

MINING IN THE EASTERN TOWNSHIPS.—Professor A. L. Fleury, of Philadelphia, writes to the *Sherbrooke Gazette*, as follows:—Having heard so many conflicting reports on the Canadian Mines, and being prompted by some of my friends to let the public know through your paper, what I have seen and heard in this my second visit as professional Geologist and Chemist, to this section of Canada, I take the liberty of handing to you these lines for publication. They are only a rapid sketch, but may, perhaps, serve to clear up some doubts and correct some errors.

In my visit to the several mines, I was accompanied by Mr. G. W. Davis, late Superintendent of one of our best copper mines in the United States, and several other highly respectable gentlemen from different sections of that country, who like myself enjoyed this interesting trip.

My attention was first called to the property of the Hartford Mining and Smelting Company, located near the Mississippi river, about six miles from Lennoxville. I found there a spacious building, just erected, for smelting purposes, with four furnaces partly completed. About 50 rods above, on the brook an adit is being driven on a band of slate containing iron pyrites (the miner's so called munitic,) well disseminated throughout, some 8 to 12 feet. Two shafts are now being sunk on this property, consisting of about 400 acres. All about the mine shows vigorous work and able direction. From there I proceeded to the adjoining mine, called "The Lower Canada," and by the kindness of Mr. J. W. Wiswell, its present manager, I was shown in detail one of the best developed, and well worked copper mines that I have ever seen. The shafts, five in number, are from 60 to 100 feet deep, with immense drifts and stopes. The ore is of excellent character (sulphurets of copper, averaging 5 per cent. of copper,) and works from bands of from 8 to 12 feet in thickness. Mr. Wiswell deserves all praise for this excellent work,—he is what we may say "a thorough miner," fearless and enterprising. The nature of the ore becomes richer in greater depth, because the frequent appearance of native copper in spangles, and the more compact ores in well defined veins or bands are indications of this interesting and important feature.

We then proceeded to the Capel mine, which adjoins the former on the north-east, and works on the same land. Better stoping and timbering on an incline of about 30 degrees I have never seen, and much praise for this work is due to the Captain, (whose name, I believe is Bennett,) who, I am informed so ingeniously devised this speedy method of obtaining large quantities of ore. The outside works, dressing, &c., correspond with the fine work at the mine. The ore is of very fine quality. It is being concentrated into 40 per cent. matts at the North American Smelting Company's Works, located at the base of the mountain. Messrs. Stanley and Son kindly showed me all of interest about their works, which seem to me well arranged for the purpose. I recommended the utilisation of the slag which would by proper treatment give about 40 per cent. of good iron. From there I went to Lennoxville, to visit the smelting works of the Lower Canada Mine. They are well conducted and in successful operation. The matt, I learn, is concentrated to from 30 to 50 per cent., and from nearly all works forwarded to Liverpool, where the price paid in gold is nearly the same as that now paid in greenbacks in the U. S. I trust that the time is not far distant when these copper acres shall (as is now done in Russia by General Kachette) be fully refined and smelted near the mines. It is time to emancipate our American works from this dependency on Swansea.

My next visit was to the Suffield Gold and Copper Mining Company's property, under the direct superintendence of General H. P. Adams. As this mine will speedily acquire all over the world, I will give here what I was able to learn of its history. It was bought in June, 1866, and work was commenced in September of the same year, on what they then called Copper Shaft No. 1. Small amounts of native silver as well as gold, had been found from the commencement, and the ore is said to have assayed a sufficient amount of silver to pay for its working. However at a depth of 135 feet, recently a well defined silver vein was struck, running close to the side of the copper vein. Assays of this ore were made at the United States Assay Office, by Professor Torrey, and also by Professor Brush, at Yale College, giving from average samples of ore (not picked) a result of from \$75 to \$150 per ton of silver. Picked samples I am informed yielded at the rate of \$8,000 of silver to the ore. I descended into the shaft and found both the

