence assured. The first mill erected was that of the Johnson Mill and Mining Company, for working the ores of the Takou consolidated group.

Takou Group of Mines—This group is situated two miles from Juneau at the entrance of Lower Silver Bow basin, consisting of eight patented claims and a fine water power, equipped with a ten-stamp mill, boarding house and all necessary buildings, both at the mill and mine. The workings are all under ground, and all tracks, storage, ore bins and exposed places are snow shedded. The ledge matter lies between slate and green stone walls and averages from twenty to sixty feet in width. The ore is an iron pyrites carrying some zinc blend and a small portion of galena, and is what is called "strictly free milling," no concentrators being used. Owing to its low altitude, close proximity to steamboat landing and never failing water power this property can be operated all the year round, and is the first mill and mine that has ever run during the winter in Silver Bow basin. The company intends to add ten more stamps in the early spring.

Dora Group of Mines—This property was located in the early eighties and finally fell into the hands of Dr. H. S. Wyman, who built an arastra and milled quite a quantity of ore from the Dora claims with very good results. In 1864 120 tons of the ore were milled which netted very good returns. The property is so situated that it can be operated all the year round, and the ore is of a free milling nature, and the owners expect to thoroughly develop the mine and in the near future build a mill.

Here in the basin is located the twenty-stamp mill of the Nowell Gold Mining Company which is kept at work on ores from the Ground Hog and other claims, owned or leased, and located in the upper basin, the rock being trammed one and one-half miles by surface and aerial tramways. Close to the mill are the aprons and saving plates at the end of the flume and tunnel from the placers operated by this company. These placers lie in the basin proper and have been worked a number of years with gratifying results and a large amount of excellent ground yet remains untouched. The tunnel is lined with block riffles and the placer debris is carried through it by the hydraulic wash. A surface tram from the lower station of the wire tram from the Ground Hog is also laid through this tunnel and over this is trammed all the ore from the several claims to the mill. The plant includes a dynamo which lights the workings, and a telephone connects the whole with the main office in Juneau.

In the basin proper are located many valuable producing claims, the principal of which constitute the Campbell group, on which a thirty-stamp mill is kept running during the season, and the Aurora claim, which last season was leased and operated by the Nowell Company.

The lode is located continuously, from two to three claims in width, for a distance of over six miles through Silver Bow basin and over the range into Sheep Creek basin to the Silver Queen with almost continuous surface croppings the entire distance. Following still further east along the belt where the lode leaves the valley and climbs the mountain side, the veins again crop to the surface, and locations are strung out from this point over another high range and through valleys and over ridges to Takou inlet, a distance of fully eight miles. On this end are the Star of Bethlehem, Last Chance, Sheridan, Little Queen and other locations which show some very rich, gray copper ores.

SHEEP CREEK BASIN.

Here the character of the ores differ greatly from those of Silver Bow basin in that silver predominates, though the gold values also increase. The principal claims here are the Glacier and Silver Queen, both of which are extensively developed and produce ore of a very high grade. The Nowell Company is the operating owner of both mines, and the superintendency lies with Mr. F. C. Hammond, whose efficient and energetic management has brought the workings at both mine and mill to a condition approaching perfection.

Aerial trams extend from both the Glacier and Silver Queen to large ore bins at the foot of the mountain from whence the ore is conveyed to the fifteen-stamp mill, a mile distant, over a steam railway. The mill is run on second-class rock only, a very large percentage of the ores taken from either claim being shipped direct to the smelters on Puget Sound, and the milling done is little more than simple concentration, as there is but little free gold in the ores. An extensive canvas plant, the only one in operation in Alaska, profitably supplements the work of the vanners. On the beach, two miles below the mill, the company owns a large wharf and warehouse where all supplies are landed.

Sheep Creek basin has many other very promising claims, from several of which ore shipments have been made, for a number of years; there is little doubt of its development into one of the leading quartz camps of Alaska.

SHUCK BAY.

This locality has produced large amounts in placer gold in past years though now its lodes are attracting considerable attention. Of these the Redwing group is most advanced in development, located in Shuck basin.

The ore is of a free milling nature, carrying iron, zinc blend galena, a of copper in combination with the gold, and a small percentage of silver. This property is situated half a mile from salt water at a very low altitude and possesses in connection fine water power.

SITKA DISTRICT.

While the first auriferous quartz discovered in Alaska was found near Sitka, mining operations have never been vigorously prosecuted there.

