



***Yukon
Territory,
Canada.***

***VISIT OF
American
Mining Engineers,
JULY, 1905.***

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Yukon Regional Library
Whitehorse, Yukon

COMMISSIONER'S OFFICE



YUKON TERRITORY,
CANADA.

Dawson, June 7, 1905.

**TO THE MEMBERS OF THE AMERICAN INSTITUTE OF MINING ENGINEERS,
VISITING THE YUKON TERRITORY:**

Gentlemen,—On behalf of the Commissioner and Council of this Territory, as well as of the people of the Territory, generally, I desire to extend to you a hearty welcome to the Yukon.

It is a matter of great regret that our new Commissioner will not be able to assume his duties for some time and consequently it devolves upon me as Acting Commissioner to extend this greeting to you.

It is indeed an honour to the Yukon Territory to be favored with a visit from such a large and representative body as the American Institute of Mining Engineers. It is the first time that either the American or Canadian section of this great Northland has been honored with such a gathering of scientists.

During your sojourn in the Yukon our only regret will be that the conditions of the country will render it impossible to more adequately entertain you.

It is our earnest hope that you will all feel in some measure repaid for your arduous journey by the objects of interest which we may be able to present to you in this somewhat unique mining camp, and our regret is that your stay among us is likely to be of such short duration

I am, gentlemen, yours very sincerely,

Z. T. WOOD,
Acting Commissioner.

HISTORICAL RESUMÉ.

The Yukon basin has been prospected since 1878, the first gold being obtained from the bars on the Lewis and Stewart rivers.

In 1886 coarse gold was discovered on the Fortymile River about 60 miles distant from the present site of Dawson. A camp was then established at the confluence of the Yukon and Fortymile rivers, and some 250 miners kept on working with varied success on the tributaries of Fortymile river up to 1896.

According to Mr. Dawson the yearly output of gold was about \$150,000 for that period.

In 1896 Geo. Cormack, prospecting in the Klondike region, made his famous discovery on Bonanza creek. Fortymile was promptly deserted, its whole population starting for the new diggings. It was only the following year, 1897, that the civilized world learned of the marvellous riches of Bonanza and Eldorado creeks. A rush from all parts of the world to the new gold fields then took place and the population of Dawson in the spring of 1898 was estimated at 30,000 people. The route generally followed was the present one by Skagway and the upper Yukon, but it entailed at that time considerable hardships.

In two years all the conditions of travelling were changed in this remote country. A well built railroad from Skagway to Whitehorse, and a commodious fleet from Whitehorse to Dawson allowed hundreds of tourists to visit the Yukon every year.

Dawson, once a mining camp composed only of log cabins, is now a well built city, and is connected with the outside world by a telegraph line.

It is the commercial center of the Yukon Territory, and is provided with a local administration, court of justice, and all requirements of a progressive city.

OUTPUT.

The output of the Yukon has been one of the many pleasing things to the inhabitants of the Yukon. It speaks for itself and that in no uncertain terms. From \$300,000 in 1896, \$22,275,000 in 1900, and now, after nine years' continual work, the last year shows the respectable total of \$10,350,000, making in all the formidable total of \$106,175,000.

The richest discovered pockets have been largely worked out, but in the known paystreak there is still far more gold than has yet been recovered.

The worked, gophered, and unworked auriferous gravels and deposits, with the experience gained in the past, and with improved appliances now coming into use, together with good roads and cheaper labor, can be worked to a good profit.

High rates of wages and heavy freight rates necessitated the handling of only the richest dirt, and many millions have therefore been left in the ground which more modern appliances will work at a handsome profit. The days of the bucket and windlass are waning, and in future steam shovels, dredges, etc., will handle their thousands of yards a day where formerly the six pan bucket and single windlass was content with 20 to 30 yards per diem.

Attached will be found a copy of the yearly output of this country from 1896 to 1904. The camp has been, is and will be for years to come, a factor in the production of gold.

Memorandum of gold production in the Yukon Territory, from the first of January, 1896, to 31st of December, 1904.

From 1896 to 1901 these figures are taken from the report of the Treasury Department of the United States, and from 1901 to 1904 from the records in the comptroller's office, Dawson.

1896	\$	300,000
1897		2,500,000
1898		10,000,000
1899		16,000,000
1900		22,275,000
1901		18,000,000
1902		14,500,000
1903		12,250,000
1904		10,350,000
Total			
			\$106,175,000

GOLD-BEARING GRAVEL.

The country in every direction is highly mineralized and colors can be raised in almost any gravel bank in the valley of the Yukon and its tributaries. The chief deposits at present known are the Hillsides and benches on Bonanza, Hunker, Dominion, Klondike, Eldorado, Stewart, Pelly, McMillan, and their tributaries. The following is taken from the report of Mr. R. G. McConnell of the Geological Survey Department of Canada:

The white channel gravels have a total volume on Bonanza creek and its tributaries of approximately 250,000,000 cubic yards, and on Hunker creek and its tributaries of 200,000,000 cubic yards. They are everywhere more or less auriferous, and sufficient work has already been done to prove that a large proportion, at least, of the whole deposit would pay to hydraulic if water could be obtained at reasonable rates.

The present price of water delivered on the hills is \$7 per sluice-head per hour on Lovett gulch, and \$8 to \$9 further up the valley, and even at these rates some work is possible. These gravels are very favorably situated for hydraulicking, as they rest on comparatively narrow benches, cut into the sides of the valley, at elevations of from 150 to 300 feet above the present valley bottom.

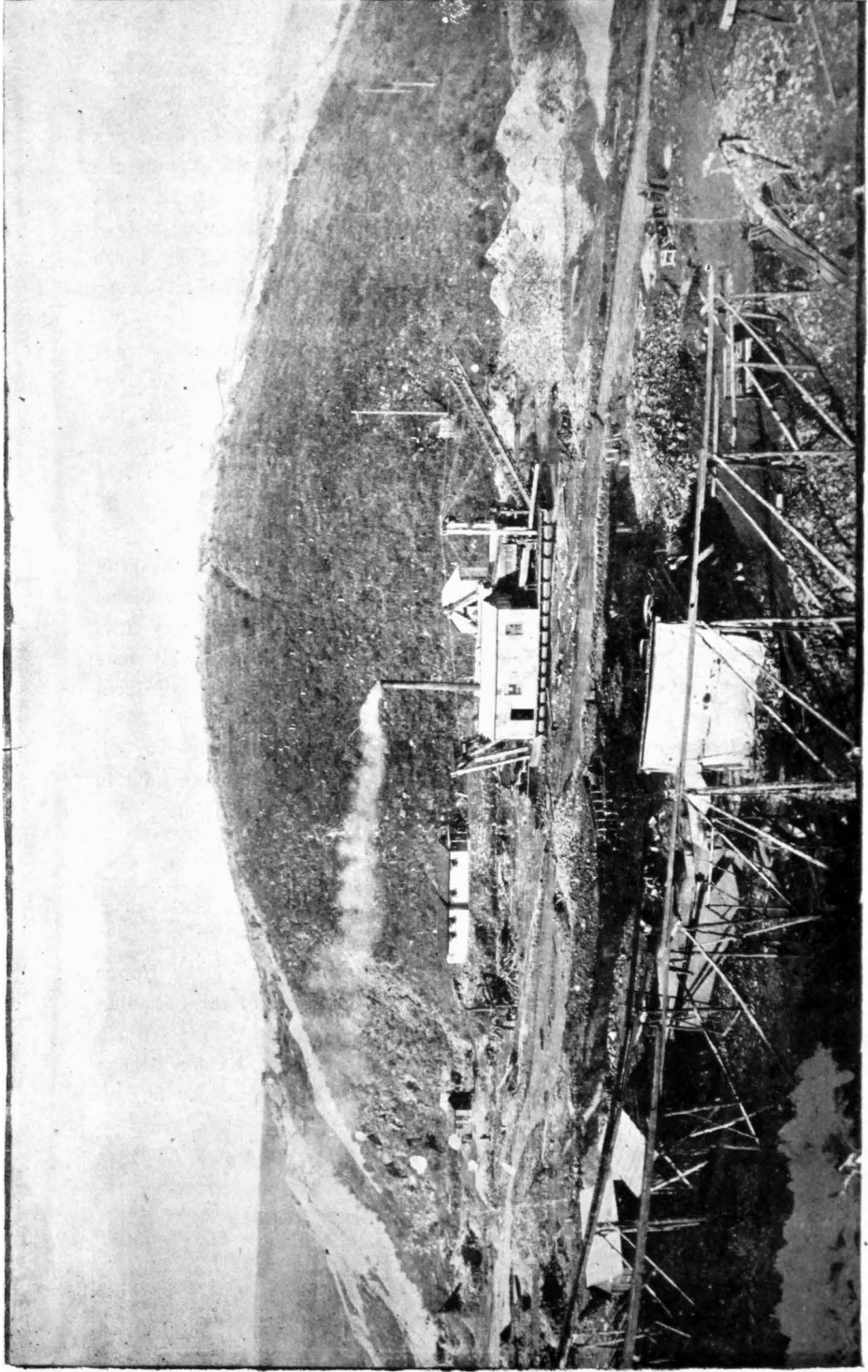
The auriferous gravels of the Territory are being profitably worked, and many companies and individual miners who are recovering gold in paying quantities in the manner shown in the following articles.

The first article is by Mr. J. Moore Elmer, manager of the Lewes River Mining and Dredging Co., and engineer in charge of the Canadian Klondike Mining Co., Limited.

The former company has been operating a three foot Risdon dredge in the Klondike District for the past six years. Its operations on Bonanza Creek have been highly successful.

The latter company is installing a seven foot Marion dredge on what is known as the "Boyle Concession" in the Klondike River valley. This dredge is expected to be in operation about September 1st of this year.

