

The Canadian Miner.

VOL. I.

TORONTO FEBRUARY 20, 1897.

No. 6.

THE NEW CARIBOO.

HYDRAULIC MINING CARRIED OUT ON IMMENSE SCALE.

THE output of Cariboo from the simple methods of placer mining during the British Columbia gold fever in the early sixties was in the tens of millions of dollars, but the miners found further work from panning slow and comparatively unprofitable. The fever ceased, and the miners betook themselves to fields more inviting. The New Cariboo in which great hydraulic engines dash immense spouts of water against the banks of golden clay and gravel, is described in an article by a writer in the *San Francisco Chronicle*, from which we make extracts. The writer, after telling the history of the old-time mining, says:

As the common saying prevailed in the Roman era that all roads lead to Rome, so the various valleys which the pioneers of Cariboo adopted to enter the Blue Mountains all lead to one common point, or rather peak—a cone-like, bald topped mountain situated in the very heart of the range and rising between 6,000 and 7,000 feet above sea level. From this bald mountain, now known under the name of Mount Agnes, almost every gold-bearing stream in the Cariboo district takes its rise, and a dozen or more of them whose names have been familiarly associated with the province for thirty-five years radiate from this hub of a wheel.

THE NEW ERA.

The new era of mining development in Cariboo is manifesting itself on all sides around the base of "Old Baldy." It was started five years ago under the direction of Sir William Van Horne, president of the Canadian Pacific Railway, with the view of developing mining properties that would serve as valuable feeders to the railroad, besides paying a fair interest on whatever capital might be invested, opening up new territory for capital and industry and thereby furnishing freight and passenger traffic for the road. The services of J. B. Hobson, a mining engineer of long experience in this state, having been associated with deep gravel mining in the vicinity of Gold Run and Dutch Flat, were enlisted, and as a result extensive purchases and locations have been made, more particularly on the forks of the Quesnelle River and its tributaries.

The later development made in Cariboo indicates strongly the presence there of the same kind of auriferous dead rivers as mark the flanks of the Sierra in this state and extend into Southern Oregon, and to which have been applied the name of the Blue lead. The properties which Hobson secured on the Horse Fly and the South Fork of the Quesnelle for the syndicate he represented, composed largely of Canadian Pacific Railway officials, bear all the characteristics of the Blue lead of California, so far as the operations already conducted show. Under Hobson's management something like \$600,-

000 has been spent in the development and equipment of the Horse Fly hydraulic mine and the Cariboo hydraulic mine, the former being situated on Horse Fly Creek, four miles north of the discovery claim of James Moore and his associates in 1859, and the latter four miles east of the town of Quesnelle Forks. The operations in both properties have been on a gigantic scale, establishing without doubt the theory that possessed everyone of the early prospectors in Cariboo that only with the use of unlimited capital was it possible to develop the wealth of the district.

Two thousand miners' inches of water was brought from Mussel Creek to the Horse Fly hydraulic mine, through 12 miles of ditch, 6 feet wide at the bottom, 11 feet at the top, and 2½ feet deep, and 2¼ miles of 30-inch steel pipe. The pipe line is laid on the plan of an inverted siphon and carries this large body of water over 3 deep depressions.

The giant has been introduced into these latter day hydraulic operations in the Cariboo district, and volumes of water quite as large as any used in California in the best days of hydraulic mining here are being handled during the "open season." There is no antidebris law in that province to interfere with mining operations, nor are there any farming lands in danger of being flooded by the overflow of the rivers. The Fraser and all its tributaries flow in deep beds between high banks or benches where the level or prairie country is traversed, and in narrow rocky gorges where the mountain range is traversed. The navigable waters of the Fraser are too remote from the scene of mining operations to be affected by them, and the fierce floods of spring and summer scour the river channels and keep them at their normal depth. Hydraulic mining is, therefore, possible of the highest and most perfect development in the Cariboo district, with nothing to hinder or to interrupt it except the long and severe winters.

NATURE OF THE PAY DIRT.

Almost all of the pay dirt in the placer deposits of Cariboo resembles the material contained in the Blue leads of California. It is a sticky, compact conglomeration of highly washed gravel, sand and clay, with which every placer miner is familiar, and from which, when found, he always hopes to reap that rich reward for which he is in search. In the Horse Fly hydraulic mine the dirt hitherto worked has been a free washing gravel, but during last season it changed to a hard, compacted, cemented gravel, that must be crushed before washing to win from it all the gold it contains. Since this change presented itself in the face of the pit only a small portion of the gold contained in the gravel piped off has been recovered, chunks of the cemented gravel being found at the foot of the sluices. A ten-stamp mill with a capacity to crush from 100 to 120 tons per 24 hours, will be installed on the premises. Mr. Hobson estimates it will cost from \$1.50 to \$1.75 per ton to mine and mill the cement, which working tests show contains from \$4.82 to \$5.56 per cubic yard of gold. The mill will be operated during summer with water power and during winter

with steam, as drifting can be carried on winter and summer alike.

The vastness of the deep gravel deposits of the Cariboo district is shown in the pit of the Cariboo hydraulic mine. The company controls about three miles of the ancient river channel, which is a thousand feet wide between the rims, and the bank of auriferous gravel rises from 350 to 400 feet above the head of the sluices, while it is estimated that from 80 to 100 feet more pay dirt lies between the present workings and the bed-rock. The latter cannot be touched until the upper stratum is worked off. This is the mine that yielded during the last season \$128,000 worth of gold at a total cost of \$85,000. An early setting in of winter is said to have deprived them of the means of taking out from \$50,000 to \$70,000 additional. There were four giants in operation last summer. Two more giants will be put in operation this year.

BIG COMPANIES NOW THE RULE.

How puny the efforts of the hydraulic miners of Cariboo of the sixties were, when they worked with canvas hose and one-inch nozzle pipes compared with the operations now going on in the district, is shown by the fact that the canal and reservoir capacity of this mining company amounts to 10,000 miners' inches of water delivered from the big nozzles of the largest giants manufactured, and there is nothing superior to its system of pipes, canals and reservoirs on the coast.

Everything has drifted into big companies in the way of mining in that district now. The Miocene Gravel Mining Company, of which R. H. Campbell is manager and whose claims cover four miles of the Horse Fly is conducting operations on an immense scale.

The Harper claim on the same creek is owned by a San Francisco syndicate, and is to be worked by a hydraulic elevator. About \$50,000 has already been spent there in the construction of a ditch and pipe line.

Seven miles south-east of the town of Quesnelle Forks is carried on one of the most gigantic placer mining operations ever attempted on the coast. It is at a point where the great Quesnelle Lake empties its overflow waters into the south fork of the Quesnelle. There the Golden River Quesnelle Company (limited) of London is employing now about 400 white men and 100 Chinese in excavating for an immense waste weir that is intended to divert the waters from their natural outlet. When this waste weir and the necessary gates are completed, the construction of the dam to hold back the waters of the great Quesnelle lake, which is 100 miles long and from one to five miles wide, will be commenced. The overflow waters which it is intended to divert cover a space 300 feet wide and are now—at the lowest stage of the river—flowing eight to ten feet deep. As the water in the lake rises six or eight feet each season, it can easily be seen what a gigantic piece of work the company has undertaken.

It is estimated that the dam will cost \$228,000, and probably \$350,000 or more will be expended before the company completes the work and gets ready to clean