

mark of one member who was not in my own line of mining, but who said he did not know that Nova Scotia ever turned out any gold. Well, now I think that within a very few years all of you will know that it does turn out gold, and also that it is capable of turning out a vast amount of iron. We are only too glad that you are here to get a practical object lesson in what it can produce. Its possibilities to my mind are not yet known. The buildings being put up here by the Iron and Steel Company are a most practical object lesson, but it is not touched yet. We hope that what you see will cause you to give this province a great big advertisement. I am not a native born Nova Scotian, but the welcome which the Mayor has extended to you must assure you of the hospitality of the people. I can only do my own part as an individual operator and as a member of the local mining society. Gentlemen, you are welcome. (Applause.)

DR. JAMES DOUGLAS—It would be superfluous, gentlemen, to say that we heartily accept the welcome that is given us, and that as far as lies in our power we will do our best to make you an adequate return. We are not in the financial world, and whether, as our kind friend who preceded me intimated, it will take the return of dollars and cents remains to be seen, but that it does take the shape of hearty thanks and that it will take the shape of some little reform is extremely likely. I quite agree with him that what we have seen to-day is simply a forecast of what I believe will be seen in the future. I passed through Sydney some three years ago. I went out to see the developments of the Eastern Development Company, which as yet do not seem to have materialized, and that was the only large metallurgical interest in this neighborhood. To imagine that in that short period should have grown up such a magnificent enterprise as we have seen to-day would seem to be without parallel. At that time Bell Island had only been discovered, but little of the ore had been stripped, and its possibilities were not appreciated. The fact that these gentlemen have within that short period actually exposed what they feel confident is over 100,000,000 tons of iron ore within economical and accessible distance of their works, gives us a faint forecast of what lies before the Dominion of Canada. We hardly appreciate the amount of undeveloped territory upon this continent. I am rather inclined to think that if we took the map of North America and the map of Africa we would find that there is probably more undeveloped territory on the continent of America than there is unexplored territory on the continent of Africa. The statement seems perhaps startling at first sight, but look at Labrador. There are thousands and thousands of square miles on which the foot of white man has never trod. Take the great Northwest, which has just been touched by exploration in the Klondike. Its resources in copper are now for the first time about to be superficially observed by the Geological Survey of Canada. They have sent out this year to the Great Copper river, where all the vague reports indicate that there are vast copper resources. The Hudson's Bay is always open for a certain period of the year—not quite as long as Lake Superior, but to within two months of it—ergo, a short line of railway of two or three hundred miles will bring these copper resources to a point where they could be handled. And then there is Keweenaw Point, which is a well known copper mine jutting out of the south shore of Lake Superior, between the Wisconsin line and the eastern half of the lake. I merely mention this as one of the remaining possibilities that lie in the great Northwest and the great North American continent. Rocks of nearly every age exist there. In our immediate neighborhood we know that its crystallized rocks are all ore bearing, and the result of the mere superficial and extremely insignificant exploration that has heretofore been made, make it almost certain that the resources of this great northern section of the continent will produce the more useful if not the more precious treasures that are being extracted from the chief central and southern zones. Canada has, therefore, a great future before it. It lies in the province of every miner and every metallurgist to develop these resources of America, as we are all Americans, but it rests more especially of course upon the miners and metallurgists to do so. Heretofore they have not shown that intense energy which the stimulus of success I believe will give them in the future. To-day one reason given for that was that so many of us drift away from the Dominion to the neighboring States. Why do they drift away? I am afraid it is because the inducements at home were not strong enough to keep us here. But I think all that is changing and rapidly changing, and that in the future the young men of Canada will remain at home to develop Canada's resources, and there is an augury for the future from the fact that the education which is being given by the mining schools, at McGill University, Montreal, at Queen's College, Kingston, and elsewhere, is going to admirably fit them for their life's work. Therefore, I, as a Canadian, sincerely thank you for the hearty welcome which you have given the American Institute of Mining Engineers, and wish your two societies God speed in the work that you have in hand, and hope that the most unbounded prosperity will be the lot of Canada and your own. (Applause.)