Mr. Elmer is the pioneer dredger of the district and writes with a full knowledge of his subject.



Dredge on Discovery, Bonanza Creek. Property of Lewes River Mining Company.

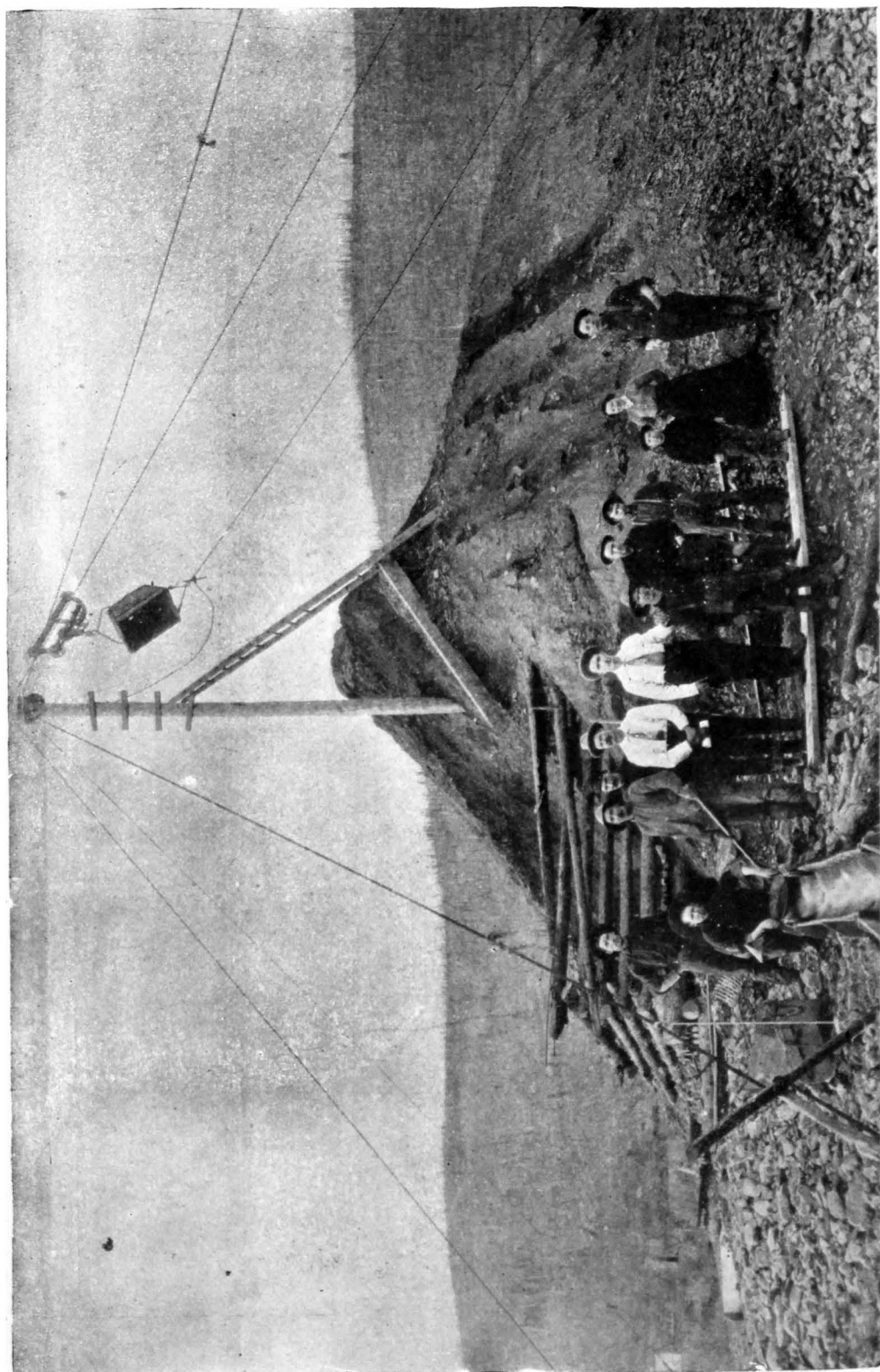


Mining in 1898, by rocker.



Mining by "Long Tom" in 1899.

All the Cuts for this book were made and supplied by H. A. Darms, Engraver Dawson.



Mining by Self-dumper on 10 above Discovery, Sulphur Creek.

GOLD DREDGING IN THE YUKON.

“Does the Yukon present a field for the profitable investment of capital in mining gold by the dredge process?” is a query frequently propounded. As a result of six years’ experience operating a three foot Risdon dredge in the Klondike District, and by careful observation during that period, of the auriferous deposits of the country and the climatic and other conditions peculiar to it, I am convinced that the vast Yukon basin from the Rocky Mountains to the Behring Sea contains immense areas in which this form of mining can be profitably carried on. Within the limits of this brief article I will endeavor to give my reasons for such belief.

The modern gold dredge is a condensed assembly of powerful machinery capable of digging the dirt, washing the gold from it and depositing the residue within a few yards of its former resting place, a process simple, yet complete, with an enormous capacity and requiring but a very small amount of human labor.

In California, where gold dredging has reached its highest state of development, extremely low grade dirt is being profitably worked, and this after paying almost fabulous prices for land which but a few years ago was considered absolutely valueless for mining purposes. True, all the conditions in California are exceptionally favorable for cheap operation. They can operate 365 days in the year, while our season is but half that length (not taking into account that during half of that time there is continuous daylight, a feature of no inconsiderable value.) Our advantage lies in the high values in the ground, and it is these high values that especially commend the field for dredging operations.

The climatic conditions are not as unfavorable as might be supposed by those unacquainted with the region. The summer climate can not be surpassed anywhere in the world for delightfulness. It is a healthful climate, and where the most ordinary sanitary precautions are observed, zymotic diseases are practically unknown. The winters are cold, but not severe, due to the dryness of the atmosphere and the absence of high winds. Blizzards are unknown. While actual dredging operations can not be carried on during the winter, that season is ideal for the cutting and yarding of wood. Men engaged in that occupation seldom find it necessary to lose a day on account of the weather. The prospecting drill can also be worked to the best advantage during the winter.

Our placer gold is found mostly in bedrock and the ground is generally frozen. This combination of circumstances may seem to the uninitiated a fatal objection. It presents a difficulty, to be sure, but not an insurmountable one, as the results I have been able to accomplish will amply testify. It adds to the cost, but the high values obtained justify the expense.

There are countless thousands of acres in the Yukon basin that are suitable for dredging and that would pay handsome returns on the investment if judiciously made. The country is capable of thorough investigation and it is the thorough and intelligent investigator that the country needs. When the true conditions become generally known, by reason of such investigation, I believe I am not too optimistic in predicting that the number of dredges in operation in the Yukon will be limited, for a number of years, only by the capacity of the manufacturers to fill orders.

It must not be inferred that all placer ground in the Yukon is suitable for dredging. On the contrary, much ground that can be profitably worked by other processes would prove a failure for dredging purposes.

In order to succeed with a dredge in the Yukon the first desideratum is careful selection of the ground as to its suitability for the purpose; then, given a dredge properly constructed to meet the conditions under which it is to be operated, and, intelligently managed, and the Yukon presents an almost limitless field for the profitable investment of capital in mining gold by the dredge process.

Dawson, Y. T., June, 1905.

J. MOORE ELMER, E. M.

TENMILE CONCESSION.

This concession is owned by the Syndicat Lyonnais du Klondike. It is situated on Tenmile Creek, a tributary of Sixtymile River, at a distance of about 62 miles from Dawson. It is five miles long and one mile wide.

Tenmile Creek was first prospected by the Fortymile miners in 1894 and 1895. According to their reports, the creek was very spotted, but they could make wages, though they could use only the most primitive methods of placer mining. The creek was abandoned when the miners followed, in 1896, the rush to the Klondike.

The Syndicat Lyonnais acquired this concession in 1901. Three crosscuts were made from rim to rim at a depth of 20 feet. This work showed that the creek contained gold, but the pay was so irreg-

ular and the quality of the gravels were such, together with the existing conditions of the creek, that it did not warrant a continuation of operations.

In 1904, under the directions of Mr. Beaudette, government mining engineer, a search was made on the hillsides on the left limit of the creek, which, he alleged, contained gold. In the month of June of the same year these gravels were found to contain gold in sufficient quantity for further investigation. A tunnel was driven 175 feet in the hillside and proved to contain pay all the way. Pans were taken from this tunnel giving very good results. Some pieces of gold as high as 30 cents were washed in a pan. The whole tunnel was sluiced up and an average of the pay taken to the cubic yard. It was then decided to install a large hydraulic plant and operate on a large scale.