copper as well as the silver in easily traced veins. The copper ore (of which about 1500 tons have already been mined) seems to be at least 7 per cent., while the silver ore, in a vein of about 4 1/2 feet in width and assayed as above mentioned, is now being mined from 125 feet downward. Drifts are already driven and vigorously worked on both sides of the veins. This ore is of a very peculiar kind. Sulphurets of iron and copper, copper pyrites, zinct blende, together with sulphuret of silver with frequent threads and leaves of native silver beautifully crystallized in albite, are intimately mingled together forming, an ore until now only known to exist in Mexico. Near the mine, which is now energetically worked, stands a compact, handsome building, destined for smelting the ore, with four furnaces near completion. I learn that this company was organized in September of last year, under the laws of the state of Connecticut, with a fully paid up capital of \$150,000. The office of the company is at Suffield, Conn. H. E. Day, of Hartford, President; D. W. Morton, Secretary; and Sam'l Austin, Treasurer. This mine does honor to the country, and shows how much can be done in a short time with energy and proper business talent. I wish I could say the same of the mines in the United States. Most of them are more worked for selling the stock, and outside speculation, than for developing the wealth of the country to the loss and often ruin of the stockholders. These mines must be seen to be fully appreciated. My last visit was the Golconda Co's property, only three quarters of a mile from the Suffield works, which are only about 7 miles from Sherbrooke. This Company is now superintended by one of the principal owners, under whose able and judicious management it now gives signs of a more active and well organized life. In the mill, in addition to the old battery of stamps, there had been recently placed some of Hugh's atmospheric crushers. These crushers seem to work well, and, as I am informed, give very satisfactory results. The amalgamation is performed by the well known barrel process, however, with some important improvements.

I visited several shafts from which rich quartz is being taken out. The veins are all well defined and of unusual width. Comparing these with the now so successfully worked quartz veins of the New Hampshire mines, (the Lisbon and Lyman mines) were at a depth of about 30 feet, free gold can be seen on every side of the shaft; I feel fully convinced that the Golconda mines pushed to greater depth will soon show more startling results.

I witnessed several washings from the alluvial soil, some six feet from the surface, and extending over at least 100 acres of ground; in every instance free gold appeared accompanied by quantities of black sand.

If a new mill, containing the latest improvements, with desulphurising and smelting works, were erected, with a capacity of working up 500 tons of rock per day, this Company would occupy the first position in the northern hemisphere.

ONTARIO GOLD REGION.—Report ending the 22nd day of August, 1867, from the office of Loughhead, Hurd & Co., of assays made by Dr. Otway, F. R. S.

Cariboo mine—Lot 29, 4th con., Madoc.
Yield per ton: Gold 16 oz. 13 dwt. 8 grs.
Value..... \$333 00

Lot 19, 5th con., Tudor. Yield per ton:
Gold 4 oz. 3 dwts. Value..... 83 00

Lot 17, 10th con., Marmora. Yield per ton:
Gold 8 oz. 6 dwt., 6 grs. Value..... 133 12

Bay State mine—Lot 12, 8th con., Madoc.
Yield per ton: Gold 25 oz.—value \$500.
Silver \$31 per ton. Total per ton..... 531 00

Madoc Gold Mining Co., of Toronto—Lot 17, 7th con., Madoc. Yield per ton:
Gold 16 oz. 13 dwt. 8 grs.—value 333 33.
Silver \$80 per ton. Total per ton..... 413 33

Lot 17, con. A, Township of Galway. (Argentiferous Galena.) Yield per ton:
Sulphur 33 per cent.; Silver Lead 67 per cent.; Silver 16 oz. 13 dwt. 8 grs. Value per ton: Silver \$35 00; Lead \$66 66; Sulphur \$10. Total value per ton..... 111 68

Lot 20, 4th con. Kildare. Yield per ton:
Gold 4 oz. 3 dwt. 8 grs. with a trace of silver. Value per ton..... 83 33

Lot 3, 2nd con. Tudor. Argentiferous Galena.) Yield per ton: Lead 78 per cent. Silver 16 oz. 3 dwt. 8 grs. Value..... 34 50

Cameron Mining Co.—Lot 18, 8th con. Madoc. Yield per ton: Gold 2 oz. 3 dwt. 6 grs. Value..... 41 66

Dr. Otway has located shafts upon the following Lots: Lot 19, 3rd con., Madoc—W. G. Beach,

Quinte Gold Mining Co. Lot 6, 10th con., Tudor—Ottawa Mining Co., Mr. E. Miles. Lot 23, 10th con., Madoc—Upper & Co., Dunnville, Lot 18, 5th con., Madoc—Belleville Mining Co., McNider, Lot 25, 4th con., Madoc—Dr. Fraser, Prescott.

