

it is also higher-lying than the ground occupied by the copper-bearing rocks or the horizontal red sandstone. There is very little agricultural land of value.

3. In what section of country did you find the existence of copper, iron, or other economic minerals, and to what extent?—I observed copper in all the formations (with the exception of the horizontal sandstone), and iron principally in the Huronian rocks. The occurrences of these minerals are described in a Report addressed by me to Sir Wm. E. Logan, dated 28th April, 1866, to which I beg to refer.

4. Do you consider that copper exists in sufficient quantities to pay the expenses of working the mines, and if so, your opinion as to the most available means of developing the resources of the copper region?—I think that copper may be found in sufficient quantity to pay, with careful and economical management. This would, I think, be the case with the Begley Mine, although large profits could not be expected. The ores of the copper-bearing rocks would be best developed by presenting inducements to South Shore explorers to take up the matter. The enactment of a mining law similar to that of Norway, but with modifications, would, in my opinion, lead to the discovery of valuable mines. I shall refer to such a law further on.

5. The same question with respect to iron?—The Hemalite Mines of Bachewahnung Bay and Gros Cap Michipicoten, so far as they have yet been developed, will not pay, in my opinion. Still, I believe that in that neighborhood and in other Huronian districts valuable iron mines will yet be discovered. The proposed mining law would also apply in this case.

6. The same question with respect to other minerals?—The agates found in various beds of the copper-bearing rocks might, perhaps, be exported to Europe (Oberstein in Germany) with profit, in the same manner as the agates of Brazil. The mining law would come in here also.

7. At what points are mining operations now going on, so far as you know, and with what success?—I am unaware as to what mining is being done on Lake Superior this year. With regard to 1865, the information is given in my Report.

8. What are the facilities for reaching the mineral deposits on the coast, and in the interior?—The Steamer *Algoma* usually sails from Sault St. Marie up the lake every fortnight, but it touches only at Michipicoten Harbour, Isle St. Ignace and Fort William. The best means of getting into the interior is by a birch canoe. Facilities for the transport of ores there are worse.

9. Are you acquainted with mining operations on the South Shore, or American side of the lakes?—Yes; and have referred to them in a paper contributed to the *Canadian Naturalist*, a proof of which accompanies these answers.*

10. Please inform the Committee as to the character and extent of the mines there when you visited that locality?—See the paper just mentioned, especially towards the end.

11. Are you acquainted with the system of granting lands on the South Shore,—if so, please state its leading features?—Any one on making application for unallotted lands can obtain them without delay, on account of their having been previously laid out and surveyed.

12. What is your opinion of the American system as compared with ours?—It is preferable, because, on our side, the applicant has to get a survey made himself.

13. Have you any suggestions to offer the Committee for the improvement of the land-granting system in the mineral region,—if so, please state them?—I would suggest the passing of a law by which any explorer, having discovered valuable minerals and intimated his discovery to an Inspector of Mines, should receive papers putting him in possession for twelve months, and as long thereafter as he continued to work the mines discovered, subject to a royalty to the Crown of 1-25th, or 4 per cent. of the produce. In the event of work being stopped, the location to fall free again. This is the Norwegian law, and wild land belonging to individuals is subject to it.

14. Have you had any experience in mining operations on the North Side of Lakes Superior and Huron,—if so, where, and to what extent?—No.

15.—Is it your opinion, from the experience you have had, that mining for iron can be carried on to advantage in that section of country?—See question already answered.

16.—Have you met with any copper veins during your operations?—See my Report to Sir W. E. Logan.

* See document marked A at the end of this Evidence.