arsenical pyrites carrying good value in gold), which will considerably increase the worth of their property and ought to make their shares a desirable investment. This copper vein appears to run parallel to the main lead, and to be quite distinct from it; so much is this the case that it will in no way interfere with the cyaniding process which it is intended to use in the treatment of the ore generally. Another good feature about this mine is that the values do not diminish at all as depth is increased, and the ore body is stronger than ever. A personal visit recently to Keystone Mountain (some 8 or 10 miles from the Boston and B. C. property) proved a veritable "eye opener" in regard to the amount of mineral showing, although not very much has been done yet beyond staking claims as the camp is comparatively a new one. Still, some tunnels have been driven and short shafts sunk, all demonstrating the presence of ore, usually galena and pyrites, but with very strong indications of copper. No doubt a year or two more will be sufficient to call investors' attention to this most promising locality. As with most if not all the best prospects, there is the great difficulty of access, though when one is once at the top of the mountain travel is easy enough, the scarcity of timber making the country more like a park than a mining district. There are of course the usual apologies for trails, which in most cases seem to have been thoughtfully arranged to cost the most money with the least possible useful work—such a troublesome job as cutting out a fallen tree is not to be thought of; turn the trail round it; and for fear of ill-conditioned people saying that such a proceeding was unnecessary, the usual way seems to be to go some hundred yards or more out of the way to make it look as if it was not done to avoid the fallen timber, but for some wise reason. And why a trail should be constructed a long way up a steep hill for the sole object of coming down again, instead of going round more nearly on the level, is one of those things that passes all understanding, and causes a free use of language that some people would consider profane. Notwithstanding all these inconveniences, however, a week or two in the mountains is most enjoyable, and the views of apparently illimitable snowy peaks and glaciers, particularly at sunrise and sunset, so lovely as to repay one for the exertion of climbing some 8,000 feet above sea level.

To return, however, to the subject of the mining matters in this district, good reports are to be heard from the Adair claim on Laforme Greek, a very fine stringer of copper ore having been cut while extending the tunnel. The ore certainly looks very much like that from the Rosebery referred to already, and the vein which the tunnel is expected to tap some 30 feet further is arsenical pyrites also; but it does not follow that it is the same lead. That seems rather a common error, to take it for granted that because the ore in one claim chances to be like that in another perhaps 20 miles away, both are on the same lead. Of course it may be the case, but it will be very difficult to prove.

From Illecillewaet we have the news that the Tangier, which has been working with a considerable force of men all the summer, is shut down for the winter. Rumors about the management of this mine are plentiful, and not complimentary, but it would be most unfair to condemn any manager without far better evidence than we have. Both the Waverley and the Tangier are in a good neighborhood for minerals, and will very likely turn out all right after further development. It takes more than one or two years work to make a mine, though in this country it certainly ought to show what to expect.

The Lardeau is holding its own well, and some extensive deals have been made lately in the mining properties there, notably perhaps the Towser, which has been sold to a Chicago syndicate for a cash price of $40,000. This is next to the Silver Cup, and will probably turn out as well as that has done. Most of the more developed claims in the Lardeau will be worked all the winter; especially the Nettie L., which has been spoken of frequently—at this mine the ore is being sacked just as it comes from the stopes, and will be shipped out as soon as there is sufficient snow for rawhiding. Two men recently took out 150 sacks of ore in one day, all of high grade and not sorted.

