

MINING.

Mineral samples sent to the Critic office, accompanied by a fee of one dollar, will be submitted to a thoroughly competent assayer for a preliminary examination and slight test of contents. The results will be communicated to senders of samples, and if full assays are deemed advisable, they will be notified and instructed as to amount of fees to be remitted.

COUNTRY HARBOR.—In a recent issue of THE CRITIC we referred to the cutting of the pay streak on the property of the Country Harbor Gold Mining Company, and gave the purport of two rumors that were circulating in the city as to how the discovery had been made. One of these gave the credit to Geo. W. Stuart, the well known gold mining expert of Truro, and, although the minor details were not correct, the following letter from the president of the Country Harbor Gold Mining Company and the accompanying report of Geo. W. Stuart prove that the credit of the successful issue of the mining operations belongs to the latter, as the work which resulted in the cutting of the pay streak was undertaken and carried out on the strength of his report:—

The Mining Editor, Halifax Critic.

St. John, N. B., Feby. 8th. 1893.

DEAR SIR,—In regard to the article in your issue of 28th ult., concerning our mine at Country Harbor and Mr. Geo. W. Stuart's connection therewith, and as well to the exceptions taken thereto by "A Minor" in "Herald" of 28th ult., permit me herewith to hand you a copy of Mr. Stuart's report on the property, which you are at liberty to publish, and which in justice to him I think it would be well to do. It is not necessary to state here why the mine was shut down, or why Mr. Stuart was called in to examine and report. Suffice it that his report has proved satisfactory, and practically correct. The rich gold "strike" has been cut at a depth given by him, and he would also have been correct in his lateral directions except for a short "fault" or break. As it was, we had to drive but a few feet west to get at it at the depth named.

Yours truly,

J. F. FRASER,
Pres. C. H. G. M. Co., Ltd.

To the Country Harbor Gold Mining Company of Country Harbor, N. S.

GENTLEMEN,—The following is a synopsis of my observations and conclusions regarding your mining property at Country Harbor, obtained during my late visit there.

As this rather cursory report is only intended for the eye and benefit of the parties directly interested and not for the purpose of placing the property on the market, I need not refer to surface area, general formation and character, all of which is already understood by your different members, I shall therefore rather confine myself to what may reasonably be expected from future development, and my opinion as to what has been done in the past.

My conclusion as to the great value of your mine is derived almost entirely from my examination of the Copeland mine adjoining you on the north, and the valuable information obtained from its courteous, genial and very observing manager, Mr. McDonald, to whom I am much indebted.

I will at once draw your attention to the rough sketch of the adjoining parts of the two mines. That part of the Copeland enclosed in red lines may be said to sufficiently represent the ground excavated or the principal and most valuable belt, so far worked. This belt averages about ten feet in width, about three-fourths of which is milking material. The belt is a banded structure composed of quartz slates and quartzite, the whole of which is heavily mineralized with arsenical iron, some copper pyrites, zinc blend and galena. The slates vary from a dark gray or grayish green, very soft talcose, to a black argelyte. The quartz portion of the belt is a succession of lenticular shaped sections bedded in slate and over-lapping, making a continuous lode, which might not be improperly called a *link lode*. The whole of the belt is intersected with quartz stringers, which accounts for the slates being auriferous. In my examination I was unable to find any wall marks calculated to influence and regulate the gold strike, except that of the general strike of the rock, as is shown on the sketch, dipping 27 degrees south. Mr. McDonald assures me this is the true dip of the gold strike. He also assures me they have gone through in the north end of their works, a succession of four good strikes, and are now in the fifth, these strikes are divided about as I have marked them on the sketch by the figures 1—2—3—4—5— The top strike is twelve feet deep and has given as far as worked an average of two ounces of gold per ton. The next 8 feet below is considered rather poor, and the following 30 feet is alternately low and medium grade, the whole 30 feet giving an average of eleven dwts to the ton, and I find by the mill books, which were kindly shown me, the whole 50 feet, including the 8 feet marked poor, has given an average of 14½ dwts to the ton, which may well be considered an extraordinary yield for so large a belt. Mr. McDonald also assures me, and there is every reason to believe, the whole of these strikes are quite as rich at the extreme south end of their works, going towards your line, as they have found in any other part of their mines so far worked.

It will be seen by the sketch there is a vertical slip or fault of 8 feet, about 100 feet from the line, the south end dropping, thus necessitating, on this account, going 8 feet deeper to catch the strike on your property, than you otherwise would, had this fault not occurred.

I see no evidence or indication of other faulting, either lateral or vertical.

A cross cut driven west a distance of 27 feet from the south end of the Copeland works, encounters a belt of quartz and slate six feet in width heavily mineralized.

