

river it has been found to extend over large portions of Sections 5 and 6, comprising a length of about one and-a-half miles, with an average width of over one-half mile, and rising from fifty to one hundred and fifty feet. What the ultimate value of these huge deposits may prove to be, can only be fully established by more minute examination and practical tests; but from the specimens we have seen, there is hardly a question but that they will prove of the highest value, in location, they being only 30 miles from the lake, and in the quality of ore they contain; while they will be easily opened and cheaply mined, as the railroad within one year will pass up the valley of the Esconawba, directly between them. But while iron is thus being found, and roads constructed to bring it to the lake—many more vessels must also be built, or it will be wholly out of the question to place it in the lower lake markets. Let there be a corresponding amount of work done in this direction.

#### Extensive Copper Mines.

One of the proprietors, Mr. Dean, has lately returned from a visit to the Lake Copper Mines, and brings a report up to Saturday afternoon last. From him we learn that the veins which we spoke of a fortnight ago, have quite equalled the expectations which were then entertained; they have gone down fourteen feet, on what was then the eastern vein, and the miner in charge estimates that in the last fathom he has taken out of the vein a ton of ore,—about nineteen-twentieths being purple,—sixty per cent,—and one-twentieth yellow, or thirty-three per cent ore.

He has also opened another vein, on the eastern slope of the ridge, of the same kind of ore, four feet and a half wide, and clearly traced two other veins below this last, on the same ridge, so that the matter stands thus,—a little below the top of the ridge on the west side they have a vein four feet and a half wide; twelve feet east of this, a vein three feet and a half wide, and two feet east of the second a vein five feet wide. This brings them to the eastern slope, and down this thirty feet is the one lately opened four feet and a half wide, while between this last and the bottom of the ridge are two veins more, not yet explored.

Even to a person not versed in mining, the advantage of parallel veins close together, and likely to come into one, in depth, will at once be apparent, and we fancy that this one ridge gives no slight indication of the existence of copper in the neighbourhood.

But by far the greatest development was made on Friday and Saturday last; we give it in the words of the superintendent miner. We quote from his report made on Saturday afternoon:—

"I commenced yesterday morning to strip and open a vein on the same lot as above, but on the east side of the river, about a quarter of a mile nearly due east from the other.

"The vein comes to the top of the ridge, and we have stripped and blasted about fourteen feet from North to South, (the direction of the vein,) and find it extends from East to West across the ridge *twenty-seven feet* from wall to wall; the walls are slate, and the veinstone a very soft sand stone with occasionally quartz; *the whole rock is full of yellow*

*copper ore* in small veins and finely disseminated, with occasionally lodes of two or three inches, we have saved all the rock, as we have taken out nothing here unfit for working; we find it gets richer as we go down; it drills very easily, so much so that we are using drills we began with yesterday without sharpening.

"I estimate that there is thirty pounds of ore in every hundred pounds of rock in this vein, the ore is all yellow."

This settles the question as to the ore existing in concentrated quantities, and the fact that it appears at innumerable places over a large extent of land leaves no doubt that a mineral region of boundless and inexhaustible wealth exists just behind us, which can no longer remain unworked.

From Tudor we learn that Mr. Chard has "brought to grass" some eight or ten tons of lead by the labor of two or three men, and that his vein is constantly increasing, and a vein equally good has been stumbled upon near Mumby's Mill, just in the rear of Madoc.—*Hastings Chronicle*.

#### Photography on Stone.

A curious communication was recently sent in to the Academy of Sciences by M. Morvan, in which he describes a method of his for obtaining direct photographic impressions upon stone, and which he can afterwards print off. He first gives the stone a coating, which he applies in the dark, of a varnish composed of albumen and bi-chromate of ammoniac. Upon this he lays the right side of the image to be reproduced, whether it be on glass, canvas, or paper, provided it be somewhat transparent. This done, he exposes the whole to the action of light, for a space of time varying between thirty seconds and three minutes if in the sun, and between ten and twenty-five minutes if in the shade. He then takes off the original image, and washes his stone, first with soap and water, and then with pure water only, and immediately after inks it with the usual linking roller. The image is already fixed, for it begins to show itself in black on a white ground. He now applies gum water, lets the stone dry, which is done in a few minutes, and the operation is complete. Copies may at once be struck off by the common lithographic process.

#### A Tremendous Shock.

Dr. Jerome Kidder, of New York, has lately enjoyed the happiness of receiving, with perfect safety, a shock of electricity sufficient, according to the previous ideas of scientific people, to kill fifty men. The experiment took place at the Cooper Institute, under the direction of the eminent Professor Vander Wede, of that institution. The battery consisted of six of the large Bunsen cups and a Ruhmkorff coil, of sixteen miles of wire, made by E. S. Ritchie, of Boston—one of the best makers in the country. A most formidable battery truly! The *New York Tribune* states that Dr. Kidder had observed that the longer the wire was used the greater the tension, and consequently the greater the ease with which the current is conducted through the body. Hence he argued that the enormous length of the wire in the Ruhmkorff coil must render the current so highly conductible that, in spite of its great power, it would not lacerate the tissues of the body. He staked his life on his opinion and won it.