In the Fish Creek camp again, some very fine strikes of ore have been made quite lately, notably on Sable Creek, (tributary to Fish Creek), where both the Trilby group and the Revenge group have "struck it rich," one to three feet of galena on the surface that carries very high value in silver and lead, as well as some gold. But it is really a difficult matter to pick out any one or two groups of claims, when all are so very promising and most of them so wonderfully valuable; it must suffice for the present to merely mention the St. Elmo, near the Great Northern ledge, and the Crack Shot, which is in the opposite direction on McDonald Creek, near the Glengarry claim, both of which have remarkably rich ore actually from the grass roots. Still others come to mind, the Hidden Treasure, close to Trout Lake, and the Chief Mountain on Surprise Creek, which latter is showing a marvellous vein of copper ore, some samples from which are said to assay as high as 60% copper, though of course an average sample cannot go anywhere near that point. Enough, however, has been said to indicate that the Lardeau district contains vast bodies of high-class ore, and that the railroads now in course of construction through it, will reap a grand harvest; while the erection of a smelter in the vicinity, which is already being seriously considered by men well able to judge as to the profit to be derived, would seem to point to a very promising future to this district in particular, and to the country generally.

Revelstoke, B.C., Oct. 15, 1899. A. H. H.

COAL MINING IN CAPE BRETON.

The main shaft at Dominion No. 2 is now in the hands of the contractor, who will continue the sinking until the Phalen seam is reached.

For sinking purposes a battery of boilers has been installed to furnish steam for a pair of 8 in. x 12 in. and a pair of 12 in. x 24 in. engines used in hoisting material from the shaft.

The compressor for supplying power to air drills is a 20 in. x 30 in. steam end and 18 in. x 30 in. air of the straight line type. All the shaft water will be lifted in iron tanks, and an effort will be made to keep it dry without the aid of pumps.

A shaft is being sunk to the Phalen seam near Caledonia colliery for the purposes of lifting the water from the workings that were flooded during the recent fire.

When completed, the pumps to the rise of this point will be taken out, and as the workings proceed the water will be pumped to this shaft and there raised to the surface.

Two 12 in. bore holes for pumping purposes are being put down at Dominion No. 1, and will strike the seam at the lowest workings of this colliery.

The Dominion Copper Company, Limited.

Among our illustrations this month we reproduce a number of excellent engravings of the underground and surface works at the Brooklyn, Stemwinder and other properties in the Boundary District of British Columbia which Messrs. Mackenzie & Mann have turned over to the Dominion Copper Company, Limited. The new company has an authorized capital of of $5,000,000, in shares of a par value of $1.00, of which 2,000,000 fully paid shares are taken by the vendors in full satisfaction of the purchase consideration; 500,000 shares are offered for subscription; and 2,500,000 shares are to be held in reserve for future purchases and operations. The officers and directors of the company are: President, Hon. George A. Cox; Vice-President, Wm. Mackenzie; Managing Director, Hugh Sutherland; and Messrs. D. D. Mann and J. W. Flavelle. The properties are all situated in the Phœnix Camp, Boundary District, and comprise the Brooklyn, Standard, Stemwinder, Montezuma, Rawhide and Idaho copper mines. In reporting upon these properties, Mr Frank Robbins, M.E., formerly manager of the new Elkhorn Mining Company at Leadville, Col., who has been appointed mining engineer to the new company, says:—

Brooklyn.—A number of surface cuts and small pits, showing the direction and width of the lode—from all of these samples are of record showing good values in gold, silver and copper.

An incline shaft of 240 feet in depth, this has been sunk upon the limestone foot-wall; from top to bottom, with exception of a barren bar, or horse, at sixty feet in depth, (twenty-five feet in thickness); this shaft has been sunk entirely in ore. (Upon June 1st this shaft had reached a distance of 260 feet, the same ore condition continuing.)

At 150 feet from the surface a crosscut has been driven from foot-wall to hanging-wall, a distance of one hundred feet; for fifteen feet from the foot-wall this crosscut was in ore, from this it pased into still mineralised, but lode matter of no real value, this condition obtained until it reached a point thirty-five feet from the hanging-wall where it encountered and continued in lode matter containing numerous small seams of high grade ore for thirty feet, then passed into barren matter for the remaining five feet.

