

## MINING.

Mineral samples sent to Post Office Box 123, Truro, accompanied by a fee of one dollar, will be submitted to 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.

## NOVA SCOTIA MINING SOCIETY.

The September quarterly meeting of the Mining Society of Nova Scotia was held at the rooms of the Society, 129 Hollis Street, on Thursday the 28th Sept. last. Among those present were Mr. H. S. Poole, F. G. S. A., R. O. M. of Stellarton, President; John E. Hardman, S. B., of Oldham and Waverly, Vice President; John F. Stairs, M. P., of Halifax, President New Glasgow Iron, Coal and Railway Co.; R. H. Browne, Sydney, C. B., Manager of the General Mining Association; Charles Fergie, M. E., Westville, Manager Drummond Colliery, A. A. Hayward, Manager Lake View Co., Waverly; Alderman Geoffrey Morrow, Halifax, of Stairs Son & Morrow; F. H. Mason, F. C. S., chemist and assayer, Truro; J. H. Auston, of Auston Bros, Halifax; Capt. W. R. Thomas, Montague, Manager Nova Scotia Gold Mines, Ltd; Alfred Woodhouse, F. G. S., Managing Director Symon-Kaye syndicate, Montague; B. C. Wilson, Waverly; Geo. W. Stuart, Truro; Howard Clarke, Doctor Gilpin, Arthur Drysdale, barrister; H. M. Wyldo, Secretary, Halifax, and B. T. A. Bell, Ottawa, Ont.

The morning session was devoted to routine business, and a large delegation of members waited on Premier Fielding with reference to the introduction of mining legislation. Mr. Alexander Dick was unanimously elected a member. At the afternoon session papers were read and discussed, the first being by Charles E. Fergie, M. E., manager Intercolonial Coal Mining Company, on "Effect of a lightning discharge at the Scott Pit." As this was the first undisputed case of an explosion in a coal mine caused by lightning the records of the Association were enriched by a most valuable paper, and Mr. Fergie was warmly thanked for his most interesting article. Capt. W. R. Thomas' paper, "Notes on Practical Mining applicable to some gold districts in Nova Scotia" was well received, as it deserved to be, and evoked considerable discussion, throwing much needed light on the persistency in depth of gold pay streaks in Nova Scotia. There was a general concurrence in his views in regard to the advisability of the Government offering bonuses to encourage deeper mining, and we trust that his recommendations may be acted upon. Mr. Hardman stated that at Oldham he had just cut the top of his pay streak on the dip of the lead at 675 ft. in depth and the Wellington mine was another instance where it was known that the pay streak had continued for over 600 feet on the incline, but the vertical depth in no instance had been below 400 feet. Mr. Woodhouse agreed with the writer of the paper and elicited from Mr. Stuart very valuable information in regard to the Lawson and Rose mines at Montague. Mr. Hayward, the President and others discussed the paper, and Mr. Hardman followed in line with his paper on, "Government aid to the Mining industry—a suggestion," in which he outlined the different proposals that had been made for Government aid in the sinking of a shaft, the reduction of royalty and the bonus, and then very clearly showed that the preparation of plans from surveys and from information now available of the working in each district would be invaluable to miners as guides in workings and to capitalists intending to invest. He illustrated his remarks by a sketch showing how the information could be embodied in the plans so as to be clearly intelligible and pointed out how invaluable these plans could be made to the Government in advertising the gold mines of the country, being an exact index of what had been done, the yield of each lead, &c., &c. The suggestions were endorsed by the Association and both Captain Thomas and Mr. Hardman were tendered the thanks of the members.

In the course of the afternoon Mr. B. T. A. Bell arrived from Ottawa as the representative of the Quebec Mining Association, and was accompanied by S. P. French of Ottawa and one or two other members of the visiting society. A dinner at the Halifax in the evening was a fitting conclusion to the day's programme. On Friday, in spite of the bad weather, the excursion to Montague and Waverley came off, and the works of the Nova Scotia Gold Mines, the Symon-Kaye syndicate, the West Waverley company and the Ladaw Hill tunnel inspected. At the Waverley Hotel Thomas Beech catered to the wants of the inner man and as usual did it to perfection.

**THE MEMRAMCOOK MINING COMPANY.**—Things are moving at Memramcook and in all probability the fifty stamp mill will be in operation by the tenth of December. The foundations for the boilers, engines and batteries are now being laid, and the mill building will probably be constructed by Messrs Rhodes, Curry & Co., of Amherst. The president and directors have shown excellent judgment in selecting Mr. Geo. H. Nissen, M. E., to plan and superintend the erection of the machinery, as his large experience in the United States, and elsewhere is a guarantee that he will turn out the mill complete in every detail and capable of being run at the minimum of expense. We have seen Mr. Nissen's plans and they seem to meet every requirement. The ore, or conglomerate, as it is quarried is to be conducted to a Blake crusher and dropped into a pit, from which it is raised by an endless belt and buckets to the top floor of the building and dumped into the ore bins. The belt at each revolution will elevate a ton of ore, and the capacity of the mill will be one hundred tons per day. The elevator is in the middle front of the building and the ore bin is so constructed that by gravity all the self feeders are supplied with ore, the ten batteries being fed from the one bin. From the time the ore is fed to the rock breakers until, separated from its precious metals, it issues from the mill as tailings, the action is automatic, and only three men will be required to run the mill. The boiler

house is at one end of the building and the engine room just beyond in the main building. The bolting and shafting to convey the power to the rock breaker, endless belt and batteries are well designed and the smallest detail has been carefully considered.

