

to admit of our making an intelligent report of their probable value. The quality is of high grade but, until more work has been done in the way of opening up the deposits, the quantity of mineral will remain a matter for speculation. As capitalists usually like to know what they are purchasing, and as it is satisfactory for owners to have some idea of the value of the property they are offering for sale, we would strongly recommend them to expend a small sum of money in preparing their Asbestos deposits for inspection.

We will at all times be pleased to receive information concerning the discovery of Asbestos in any part of Canada and to render every facility in our power to open up negotiations between owners and those seeking investment in properties, with a view to the speedy development of mines. A recent report on the deposit, referred to in our last number, occurring on S $\frac{1}{2}$  of Lot 11, in the 8th Range of Templeton, speaks of the property as one of considerable value.

It is reported from Montreal that Mr. L. A. Senecal has purchased an Asbestos property in the Eastern Townships, from Mr. Charles Lionais, for \$45,000. This is a large sum, and, if the report be true, the property referred to should be one of considerable extent and unusually rich in mineral.

### MICA.

For many years it has been a grave question in the minds of prospectors and others as to whether any of the Mica deposits, in the formation contiguous to the Ottawa Valley, would prove to be of merchantable value. Recent discoveries have settled this question in a most satisfactory manner; specimens sent to us from several localities show that, not many miles from this city, there exists extensive deposits of Mica, of a very excellent quality, as regards clearness and the size of the sheets to be obtained, and experiments prove it to be capable of withstanding the greatest degree of heat without showing signs of crepitation. That Mica mining will, at an early date, be numbered among the many important industries of this section of the Dominion of Canada is now beyond a doubt, and we strongly advise farmers and others throughout the country, who have already observed, or may hereafter discover this mineral on their property, to bring, or send by mail, to the office of the MINING REVIEW, fair average specimens, with a description of the rock with which it is associated, the name of Township and the number of Lot and Range in which the deposit occurs, mentioning also the probable size of the sheets that can be taken out, in order that we may make a clear and unprejudiced report

on same. We have had many inquiries lately from our correspondents about this mineral and desire to put ourselves in a position to give the public reliable information on the subject.

### IRON.

Valuable discoveries of Iron Ore are being brought to our notice almost daily. Specimens sent to us quite recently from the Township of Ba. got prove to be of unusual purity, it is a magnetic ore of high grade and free from titanium, with an almost imperceptible trace of phosphorus, not sufficient to depreciate the value of the ore in the smallest degree. Specimens of Red Hematite have also been sent to us from the same district, and in the next number of the REVIEW will be found complete analyses of the samples in our possession.

It is to be hoped that the manufacturing of pig-iron at our Canadian mines may be looked for in the near future. A movement is on foot to induce the Dominion Government to increase the bounty they have offered to pay on home manufactured "pig." A deputation of influential men have already waited on Sir Leonard Tilley and have framed their arguments, in favour of the proposed increase, in most forcible terms. The matter will receive the favourable consideration of the Government, but no definite action can be taken until the next Session of Parliament.

A New York writer, in calling attention to the vast number of Iron deposits in Canada, says there is every probability of a heavy rivalry between Canada and the United States in the manufacture of this metal, not only on account of the remarkably excellent quality of the Canadian metal, but on account of the low prices of labour and material employed in its production; and the writer exemplifies its quality from a test made by the Superintendent of the West Point foundry, who reports a square inch of Canadian iron resisting 20,000 lbs. more pressure than that from the most popular works in the United States. The same iron, he says, has been manufactured into beautiful specimens of steel.

### IRON PYRITES.

A great quantity and variety of Iron Pyrites is distributed throughout the Ottawa district, in fact it is more or less associated with every other mineral yet discovered, but not in sufficiently paying quantity to warrant its being mined for merchantable purposes. The only well defined vein of any size, that we know of, occurs within

half a mile of the Ottawa River. The vein, as it appeared on the surface, measured about two inches in width and can be traced for some four or five acres in length. An opening has been made and a shaft sunk forty feet on the vein, at which depth it has increased to six feet in width, and shows signs of widening at the same ratio as it descends. There has been about 300 tons of Pyrites taken from this shaft, the analysis of which shows about 1,000 lbs. of sulphur per ton. In the very heart of the hard granite rock in which the mineral occurs is frequently to be found a conglomeration of a bluish clayey substance, of a soft soapy consistency, and which hardens when exposed to the weather; it appears to be impregnated with sulphur, and that it should be met with in the heart of this hard solid rock caused some surprise to the inexperienced miners engaged in the work. This property has been placed for sale with the publishers of the REVIEW.