A drift has been driven in the fifteen foot vein, lying upon the foot-wall, for a distance of fifty feet; this work has been entirely in ore, which still continues as the drift proceeds. (Upon June 1st this drift had reached a distance of 86 feet, the same ore condition continuing.)

A drift has also been started in the thirty feet containing the rich seams with the idea that these seams form feeders to a more concentrated body of ore, or in other words to a pay-shoot.

I am purposely omitting the values of the ore in this generalized report, as you are fully acquainted with this from the weekly detailed letters; but it may be well to here state that the ore in which this drift was started at the station level, carried five per cent. copper besides the gold and silver values. It may also be well to note here that copper ores of less than four per cent. are now being mined and treated at Butte, Montana, and at other places.

As soon as the shaft has reached a sufficient depth to give a sump for accumulation of water, another drift will be started at 250 feet in depth. That is, about the time this communication will reach you.

The Brooklyn is well equipped, having a good, iron roofed shaft house, a steam hoist of sufficient power to sink 500 feet; there are also two boilers of ample size for this purpose, and a pump of a capacity of 100 gallons per minute is ready to handle any influx of water, although, so far, the water has been easily handled by the engine and hailing tank.

Idaho.—There has been no work done upon this claim, beyond surface cuts and one small pit 30 feet in depth. The surface-showing made by these is as good, if not better than that upon the Brooklyn at a similar stage of development, of which lode, I have already stated, I believe this to be the continuation.

Stemwinder.—The workings here consist of, besides the open surface cuts, a tunnel 86 feet long, striking the lode at a depth of 60 feet; a crosscut from this crossing the lode for 78 feet; a drift; a winze from the end of the last—this winze was sunk upon a vein of good ore. A shaft 56 feet deep, which is caved and inaccessible; this, I am informed, crossed a vein some 12 to 15 feet wide, of very good ore—some of this ore is in evidence on the dump. There is also another shaft 90 feet in depth, which crossed the same vein just spoken of, at a point where it was 21 feet wide; from the bottom of this shaft a crosscut was driven to encounter this vein, but owing to the faulting of the formation, this was displaced some 40 feet and then recovered. From the point of recovery a winze was sunk upon the vein for 25 feet, and a crosscut driven across it for 18 feet. Upon the foot wall of this winze a portion of the vein about 2 feet in thickness consists of solid chalcopyrite—a valuable copper ore.

The above described workings, being extremely primitive and unsuited for permanent work, a double compartment shaft was started and sunk to strike the lower portion of the faulted vein. This was struck at a depth of about 90 feet. The shaft has been continued to a depth at this time of 162 feet. At 114 feet a crosscut was started; this has been driven in ore, with exception of some small breaks, for a distance of 64 feet. (Upon June 1st this crosscut had been driven to a distance of 114 feet, the same ore condition continuing.)

The equipment of this shaft consists of a building sufficiently large to accommodate any machinery which may be required for several years to come; a boiler; and a hoisting engine and pump similar to those at the Brooklyn. Here, too, no water has been encountered greater than the hoist can easily handle.

Montezuma.—This has had no work done upon it other than the pits and surface cuttings to expose and explore the croppings.

Rawhide.—This has numerous surface cuts upon the ledge, by these the continuity of the vein is traced for almost the entire length of the claim.

The outcroppings are very bold and very fine, and fair values are sustained through all of them. These croppings are much oxidized, pointing to the fact that, as in most copper mines, the copper has been leached out and will be found re-precipitated below. As a fine opportunity occurs here for development to a considerable depth by means of a crosscut tunnel, such was started, and is now in 400 feet, and is now very close to the ledge.

Conclusion:—I will add that never have I seen greater surface showings than those of "Phœnix" or "Greenwood Camp"; and none of these, I make no exception, is better than any of the three lodes I have endeavored to describe. It is further my opinion that with more development, veins, pay chutes and deposits of great profit will be uncovered in all three of these lodes. It may take some little time, but every foot of work done encourages this opinion."