**C. OCHILTREE MACDONALD.**—Mr. C. Ochiltree Macdonald is on the high road to popularity in Canada. The *Canadian Mining Review* in its last issue had a contemptible fling at him, and he can rest assured that the highest testimony of his ability and honor is to be found in the ill-will of that discredited journal.

## NOTES ON PRACTICAL MINING, APPLICABLE TO SOME GOLD MINING DISTRICTS IN NOVA SCOTIA.

Read before the September Quarterly Meeting of The Mining Society of Nova Scotia by Captain W. R. Thomas, Manager Nova Scotia Gold Mines (Ltd.)

In treating this subject I propose to evade the much discussed and debatable question as to formation of the "beds" with the contained auriferous quartz "leads," as found in Nova Scotia; leaving the solving of this problem to far more able geologists than myself, as well as to men who have had far greater experience in gold mining generally.

I intend asking you to consider a few principles which may be applied in conducting mining operations in some gold mining districts in Nova Scotia, practically taking my stand on experience in the Montague District, together with information gained from conversation with people engaged in other districts of the Province.

I also desire you to look on the following as being the conclusions of one who has had but a comparatively short experience, not only in gold mining, but in gold mining in Nova Scotia. However, I must candidly state that I cannot concur with the opinion of some mining experts, when they speak of the absurdity of men, who have only previously had experience in mining for other ores or metals, entering the profession of gold mining. I look on common sense and judgment as being the first and foremost principles, which men, in all the various branches comprising the mining profession, should possess, and if possible, cultivate.

**Surface Operations.**—In this, as well as in many other countries, some huge blunders have been made, not only in the erection of suitable machinery, but in the extent of the plant required. I venture to say that had the amount of money, which has been unwisely expended in erecting extensive mining plants, been spent in mine development, the list of successful Nova Scotia mines would be much larger than at present. It is highly essential to have a sufficient quantity of machinery, enabling one to easily deal with the present output, but to commence the erection, on the laying out of a plant, which the present developments do not warrant, looking a long way ahead in the distant future, is most certainly monstrous in its absurdity, and, in fact, a suicidal policy.

If a five stamp mill is of sufficient power to mill all the available quartz, why erect a 10 or 15 stamp mill? Or if a 30 H. P. engine is equal to working your pumping and hoisting machinery, is it economy to erect an engine of 80 or 100 H. P.?

Naturally, when water power is within reasonable reach, it is wise to utilize it, assuming that, after full consideration from a business point of view, the profit derived will be sufficient to warrant the necessary outlay.

Where this much coveted power is not within reach, procure the strongest, cheapest and most economical style of machinery, of sufficient power to cope with your present requirements, remembering that the less machinery you have, the correspondingly less will be your account for supervision, fuel, rates and taxes, &c., &c.

One of, perhaps, my strongest reasons for conservatism on this point is, that it is especially disastrous where actual mining is so expensive—surrounding rock hard, and "leads" small—to reduce the surface expenditure to a minimum. Of course this policy should be practised in all cases.

It is not possible to develop a mine in a day, week, month or even a year, as mining operations are not carried on as rapidly as one might bring himself to conceive when using the parallel ruler, scale and pencil. To "mine" in the rock, and to "mine" on paper are slightly different in their natures; the result in many cases not comparing as favorably as one might desire, one with another.

I have not had any experience in importation of machinery in this Province, but am of the opinion that the Government of this country would, by the abolition of importation duties, create a confidence between themselves and foreign investors which, in the future, they might not regret. I say this, not thinking disparagingly of the class of mining machinery locally manufactured; in fact I have pleasure in having an opportunity to state, that, in my opinion, the machinery manufactured in this country is of a first-class order, and difficult to surpass, and I also feel assured that the local manufacturers are not afraid of competition.

**Locating of Plant.**—It is highly important in the laying out of a mine, that is, the commencement of the necessary surface erections, to localise your plant as much as possible with a view to practising economy in the amount of labor employed in supervision &c.

In many countries, including Nova Scotia, economy in labor is an important matter, which should not be overlooked. I am personally acquainted with many instances where vast sums of money have been expended in the erection of mining machinery before even the most important considerations have been thought of. For instance, air compressing machinery on the top of a mountain, rendering the item carriage of fuel excessive; all of which might be saved by the purchase of 1500 or 2000 feet of air pipes.

**Underground Operations.**—We have all heard discussions as to the advisability of vertical shafts in preference to the inclined shaft sunk on the