# REPORT

OF

# THE SECRETARY OF WAR,

COMMUNICATING

(In compliance with a resolution of the Senate)

*A copy of a report of Walter Cunningham, late mineral agent on Lake Superior.*

February 11, 1845.

Read.

February 13, 1845.

Ordered to be printed.

War Department, *February* 11, 1845.

Sir: In answer to a resolution of the Senate of the United States, of the 7th instant, requiring the Secretary of War "to send to the Senate any communication or report, recently received at the department, from General W. Cunningham, late mineral agent, containing information relative to the copper mineral of Lake Superior, I transmit, herewith, a report from the officer in charge of the Ordnance bureau, with a copy of the communication referred to in the resolution.

Very respectfully, your most obedient servant,

WILLIAM WILKINS,
*Secretary of War.*

Hon. W. P. Mangum,
*President of the Senate United States*

Ordnance Office,
*Washington, February* 10, 1845.

Sir: I have the honor to enclose, herewith, a copy of a report recently received from Walter Cunningham, late mineral agent on Lake Superior, called for by a resolution of the Senate of the 7th instant.

The resolution is herewith returned.

With great respect, I am, sir, your obedient servant,

G. TALCOTT,
*Lieutenant Colonel of Ordnance.*

Hon. William Wilkins,
*Secretary of War.*

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

GALENA, *January* 8, 1845.

SIR: By the treaty made by Robert Stuart, Esq., with the Chippewa Indians, in October, 1842, it was provided, that "the Indians residing on the mineral district shall be subject to removal therefrom at the pleasure of the President of the United States."

The following is the second article of my instructions of the 13th April, 1843, issued by the Secretary of War:

"That the portion of the Chippewa country which the Government designs should be treated as mineral lands should be designated according to the terms of the treaty ceding them, and that permits or leases should be granted to all orderly and responsible citizens for working the same, in such manner as to prevent conflicts and collisions, and to secure to the Government an adequate, reasonable, and certain rent, so that there shall be no lawless scenes of violence, disorder, or confusion, growing out of the want of system in the charge of those lands and the mineral they contain."

In pursuance of these instructions, and of those from yourself of the 19th June last, I proceeded to take measures to define the extent of the mineral lands by the most careful observations; and I would state, as the result of these observations, that the boundaries of the "mineral district of Lake Superior" may be fixed as follows: Commencing at the entrance of the Chocolate river into Lake Superior, following up the course of the said river twenty miles; thence, in a due west course, to the western boundary line of the country ceded by the above treaty. The whole country lying north of this east and west line, (which is the south line of the mineral district,) including all the islands north of it, I declare to be mineral land, and ought to be treated as such.

The difficulties of examining so vast a country with that care which is necessary to form a correct judgment of its mineral resources are great, and must be a work of time and labor; but, from the examinations made, it may be fairly inferred, without romance or extravagance, that the country abounds in mineral wealth in a far greater degree than any other portion of the United States.

In the vicinity of Death river, important discoveries of lead ore have been made. It is supposed that this is the commencement of what is called the great "lead range," which extends southwesterly, passing through Wisconsin, Illinois, Iowa, and terminates in Missouri.

The most important discoveries of veins of copper ore yet made are in the vicinity of Eagle river and Copper harbor, on Point Keweena, some of which, in each place, are now being worked, and considerable quantities of ore have been raised.

Two associations of respectable men, having leases, have been formed, possessed of capital and energy, who are now pushing their labors with much force, with a view to prove the value of their mines, while many other individuals are making other preparations to do likewise.

Some of the ores found at these places are remarkable for their richness. Silver is found interspersed with copper at Eagle river; and from a careful analysis, by Dr. Jackson, of Boston, the ore found at that place was ascertained to be worth $130 per ton; there was found to be, in value, a greater amount of silver than copper.

At Copper harbor, a vein of copper ore has been long known as the Green rock, from which a specimen of black oxide has been taken, yield-

ing 51.8 of pure copper. Another vein of black oxide of copper, situated about one hundred yards east of the sutler's store at Fort Wilkins, has recently been discovered, which has already been traced north and south fifty feet, and which is in its average width about twenty inches, presenting itself at all points within two feet of the surface. The ore consists of the finest description of compact black oxide of copper, of specific gravity about 7, and is quite free from impurities.

