

MINING.

The opinion has become so thoroughly impressed upon our mining men that our gold ores are free milling and that so much of the gold is saved in milling that the tailings are not worth a second handling; that it is hard to make them believe that in many cases almost as much gold is lost in the tailings as is saved in the batteries and from the plates. As depth is reached in mining and the sulphurets are encountered in close association with the gold, the losses become heavier and heavier, and in the majority of cases the mine is shut down as used up, just as the most certain source of revenue has been reached. A few of our most competent mining men recognize the necessity of special treatment of tailings by concentration; but there seems a diversity of opinion as to the best system to adopt, and as the question is interesting and is being specially investigated by Mr. Woodhouse at Montagu, we should like to have the views of our mining readers, and for that purpose our columns are always open. We invite the fullest and freest discussion, feeling that this important matter should be at once grappled with, so that the best system may be adopted.

MONTAGU DISTRICT.—The English companies operating at Montagu are two in number. "The Nova Scotia Gold Mines, (Ltd.)" and "The Symon-Kaye syndicate, (Ltd.)" The Nova Scotia Gold Mines, (Ltd.) purchased the Annand, Lawson, Montreal and Rose properties, forming a block of areas a mile and a half long, but not including the British American areas. The name "The Nova Scotia Gold Mines, (Ltd.)" which is rather sneeringly referred to in the last issue of the *Canadian Mining Review*, was adopted for the sole purpose of aiding the gold mines of Nova Scotia in England. It was found by Mr. Woodhouse (and the fact is also known to every one who has tried to sell mines in London) that Nova Scotia mines fairly stank in the nostrils of investing Londoners. Feeling sure of the great value of the mines that he was purchasing, and that they would, when worked on a substantial basis, yield largely in gold, he determined to give the province the full benefit, and so adopted the above name. The Symon-Kaye syndicate, (Ltd.) have purchased the block of 108 areas, formerly known as the Kaye Symonds mine, bounded on the east by the Lawson areas. Since the handing over of the mining areas to The Nova Scotia Gold Mines, (Ltd.), and the arrival of Mr. Woodhouse from England, the work of putting the mine in shape has been economically and rapidly pushed forward, the mine at the same time yielding larger returns than ever. Mr. Woodhouse, on assuming control, arranged the works on a systematic basis. Lucius J. Boyd, M. E., was appointed general manager, and the works divided into three departments, each in charge of a sub-manager. These were the mining department proper, or work under ground, the surface work and the milling and amalgamating. Each gang of miners has a competent foreman who is responsible for their work, and the day has been divided into three working shifts of eight hours each. Work in the mine is thus continuously progressive from midnight Sunday until midnight of the Saturday following, and so on, week in and week out. A perfect system of accounts has also been adopted, and every hour's work, every ounce of dynamite and all supplies are so accounted for and charged up that the cost of running all departments can be seen at a glance, and any dilatoriness or excess in expense at once detected. Rules and regulations for the guidance of the men have also been drawn up and printed, and any infraction results in a fine or dismissal from the company's employ. Under this perfect system an astonishing amount of work has been done in a short time, mainly under ground, as the management have determined not to make the fatal mistake of spending their money on surface plant, their sole aim being to make the mine pay dividends. Recognizing that a large amount of gold is lost in the free milling process, Mr. Woodhouse has turned his attention to the best means of saving the gold in the tailings, and as will be seen by the official report below, has sent a quantity of concentrates and tailings to England. They are also prepared to supply a want long felt by the mining public, having, as will be seen by advertisement elsewhere, made arrangements to assay any mineral samples that may be sent them on payment of the usual fee.

In the past we have had numerous samples of rock either sent to us by mail or handed to us by callers at the Critic office by parties who were anxious to know whether they contained minerals of value. In many cases it could be seen at a glance that the rock was of no value, but in the large majority of cases no fair opinion could be given without a test by some competent assayer. Of late years there has been no one in Halifax devoting special attention to the assaying of minerals, and as a result the specimens had to be sent abroad at considerable expense for assay, or, as was generally the case, the finders would shrink from the expense and uncertainty and not have the rock tested. To meet the requirements of these cases and also to provide for actual milling tests of ores, we strongly advocated the establishment of a provincial assay office and the appointment of an official assayer. The mining men took up the matter and strong petitions were presented to both the Dominion and Local Governments, forcibly showing the necessity that existed for the establishment of such an office and praying that the governments would act. Nothing has so far come of this movement, and as we still continue to receive samples for assay or our opinion as to whether they are worth the expense of assaying, we have long been meditating a connection with some competent assayer, who would first give a slight test to prove whether samples were likely to be worth a full assay, and second, would be prepared to proceed with the assay without delay should it be ordered. We have now been able to make such an arrangement with parties of undoubted skill and honor, and senders of samples may rest assured that the tests will be made by competent assayers

and that all business will be treated as strictly confidential. Samples should be addressed to care A. Milne Fraser, manager of the Critic, and should be accompanied by a preliminary fee of one dollar. This will secure the sender the assayer's opinion of the ore. If the assayer thinks it of sufficient value to be further tested, he will so notify us and state his further charge for a fire assay. We will at once communicate with the sender of the sample, and if the latter desires the full assay, he can send on the fee and have the work completed.