DR. R. W. RAYMOND: Since I entered the Dominion upon this visit, Mr. President and gentlemen, I must confess that the thought that has been impressed upon my mind was somewhat different from the anxieties which seem to appertain to the mind of my Canadian friend, Dr. Douglas. I am a little worried as to how we are going to keep the American Engineers in the United States. I did not know that the doctor was hankering for the copper of the Northwest, and I am a little afraid that 99 John street may know him no more, and that I will no longer be able to find me near my brother. (Laughter.) I know that we have lost a good many smart men whom we could not afford to spare, such as a Libbey and a Lewis. But after all I do not see that it makes any difference. I could not see any foreign aspect. Wherever we go on this continent we are face to face with foreign forms, and even there I managed to find myself very much at home and to see in the face of all the people I meet an American type which seemed stronger than any type of local blood. I must confess that the very sudden development of this part of Nova Scotia had taken me very much by surprise. I evidently was not a prophet or the son of a prophet when I came here a dozen years ago. I was not wise enough to take stock in the Dominion Coal Company, and I even pitied my friend, Mr. McLennan, who seemed to be entangled in a coal undertaking up here. I do not pity him any longer, but rather feel envy. (Applause.) However, I feel that looking back upon the past we may fairly say that all our great developments anywhere in this western world have been similarly sudden. I do not know whether we are mining engineers enough to know where the next boom is going to be and to get in in time. I know an instance of where a man could have bought a property for \$10,000, but he cannot get it for \$50,000,000 now. Therefore, when we undertake to make a rule of prophecy out of it we are not able to look at one and the same time into the earth and into the future. If we forget the earth we study the future, and if we forget the future we study the earth. After all I think our functions will continue to be that as in all the centuries to let accident and the wisdom of others, rather than ourselves, direct the course of Empire and of progress, and we will come in to make that progress stable and permanent. Our vocation is not to look into barren land and recommend it for investment, or to make prognostications about what it will yield before it has ever been opened. (Hear, hear.) Every mining engineer knows how disagreeable that part of his business is; and the men who go out into the wilds and build stamp mills and

travel over the horrible roads of a new country, the men who look out in advance and execute step by step such vast enterprises as you see here to-day, are not worrying themselves in writing prospective criticism; we leave it to the newspapers to insult us, or admire us, or to call us down if they choose, but we simply bother ourselves in trying to do the thing and when the thing is done it speaks for itself. (Applause.) As long as we continue to be the men who do the things we shall continue to be a lot of good fellows, because the man who does the thing leaves him hours of recreation with his fellows, is most interesting in conversation, most hearty in his welcome, most retentive in his memory of welcome. For instance, I have been connected with the American Institute since 1871; it then had thirteen members, but it now has three thousand. If you come to any meeting of that Society and think that by sitting down in a hall and hearing some papers read you have struck the heart of that society you make a huge mistake. It is on the train, in the wagon, at the hotel over the evening pipe—I am afraid sometimes it is over the evening hot Scotch—(Hear, hear) that you, will find the real work of that Institute going on. We learn more in our interchange of reciprocal feelings, we teach more in our talks, in our clasping of hands, in our social intercourse, than we do in the printed page. (Applause.) In other words, the American Institute might just as well turn itself into a big publishing house and start a newspaper. The Institute of which I am the secretary will get out its transactions and see that you get big value for your money, and the material for the next big volume is already at hand. It is not a question of piling up statistics as a permanent record, but it is a question of welding these people who do things into a social, harmonious and organized institution. Our institution was the first on this continent to do that on a large scale, and these societies of ours have welded together a great profession and made it a great factor for happiness and prosperity and knowledge among men. That is why I like to hold meetings anywhere. (Applause.)