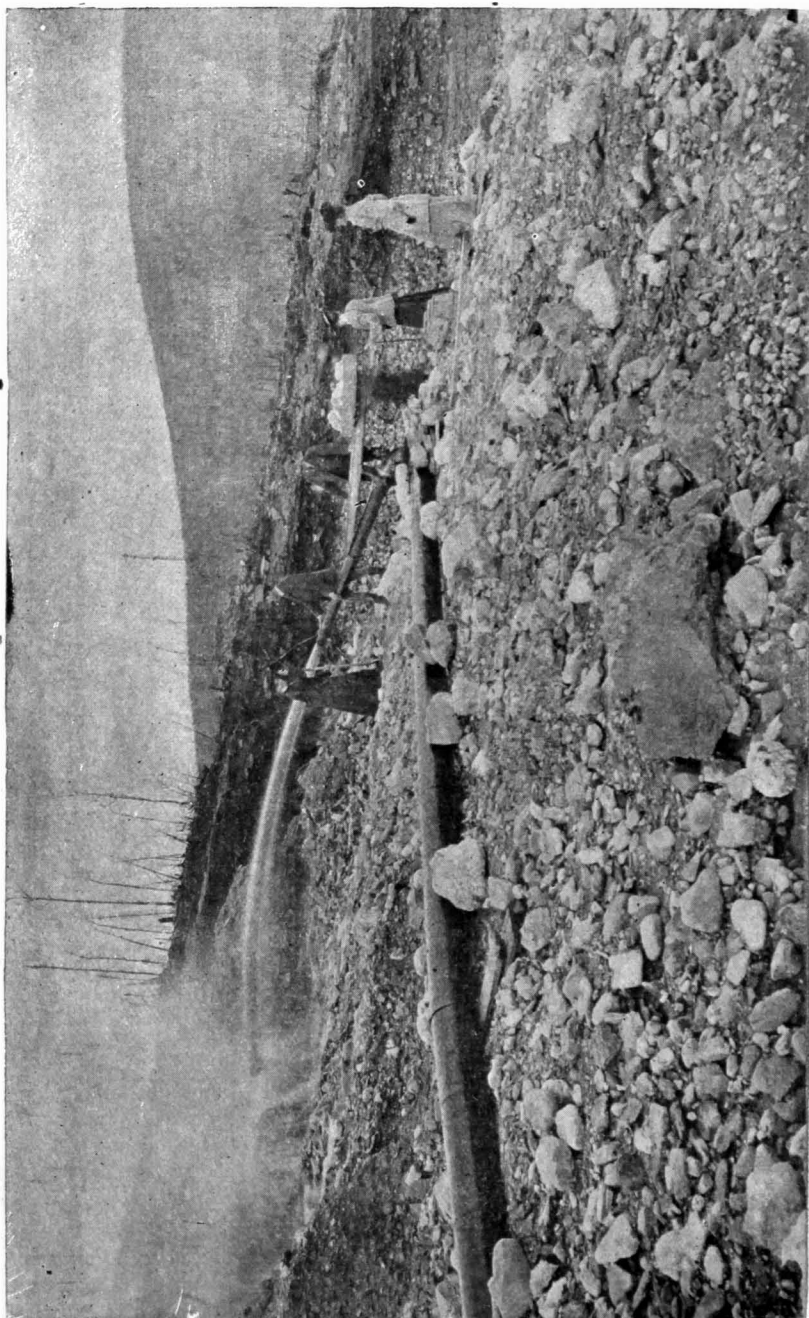
These gravels are situated at an elevation of 170 feet above the level of the creek and their thickness at the deepest place will reach 75 feet. They are composed of small quartz pebbles together with some very fine material composed of calcite and silica very easily disintegrated and devoid of large boulders. The extent of these gravels is at present unknown, but they have been observed at different places on the same side of the creek for a distance of three miles and it is proposed to make further prospecting.

In the winter of 1904-05 the company installed a saw mill at the mouth of the creek to saw all the lumber necessary for the construction of the conducts of water. Two hundred and sixty thousand feet of lumber were sawed and delivered on the hillsides along the creek for the construction of the flume. This flume will be four and one-half miles long with a capacity of 750 miner's inches. The water will be delivered 180 feet above the point where the operations will take place, thus affording a good pressure. From this point the water is conducted to the mine by a pipe 18 inches in diameter to which are connected four monitors of two and one-half and three inch nozzle.

The area of dumping ground is practically unlimited, as there is the whole creek to dump in and the distance from the end of the sluice boxes to the bottom of the creek is 90 feet along a steep hillside.

The sluices are provided with block riffles and are 500 feet long with a grade of eight per cent.

As the company has just completed the installation of this plant and is about to start hydraulicking, no cleanup has been made as yet, and no data can be given as to the quality of the gravel to the cubic yard and as to the cost of operation and the duty of a miner's inch.



Hydraulic Operations on Bonanza Creek, Property of J. B. Tyrrell, M. E.

THE WHITE CHANNEL GOLD HILL HYDRAULICS, LTD.

Twelve and one-half miles distant, accessible by stage in two hours from Dawson, the property of the White Channel Gold Hill Hydraulics, Limited, is situated on Gold Hill, at the confluence of Eldorado and Bonanza Creeks.

The ground lying, as the company's name suggests, in the famous "white channel," has been partly worked by the placer methods hitherto in vogue in the Klondike, of "wood fire" and steam "thawing" and underground tunneling, sometimes at a depth of more than 100 feet. On the 23rd of April of this year, however, the preparatory work of installation of a gravity system having been completed last autumn, actual hydraulic operations were commenced.

At a point some five miles distant, the waters of Bonanza Creek are diverted and conveyed through 4.78 miles of ditch and 1.04 of flume, each capable of carrying 1,000 inches, along the right limit of Bonanza Creek, crossing the numerous tributaries en route and being augmented by their quota of water, until at a point just below the town of Grand Forks they are conveyed to the opposite side of the creek and onto Gold Hill by means of an inverted siphon. Here they are directed through six No. 2 monitors onto a face some 1,000 feet in extent. These monitors are arranged in pairs which each feed a lateral to the main sluiceway. By working these pairs alternately, two-thirds of the face is always exposed to the thawing influence of the sun's rays, while one-third, which has already been thawed, may be most easily moved by the action of the water.

Adopting this system, with the monitors under 146 feet direct pressure from the siphon, as nearly as can be estimated, the duty is four cubic yards to the miner's inch.

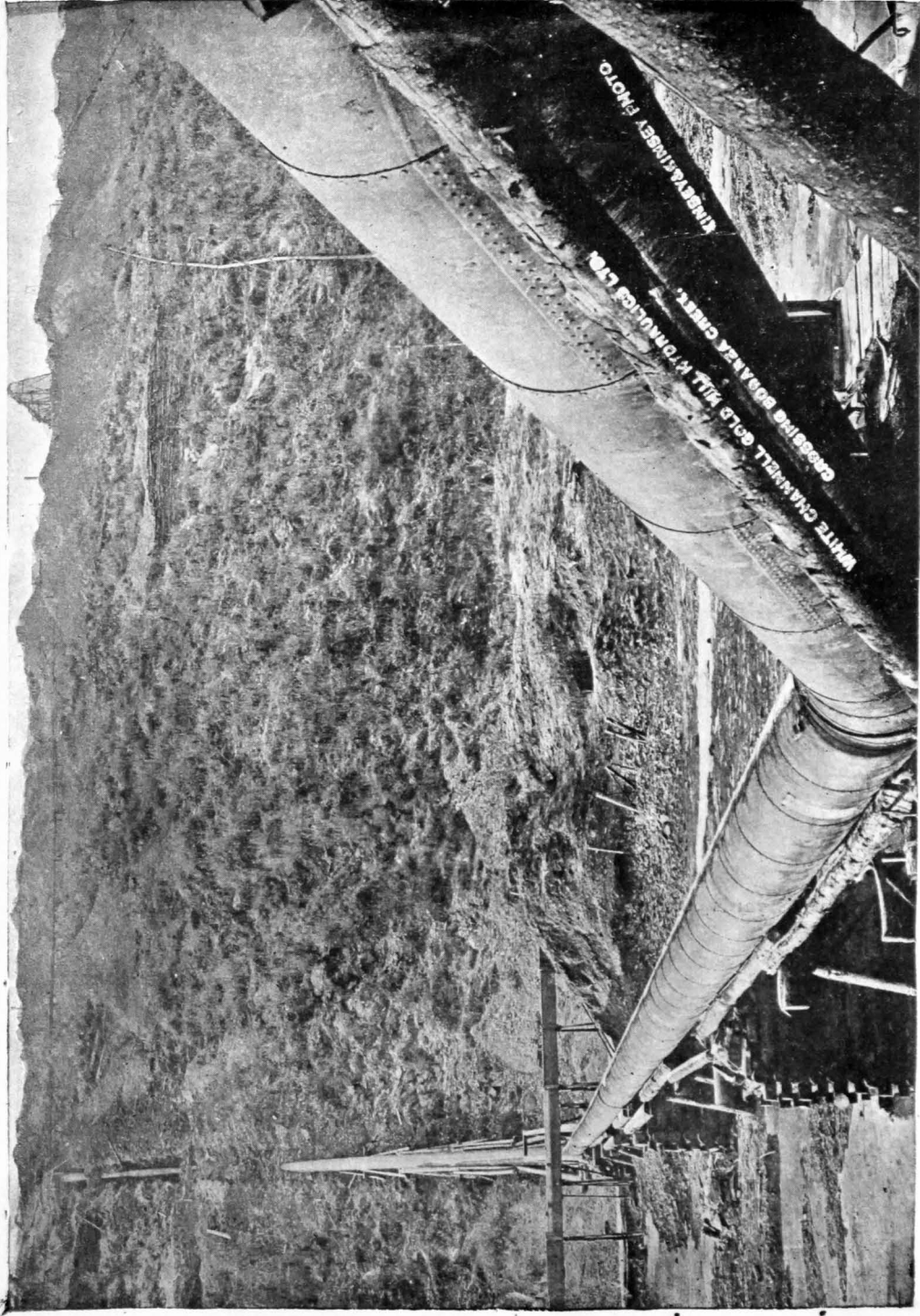
BONANZA CREEK GOLD MINING COMPANY, LTD.

Canadian corporation with its main office at 29 Broadway, New York, and mine office at Adam's Hill, Y. T.

PROPERTY—Hydraulic Mining locations, No. 2, 8 and 9 on Bonanza Creek, between Adam's and Boulder Creek.

PLANT—Flume and ditch four miles in length from Stampede Gulch to head of Adam's Creek, and over the entire property, connecting with one large reservoir, built so far on Adam's Hill.

From the reservoir an eleven-inch pipe line takes water to No. 1 works with two No. 1 monitors, and a 12-inch pipe to No. 2 works with two No. 2 monitors.