OLDHAM.—As a specimen of the gold mining news furnished by the Nova Scotia correspondent of the *Canadian Mining Review* we quote the following from the September number.—"Oldham.—Some parties from Providence, Boston, and vicinity, have bought fourteen areas on the north side of the district for \$1,000. Some prospecting was done on these areas this spring by Edward Whidden (one of the vendors), and a bunch of quartz worth about an ounce to the ton was uncovered. Work on the property will be prosecuted this winter. Mr. H. F. Carpenter will be resident manager."

This little item, which is only a fair sample of the misrepresentation indulged in by the *Review's* correspondent on all occasions where the interests of a certain clique are not involved, is wrong in almost every statement. There are no Boston parties interested, the number of areas stated to be purchased is incorrect, as is also the price paid. The statement that "a bunch of quartz worth about an ounce to the ton was uncovered" is an unjustifiable belittlement of the discovery, and the paragraph is only correct in stating that "work on the property will be prosecuted this winter."

Members of the following well-known firms are interested in the property:—Horton, Angell & Co., manufacturing jewellers; Pierce and Carpenter, lumber dealers, etc.; Marsh and Bigney, manufacturing jewellers; J. L. Wells, dry goods merchant, all of Attleboro, Mass.; and Hancock, Becker & Co., manufacturing jewellers; William C. Green, manufacturing jeweller; and Horace F. Carpenter, gold and silver refiner of Providence, Rhode Island.

These firms represent an aggregate capital of over a million dollars, and the members of the firms in investing some of their surplus capital in our gold mines have used due care and diligence in the selection of a property, and while wishing only for fair treatment are by no means inclined to submit quietly to misrepresentation, but as will be found in the end are undoubtedly able to protect their own interests.

It is a good sign to see such large capitalists investing in our gold mines, and no one with the true interests of the Province at heart would have pondered such a malignant attack on their venture as the little item above quoted certainly is.

The yield of gold for the first six months of 1892 as per official returns at the Mines office was 8838 ozs 3 dwts. 14 grains from 13958 tons of quartz crushed.

OFFICIAL REPORT FROM THE NOVA SCOTIA GOLD MINES, LIMITED.—PROGRESS AT MONTAGU FOR MONTH OF SEPTEMBER.—Tons crushed 170, yielding 280 ounces of smelted gold. Millowing to repairs to mine only ran half time.

Good progress has been made with the conversion of No. 5 incline shaft into a three compartment vertical main shaft, 14 ft. by 7 ft. outside timbers. This main shaft has been cribbed from bed rock to old deck head with 9 inch square sawn timbers placed 5 inches apart, and from old deck to new deck head with 6 inch square timbers 3 feet apart, and the whole lagged with 2 inch planks.

The new deck has been raised 17 feet in order that the ore trucks as raised from mine on cage can run into ore bin at mill 8 feet above mortar feed openings, and thus save second handling of ore.

The main shaft has been trimmed down 49 feet from old deck or 29 feet below bed rock.

The head gear built of 10 inch hewn square timber 35 feet high, rests on 14 inch hewn square sills and is almost completed.

The bottom of mine 238 feet from old deck has been levelled east and west of No. 4 shaft and rails will be laid in a few days, when drifts will be started on course of quartz vein, while crosscuts will be made north and south to intersect the other leads.

Increase of sulphides is found with greater depth, more especially those of copper and lead.

Attention has been given to the amalgamation of free gold, and several alterations have been made which answer well in reducing loss to a minimum.

Experiments with the old tailings have been carried out by means of a straight throw Australian percussion table having a 7/8 inch stroke and 260 throws per minute. Quick-silver and amalgam have been recovered besides concentration of the sulphides.

15 cwt. of concentrates and one ton of tailings have been sent to England for trial.

An assay laboratory has been built and fitted up where value of ore etc. will be carefully followed.

Assays for the public will also be carried out in addition to the company's private work.

OFFICIAL REPORT SYMON-KAYE SYNDICATE (LD).—A 30 h. p. engine with 35 h. p. boiler have been purchased for this property, but a 1 mining work will be discontinued pending the arrival of an 8" pump, which will be put down to compete with the heavy water. It is the intention to work the crushing mill by water power from Lake Lou.