MR. FERGIE—More especially referring to the mining societies, I would like to take this opportunity while here in Sydney of reminding all those engineers, both in iron and coal, who are not now connected with any society the great advantage of joining. We have in Canada two prosperous societies—the Canadian Mining Institute and the Mining Society of Nova Scotia—and I would give all a very welcome request to send in their application for membership which will be duly considered.

MR. B. T. A. BELL—Mr. Chairman and gentlemen, as one who has to some extent been responsible for the inception and carrying out of this gathering, and as one who has also been primarily responsible for a number of meetings of the American Institute in Canada—going as far back as 1889 and 1891—I have great pleasure in expressing to-night on behalf of the Canadian Mining Institute our appreciation of the efforts, the successful efforts, that have been put forth for the reception and entertainment of our guests not only here in Cape Breton, but by also those mining companies which are represented here from other parts of the Province. I am a profound believer in the great and abundant wealth of our Dominion in natural resources, not only in coal and iron, but in gold and silver and nickel and copper, and all these minerals and metals which make for the greatness of a people, and in promoting this visit to Canada of the American Institute I was inspired by the hope that we had much to gain by asking you to come and see our country again, to become better acquainted with our mining men and to see what progress we are making in the development of these resources. Visits of practical men to our country are the best method of advertising its resources. We trust the next time you visit this portion of Canada the progress you will see will just be as great as it has been since the last time you visited us here, in Nova Scotia, in 1886; and I may say that this great expansion in mineral and industrial development is not alone confined to this good old Province of Nova Scotia. In British Columbia, in the far off Yukon and North-West Territories, in Ontario, with its nickel, its iron, its copper and its gold, yes, even, in the old Province of Quebec, we have much still to show you of our progress in mining enterprise. A year or two ago the net value at the pit's mouth of our mineral output reached something like \$22,000,000, to-day it is over \$50,000,000, and this rate of progress, I make free to say, will be maintained for many years to come. While comparatively speaking, a youngster in years, our Canadian Mining Institute has done not a little towards promoting better mining legislation in Canada, and in bringing together the best elements of the mining profession in the various Provinces of the Dominion. Its meetings are well attended and it publishes annually a volume of proceedings, which will compare, I think, most favorably with any similar organization of its years and membership. I should be pleased to have applications for membership from any mining engineer who is not yet enrolled in our members. In conclusion I would move, Mr. Chairman, that this meeting of the members of the Canadian Mining Institute places on record our grateful appreciation of the hospitalities and courtesies which have been extended to ourselves and to our guests the American Institute of Mining Engineers on the present occasion. (Applause.)

DR. RAYMOND—I would like to second that motion on behalf of the American Institute of Mining Engineers which has certainly taken a large share of the entertainment and ought also to feel as it does a large share of the gratitude, and if gratitude be, as we have been told, a lively sense of favors yet to come then we ought to be doubly grateful in view of the week before us. (Applause.)

The motion was carried unanimously.

NEW MEMBERS.

The following having been recommended by the Council were elected members of the Canadian Mining Institute:—

- DR. E. GILPIN, jr., Mining Engineer,
Deputy Commissioner and Inspector of Mines, Halifax, N.S.
- PROF. CARR HARRIS, Civil Engineer,
Queen's University, Kingston, Ont.
- MR. WM. KOEHLER, Chemist and Metallurgist,
Dominion Copper and Nickel Co., Hamilton, Ont.
- MR. WILLIAM L. GRAMMER, Mining Engineer,
Dominion Iron and Steel Co., Bell Island, Newfoundland.
- MR. C. H. TOMPKINS, Mechanical Engineer,
American Diamond Rock Boring Co., New York.
- MR. E. P. JENNINGS, Mining Engineer,
Salt Lake City, Utah.
- MR. W. S. EDWARDS, Mining Engineer,
29 Broadway, New York.
- MR. A. E. NOBLE,
Anniston, Alabama.

MR. B. T. A. BELL—I would move that this meeting as a meeting of the Canadian Mining Institute do now adjourn, and as I understand the American Institute has some business to transact, perhaps the occasion would be appropriate for their meeting.