Near the Montreal and Ontonagon rivers, and upon Isle Royale, specimens of gray copper, sulphuret, blue and green carbonate of copper, have been taken by the miners and explorers, which I have had analyzed, and which yielded from 20 to 40 per cent. of pure copper.

Specimens of pure silver have been taken from a number of places in former years, weighing several ounces, but they have not been traced to any regular vein.

Specimens of pure or native copper, weighing from ten to five hundred pounds, are not unfrequently met with; the largest yet found here, or in the world, is the celebrated "copper rock" of the Ontonagon, weighing three thousand seven hundred and eight pounds, which was last year sent to the department at Washington.

In the report of Dr. Houghton, made to the Legislature of Michigan in 1841, he says: "Of those specimens of copper ores which have been taken from mineral veins of the upper peninsula, which have been examined, embracing nearly the whole, (and not including the native copper,) the per cent. of pure metal ranges from 9.5 to 51.72, and the average of pure metal is 21.10. Associated with some of these ores, I have detected a metal, the character of which remains as yet undetermined."

Dr. Jackson, in analyzing some specimens of copper ore which I sent him last year, found that they contained particles of pure gold. From one piece he took 40 per cent. of pure copper, and sufficient gold to be equal in value to 40 per cent. more, which made its value equal to 80 per cent. Curiosity or enterprise has been little excited to search for either gold or silver, and no accurate opinion can be formed of their extent or abundance.

A great variety of specimens of the different kinds of valuable ores found in this country have been collected by me, at much expense and trouble, and forwarded to the War Department and to the National Institute at Washington. These specimens were taken from one hundred and thirty different veins or lodes, which have been discovered.

The Lake Superior country is capable of sustaining a dense population. The whole extent of land ceded by the before-mentioned treaty is equal to about twenty-five thousand square miles; one-half of this land is equal to the average of the State of Michigan. It abounds in fine streams and water privileges, and the character of the timber is that of the western part of the State of New York, with the exception of hickory and chestnut. The soil is excellent for the growing of wheat, and Indian corn comes to maturity, and it is a remarkably fine grazing country. Farmers would find a ready sale for all the produce they could raise, and at high prices; and they could raise it with as much ease as in western New York.

The fisheries bid fair to become, at some future time, a matter of very great commercial importance.

A comparatively small amount of capital, expended by judicious and industrious men, having experience in fishing, would produce one hundred thousand barrels per annum of sisquette, and salmon trout, and white

fish, which now command from six to eight dollars per barrel in all the principal towns on the lower lakes.

Lake Superior is about four hundred and eighty miles in length and about eighty miles in width, with about sixteen hundred miles of coast. Bordering this lake, the United States own some twenty millions of acres of lands. Navigable communication is now cut off from the lower lakes, by the falls or rapids in the St. Mary's river. A ship canal of less than one mile in length might be constructed around these falls, at an estimated cost of four hundred and forty thousand dollars.

The white population of this vast country is now about two thousand souls; and there are about four thousand Indians, of the most peaceable character. It is capable of supporting millions. Were this canal constructed, this country would soon be settled, by an enlightened, industrious, and enterprising people.

I would beg leave to suggest, that a road be cut from Fort Wilkins to Fort Howard, at Green Bay, a distance not exceeding two hundred miles. It would pass through a good district of country, and it would be a great inducement to its settlement; and the road might be constructed at a comparatively small expense. By this means, the garrison at Fort Wilkins can always be supplied with provisions, in the winter, in case of an emergency; and it would afford a good route for the conveyance of the mail, which is at this time indispensable.

After passing through and examining the mineral lands in Wisconsin, I arrived at this place on the 10th November last, and have since been occupied in examining the mines of this State and Iowa.

I find there has been an increase of labor this year, on all the mines in this mineral district, of at least 25 per cent., with proportional increase of capital.