Inverted Siphon to Gold Hill. Property of White Channel and Gold Hill Hydraulics, Limited.

No. 1 works is fitted with 1,000 feet of sluice to debris bank. Size of sluice, 24x30 inches with block riffles.

No. 2 works is fitted with a sluice 32x30 inches, also wooden block riffles.

No. 3 works is independent of the others as to water supply and debris bank, and has only a single No. 1 monitor and a short sluice, 16x24 inches, with wooden riffles.

We find the wide sluice the best and will replace the wooden riffles with rock during this season.

Other reservoirs will be built for storage on the various hills on the property this summer.

A large impounding dam will be commenced on the arrival from Massachusetts of Mr. Moore, who will take charge. This dam should store sufficient water from freshets to carry the supply over the dry season.

Other operating plants' will be constructed this season ready to operate next spring.

We are highly pleased with the results of the operations so far and can only encourage hydraulicing in the Yukon Territory.

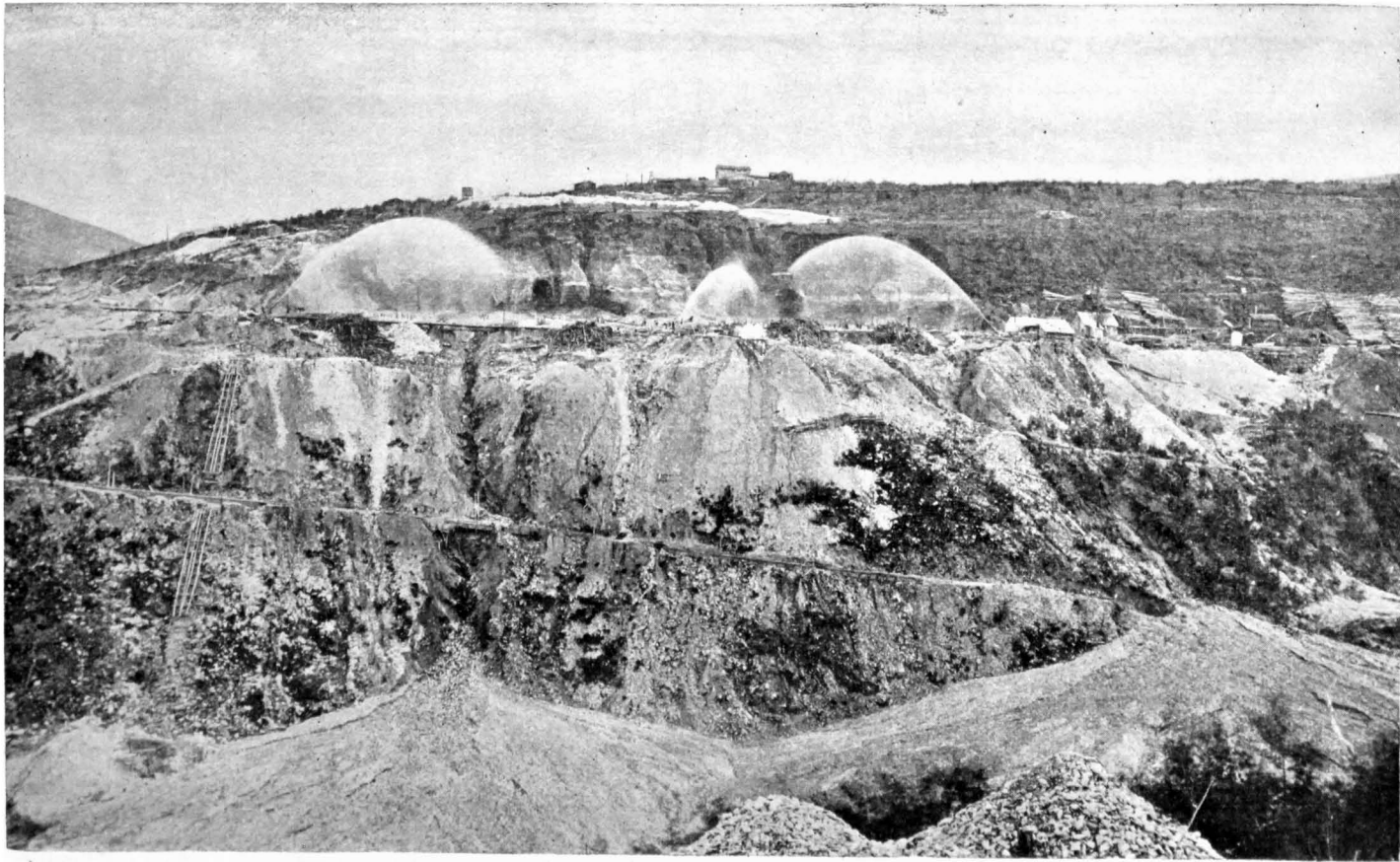
THE PACIFIC COAST MINING COMPANY.

The Pacific Coast Mining Company's plant and property are located at 6 and 7 below Bonanza Creek. Their pumping plant consists of the following machinery:

Boilers—two batteries of two each, water-tubed, tested at 225 lbs running pressure; total, 528 horse-power. Stack, 54 inches by 125 feet. (Cahall, built by Aukman, Taylor & Co., Mansfield, Ohio.)

Engines—One cross-compound high duty, fly wheel, corless valve, 22x44 cylinders (36) stroke (13) plungers, pumping engine. Direct connected jet condensing boiler feed attachment. Capacity, 3,000 U. S. gallons per minute at 37 revolutions to a head of 300 to 400 feet. Built by Snow Steam Pump Works, Buffalo, N. Y.

Smaller machinery—One compound duplex double-acting independent jet condensing pumping engine. Capacity 1,500 gallons per minute. One Barnes drill press, one pipe cutting machine, 8 inches and down; one shaper, one emery stone, one Lodge & Shipley lathe (36 in. sweep and 10 ft. centers); taper attachments; one 20 horse-power upright shop engine; one direct connected General Electric plant (150 lights), Etc.



Hydraulic Operations on Cheechaco Hill, Boñanza Creek. Property of the Pacific Coast Mining Company.

Points of interest about the plant—The large engine weighs 228,000 pounds, three of the pieces weighing over 24,000 pounds each. It required 50 tons of cement for the foundation. There are 384 four-inch valves giving it a large area. Made special by the Snow Steam Pump Works for this country and particular attention was paid to the fact that the water to be pumped carried a large percentage of sediment. It cost over \$120,000 for the plant, and installation.

The pumps were started in September, 1903, and have given complete satisfaction in every way.

Cost of pumping water, etc.—Labor, (one month) \$2,200; fuel, \$2,600; supplies, etc., \$600. Figuring 25 running days to the month makes an average of \$216 per day. Number of gallons pumped, 3,000, (miners inches, 270). Cost per day for one sluice head of water (60 in.) \$48.

Cost of hydraulicing, etc.—The efficiency of one miner's inch of water from the middle of June to first of September, is eight cubic yards. This high duty per miner's inch is due to the fact that the gravel rests on an even bedrock high above the present creek level, thus giving plenty of grade for hydraulicing purposes, and that the shape of the gravel being such that it washes readily.

Then the ground is well thawed at this time of the year, which makes a big difference in the daily output.

Cubic yards washed per day, 2,160; cost of pumping, per day, \$216; cost of hydraulicing, general expense, etc., \$200; cost of handling one cubic yard, about 20 cents.

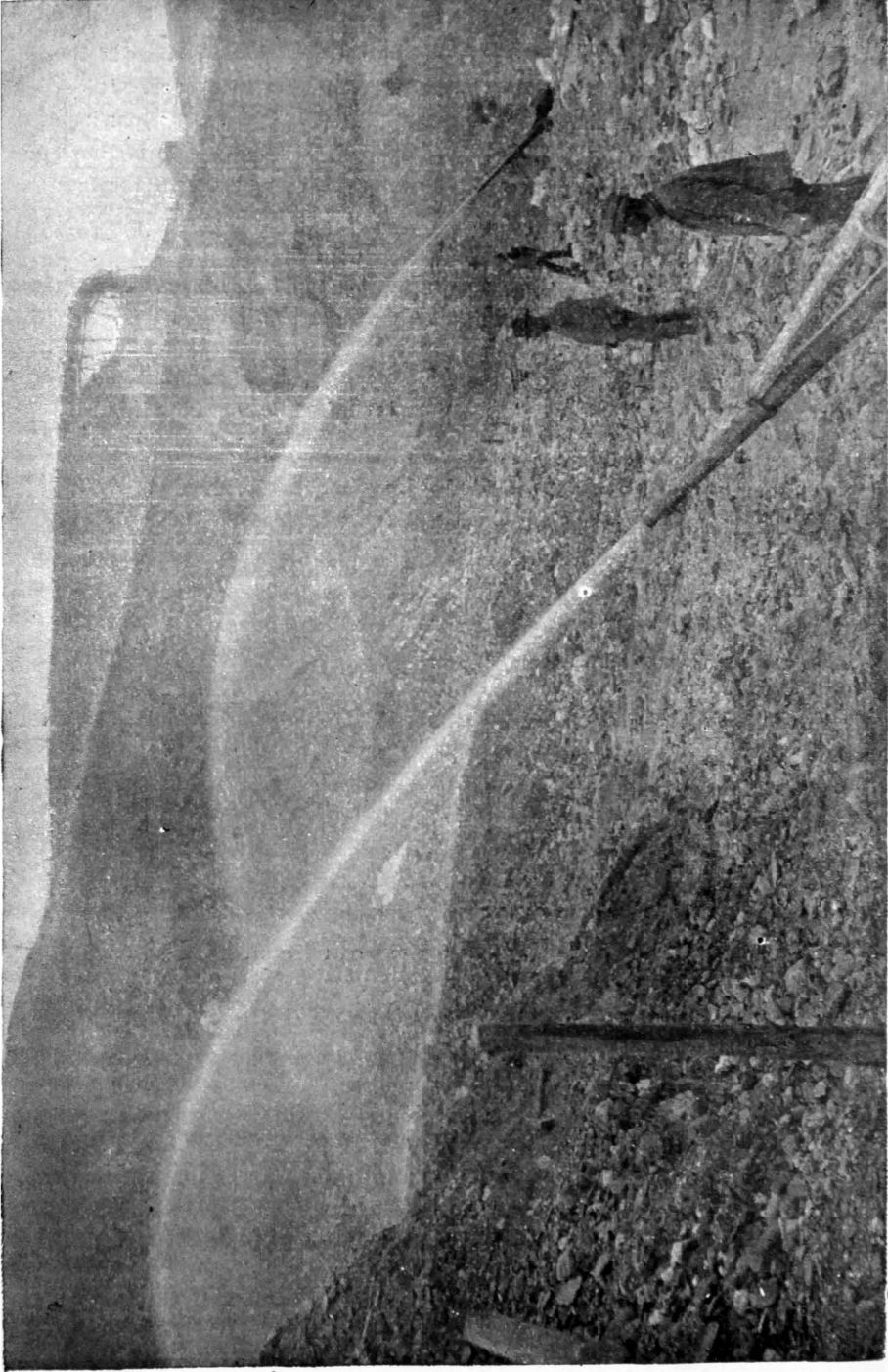
The company have over 1,500,000 cubic yards of gravel which will pay to work by hydraulicing. We are working our deep gravel claims by tunnels, shafts and drifts.