During the past season some interest has been manifested and a number of groups have been bonded to parties who propose operations next spring. A five stamp mill represents the total of the actual mining plant in the district though some of the claims promise well.

THE SUM DUM DISTRICT.

The richness of the surface prospects in this district, fifty miles south of Juneau, has inspired the gold seeker with great hopes for the future of the many claims located in the locality and the promise has been fulfilled in every instance where development has been made. Most conspicuously is this true in the case of the Bald Eagle mine, which, a mere prospect three years since has become one of the richest and best paying properties on the Pacific coast.

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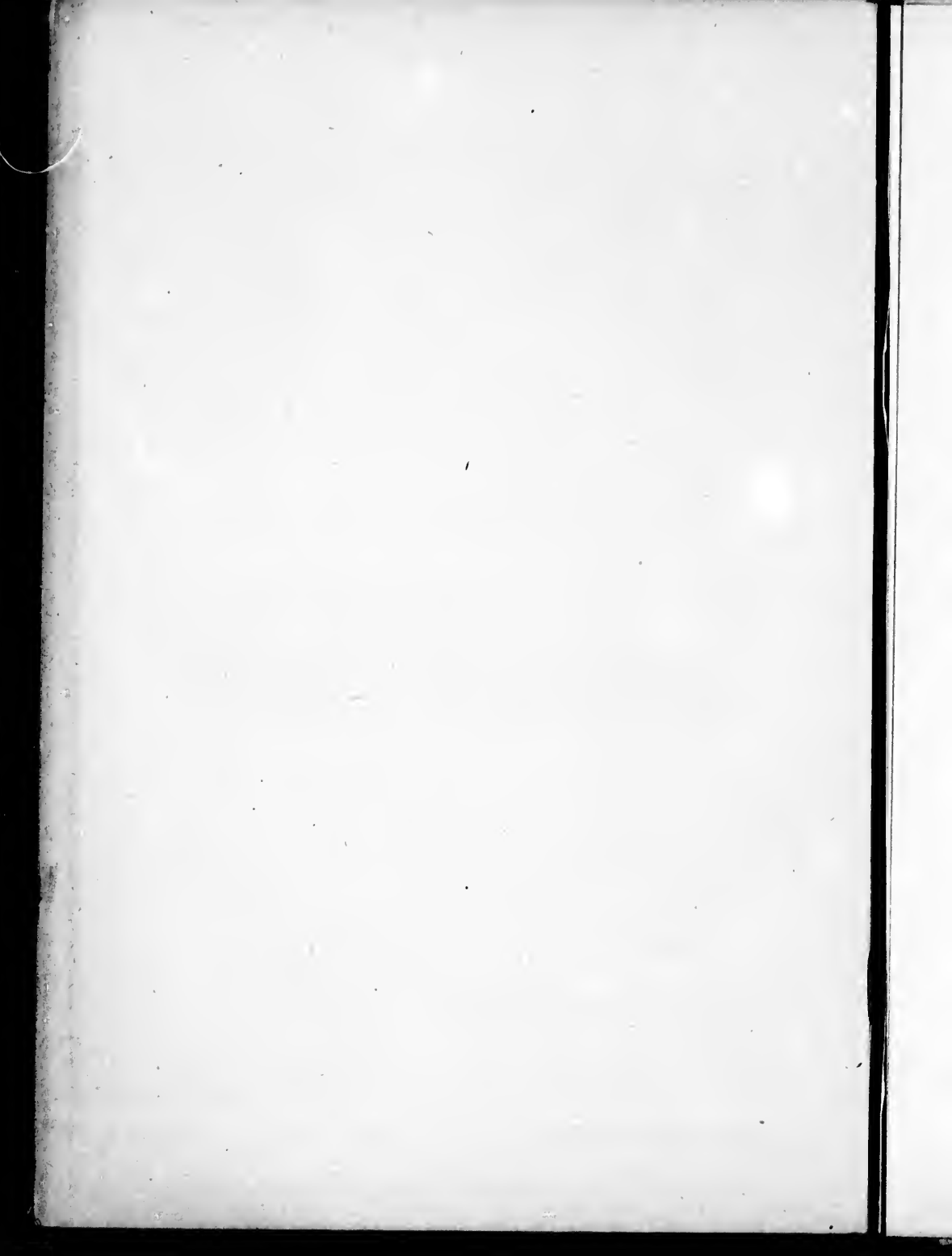
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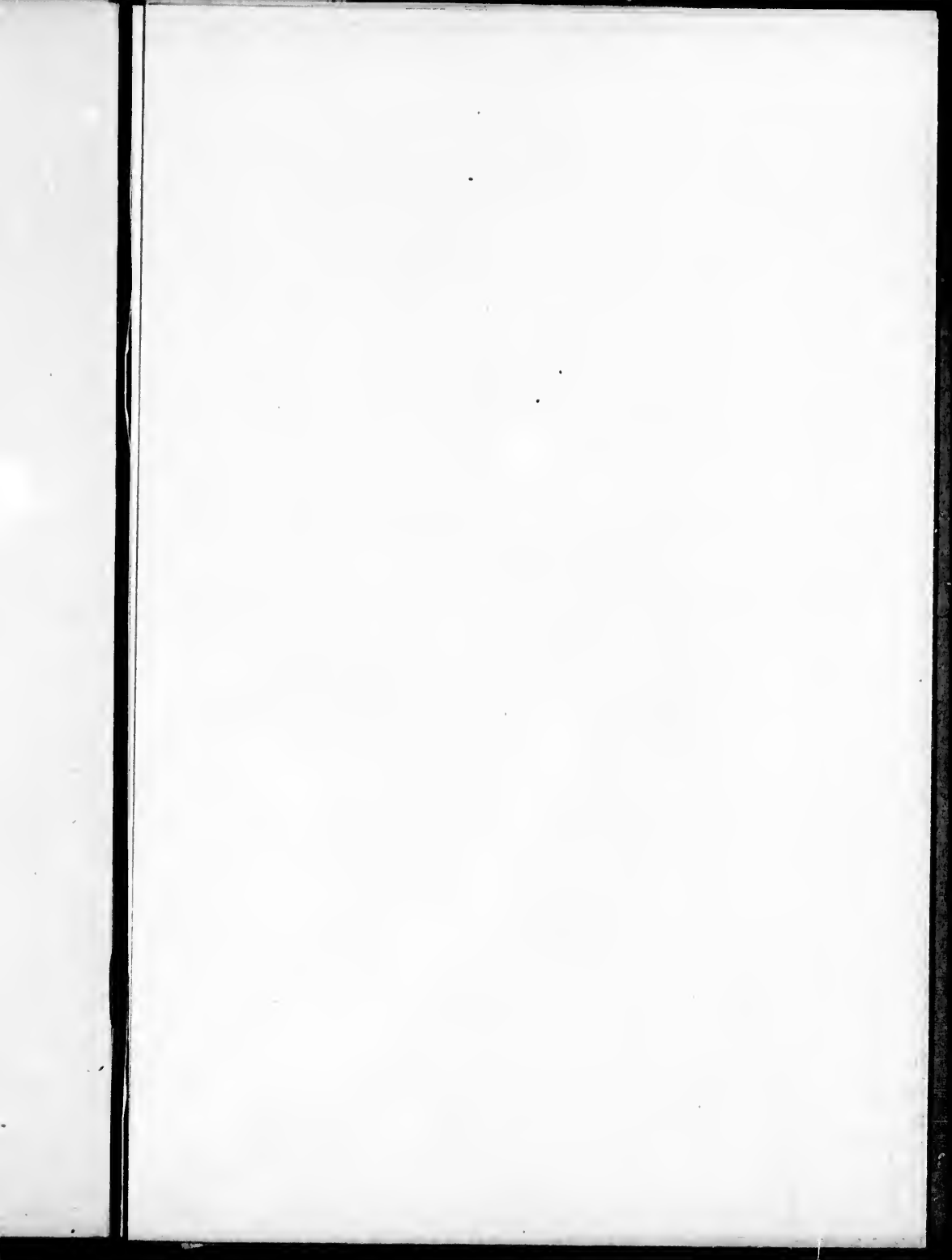
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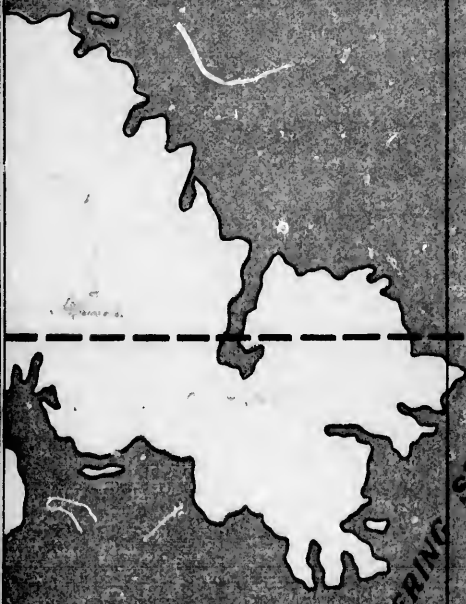
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GOLD FIELDS

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Buckley Riv.