The same belt is cut in the end of your west cross cut and marked in the section sketch showing the bottom of your own works. This belt I

am strongly inclined to think will yet prove to be a very valuable one, as it certainly has many of the characteristics indicative to great richness.

I would advise connecting your No. 1 shaft with the north drift or level, which cannot be more than ten or eleven feet, and by sinking from fifteen to twenty feet below the level, you should cut the top of the first pay strike in the Copeland, and by continuing down find the same succession of strikes as has been proved in the Copeland, this is, from the evidence before us a most reasonable and natural conclusion, bearing in mind however, that there are freaks in structural phenomena which cannot be accounted for.

You also desire my opinion as to your explorations and construction work up to the present time.

In answer I am obliged to say, I think the sinking of your No. 2 shaft was quite unnecessary and I cannot understand why this was done, being out of line, as it is, with the belt you desired to open. My opinion is, you should have pushed your No. 1 shaft as rapidly as possible, confining your work to that shaft, until you reached the pay strike, when on proof of its existence on your property, then sink another shaft, say, 100 feet below your first one, and on the same belt, and connect with a level when sufficient depth is attained. Drive cross cuts at your leisure after the above work has been done, when you will have good air circulation.

In regard to the crusher, so far as I have been able and had time to examine, no fault can be found with the construction. The mortars, it is true, are of the old pattern, although they do not perform as much work as the newer pattern, which is much heavier and more expensive, yet many of the old mill men adhere to them, and consider they do better work than the new, so-called "Black Hills" mortar.

I may say there is a want of room in front, for ore, of 8 or 10 feet, which, however can be provided for without much expense. But I am obliged to say, I consider the building of this 20' amp mill decidedly premature and unnecessary, at the stage of your operations in which it was done, or at any stage until you have conclusively proved you have a mine requiring a mill. I cannot too strongly condemn the practice, as it has become, with some men of erecting expensive milling and other unnecessary surface plant before proving whether they have a mine or not the evil results of which often cannot be estimated, frequently financially crippling the owners and causing a discontinuance of underground explorations where expenditures should be chiefly confined, until the property is proved worthy of a mill, when one suitable for the requirements can be erected. In your case, as in almost every other case throughout the province there is ample opportunities for having small mill tests made, before going to the expense of erecting one before needing it.

Yours faithfully,

(Sgd.) GEO. W. STUART.

Wine Harbor, N. S., Jan 23rd. 1893.

NOTE—The accompanying sketch is not made to scale, my instruments not being at hand.

CANIBOO.—The Dixon Mine continues its regular yield, the last clean-up yielding a bar of gold of some 95 ounces.

As will be seen by the report below, the Truro Gold Mining Company is being energetically worked and rapidly being brought in position to become a large gold producer.

To T. G. McMullin, Esq.,

President Truro Gold Mining Company

DEAR SIR,—The following is my report of operations at your mine for quarter ending December 31st, 1892, and suggestions for future operations. The former I trust will be satisfactory to you, and the latter meet with your approval.

The tribute lease was purchased and the mine formally taken over on the first day of October. I found the entire plant, machinery in particular, in very bad order, and the most of it inadequate for the work required. To ascertain the prospective value of your mine, I determined to struggle through a month without much extraordinary expense, which I succeeded in doing with much difficulty from numerous break-downs. I succeeded in getting 248½ days work under ground, and raising 22 tons of quartz, which yielded 272½ oz. of gold. This result warranted my conclusion to reconstruct your entire surface plant, for which I made as rapid preparations as possible, continuing mining operations in rather a desultory manner until the 17th of Nov. when I shut down.

After removing the old machinery I set, by plans furnished me by J. E. Hardman, S. B., a 40 H.P. tubular boiler, a new 30 H.P. engine on eight feet of solid masonry. Built a new amalgamating room, and reconstructed all amalgamating appliances, put in a new friction hoist pulley, erected a new smithy, built a new shaft house, and a manager's office building, and various other changes and improvements. On the 7th of December the new engine and pumps were in motion. On the 14th, the mine was again unwatered and mining resumed. On the 30th, after running 140 hours with 5 stamps, I cleaned up and smelted 750 oz. of gold from 30 tons of quartz, mined from November 1st until 17th, and from December 14th until 30th, 29 working days of 16 men under ground, representing 462 days labor.

I must tell you the chief part of this gold came from the rich strike cut at a depth of 75' in your east shaft, which is 180' on the lode from your mill shaft, which is now 115' deep. The strike is dipping west toward the mill shaft, at an angle of 45°, the lode below the strike is poor, as far as we have proved it. To continue sinking the east shaft and stopping below the strike, which you will readily understand would require to be done in order to follow would be a waste of money. When by sinking the main shaft 136' below its present depth, the strike will be cut, when you will