The company are operating on the different faces on Cheechaco Hill with gravity water this spring and expect to start the pumps the latter part of June and run continuously until it freezes.

PACIFIC COAST MINING COMPANY,

E. E. ANDREWS,

Manager.



Hydraulic Operations, Bonanza Creek Gold Mining Company.

HYDRAULIC OPERATIONS

Are still in their infancy in the Yukon. Every one in the Territory has been too busy picking up "easy money" to devote much time to the more elaborate but better paying system known as hydraulic mining.

The camp is now in a state of transition, and in the future the hydraulic system will be the one that will produce the most money.

All the miners, however, have not been blind to the possibilities within their reach, and the following list will give one an idea of the number of those who have already engaged in hydraulic mining :

Anglo-Klondike Co.....	Fox Gulch.
White Channel Gold Hill Hydraulics..	Gold Hill.
Fuller-Norwood Mining Co.....	Bonanza.
Brenner Co.....	Eldorado.
N. A. T. & T. Co.....	Miller Creek.
Syndicate Lyonnais	Tenmile creek.
Breeze Mining Co.....	Bullion Creek, Alsek
Pacific Coast Mining Co.....	Bonanza Creek.
Dago Hill, pumping plant.....	Hunker.
Dolan et al	Last Chance.
Treasure Hill, pumping plant.....	Last Chance.
Elwell, Murray & Roselle.....	Temperance Hill, Hunker.
August Larson.....	Temperance Hill, Hunker.
Delhi Group	Hunker.
Redmond Bros.....	Paradise Hill, Hunker.
Bonanza Creek Gold Mining Co.....	Bonanza creek.

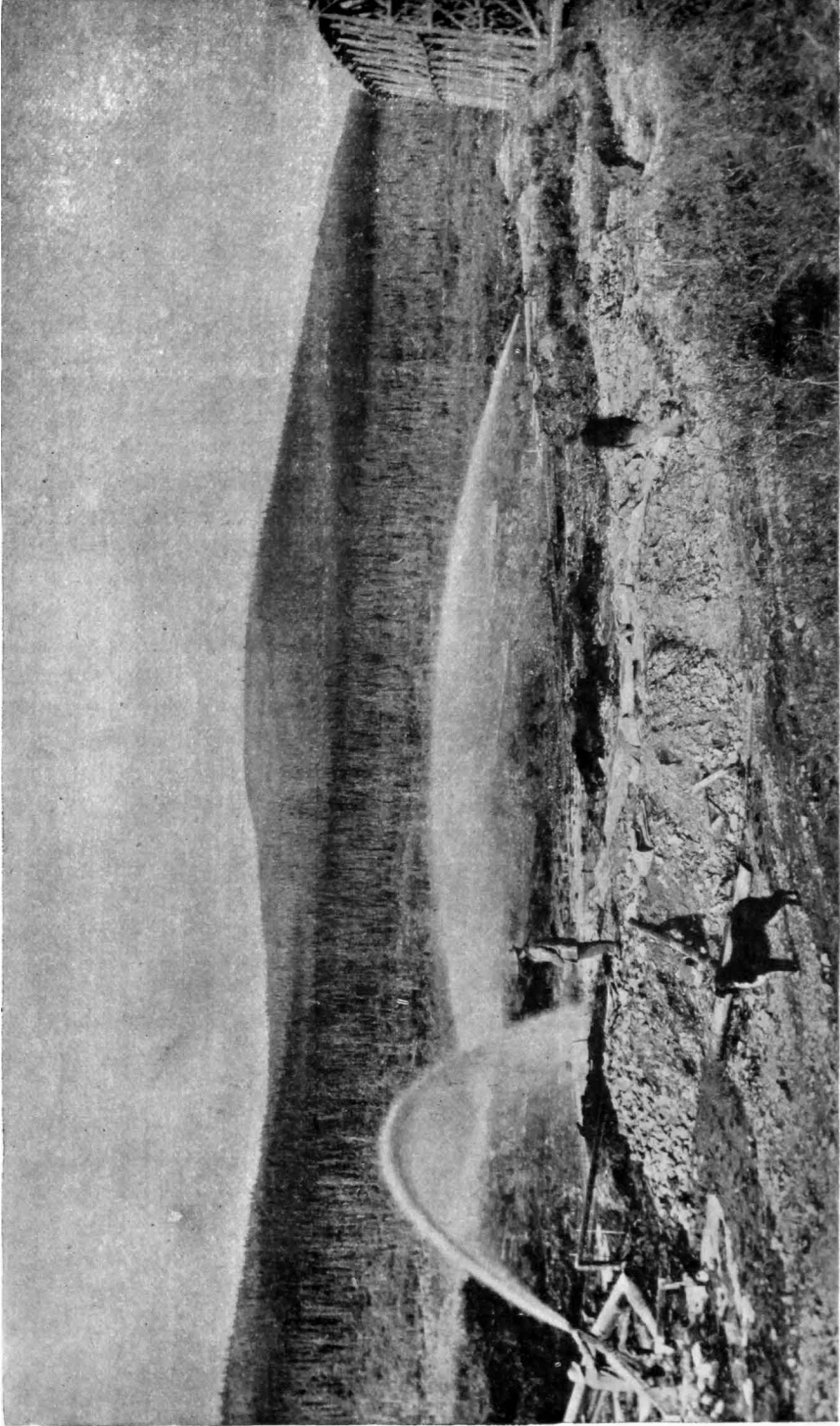
In addition to those above mentioned, there are many others working on a small scale throughout the country, using gravity water instead of the old system of pumping, and making a success.

DREDGES AND STEAM SHOVELS.

There is any quantity of ground still virgin or partially worked out that would pay handsomely if worked by this method.

The following is the list of the dredging companies at work in the Yukon :

Ogilvie Dredge Co.....	Klondike River.
Lewes River Dredging Co.....	Dredge on Discovery, Bonanza.
Canadian Klondike Mining Co...	2 steam shovels, Bear Creek.
A. D. Fields.....	No. 60 below, Bonanza Creek.
Frank Phiscator.....	2 shovels, No. 2 Eldorado Creek.



Hydraulic Operations, North American Trading & Transportation Company, Miller Creek.

DREDGES CONTEMPLATED DURING 1905.

In addition to those now at work, several dredges are being sent in to the country and will be set up during the summer of 1905. Capital has in some instances been convinced of the possibility of working ground by this method and these dredges are the advance guard of an army which will attack the gravels of the Yukon.

Canadian Klondike Mining Co., cost \$200,000, capacity 2,500 yards daily, to replace steam shovels at the mouth of Bear Creek.

Williams dredge, cost \$100,000, on Klondike River, below Ogilvie Bridge.

The Canadian Dredging and Mining Co., cost \$75,000, on 89 below, Bonanza Creek.

QUARTZ LOCATIONS, ETC.

The pursuit of gold bearing quartz has been undertaken as cheerfully in the Yukon as in any country under the sun, and this in the face of difficulties that are worse than generally fall to the lot of the prospector. According to figures from the gold commissioner's office, there are at the present time 700 gold quartz claims in good standing. This means that 700 claims, each covering 50 acres of land, are being represented and developed every year; that 1,400 miners at least are putting in \$100 worth of actual work each every year on prospects that they have faith in. Out of this total of 700, 54 claims have had crown grants issued in their favor. The issuing of a crown grant entails years of labor and an expenditure of \$500 on each claim in actual development work.

In some cases, mining on a much larger scale than is necessary for the obtaining of a crown grant (or patent) has been prosecuted, as much as \$30,000 having been spent on some groups of locations by the present owners, and the fact that these owners, for the most part men of large practical experience, are still spending their time and money in endeavoring to determine the extent and richness of the gold bearing quartz beds which they have discovered, and to open up their mining properties, in a country where the mills of Nature herself have already separated so much gold from the rock which contained it, is worthy of the most serious consideration.

That gold bearing quartz veins occur abundantly in the Klondike District is beyond dispute, and it is hardly conceivable that some of these veins should not be found rich enough to pay handsome profits.



Sluice on Property of J. B. Tyrrell, M. E., Bonanza Creek.

MILES OF DITCH AND FLUME.