### COPPER MINING IN NEWFOUNDLAND.

Copper mining has become, during the past few years, a source of wealth in the Island of Newfoundland, and the day having gone by when speculators and others were exercised by the copper fever, the industry has reached a solid basis and mining operations are now carried on with systematic activity. The three most active mines are the "Tilt Cove," "Bett's Cove" and "Little Bay." The "Tilt Cove" was the first mine opened and up to the close of 1879 its owners had exported ore to the value of over one and a half million of dollars, the ore averaging about \$30 per ton. From 1875 to 1879 nearly three million dollars worth of ore was exported from "Bett's Cove" mine, averaging about \$24 per ton, and the total value of the ore shipped from the Island previous to the close of 1879 exceeded four and a half millions of dollars. The "Little Bay" mine is said to be improving as greater depth is reached, the ore increasing in quantity and yielding a greater proportion of metallic copper as mining operations proceed. It was opened in 1878, and up to the close of 1881 sixty-six thousand five hundred tons of ore had been exported at an approximate value of \$1,750,000.

The export of copper ore from Newfoundland during the past three years, viz: 1880, '81 and '82 has reached an average value of nearly half a million annually, and, though the statistical returns of work done during last year have not yet reached us, we are prepared to hear of a considerable increase in this year's exportation.

### NOTES ON COPPER MINES.

THE COPPER MINES OF CORNWALL (England), which have been worked for centuries, continue to be worked at a handsome profit; the average yield of the ore is 6 $\frac{1}{2}$  per cent, and the veins are from 3 inches to 4 feet wide.

THE DEVON GREAT CONSOLIDATED COPPER MINING COMPANY, called the "Devon Consols," which commenced operations in 1841, was £1 per share then paid in, and steadily continued work. In 1856 the large amount of £358 had been paid in dividends on each share. In 1856 the £1 shares sold for £4. In 1881 the mine was paying monthly dividends and the shares were quoted at £410. The mine yields 8 $\frac{1}{2}$  per cent; the veins are 4 inches to 6 feet wide.

THE WHEAL BULLER COPPER MINE.—The par value of the shares when the company was first organized, was £5; the stock has steadily increased in value, and in 1881 was worth £1,025 per share.

THE CAPELTON COPPER MINE near Sherbrook, in the Province of Quebec, was said to pay a profit of \$45,000 annually on the capital invested, though the average yield of the ore is but 4 per cent.

The copper mines of Sweden were worked at a profit, notwithstanding the ore yields but 1 or 1 $\frac{1}{2}$  per cent and a little silver.

THE NEWFOUNDLAND COPPER MINES, which are considered very valuable, yield (according to the return of sales at Swansea) 6 $\frac{1}{2}$  per cent.

THE CALUMET AND HECLA COPPER MINE, on the south side of Lake Superior, yielding 4 $\frac{1}{2}$  per cent of metal, has been worked for nearly a quarter of a century; the par value of shares is \$25; to-day they are worth \$238 and the amount paid in dividends has reached \$22,850,000. The estimated value of the metal produced in 1879, was \$6,000,000. The current value of the mine is \$24,000,000.

THE AUSTIN MINE, on the shore of Echo Lake, County of Algoma, Province of Ontario, according to a corroborated report, has a vein of yellow sulphuret of copper ore, trending the entire length of the company's property, varying from 25 inches to 35 feet in width. The vein is enormously rich, yielding from 10 to 20 per cent. of metallic copper, as per the following assays: one made by an analytical chemist in Boston gave 15 $\frac{3}{4}$  per cent. A second made by Christian Hoffman Esq., chemist to the Geological Survey of Canada, yielded 18 per cent., and the average of the different assays made by Professor George Baptie, Esq., M.A., B.A., the Normal School at Ottawa, produced 22 $\frac{1}{2}$  per cent. of metal. The average ore, at the depth of 40 feet in the shaft, yields 10 to 12 per cent. of metal, and yet this valuable property is allowed to remain idle. Can this be explained?