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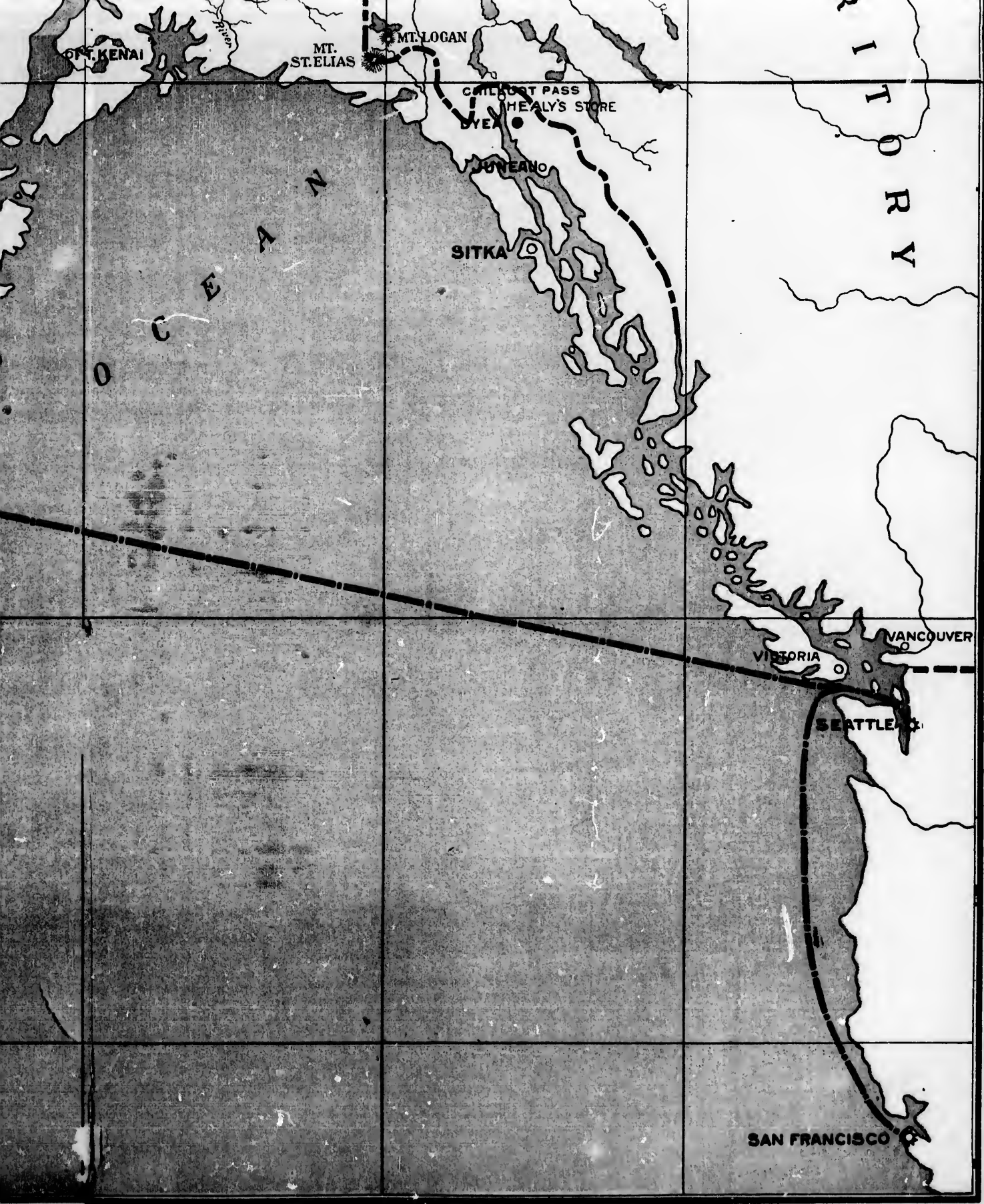
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