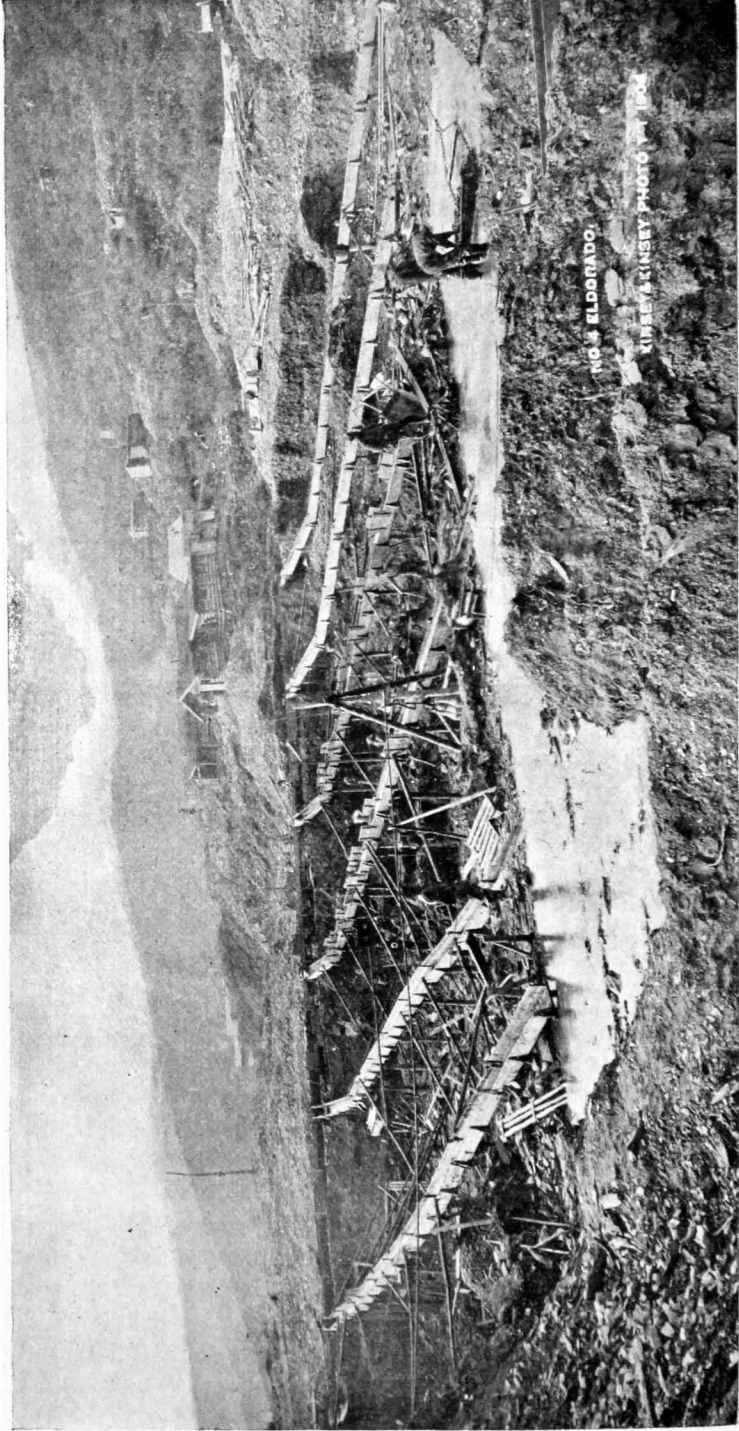
To convey the water for the economical working of ground, it has been necessary to construct many miles of ditches and flume throughout the country, and by extending the present system it is hoped and expected that large areas of gold bearing gravel as yet untouched will be worked in the near future.

In addition to the small flumes carrying water to individual mining claims, the following permanent ditches, flumes and inverted siphons have been constructed :

	No. of miles.
Fuller-Norwood Mining Co., Bonanza Creek.....	7 ...2 inverted siphons
White Channel Gold Hill Hyds., Bonanza Creek...	6 ...1 inverted siphon
Otto Brener, Eldorado Creek.....	7½...1 inverted siphon
Redmond Bros., Hunker Creek.....	7
Elliott & Jensen, Hunker Creek.....	3
Larson, Temperance Hill, Hunker Creek.....	3
Delhi Group, Hunker Creek.....	4
Anderson Concession, Hunker Creek.....	1½
Ensel & Gandolfo, Hunker Creek.....	3
Geo. Burke, Hunker Creek.....	2
Envoldson & Co., Hunker Creek.....	2½
Younkins et al, Last Chance Creek.....	4
N. A. T. & T. Co., Miller Creek.....	17½
Acklen, Moosehide Creek.....	9
McLennan & Day, Lower Dominion Creek.....	2½
Morrison et al, Lower Dominion Creek.....	3½
Croteau & McConnell, Indian River.....	3½
Cook, Mizner, Day & Elliott, Boulder Hill.....	3½
Anglo-Klondike Mining Co., Boulder Creek.....	4
Ole Tystad, Quartz and Calder Creeks.....	2½
Rosenburg et al, Quartz and Calder Creeks.....	4
McGillivray, McDonald et al, Quartz Creek.....	6
Fassbender, Adams Creek.....	4
Pacific Coast Mining Co., Adams Creek.....	4 ...1 inverted siphon
Syndicate Lyonnais du Klondike, Tenmile Creek	5
Parks et al, Quigley Creek.....	4
Knox & Hamilton, Queen Gulch.....	5 ...1 inverted siphon
Bogden et al, Pure Gold Creek.....	3

112½ miles.

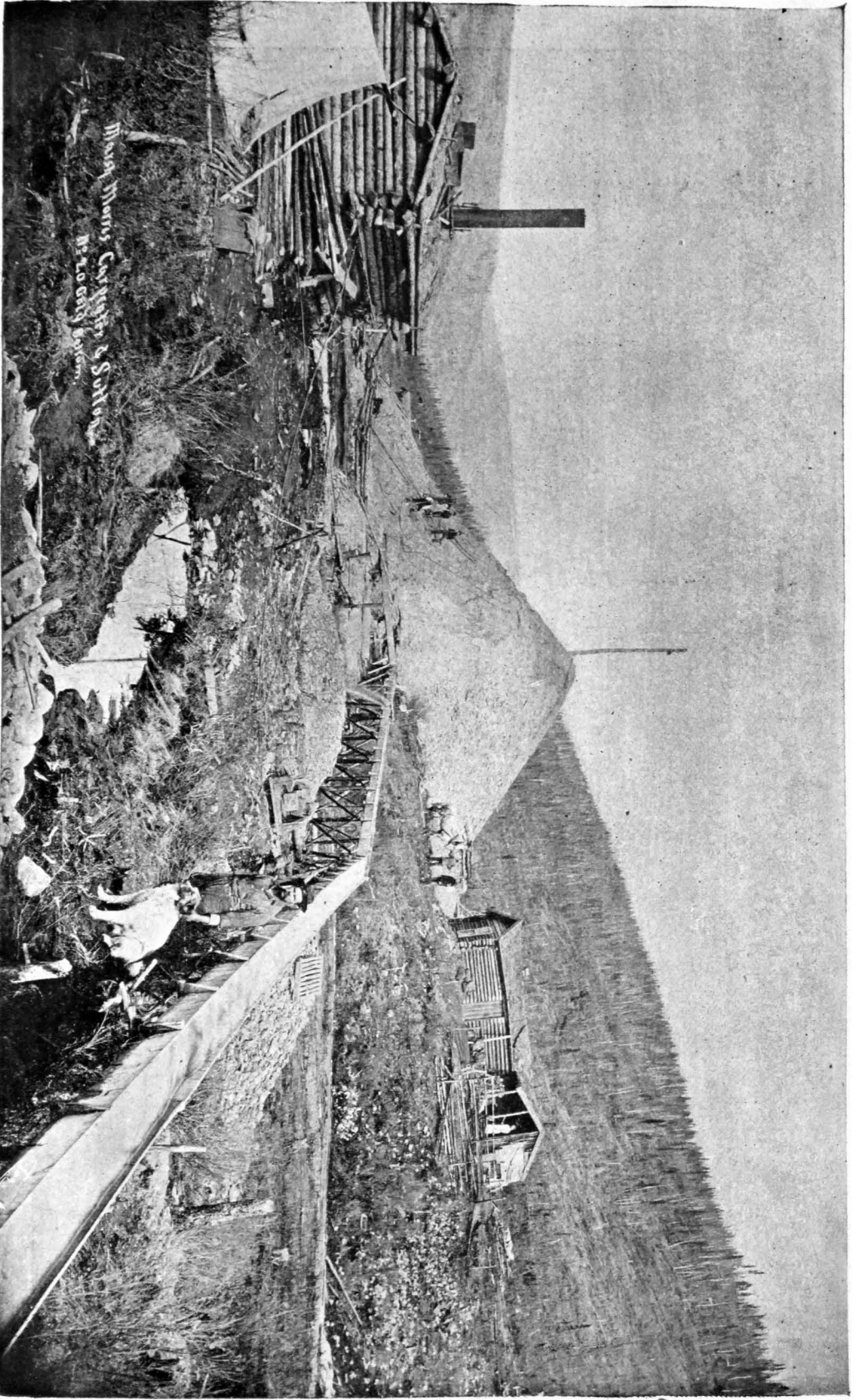
In addition to those mentioned above there are numbers of others not large enough to deserve individual mention, but which entail a considerable outlay of money, and the fact that they are still building and extending the system year by year goes to prove the faith that the miners of the Yukon have in the future of the country. The total, viz.



NO. 4 EL DORADO.