The quantity of lead shipped from this country in 1843 was forty millions of pounds. The average price of lead was $2 50 per hundred pounds. In the year 1844, the quantity shipped was forty-two millions. The average price, at this place, was $2 90 per hundred pounds.

From the many very important discoveries made the last year, from the large increase of labor and capital employed, the advanced and increasing price of lead, and from the past general good success of the miners, it is estimated that the product of these mines in 1845 will exceed forty-six millions of pounds.

These mineral lands are very valuable indeed, and they are rapidly increasing in value, and will continue to increase for years to come; and although the business of mining, as it is termed, is increasing, it is yet in its infancy; for the work or business done thus far has been conducted quite superficially, there being but one steam engine in use in this mineral district; and no shaft or pit has been sunk below 150 feet; and no matter how great and extensive the sheet of mineral may be in sight, when the water comes in, so as to require the use of extraordinary means to remove it, the vein or lode is abandoned for the present, and the miners commence digging a new shaft elsewhere, and generally upon the same range.

The most valuable townships of the reserved mineral lands in the State of Illinois are—township 27 north, range 2 east; township 29 north, range 1 east; township 28 north, range 1 east; township 28 north, range 1 west. In Iowa—township 89 north, range 2 east. In Wisconsin—township 3 north, range 3 west; township 1 north, range 1 west; township 1 onrth, range 1 east; township 1 north, range 2 west; township 5 north,

range 3 west; township 6 north, range 3 east; township 4 north, range 4 west; and the townships in which the works of Mr. Hamilton are established.

The right to dig upon the greatest part of these lands is frequently sold by the claimants at the rate of $100 to $150 per acre; and from those not sold, the claimants now demand and receive from the miners 25 per cent. of all the mineral which may be raised from them; and the quantity of mineral now being raised is very great. The fee simple to one-half of all the lands in the above-mentioned townships would command $100 per acre within two years.

I am still of the opinion, that the mines which are already discovered, and have proved to be so valuable, and would now sell for $200 per acre, should be designated; and, if sold, it should be at a much higher rate than other reserved mineral lands, upon which no discoveries have been made, and would not now sell for more than $5 per acre. A large portion of all these mines is now owned by a very few individuals.

As an evidence of the present value of these mineral lands in this country, I will state that Mr. Stone has this day sold, for cash, to Messrs. Joumey & Hewlett, his "claim" upon 130 acres of land, situated at Elizabeth, township 27 north, range 2 east, (upon which there are no improvements,) for $12,000. Many other sales of smaller parcels of land in this vicinity have been made and paid for at the same rate, while others are held at much higher rates.

I am happy to find that litigation with regard to these mines has greatly decreased the past year, and that harmony is in a measure restored among all classes; and there is a growing disposition among the respectable and responsible miners to take out leases; and they pay their rents much more promptly than heretofore. The leasing system is less odious than it has been; and the business of the office, under the present superintendent, Mr. Floyd, and his assistants, is conducted with great energy, sound judgment, and care, and appears to give universal satisfaction.

The duties being therefore much greater than heretofore, if the same system is pursued, additional aid may be required to discharge the same; more especially, if it is the design of the department to persevere in the collection of the very large amount of arrearages of rent lead which are still due the Government, the most of which will be collectable without recourse to law, whenever a decision is had in the case of the United States *vs.* H. H. Gear; and to the importance of an immediate decision of that case it cannot be necessary for me to allude.

Lead and bismuth have been found within the district and country included within the limits of the treaty made by General Dodge in 1837, and also many valuable veins of copper ore; and there can be little doubt, from the character of the discoveries already made, that large portions of that country are quite valuable for their mineral properties. Upon the banks of the St. Croix, Black, and Chippewa rivers, and between the Mississippi and Kickapoo rivers, quite rich veins of copper ore have been discovered and opened during the last year. Specimens from all I have examined, and find them to be of a similar character to those of Mineral Point.

I have the honor to be, with great respect, your obedient servant,

WALTER CUNNINGHAM,
*Agent for the Mineral Lands of the Upper Mississippi.*

Colonel G. TALCOTT,
*Ordnance Department.*