

The MINISTER OF THE INTERIOR.—My knowledge of the geology of Prince Edward Island is not very extensive. I can only say that I received a communication from the hon. gentleman (Mr. MacKinnon) asking that this work be done. I referred the matter to Dr. Bell, and he recommended the work, and it was done accordingly. As to the details, I think the hon. gentleman (Mr. Lefurgey) will have to talk that matter over when the hon. member for East Queen's is here.

Mr. LEFURGHEY. I would like to have the hon. minister bring down the report at as early a day as possible.

The MINISTER OF THE INTERIOR.—I will bring it down at once.

"To provide for the salary of a geologist to the international boundary survey from July 1, 1903, to June 30, 1904, \$2 000.

Mr. INGRAM.—Is there any report from this geologist?

The MINISTER OF THE INTERIOR.—Yes, he makes his report every year. It will be found embodied in the usual publications of the Survey.

Mr. INGRAM.—Is it in one of the two large volumes given to each member of the House?

The MINISTER OF THE INTERIOR.—Yes, the regular report of the Survey. Dr. Daly is the geologist, and it is to his report that I refer:

"To provide for plotting and compiling of surveys, plans, maps and utilizing field-notes, &c., (persons having technical or professional qualifications may be paid out of this vote at rates exceeding \$400 per annum, notwithstanding anything in the Civil Service Act, or any other Act), \$5,500."

Mr. BORDEN (Halifax).—There is an increase of \$1,500 in this item. Will the hon. gentleman please explain?

The MINISTER OF THE INTERIOR.—This vote is to enable us to catch up with work now in arrears. The maps were not got up as promptly as they ought to be. Since Dr. Bell took charge, to his credit be it said, he has endeavoured to get the work up to date, and this is a special vote to enable him to do so. He reports to me that this vote of \$5,500, being an increase of \$1,500 over that of 1902-3, is necessary because the vote of last year was insufficient to pay the salaries of draftsmen employed for the fiscal year. Five draftsmen are engaged, two at \$3.25 a day, two at \$3 a day, and one for eight months at \$2.75 a day, this officer being for the other four months engaged in field work and paid out of the general vote. This vote is practically to enable us to employ draftsmen and other technical officers to finish maps and plans so as to make available for the public the work the Survey has already done.

Mr. BORDEN (Halifax).—Is the work tabulated in any way by these men, or do they simply do the work from the field-notes?

The MINISTER OF THE INTERIOR.—They work from the field-notes of the technical officers.

Mr. BORDEN (Halifax).—The work the hon. gentleman (Hon. Mr. Sifton) spoke of a while ago would be further work in connection with analyzing the results and putting them in tabular form.

The MINISTER OF THE INTERIOR.—This is different.

Mr. BORDEN (Halifax).—I understand. But that work of tabulating has never been done before?

The MINISTER OF THE INTERIOR.—No. The only work of that kind that we have done has been the work that Dr. Barlow was doing last year. The work to be paid for by the vote now under discussion consists in putting in shape to be available the work of the technical officers in the field. The other work consists in collecting from the different reports of the Survey during the years it has been in existence the information which is embodied there, analyzing it, casting out what is obsolete, perhaps making re-examinations to supplement the information where it is defective, and putting the whole thing in shape where it will be practically valuable to the ordinary reader.

Mr. SPROULE.—If you are collecting this information, it can be done by these officers?

The MINISTER OF THE INTERIOR.—No. This is for technical office work necessary to make available the work done in the field.

Mr. SPROULE.—But that gives no information. The hon. minister employs two classes of men, and he proposes to take a vote of \$1,500 more than last year. That means that he will employ additional hands. What are those additional hands. What are those additional hands to work at?

The MINISTER OF THE INTERIOR.—When an officer goes into the field and makes an examination of a certain district he makes his field-notes of the work he does. When he comes back he extends those field-notes,

and then upon those field-notes are drawn the geological maps of the districts which he has surveyed. The preparation of the geological map is the work necessary in order to make available the work which the technical officer has done in the field. That is the foundation of the usefulness of the survey. That has been allowed to get behind, and we are trying to catch it up.

Mr. SPROULE.—How far are you behind now?

The MINISTER OF THE INTERIOR.—The large map of the western section has been got out, that of the eastern section we expect out very soon. The arrears in connection with the general work of the survey, I think, will probably be overtaken in a year.

NORTH STAR.

Mr. J. L. Parker, superintendent of the North Star Silver-Lead Mine at Kimberley, B. C., reports to shareholders as follows.—

The work outlined in last year's report has been carried out and the contacts of porphyry have been kept in touch with the result that quite an appreciable amount of ore has been found, both in No. 1 and No. 2 ore channels. Whilst much of the expenditure has been on what has been surface and shallow prospecting work, yet this has been the means of finding more ore, and also of enabling the decision to be made of the best points at which deeper development could be most advantageously commenced.

Two exploratory places have been started, each pregnant with possibilities, namely, the East Incline Shaft, which is following the porphyry contact, and the North Incline, which is following the No. 1 ore channel.

As outlined in last year's report, contacts in porphyry and country rock have been kept in sight by means of gravel drifts in the mine and surface cuts, and also adit tunnels and shallow rock development on the 60 ft. level.

Whilst not finding any large deposits, the work done during the year in conjunction with the previous work has fully demonstrated the fact that the porphyry contacts possess a most important bearing on the ore deposits, and judging from the length of the principal ore shoots, and the smaller ones, which in each case were lying in contact with the porphyry dike, some very close relation between the two must exist. Drill holes were therefore placed in such a position as to prove that these dykes probably extended to the deep, and a stringer of ore was also followed down, at the north end of the No. 1 ore body, by a shaft. The information thus gained has proved that the dyke extended to the deep and that there is a possibility of further development opening up ground favorable to the deposition of ore.

This shaft, which is known as the East Incline Shaft, is 200 feet deep, and drifts and crosscuts have been driven with the result that stringers of ore have been encountered in the contact, which, whilst low grade, averaging 8 to 10 oz. silver and 23 to 38% lead, show that there is a possibility of striking something better later on. This shaft will be sunk deeper as soon as the necessary buckets, which have been ordered, have arrived.

The North Incline has been driven 250 feet, and has followed the ore channel all this distance, and good stringers of ore have been met intermittently all the way down, which have assayed as high as 90 oz. silver and 70% lead.

The total amount of development work done during the year amounts to 12,166 feet of drifting, cross-cutting, sinking, raising and diamond drilling. The work from now on will be more confined and not so scattered as last year, and will I hope be encouraging. The theory that the ore deposits were only to be found on the surface, or rather that there was small chance to find any at depth, has been in my opinion proved to be too early a snapshot judgment.

During the year 3,426 tons of ore have been shipped, the assay value of which averages 29.5 oz. silver and 36.2% lead.

In conclusion, I may state that the conditions are now more encouraging than at this time last year, and I have certainly not lost hope of more ore being found as the development work continues.

TYEE COPPER.

Mr. E. C. Musgrave, Superintendent of the Tyee Mine, Mount Sicker, gives some interesting figures of costs at this mine during the past year's operations of the Company.

The total amount of development work done during the year has been: drifting 1,095 ft.; cross-cutting, 511 ft.; sinking, 193 ft.; and upraising,