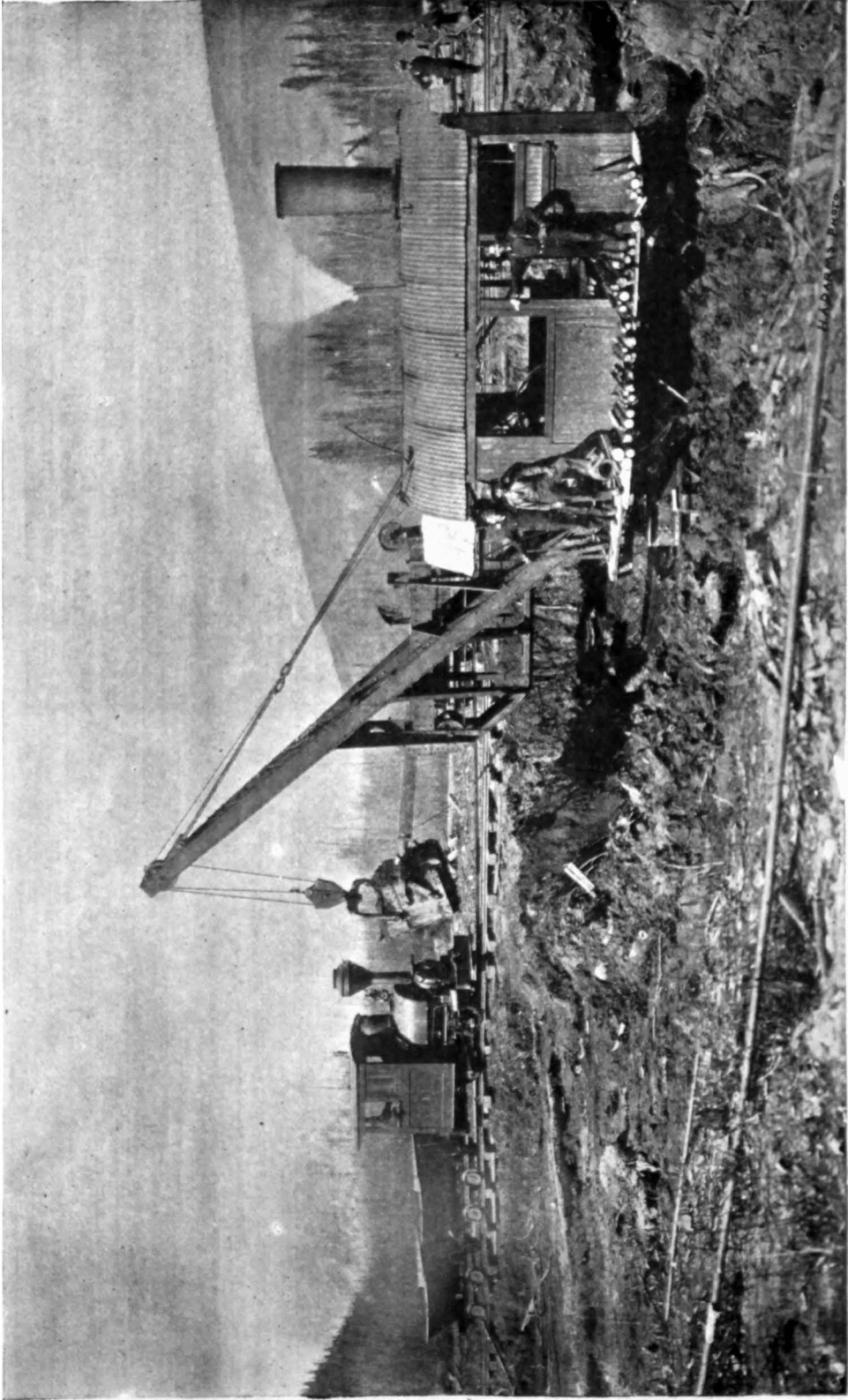
KINSEY & KINSEY PHOTO VAN DYKE

Open Cut on No. 4, Eldorado.



Marsh Morris, Carpenter & Scaffolds
No. 10 Gold Bottom

Mining by Self-dumper on Gold Bottom Creek.



LABORER PHOTO

Steam Shovels operating at the Mouth of Bear Creek, on the Properties of the Canadian Klondike Mining Company, Limited, during season of 1904.

112½ miles, does not nearly cover the ground, and a better idea would be given if the number of miles was placed at a much larger figure.

By an extension of this system and the erection of impounding dams many of which are now being completed, to control the supply of water now running to waste in the spring, the output of the country should considerably increase.

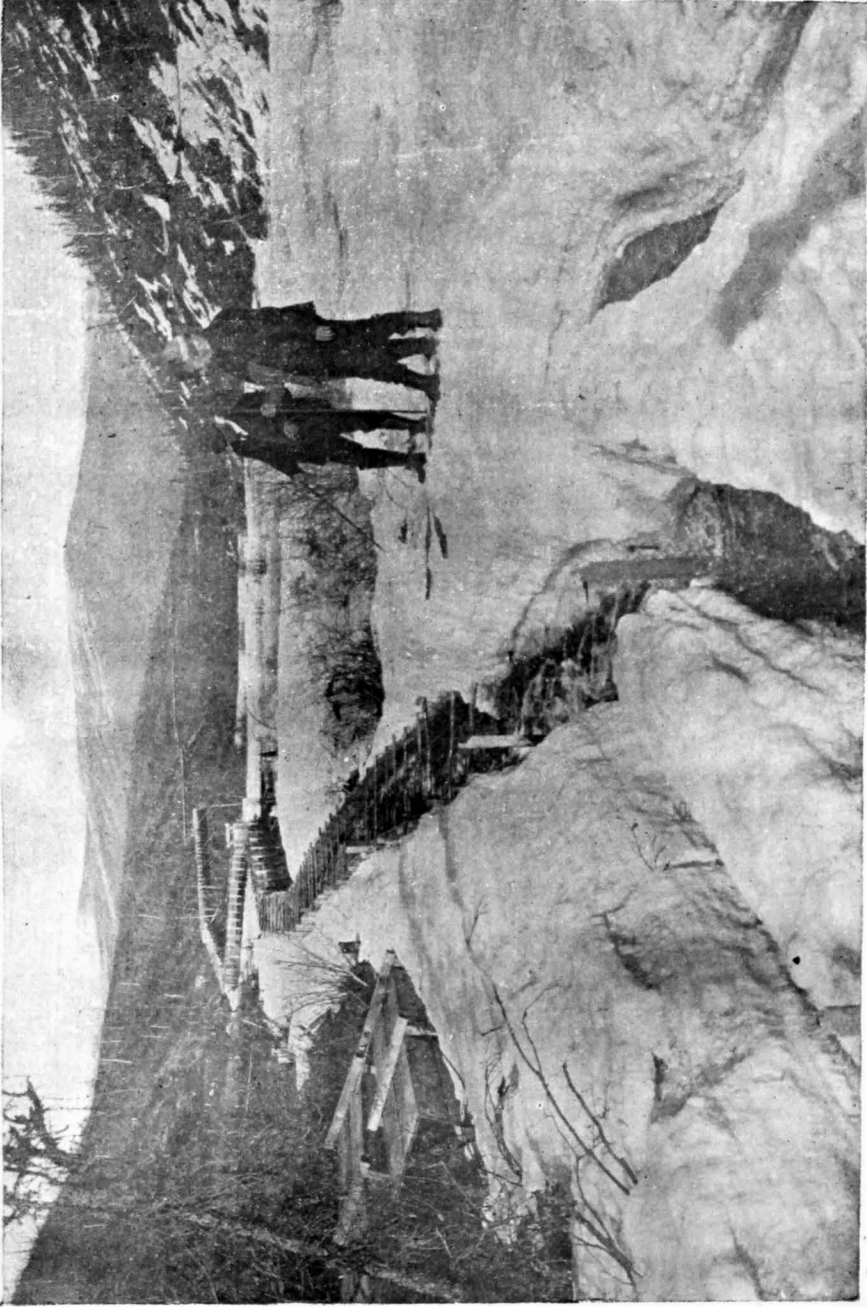
VALUES OF GOLD DUST.

The following is an account of the value of gold dust from some of the most important creeks in the Yukon:

	per oz.
Bonanza creek, from Discovery to 7 below, from . . .	\$15.93 to \$16.16
Bonanza creek, from 7 to 47 below.	16.14 to 16.45
Bonanza creek, from 57 to 105 below, from	16.00 to 16.45
Bonanza creek, from Discovery to 7 above	15.79 to 16.80
Bonanza creek, from 8 to 43 above from	17.01 to 17.09
Eldorado creek, from mouth to 36 from	14.97 to 16.10
Hunker creek, from Discovery to 32 above, from . . .	16.95 to 17.28
Hunker creek, from Discovery to 28 below, from . . .	17.39 to 17.65
Hunker creek, from 50 to 75 below, from	16.20 to 17.17
Last Chance creek, from mouth to 15 above, from . . .	14.32 to 16.66
Dominion creek, from Upper Discovery and above. . . .	16.62 to 17.10
Dominion creek, from Upper Disc. to lower Disc.	16.75 to 16.95
Dominion creek, 243 below to 256 from	17.32 to 17.92
Gold Run creek, from mouth to 12, from	17.64 to 17.70
Gold Run creek, from 46 to 70, from	17.84 to 18.00
Steep and Ledge creeks, from	16.56 to 19.55

The number of claims worked in each district and average number of men employed during the years 1899 to 1903:

	Bonanza		Hunker		Dominion		Gold Run		Sulphur		Eureka		Total	
	Claims	Men	Claims	Men	Claims	Men	Claims	Men	Claims	Men	Claims	Men	Claims	Men
1899—							35	450	59	463	11	30	105	943
1900—	204	1445			128	906	57	500	60	308	23	80	472	3139
1901—	219	1690	219	927	145	730	30	370	47	227	17	70	677	4014
1902—	388	2444	308	1316	257	1143	60	400	60	262	28	100	1101	5665
1903—	447	2216	279	1126	202	945	46	327	84	355	15	50	1023	5019



Glazier at Mouth of Flume, Property of Bonanza Creek Gold Mining Company.

