

Mr. Heinze has secured a charter for the extension of this road into the Boundary Creek camp, 100 miles to the west.

The smelter is a model plant in every respect and consists of three buildings, namely: The sampling works, of 250 tons daily capacity; a furnace building, in which a blast furnace and four reverberatories are running night and day; the third building is occupied by a double-deck automatic set of O'Hara roasters. The ore-bins already up in the yard are capable of holding about 3,000 tons. An ore platform for a like capacity is being built. The ore when it reaches the smelter is first run through the sampling works, then assayed, and from this sampling paid for. From there it goes to the roaster before going into the furnace.

A word about the calcining of the ore that goes into the reverberatories. Mr. Heinze has innovated a very simple device for cheap roasting. Above each reverberatory there are four large circular calciners, revolving round a vertical shaft, into which ore is dumped, and the heat from the reverberatories is communicated to these calciners and the ore calcines itself, and by the means of a double set of hoppers discharges itself directly into the furnace, thereby affecting a saving in the cost of fuel and handling. The cupola is operated by a Root centrifugal fan; a Mansfield automatic cut-off engine furnishes the power. The capacity of the smelter is 200 tons, and three carloads of matte are being turned out daily and shipped to Butte to be refined. Mr. Heinze has given out that this smelter will be kept up to its present state of efficiency, and its capacity will be increased as rapidly as the requirements of the camp demand it. He is in the field to buy all the gold, silver and copper ore in the market. All ore is paid for on assay at the smelter. He is willing to receive ore from one-ton lots up, and his treatment charges are a third less than have heretofore been known.

SURROUNDING DISTRICTS.

Not less remarkable than the development of the producing mines in the immediate vicinity of Rossland have been the rapidity with which prospecting has been pushed afield and the discoveries which have been made in other sections of the Trail Creek mining division. Wherever the formation in which the Rossland mines were discovered has been found, claims have been located and surface development work done. And already out of a chaos of locations, mineral zones have been defined which bid fair to equal, if not rival, the basin of Trail Creek.

The most remarkable of these, as it is certainly the most extensive, is known as Murphy Creek. It begins, roughly speaking, about six miles due north of Red Mountain, and extends some eight miles farther in a northerly direction. There are as yet no roads, and only the roughest of trails into this country, but in spite of this the most promising looking showings are being rapidly taken hold of by stock companies or under bonds. Two of the biggest propositions in this section are the "Paymaster" group, which has been acquired by an English company, and the "Empire" group. On the latter the highest grade ore yet found in the Murphy Creek zone has been discovered. The ore is similar to that of Red Mountain, but rather more silicious.

On the east bank of the Columbia river a zone of undoubted richness has been found, and the excitement over it at the present moment is intense. What it will finally be named it is hard to say. It can be approached by three routes—Bear Creek, which falls into the Columbia river two miles below Trail; Champion Creek, some eight miles above Trail, and from Waterloo landing, still farther up. And accordingly it is known by some as the Bear Creek camp, by others as the Champion Creek camp, and by still others as the Waterloo camp. The commencement of this belt is well defined by an enormous dyke of eruptive rock, running in a northerly and southerly direction, and in an air line some three miles east of the Columbia river. It has been traced and located from the headwaters of Bear creek, through the headwaters of Champion creek, where it is traversed by a belt of granite, or bull quartz, about two miles wide and on to the Waterloo camp proper. Mineral was first discovered in this district in 1891, and some ground located on a very

large cropping on the head of the south fork of Champion creek. Some high-grade float was found, but the prospectors confined their attention to a barren dyke of porphyry mixed with some white quartz, apparently in the hope of finding free-milling gold ore. Failing in this they abandoned the ground. It was re-located last summer as the "Jeff Davis" and "Free Coinage", and the locators, wiser for the experience of Red Mountain, worked on the iron-stained cap-rock. This they have broken through in several places and have disclosed a large showing of ore. The ore is a fine-grained arseno pyrite mixed with chalcopyrite in a gangue of hard blue quartz. It runs high in gold. These claims are now in the hands of a powerful English syndicate. Several claims along this lode are being worked by joint stock companies, of which the Black Hawk is the furthest developed. In the Waterloo camp the "Apache" group has been bonded by the Lillooet, Cariboo and Fraser River Gold Mining Co. This group shows an immense surface outcrop.

From present indications, it would seem as though the Columbia river between the 49th parallel and the main line of the Canadian Pacific Railroad, was about to become the outlet of a gold producing country, which will pale the lustre of California, Australia or the Rand.

Warning to Investors.

The remarkable activity in the development of our mining enterprises has unfortunately brought with it a craze for company promotion and stock jobbing speculation. Mr. J. J. Kingsmill, Q.C., President of the Ontario Mining Institute, is to be commended for promptly sounding a note of warning to our Canadian investors in the following letter to the President of the Toronto Board of Trade:—

"The object of the Ontario Mining Institute being to mutually benefit and protect its members, I, with the approbation of some members of the Council, deem it advisable at the present time, when there is likely to be a very large amount of stock of British Columbia and Ontario mining companies put upon the Toronto market, to sound a note of warning to our associates and others about to invest, and to ask the co-operation of the Toronto Stock Exchange and the brokers generally to assist in keeping the dealing with mining stocks within what is strictly legitimate and fair business, and thus protect the unwary.

As has been the case in all mining booms, not only in the United States, but elsewhere, many companies will doubtless be formed, with really very little to justify their incorporation. In many cases this has been done when the promoters had nothing beyond a mere option to purchase, and then, with an irresponsible Board of Directors, placed their stock upon the market at an enormous discount, and, quietly pocketing the cash, left the unfortunate purchasers of the shares with a property subject to heavy payments, absolutely worthless in itself, or absolutely valueless by reason of their being unable from lack of time, experience or capital to handle it.

People about to invest should be cautious before parting with their money, and should satisfy themselves, among other things, upon the following points:—

- (1) Whether the so-called company has been incorporated, and where?
- (2) Whether the stock is paid up and unassessable; if not, what is the extent of the liability of the holders of it? (This depends on the legislation at the place of incorporation.)
- (3) Whether the company (if incorporated) has procured a Crown grant for the mining locations which they are supposed to control.
- (4) Whether any development work has been done; and if so, whether it is established that the location justifies further expenditure.
- (5) Whether the incorporators are men worthy of the trust reposed in them, and such men as the investors would trust with the management of their affairs and the investment of their money.
- (6) Whether money raised on the first sale of stock is to be devoted to development purposes or not; if not, a good reason for declining to accept shares would thereby be afforded.

In my opinion no portion of promoters' stock should be placed upon the market until sufficient treasury stock has been disposed of, and expended to demonstrate the value of the property.

The Stock Exchange and brokers can keep up the reputation of our city, protect their clients and the public, and ultimately secure a more lucrative business by declining to list or deal in any shares issued by any company which cannot satisfactorily answer all of the above inquiries.

There will in the next few months, and I hope years, be ample scope for making money in mines and mining stock in a fair and legitimate manner, and we should be careful not to jeopardize that prospect and the good name of our city by countenancing even in the slightest degree anything that might, in mining parlance, be termed "wild-cat propositions."