I certify that the above Report made by Loughhead, Hurd & Co., of analyses made by me for that office, is correct in every particular.

(Signed,) W. B. OTWAY, M.D., &c.

THE MINERAL WEALTH OF THE UNITED KINGDOM.—The "Mineral Statistics" for 1866, will, in a few days, be issued from the Mining Record Office in the Museum of Practical Geology. In the "Notice" by Sir Roderick Murchison, especial attention is drawn to "the continual increase in the production of coal, notwithstanding the depression which has been felt throughout the year in many manufactures, and especially in that of iron." This is really a point worthy of close attention. The quantity of coals produced in each of the last four years has been as follows:—

	Tons.	Tons.
1863	88,292,515	
1864	92,787,873	increase 4,495,358
1865	98,150,887	" 5,127,145
1866	101,630,643	" 3,479,956

We find upon examination that our exportation of coals in 1866 was 782,633 tons in excess of that of 1865. We have, therefore, to account for two millions and a half tons, which have been consumed in this country during the period of extreme manufacturing depression, in excess of the previous year. These returns inform us that there was a falling off in the manufacture of pig iron to the extent of more than 290,000 tons, the production of which would have consumed nearly a million tons of coal. We find, however, upon examination, that there has been a uniformly increased consumption of coals over every part of the country, all the returns of "railway distribution" being considerably in excess of former years. To our steadily increasing population, and to the enlarged means of a great majority of the people, enabling them to enjoy more of the comforts of life, may be referred this increase in the consumption of coal, at a period when manufacturing depression would lead us to expect a contrary result.

The large quantity of coal raised in 1866 was obtained from 3188 collieries, and the great development of coal-mining in this kingdom is shown by the fact that in 1856 there were but 2815 collieries in active operation.

Iron.—The quantity of iron ore produced in this country last year was 9,665,012 tons. This was smelted in 613 blast furnaces, and of pig iron we produced:—

	Tons.
In England	2,576,928
In Wales	959,123
In Scotland	994,060

Total of Great Britain..... 4,530,061

Of this pig iron we exported 497,138 tons, reserving more than four million tons for conversion into merchant iron. These returns inform us that there were 256 ironworks in activity in 1866, in which there were 6239 puddling furnaces and 826 rolling mills.

Copper.—There were 174 mines in these islands producing and selling copper ore in 1866. These produced of copper ore 1,803,378 tons, valued at £759,118, from which we obtained metallic copper 11,153 tons, valued at £1,019,168. This shows a considerable falling off in the produce of copper mines. During the year there was an increase of more than 7000 tons in the copper ore and regulus imported; of this Chili alone sent us nearly 56,000 tons.

Lead and Silver.—There has been but little variation in the production of these metals from our mines. In 1865 our lead mines gave us 90,452 tons of lead ore, yielding 67,181 tons of lead and 724,856 ounces of silver. The silver given in 1865, it is explained, is in excess of the real quantity obtained, many mines having returned the silver contained in the ore, which was, not eventually separated by the smelter, since, when the lead contains less than four ounces to the ton, it does not pay for separation. The quantity given this year is the quantity actually produced, as nearly as this can be ascertained.

The total value of the mineral productions for the year 1866 will be, according to Mr. Robert Hunt's return, £41,712,330.

We noticed a short time since an ingot of gold brought from the "Palmerston" mine, Sherbrooke by Newell Snow, Esq., the manager, which weighed 605 ounces and which was the product of thirty-two men. We