ROADS.

The history of road building by the Government in the Yukon Territory dates from the summer of 1899. Prior to that time all freight was transported to the mining creeks by pack animals during the summer, and sledded either with dogs or horses over the ice and snow in winter.

The following tabulated statement shows the number of miles of sled and wagon roads constructed since, and including that year, built and maintained at the cost of \$1,198,875.00:

	1899	1900	1901	1902	1903	1904	Total
Wagon Roads...	45.00	32.00	63.36	85.81	26.00	90.00	—278.17
Sled Roads.....	160.00	10.00	80.25	372.00	4.00	63.00	—689.25

The cost of construction for wagon roads runs from \$1,500.00 to \$3,500.00 per mile, and sled or winter trails from \$250.00 to \$350.00 per mile.

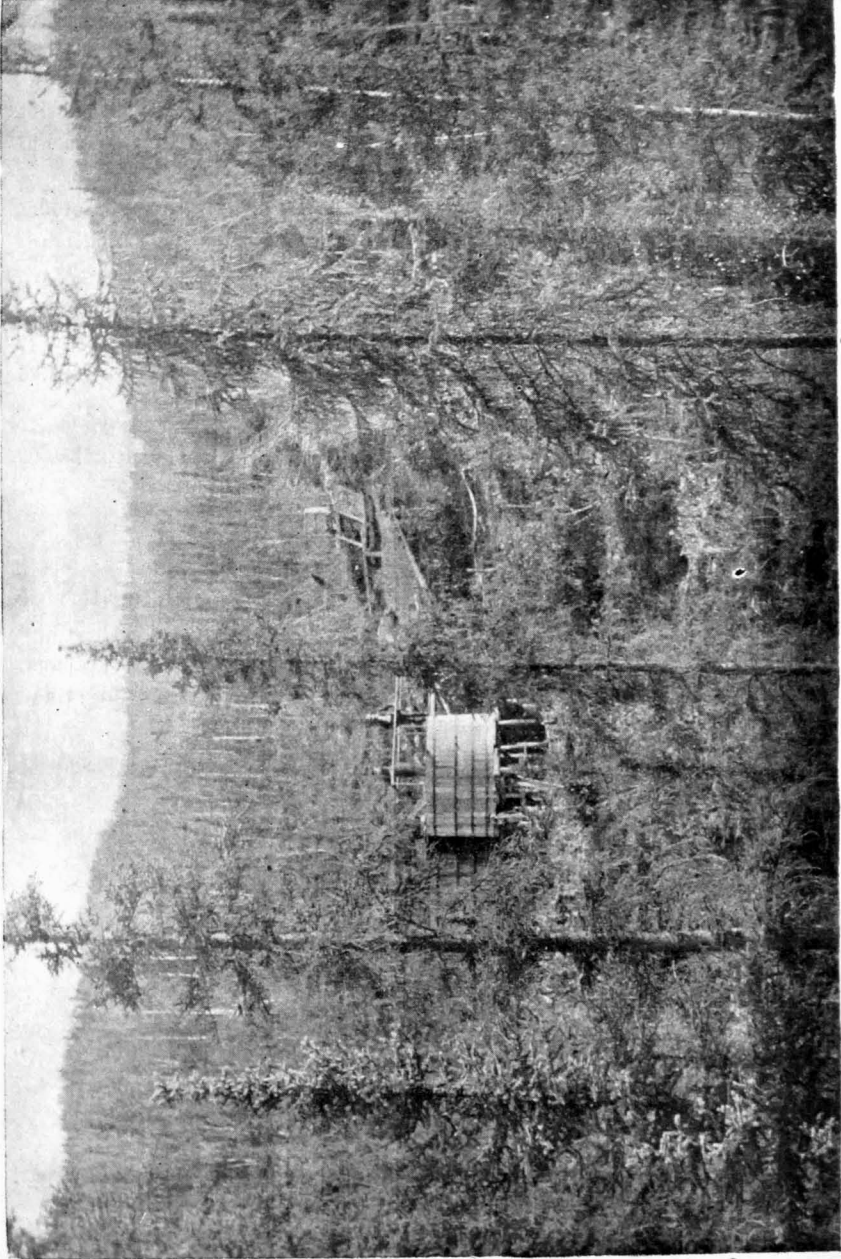
POPULATION.

As in all mining camps, the population in the Yukon Territory is fluctuating, and has been affected by conditions arising through stampedes in other districts, as to Nome, Kuyokuk, Fortymile, Tanana, etc. In 1898 and 1899, when the gold rush was at its height, there were from 40,000 to 50,000 people in the Canadian Yukon.

According to the last census reports, compiled in 1901, the figures were 20,431, made up as follows:—

Dawson	7,700
Creeks in immediate vicinity	5,476
Steamers "in transit,"	2,451
Lower Yukon "Canadian"	329
Middle Yukon Klondike to Pelly,"	428
Yukon River Posts, etc., Big Salmon	364
Whitehorse and Cariboo	1,133
Absentee names, temporarily out of territory	1,500
Esquimaux and Indians	900
Livingstone Creek	150
Total	20,431

Despite the fact that the camp is now in its tenth year as a producer, the population has not materially decreased. It has become



First Cyanide Plant in Yukon on the Wells Group, Lepine Creek.

DUTIES OF A MINER'S INCH.

In the report of the Anglo Klondike Mining Company for 1904, whose claims are situated on Bonanza Creek, the account of hydraulic work done, shows a duty per miner's inch per day for various runs, using 200 inches of water under 150 feet pressure of 6.29, 4.68, 5.98, 8.73, and 6.66 cubic yards.

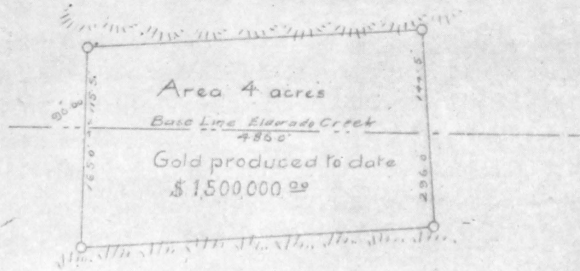
THE WHITE PASS & YUKON ROUTE.

The first construction work on the rail division of the White Pass and Yukon Route was started in the spring of 1898. It was the intention to build only as far as Bennett, but when the road was completed to this point, it was found that it would be advisable to build the line to a point below Whitehorse rapids and contracts were at once let for the construction from Bennett to the new town of Whitehorse.

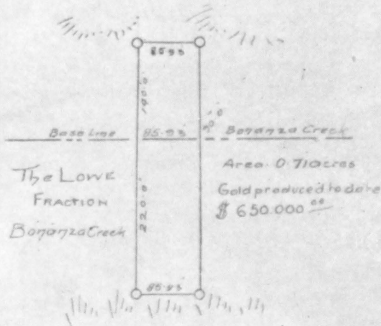
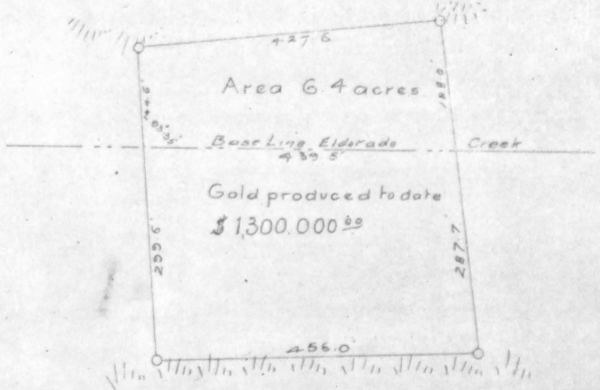
The extension was first completed from Caribou to Whitehorse, cars being transferred by ferry from Bennett to Caribou. The whole line was completed and open for traffic in June, 1900. In 1901 the fleet of the Canadian Development Company was acquired which gave the White Pass & Yukon Route a through line from Skagway to Dawson. As the road was built north from Skagway freight was taken from the end of the completed line and from there packed to Bennett. The completion of the road to the Summit, 20 miles from Skagway, practically put an end to the high priced packers as a stage line was inaugurated from there to Bennett which carried goods at greatly reduced rates.

With the purchase of the Canadian Development Company's fleet the White Pass took over certain mail contracts which they had, and which have since been renewed, and the stage line which they operate during the closed season of navigation between Whitehorse and Dawson is fully up to the requirements of the country. While the trail is in condition they maintain a tri-weekly service in both directions, the time between Whitehorse and Dawson averaging about five days and during the open season of navigation the boats arrive from Whitehorse daily, thus giving direct and quick service to and from the outside.

Creek Claim N^o 16 Eldorado



Creek Claim N^o 17 Eldorado



Sketch of Three of the Richest Claims Struck in the Klondike.

THE KLONDIKE MINES RAILWAY.

This enterprise might be called the second venture in this northern country.

The principals of this enterprise are English capitalists and although the original intention this season was only to build to Grand Forks, it is being seriously considered to push ahead to the Dome.

The hope of the people and the wish of the Government is to see the railway reach the Stewart river next season, thereby making the Stewart river country accessible all the year around. It may be remarked that enough good paying ground has already shown up to guarantee the building of the road this distance.

The railway means a great deal to the future development of the Yukon Territory and as a paying enterprise, a gilt-edged proposition, once it is carried to the Stewart river. This is the opinion of bankers and all classes of business men.

A representative of the London capitalists, Mr. H. B. Smith, is now here making himself acquainted with the facts in regard to the future work of the London capitalists.

The half tone illustrations in this pamphlet were prepared in Dawson.